



# 2024-2025 Corporate Plan

Accelerating Discovery

Funded by the  
Government  
of Canada

Canada 



Digital Research  
Alliance of Canada

Alliance de recherche  
numérique du Canada



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## 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 long-term DRI needs of Canada and to help deliver against our mission, we are guided by six principles:

### **RESEARCHER-CENTRIC**

### **STRIVING FOR EXCELLENCE**

### **COLLABORATIVE**

### **SERVICE-ORIENTED**

### **ACCOUNTABLE AND TRANSPARENT**

### **DIVERSE AND INCLUSIVE**



# Letter from the CEO

On behalf of the Digital Research Alliance of Canada, I am pleased to present the 2024-2025 Corporate Plan. Together with our partners, we have defined a new vision for Canada's digital research infrastructure (DRI) that truly supports research excellence.

Throughout 2023-2024, we prepared for the renewal of our mandate for 2025-30. We conducted an in-depth assessment of the current state of DRI in Canada to understand the challenges facing the research ecosystem, and the opportunities to tackle them. With the right approach, we can increase discovery and innovation, strengthen economic development, and make Canada competitive in the knowledge economy. 2024-2025 will be a pivotal year for DRI as we further develop the vision's blueprint towards implementation. There is a long road ahead, but we are well positioned for change.

In 2023 we also began work on [nine new initiatives](#) with an investment from Innovation, Science and Economic Development Canada (ISED) totalling more than \$280 million. This work addresses pressing issues in the ecosystem. For example, we launched an initiative that will transform how valuable sensitive research data may be deposited and reused. We are working with national host sites to provide critical upgrades to aging infrastructure. We are adding capacity to existing platforms to better meet the needs of researchers and their institutions. As well, we are tackling inequities in DRI so that all researchers in Canada have access to world-class digital tools for leading-edge research.

In the coming year, we will continue to build on this momentum, working with the community to instill a more agile, responsive, and equitable DRI ecosystem. We will work to:

- Provide easier access to tools and services for researchers, reducing barriers and administrative burden.
- Increase compute capacity and capabilities for Canadian research.
- Develop a national data and software platform that supports multilateral data storage and policy requirements.
- Support highly qualified personnel with learning opportunities and skills development.
- Enhance security and sovereignty of research data.

Our work in these areas will enable researchers to do what they do best—break new ground, transform society, and build a better future.



We are grateful for the continued support and investment from our funder, the Government of Canada, as well as the dedication of our Board of Directors, Researcher Council, members, partners, and staff. The community's passion for advancing DRI in Canada and around the world is inspiring, and we are proud to be part of it.

George Ross  
Chief Executive Officer  
Digital Research Alliance of Canada



# Executive Summary

The Digital Research Alliance of Canada (the Alliance) serves Canadian researchers by coordinating and delivering services in advanced research computing (ARC), research data management (RDM) and research software (RS). As per the agreement under the Digital Research Infrastructure Contribution program, the Alliance is required to provide an annual Corporate Plan. Within the pages of this Plan are the year's outputs and outcomes; successes and remaining challenges; risk assessment and mitigation strategies; financial information including planned expenditures and anticipated revenues; equity, diversity, and inclusion activities; among other considerations. This exercise also allows planned activities for the upcoming fiscal year to be outlined, which informs partners and the broader community of the Alliance's strategic direction, goals, and priorities.

## 2024-2025 Planned Activities

The planned activities for 2024-2025 demonstrate the Alliance's commitment to fulfilling the initiatives in the [Multi-Year Funding Proposal](#) (MYFP); as well as other activities actioned to improve digital research infrastructure (DRI) services, access and functionality. In collaboration with our DRI partners and community, the Alliance will:

- Renew aging ARC and cloud infrastructure, and upgrade data centre capacity.
- Prioritize equitable access to DRI and facilitate the enactment and assertion of Indigenous data sovereignty.
- Support researchers using quantum computers.
- Improve access to commercial cloud services.
- Streamline and improve national DRI services.
- Develop a national DRI service catalogue
- Continue to implement the Cybersecurity Framework and Long-Term Action Plan
- Stabilize and grow the DMP Assistant and Lunarix
- Improve the sharing of sensitive data through the Control Access Management initiative.
- Develop a national DRI training framework and extend user support.
- Maintain and expand national and international engagement.
- Continue to support the Pan-Canadian AI Strategy through the coordination, installation, and operation of new compute resources for AI.

As part of the preparations for 2025-30, the Alliance has also begun sharing its vision for the future of Canadian DRI. The Alliance focused on the growing needs of the Canadian research ecosystem as well as emerging opportunities and technologies. This work will continue into next fiscal year and beyond, as the Alliance continues to engage with partners to ensure the implementation plans are robust and thorough, with clear delineation of objectives and technological capabilities.



# 2023-24 Outputs and Outcomes

Outputs/ Outcomes	Strategic Plan Objectives			Status as of Q3, 2023
Increased technological capacity in the DRI ecosystem	<b>Research Data Management</b>			
	<b>Strategic Objective</b>	<b>Performance Indicator(s)</b>	<b>Target</b>	<b>Status</b>
	Expand and support the use of specialized research platforms in Canada	Increased number of data sets available to Canadian researchers through nationally accessible platforms	<b>Baseline:</b> 132 datasets published in FRDR for the period December 2020-2021	424 curated datasets published
			<b>Target:</b> 172 curated datasets/year published in FRDR by 2023 (↑ 30%)	
	Increased number of research software tools and platforms developed and reused	<b>Baseline:</b> 50 research platforms in CANARIE's Research Software Platform Registry	47 research software tools and platforms	
		<b>Target:</b> 75 by 2023		
Canada's researchers have improved skills	<b>Training and Development</b>			
	<b>Strategic Objective</b>	<b>Performance Indicator(s)</b>	<b>Target</b>	<b>Status</b>
	Establish a system for ongoing DRI training and education for researchers and professional support personnel within Canada	More training provided to more researchers	<b>Baseline:</b> 45,987 hours of training to over 14,218 users at 561 events per year	We are currently developing a centralized repository of training events and metrics
<b>Target:</b> 48,286 hours of training to over 14,928 users at 589 events by 2023 (↑ 5%)			Will provide an update in the next annual report	





	National DRI			
	Strategic Objective	Performance Indicator(s)	Target	Status
<b>DRI resources are safeguarded</b>	Develop a cybersecurity upskilling program for researchers and higher education institutions, especially small institutions that lack resources in cybersecurity	Increased percentage of institutions accessing ARC that have cybersecurity standards in place aligning with national standards	<b>Target:</b> Increase year over year	This is a new performance indicator.  We are establishing the appropriate benchmarking for future measuring
	Equity, Diversity, Inclusion and Accessibility (EDIA)			
	Strategic Objective	Performance Indicator(s)	Target	Status
<b>Increased awareness of the Alliance and national ARC, RS and RDM platforms and tools</b>	Develop outreach programs and solutions to promote equitable access to and awareness of the Alliance's tools and services, regardless of geography, discipline, or institutional affiliation	Number and type of participants aware of and using the Alliance service and support offerings (disaggregated by discipline/type of researcher)	<b>Baseline:</b> 15,994 active users of CCF infrastructure in 2022 (Comp. Sci and Engineering - 37%, Natural Sciences - 28%, Pure Sciences - 25%, Social Sciences and Humanities - 10%) <b>Target:</b> 19,192 annual active users, 20% from the social sciences and humanities by 2023	21,783 active users of Alliance infrastructure in 2023 (Comp. Sci. and Engineering - 34%, Natural Sciences - 44%, Pure Sciences - 17%, Social Sciences and Humanities - 6%)
		Increased awareness of the vision, mission, and operations of the Alliance among partners, stakeholders, and Canadians	<b>Baseline:</b> 142 member institutions (43.6% Universities, 20.4% Colleges, 7% Hospitals, 28.8% Other) <b>Target:</b> 149 member institutions by 2023 (↑ 5%)	
<b>Equitable and inclusive access to DRI for women, Indigenous Peoples, persons with disabilities, visible minorities, casual and medium-term users, early career researchers, and non-traditional</b>	Strengthen relationships and assess the DRI needs in collaboration with First Nations, Inuit, Métis, and other Indigenous Peoples in Canada	Increased usage percent of projected demand of ARC and national highly qualified personnel (HQP)	<b>Baseline:</b> Comp. Sci. and Engineering - 28%, Natural Sciences - 45%, Pure Sciences - 25%, Social Sciences and Humanities - 1%  <i>This metric is CPU-usage only</i>	Comp. Sci and Engineering - 39%, Natural Sciences – 35%, Pure Sciences – 23.5%, Social Sciences and Humanities – 1.9%  <i>Future metrics will involve both GPU and CPU usage, but only CPU are presented</i>





disciplines including researchers in the social sciences, humanities, and the arts	Establish guidelines and metrics to ensure compliance with the Alliance's foundational EDIA principles in all decisions and activities	Disaggregated by gender, and type of user (heavy, niche, casual, medium-term, early career, and research discipline)	<b>Baseline:</b> Social Sciences and Humanities - 1% <b>Target:</b> increase the usage of Social Sciences and Humanities to 5-10% by 2024  <i>The initial focus is on research discipline. The Alliance is working diligently to put in place the necessary agreements and mechanisms to analyze usage by demographic data. This remains a work in progress and requires robust data sharing agreements.</i>	<i>here for consistency with previous reports</i>
		Percentage of qualified Alliance Board Members who are female	<b>Target:</b> 50% by September 31, 2019 (fulfilled)	47% (due to odd number of Board Members)
DRI funding is leveraged by other investments to provide greater value for money	<b>National Service Delivery Model and Funding Model</b>			
	<b>Strategic Objective</b>	<b>Performance Indicator(s)</b>	<b>Target</b>	<b>Status</b>
	Develop formal funding processes and agreements between federal and provincial funders for national, regional, and local services	Amount of funding provided by provincial, institutional, or other partners by pillar (ARC, RS, RDM)	<b>Target:</b> 60% federal resources and 40% provincial and institutional resources across DRI funding envelope (includes ARC, RS and RDM) * Reporting should include both percentage and dollar amounts	As of Sep 30, 2023:  Federal resources of \$70.4M (75.2%), and funding from other sources of \$23.2M (24.8%)  <i>All leveraged funding from the ARC pillar</i>
Growing national coordination among the ecosystem	Improve alignment and integration of practices, standards, and policies, in collaboration with the Tri-Council, and other national and provincial research funders	Increased number of institutional RDM policies implemented that align with national standards	<b>Baseline:</b> 30 (provided by ISED)	198 published institutional policies
			<b>Target:</b> At least 40 by 2023	



	Establish a DRI service classification model that can differentiate services between national, regional, and local to identify responsibility of funding and service delivery**	Number of newly structured and formalized networks or working groups (e.g., communities of practice) in each pillar and strategic area (as defined by new organization)	<b>Target:</b> One community of practice for each pillar and each strategic area within a pillar (as defined by the new recipient) by March 31, 2023	There haven't been any new communities of practice due to focus on reviewing ecosystem governance to inform priority areas for new communities of practice
<b>DRI ecosystem is responsive to stakeholders</b>	Optimize the Alliance's service delivery structure to best serve DRI needs; and remain responsive to the changing exigencies of the community while taking a continuous improvement approach	Percentage of members satisfied with the strategic planning and operations of the Alliance	<b>Target:</b> 75% of DRI Members are satisfied by 2024	The Alliance is developing a benchmarking exercise that will allow subsequent measuring of this performance indicator
	<b>National Service Delivery Model and Funding Model</b>			
	<b>Strategic Objective</b>	<b>Performance Indicator(s)</b>	<b>Target</b>	<b>Status</b>
	Evaluate and improve the current DRI resource allocation process to better meet the needs of researchers	Percentage of DRI users satisfied with front-line services provided	<b>Baseline:</b> Compute Canada's baseline was 85% for those researchers who accessed ARC services  <b>Target:</b> 85% of DRI users are satisfied by 2024	90%
<b>Canada has a world-leading research capacity</b>	<b>National and International Engagement</b>			
	<b>Strategic Objective</b>	<b>Performance Indicator(s)</b>	<b>Target</b>	<b>Status</b>
	Establish national and international relationships and partnerships to establish the Alliance's reputation as a leader, key partner, and connector in the global DRI ecosystem	Increased number of international collaborations involving Canadian researchers using international DRI as main resource, as well as international researchers using Canadian DRI	<b>Target:</b> 20	18 signed MOU



	Enable integration of services and infrastructure with Canadian and international partners to facilitate research collaboration and excellence for the Canadian research community			
<b>Increased knowledge creation and research impact</b>	<b>National DRI</b>			
	<b>Strategic Objective</b>	<b>Performance Indicator(s)</b>	<b>Target</b>	<b>Status</b>
	The Alliance does not currently have strategic objectives directly aligned with this output.	Number of publications enabled by Canadian ARC	<b>Baseline:</b> 8,158 between 2013-2018 (to be refined by new recipient by March 31, 2020) <b>Target:</b> Increasing year over year	66,511 publications to date  Reporting will be done cumulatively, rather than on a five-year period
	The Strategic Plan will be evaluated to ensure future objectives reflect this long-term priority for ISED	Number of ARC users reporting patents	<b>Baseline:</b> 251 in 2017-18 <b>Target:</b> Increasing year over year	514 received patents between 2018-2023, 322 pending
<b>Improved scalability of DRI capacity</b>	The Alliance does not currently have strategic objectives directly aligned with this output.  The Strategic Plan will be evaluated to ensure future objectives reflect this long-term priority for ISED	Means for improved scalability of DRI capacity are implemented (i.e., front-end application, back-end system, or resource utilization)  For example, ARC acquisition projects that make use of cloud procurement	<b>Baseline:</b> 0  <b>Target:</b> At least one solution implemented within national system to support niche user need by 2024	Currently there is no solution in place; however, the Cloud Connect Pilot attempts to address the scalability of DRI capacity (see below)



# 2023-24 Success and Remaining Challenges

Advanced Research Computing				
	Accomplished to date in 2023-24	To be completed in 2023-24	Challenges	To be completed beyond 2023-24
<b>Renewal of aging ARC/HPC infrastructure</b>	A targeted call for proposals has been completed by the national host sites and evaluated.	Award and execution of funding agreements.	There have been delays due to implementation changes, including the development of the new SCIA.	Procurement of equipment, delivery, and installation.
<b>Renewal of aging cloud infrastructure</b>	A Supply Chain Integrity Assessment (SCIA) group was created between the Alliance, the national host sites, and the Canadian Centre for Cybersecurity (CCCS).	Beginning of the procurement process by the national host sites.	There have been delays in securing matching funds in some instances.	
<b>Data Centre capacity upgrade</b>	The construction feasibility design was completed.  A review committee has been established to evaluate the progress of the Data Centre upgrade.	Approval of feasibility design.	There have been significant delays due to updated site and feasibility designs, as well as tendering and construction times.  New timelines are being discussed.	Competitive procurement and contract award.  Beginning of construction could depend on revisions to timelines.
Equity, Diversity, Inclusion and Accessibility				
	Accomplished to date in 2023-24	To be completed in 2023-24	Challenges	To be completed beyond 2023-24
<b>Alliance EDIA Framework</b>	The EDIA Steering Committee has been formalized to oversee and support EDIA initiatives and ensure alignment with the EDIA Framework.	A detailed list of EDIA initiatives to be advanced with focus on four pillars: partnerships, service delivery, funding, and workforce environment.	-	-
Service and Funding Model				
	Accomplished to date in 2023-24	To be completed in 2023-24	Challenges	To be completed beyond 2023-24
<b>New service delivery model</b>	Analysis on the current interim model compared to other jurisdictions.  Established formal funding and service agreements between the Alliance and service partners.	-	A lot of new opportunities for improving services to researchers has emerged from the analysis and input from our community that is being considered for the next evolution.	Develop and publish a National DRI service catalogue.  Develop and launch awareness campaigns to increase use of national DRI services.



<b>New funding model</b>	Analysis on the limitations of the current funding model and potential new revenue sources was submitted to ISED as part of the 2025-30 Mandate Renewal.	-	-	-
<b>National and International Engagement</b>				
	<b>Accomplished to date in 2023-24</b>	<b>To be completed in 2023-24</b>	<b>Challenges</b>	<b>To be completed beyond 2023-24</b>
<b>National and international relations</b>	<p>Alliance staff actively engaged and collaborated with 52 international organizations (and/or their Canadian offices) in areas such as: policy; funding, governance; membership; participation; partnerships, among others.</p> <p>Some highlights include participation in the European Open Science Cloud Symposium 2023, International Data Week, and the hosting of the first Research Software Funders' Forum.</p>	Formalization of collaboration with the National Research Council and other federal research agencies.	-	Continue to investigate new relationships, and act on existing partnerships.
<b>National DRI</b>				
	<b>Accomplished to date in 2023-24</b>	<b>To be completed in 2023-24</b>	<b>Challenges</b>	<b>To be completed beyond 2023-24</b>
<b>Cybersecurity</b>	<p>The Training and Awareness Program has completed 7 out of 20 proposed items.</p> <p>Analysis of a proof of concept for commercial Security information and event management (SIEM) options.</p> <p>As part of the Cyber Intelligence Platform and store for Threat Fusion, the Alliance deployed a malware information sharing platform (MISP) instance to collect threats and feeds.</p> <p>Penetration testing.</p>	<p>Complete tabletop exercise, and present advancement at the DRI Connect.</p> <p>Finalize the RFP for a vulnerability management solution.</p> <p>Further analysis on commercial SIEM.</p> <p>Some commercial feeds from the MISP Platform are pending.</p>	-	-



Research Data Management				
	Accomplished to date in 2023-24	To be completed in 2023-24	Challenges	To be completed beyond 2023-24
Stabilization and growth of the DMP Assistant		Continue working on deliverables.		
Expansion of Lunaris	<p>Institution to host staff was identified and the matching funding was secured.</p> <p>Project positions were hired and onboarded.</p>	Implement sustainable UX design plan, increase capacity for specialized disciplinary data, expand and improve existing metadata harvesting capabilities, increase inclusion of source repositories, establish a community of practice around Lunaris operations.	Negotiation of agreements with host institutions was longer than anticipated.	<p>No delays or project re-scoping are currently anticipated.</p> <p>2024-2025 will focus on the milestones as established in the original business case.</p>
Controlled Access Management for Research Data (formerly Sensitive Data Repository Pilot)	<p>Successfully developed and launched an Open Call.</p> <p>28 organizations submitted applications to participate (exceeding the Alliance's expectation of 6-12).</p> <p>Four organizations submitted applications to provide cost match (more than doubling the Alliance's expectations).</p> <p>Matching funds for project positions secured.</p>	Despite challenges and delays, project deliverables remain on track.	<p>There were significant changes and updates to the original Sensitive Data Repository Pilot.</p> <p>The new Controlled Access Management for Research Data was launched as an open call vs. closed, resulting in delays. Negotiation of agreements with host institutions was longer than anticipated.</p>	-
Research Software				
	Accomplished to date in 2023-24	To be completed in 2023-24	Challenges	To be completed beyond 2023-24
Research Software (RS)	<p>The RS Strategy was developed by the Alliance in collaboration with the community via the Alliance RS Strategy Working Group.</p> <p>As part of the RS Strategy, the Alliance launched a survey on RS during the summer.</p> <p>The strategy was published on November 28, 2023.</p>	The report on the research survey will be translated and published in Zenodo.	-	Complete rubric for identifying national platforms.



Self-Determination and Data Sovereignty for Indigenous Peoples				
	Accomplished to date in 2023-24	To be completed in 2023-24	Challenges	To be completed beyond 2023-24
<b>Engagement with Indigenous Partners</b>	Discussion with FNIGC on possible funding partnership.	Discussion with Métis and Inuit partners on possible funding partnership.	Discussions take time.	Deliver on partnerships.
Training and Development				
	Accomplished to date in 2023-24	To be completed in 2023-24	Challenges	To be completed beyond 2023-24
<b>National DRI Training Framework</b>	<p>A Training Maturity Assessment as a part of its broader continuous operational improvement.</p> <p>Training operations have increased in maturity while participating in training programs delivered by the regional partners.</p> <p>Delivered sessions as part of the Cybersecurity Training and Awareness Program including multi-factor authentication for users, cybersecurity for researchers, cybersecurity staff, and specialized cybersecurity.</p>	-	<p>DRI resources are increasingly complex and technical both in scope and in scale, requiring consistent updating and resourcing.</p> <p>There is a need for significant increase in resources to ensure the DRI workforce and the research community are upskilled in rapidly evolving technologies and best practices.</p>	-





## Milestones

In addition to the achievements described above, the Alliance has advanced work on a variety of fronts.

Milestones 2023-24	Status
Launch of the data discovery service Lunarix	May 2023
DRI Connect Conference	Held: May 2023
Report on Cloud Services in Research	Published: May 8 <sup>th</sup> , 2023
Workforce Planning Report	Submitted to ISED: October 9 <sup>th</sup> , 2023
Annual Report for the period 2022-23	Published: August 11 <sup>th</sup> , 2023
Joint Ecosystem Report with CANARIE	Submitted to ISED: July 26 <sup>th</sup> , 2023
Proposal for the 2025-30 Alliance Mandate Renewal	Submitted to ISED: September 2023
Annual General Meeting	Held: September 26 <sup>th</sup> , 2023
Cybersecurity Training and Awareness Program	Delivered: October 2023
Quarterly Progress Report (KPIs and financial)	Submitted to ISED: August 2023, November 2023
Alliance Research Software Strategy	Published: November 28 <sup>th</sup> , 2023
Alliance Cloud Computing Strategy	Published: November 28 <sup>th</sup> , 2023
Report on Emerging Trends in Research	Published: December 6, 2023



# 2024-2025 Planned Activities

On March 24, 2023, Innovation, Science and Economic Development (ISED) Canada awarded the Alliance funding of up to \$228.3 million for initiatives within the [Multi-Year Funding Proposal](#). The planned activities for the 2024-2025 fiscal year presented here are a continuation of the two-year investment that are focused on upgrading critical infrastructure, as well as initiatives to improve services, access, and functionality of DRI. The following initiatives and activities are presented by strategic theme.

## Pan-Canadian AI Strategy

### Dedicated computing capacity for Artificial Intelligence Contribution Program

The Alliance supports the Pan-Canadian AI Strategy through the coordination of procurement, installation, and initial operations of the new compute resources for AI researchers (i.e., Pan-Canadian AI Compute Environment, PAICE). The Alliance, AI Institutes, host sites and federation national teams 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 full report of the Alliance activities within the PAICE program can be found [here](#).

## Advanced Research Computing

### Renewal of aging ARC and cloud infrastructure

Existing compute capacity meets only half of CPU and a quarter of GPU requests from Canadian researchers annually. However, challenges in securing matching funds from provincial investments and additional supply chain security assessments have delayed refreshing the current aging HPC and cloud infrastructure. Despite these obstacles, the Alliance remains committed to upgrading the national systems approaching end-of-life, while closely working with hosting universities and provinces. As provincial match is secured, host sites will undertake competitive procurement processes to renew their respective hardware.

April-June	July-September	October-December	January-March
Host sites kick off procurement.  <i>This step may start in FY23/24-Q4 if possible.</i>	Procurement of hardware and Site preparation.	Installation and setup of hardware.	Commissioning New systems put into service.
			Final acceptance tests



## Data Centre capacity upgrade

The Data Centre housing the national systems Béluga, Béluga Cloud, and Narval has almost reached its maximum electrical capacity, restricting Calcul Québec from accommodating more powerful systems. However, challenges in securing matching funds have delayed the start of this upgrade. Despite these obstacles, the Alliance remains committed to upgrading the capacity that supports the national systems while closely working with Calcul Québec, McGill University, the École de Technologie Supérieure (ETS) and the province of Québec.

Once matching funds are secured, work will begin to boost the electrical capacity to 5.0MW, encompassing the installation and linking of an extra transformer, switchboard, cooling units and other necessary components.

April-June	July-September	October-December	January-March
Renovation work begins.	Equipment purchased, installed and configured.		Testing of upgrades and launch new capabilities.

## Supporting researchers using quantum computers

Quantum computing, while still an emerging technology, is rapidly evolving and its adoption is equally increasing. The Alliance will support regional organizations with quantum infrastructure in expanding access and utilization for Canadian researchers seeking to experiment and implement quantum technologies. The Alliance will facilitate the onboarding of staff within these institutions to help researchers define their research challenges, create quantum-powered solutions, and offer comprehensive support to those exploring innovations in quantum devices.

April-June	July-September	October-December	January-March
Begin hiring of support staff on Quantum technologies.		Implement Quantum Training Plan.	

## Alliance Cloud Connect Pilot

The Alliance Cloud Connect Pilot (ACCP) aims to develop a single portal for researchers to access on demand key commercial cloud services and simplify existing administrative and technical challenges. In addition, the ACCP facilitates funder and institutional interests in the use and provision of cloud services for their research community. ACCP will set the stage for the Alliance’s provision of a hybrid cloud service that will not only simplify researcher access to compute, storage, and software, but also allow for focused research and innovation.

April-June	July-September	October-December	January-March
Finalize agreements with service provider(s).	Continued enhancements and development of Portal.		
Select researchers participating in the Pilot and launch Portal.	Review of researchers’ feedback on Pilot Portal.		



# Equity, Diversity, Inclusion and Accessibility

## DRI Equity Champions Funding Call

The DRI Equity Champions program will be aimed at promoting a DRI that is more equitable for all Canadian researchers. The Call will support a targeted EDIA initiative to increase DRI service and infrastructure uptake and engagement among under-represented groups in the research and education sector. The Call will follow a similar format to that of the 2022-23 Alliance Data Champions Pilot and will equip under-represented groups and individuals with the training and tools to support themselves and their communities in the context of DRI.

April-June	July-September	October-December	January-March
Review and selection of applications.	Projects delivery phase.		
Negotiation of agreements.	Meetings of cohorts and participation in Open Science training.		
	Coordinate feedback from participants.		

## National Service Delivery

### National Help Desk

As part of its efforts to deliver high-quality support to researchers using the national ARC and cloud infrastructure, the Alliance will continue working with its service delivery partners (national host sites, regional organizations, among others) to standardize and streamline ticketing services (user requests, incidents, bugs, etc.) in compliance with help desk policy and procedure.

April-June	July-September	October-December	January-March
Design of standard processes and procedures.	Development of an Implementation Plan.	Configuration of the Help Desk System. Staff trained on system and process.	

## National Service Management and Continuous Improvement

The introduction of National Service Management and Continuous Improvement represents an operational enhancement within the Alliance's concerted efforts to elevate service delivery across DRI pillars. This initiative establishes a structured framework for overseeing and refining services within the national DRI, aiming to ensure streamlined operations, enhanced user experiences and ongoing optimization. This new approach will increase adaptability and responsiveness to evolving user needs while developing a culture of iterative enhancements within the Alliance and its service delivery partners. These efforts reinforce the Alliance's commitment to delivering top-tier services across all facets of DRI.

April-June	July-September	October-December	January-March
Develop structured framework for the integration of DRI services into a consistent delivery process.		Implementation of New Service Management and Continuous Improvement.	



## National DRI Service Catalogue

Building on the Service Delivery Model and Service Classification Framework submitted to ISED in 2022, the Alliance will consolidate a National DRI Service Catalogue that will act as a central hub for researchers to have quick access to the diverse tools, resources, and services they need for their work. In doing so, the catalogue will simplify search processes by providing a one-stop shop for their needs.

April-June	July-September	October-December	January-March
Develop a listing of resources, tools, and services.		Design and testing of the Service Catalogue portal.	Launch DRI service catalogue.

## National DRI

### Cybersecurity Framework and Long-Term Action Plan (LTAP)

The LTAP cybersecurity program is designed to implement key initiatives outlined in the Cybersecurity Framework (CSF). This framework encompasses a roadmap for achieving future cybersecurity goals, including analyses of current and desired states, organizational structural changes, governance updates, policies, and technology implementations. It aims to complement the existing security posture established in 2020 by Compute Canada and national host sites. The LTAP will guide the Alliance to determine the degree to which cybersecurity risk management practices exhibit the characteristics.

April-June	July-September	October-December	January-March
This an ongoing activity with expected completion date of March 2025.			

## Ecosystem engagement

The Alliance requires advisory structures fostering information exchange, bi-directional perspectives, and inputs for decision-making. During 2023-24 the Alliance engaged with its partners to discuss the establishment of advisory tables and dedicated committees, with defined mandates and memberships. These structures will enable agile responses to operational issues, offer advice on business cases, investments, and project priorities, and facilitate transparency for aligned long-term planning with co-investment partners. They will also contribute to formulating high-level, Government of Canada-aligned strategies and goals.

April-June	July-September	October-December	January-March
All relevant engagement structures (tables, committees) will be operating and meeting per their respective terms of reference documents.			



## Research Data Management

### Stabilization and growth of the DMP Assistant

The DMP Assistant is a tool that allows researchers to develop data management plans (DMPs) for their research projects and for Tri-Council funding. The Alliance will enhance the DMP Assistant by enabling machine-actionability, improving the user interface, and integrating it into Alliance infrastructure. These upgrades aim to fortify the service, ensuring seamless integration into national infrastructure for heightened stability, security, and scalability. These improvements will support the transition of the service to national infrastructure, thereby making the platform more stable, secure, and scalable. To date, uptake by Canadian researchers has been very successful.

April-June	July-September	October-December	January-March
Develop work package 1 completed (parity with international codebase).	Hiring of Systems Administrator position.	-	Development work package 2 completed (single sign-on, maDMP features).
Hiring of Year 2 Developer position.	-	-	Platform migration project management plan completed.

### Expansion of Lunaris

The Alliance will continue expanding Lunaris, the national platform indexing datasets from almost 100 Canadian repositories. Lunaris offers diverse search options for over 91,000 datasets, including text and map-based searches. Enhancements will broaden discovery features, further breaking down data silos in local repositories and forging alliances with more research organizations.

April-June	July-September	October-December	January-March
Establishment of a User Community Group to guide development of Lunaris' future and provide feedback on its User Experience.	Creation of a Specialized Disciplinary Data Harvesting Plan to better support discovery of data with discipline-specific metadata.	Completion of User Experience (UX) Design Plan to formalize a process for incorporating UX Design best practices and the feedback of the User Community Group in Lunaris' development.	Finalize a New Repositories Harvesting Plan to guide engagement with a broader range of data sources.
-	-	-	Completion of the Metadata Harvesting Process Expansion, establishing a documented internal metadata schema and cross-walking procedure.
-	-	-	Finalize an Indigenous Data Strategic Plan to guide engagement with First Nations, Métis, and Inuit communities to understand and contribute to meeting their data discovery needs.



## Controlled Access Management (CAM)

Current practices related to research data requiring controlled access involves permanently destroying it, a practice that goes against emerging standards and mandates from funders and publishers for data deposit and re-use. Overcoming these access barriers in repositories aligns with evolving norms and holds the promise of expediting discoveries, fostering new research prospects, reducing costs and resource burdens, streamlining timelines and alleviating pressures on study populations. The CAM project will deploy recently developed technology in collaboration with project partners (universities and colleges, and their researchers and staff) to establish restricted access options. This will ensure valuable and reusable sensitive research data may be deposited and reused as appropriate.

April-June	July-September	October-December	January-March
Hiring and onboarding of full-time resources.	Begin recruitment of researchers for pilot testing.	Completion of FRDR Pilot testing.	Completion of Roadmap draft.
Begin meetings with Partner Organizations.	-	Completion of training and education resource planning.	Analysis of Pilot testing results.
-	-	-	Completion and approval of Roadmap with submission of report to ISED.

## Self-determination and data sovereignty for Indigenous Peoples in Canada

### Indigenous Data Sovereignty Funding Call

DRI is involved in many aspects of Indigenous data sovereignty, including policies and practices governing data stewardship, analysis, sharing, or storage. As a result, its tools, services, and practices may inhibit or advance Indigenous data sovereignty. The Funding Call will facilitate First Nations, Inuit, and Métis Nation enactment and assertion of data sovereignty, including equitable access to DRI for Indigenous researchers and communities, and ensuring Canadian DRI is not used for research-related activities which fail to respect First Nations, Inuit, and Métis Nation sovereign rights over data.

April-June	July-September	October-December	January-March
Negotiation of agreements.	Launch of Projects with partner organizations.		





# Training and Development

## Development of the National DRI Training Framework

The Alliance will focus on securing resources to better support the DRI community and partners through enhanced training and development initiatives. This will include redesigning the Alliance Training Calendar (shared with the Federation) with a data-driven approach and partnering with experts to refine existing DRI training services. Specialized training tailored to community needs will also be acquired, along with support for an International Top Summer Class on HPC, machine learning and AI. Exploring international models for training funding and strategies will also be a priority, within the Pan-Canadian AI Compute Environment (PAICE) program, as well as a Canadian Student DRI Competition.

April-June	July-September	October-December	January-March
Partner with professional service providers to improve DRI training services (e.g., COBIT training assessment updates).			
Assess feasibility of training policies, needs and training sharing agreements with partners including Quantum programs, PAICE, and NRC funding agreements with the intent of fostering AI and specialized training in our DRI environment.			-
Engage specialized training, grounded in community consultation on training priorities, needs and criteria.			-

## Extending user support

As part of the 2023-25 investments in DRI services, and in collaboration with regional partners, the Alliance proposed the hiring of additional support staff, who are critical to the delivery of high-quality service and will respond to the growing user-base and demand. Following an extensive workforce planning exercise, the Alliance revised the original plan and will work with the regional partners to identify the roles best suited to meet the needs of the community, while also aligning with the Alliance's strategic vision for Canadian DRI.

April-June	July-September	October-December	January-March
Onboarding of new support staff.	Beginning of expanded service provision.	-	-



## National and International Engagement

### Maintenance and expansion of partnerships

The Alliance will continue working closely with CANARIE to plan activities for the DRI ecosystem. This collaboration is paramount to ensure priority, skillset, and knowledge alignment on portfolios such as cybersecurity. Similarly, the Alliance will coordinate its efforts with federal funding agencies—CFI, CIHR, NSERC, SSHRC, Genome Canada, and others—to continue supporting programs of national interest such as PAICE and the Human Genome Library. Beyond this work, the Alliance will seek to formalize collaboration with national and international partners, such as the National Research Council, among others.

April-June	July-September	October-December	January-March
This is an ongoing activity.			

## 2025-2030 Preparation

### Planning and Design Framework

The Alliance has shared a proposal for a vision of the future of DRI in Canada with ISED as part of its 2025-2030 mandate renewal. This vision is driven by fundamental digital research needs and emerging trends and capabilities that will go beyond simply meeting the growing needs of the Canadian research ecosystem. The Alliance will continue to engage with the community and DRI partners to refine the future direction and develop implementation plans that are robust, scalable, and secure, with clear delineation of objectives and technological capabilities.

April-June	July-September	October-December	January-March
Community engagement and advocacy work on future direction and considerations for planning.	In collaboration with ISED refine and update of current Strategic Plan for the 2025-30 period.	Develop implementation plans for the 2025-30 DRI vision.	Develop Annual Plan for projects to begin within the next 12 months for work to begin on new mandate period.



# Risk and Mitigation

The Alliance’s management will regularly assess, and record identified risks in a risk register upon any material change. The Audit and Investment Committee exists at the Board of Directors level and is responsible for helping to ensure that a financial risk assessment is performed regularly; the Human Resource (HR) Committee reviews HR risk and the Governance Committee reviews governance risk. All committees report their assessments back to the Board. As the Board carries responsibility for overall risk (including security and reputational risk), the risk assessment reports, and the risk register are reviewed at regular quarterly meetings.

The Alliance’s management, in collaboration with the committees of the Board and the DRI community, has identified the following potential risks for the current and upcoming years:

Risk	Mitigation Strategy
<p><b>Community buy-in and mobilization.</b> The implementation of the Alliance vision will require many activities to be executed in parallel. Most of these will require significant participation of the DRI community. Some resources will be solicited repeatedly, which may cause challenges with community capacity. Also of note, some individuals do not consider it part of their role to inform, debrief, or solicit input from a broader audience or to the broader governance or implementation groups in which they participate. This is a common occurrence with coordinating organizations like the Alliance, and often results in a perception of some in the “know” and others “not in the know”, thereby contradicting goals of wide collaboration and input.</p>	<p>Whenever possible, current existing forums will be used to optimize community participation.</p> <p>The Alliance has multiple layers of consultative mechanisms integrated into the organization through many channels, including the Researcher Council and working groups. This multi-dimensional approach helps avoid consultation fatigue from the community while securing the input needed to achieve the Alliance’s goals.</p> <p>The Alliance will make concerted efforts to ensure it is efficient with its members’ and stakeholders’ time. For example, working groups will be consolidated to reduce duplicate or overlapping work and meetings.</p> <p>The Alliance will continue its efforts to communicate frequently. The Alliance is mindful of the need to share information and seek input broadly to ensure appropriate two-way information flows throughout the transition.</p>
<p><b>Stakeholder reach</b> The Alliance needs to involve the DRI ecosystem in its planning and operations. Significant effort has been made to identify all stakeholders, but there may be unintentional omissions.</p>	<p>The Alliance is developing a stakeholder engagement strategy, including the implementation of leading stakeholder engagement tools.</p> <p>The Alliance will consult regularly with key stakeholders to augment its lists.</p>
<p><b>Inclusivity</b> Well-established research communities may unintentionally crowd out groups that are not traditionally represented in this arena.</p>	<p>The Alliance will undertake specific, targeted EDIA activities in the Alliance governance, organizational and advisory functions.</p> <p>It will explore means to build capacity and support engagement for underrepresented groups.</p>
<p><b>Security – confidentiality</b> Risks include the disclosure of personal information in the Alliance’s custody, unauthorized access to information and ransomware or hack discovered at the National Data Centre.</p>	<p>Personal information is restricted to human resources and finance/payroll staff.</p> <p>The Alliance will actively monitor and secure access to data/files. The Alliance will ensure data centres are applying cybersecurity best practices.</p>



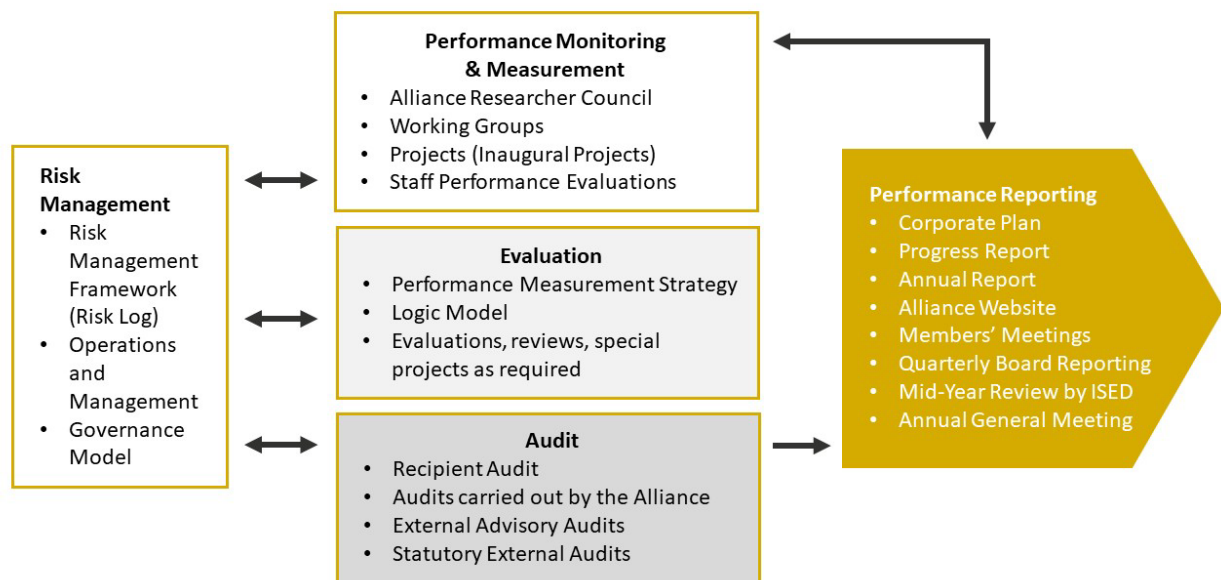
<p><b>Security – integrity</b> Risks include the alteration or loss of personal information in the Alliance’s custody and the inability to integrate with legacy systems of onboarding partners, e.g., CANARIE, cybersecurity risks.</p> <p>There are also elevated levels of risk identified by recent CSE and Canadian Centre for Cybersecurity advisories. There is a substantial risk of sophisticated, targeted attacks through state-sponsored actions.</p>	<p>Access to this information is restricted and data is backed up as needed.</p> <p>The Alliance will proactively consider the likelihood of this risk as part of transition plans being established.</p> <p>A partnership is in place with CANARIE in a jointly branded task force and initiative that considers the level of risk to intellectual property and research infrastructure, and appropriate responses based on assessed risk per the CSE and Canadian Centre for Cybersecurity advisories.</p>
<p><b>Infrastructure</b> Risks include loss or damages of office equipment and the inability to synchronize maintenance and upgrade schedules for equipment at National Data Centres resulting in down times at host sites.</p>	<p>The Alliance will ensure office systems are in secure office space; desktop and laptop systems can easily be replaced; back-up file storage in place via the Cloud.</p> <p>Host site leaders to consider timeliness and costs for equipment maintenance.</p> <p>Planning will consider the exceptional logistical challenges posed by global supply chain issues affecting procurement and transport of equipment.</p>
<p><b>Finance</b> Risks include adverse financial audit opinion and delays in developing the back office.</p>	<p>Active engagement with auditors on engagement letter and review audit plan with the Board’s Audit, Finance and Risk Committee.</p>
<p><b>Human resources</b> Failure to recruit qualified personnel and the inability to integrate benefits structure among transitioning organizations.</p>	<p>The Alliance has completed a market study of its compensation offerings (salary scale and benefits program) and will offer fair and competitive compensation and benefits packages.</p>
<p><b>Reputation</b> Failure to manage stakeholder expectations, failure to serve the research community; or the Alliance Contribution Agreement deliverables are not met.</p>	<p>The Alliance will ensure transparency with stakeholders and follow through on commitments; we will maintain regular and effective communications.</p> <p>The Alliance will actively engage with the Researcher Council to receive and share progress.</p> <p>It will resource projects during budget development and embrace good project management.</p>
<p><b>Governance/collaboration</b> Failure to provide good governance; challenges developing value proposition for primary and associate members; and loss of organizational history when Board Director one-year terms are completed.</p>	<p>The Alliance has adopted best practice governance standards: corporate By-Laws and policies, a skills matrix, self-assessment, diversity, and Board sub-committees.</p> <p>Working with Board Stakeholder and Member Committee to define value proposition.</p> <p>Staggered terms mitigate loss of organizational memory. Governance and Nominating Committee is assessing the implications of Board terms.</p>
<p><b>Funding</b> Inability to finalize the Contribution Agreement; inability to generate match funding with provinces and other sources; and the rejection of the National Service Delivery and Funding Model, and Strategic Plan.</p>	<p>Work plan development with milestones. Buffer built in to work plans to ensure slippage is not detrimental.</p> <p>ISED and the Alliance are engaged in on-going conversations with provincial ministries and regional ARC organizations to assess likelihood of provincial match.</p> <p>Extensive engagement, involvement and community consultation planned to ensure issues/concerns are identified early and dealt with in a timely manner.</p> <p>Provide required reporting to ISED on time.</p> <p>Ensure that ISED is kept informed of matters as they arise; promptly respond to ISED’s request for information.</p>



# Ongoing Performance Monitoring Strategies

The Alliance has developed a Performance, Evaluation, Risk and Audit Framework that will be used as a mechanism to monitor activity, performance, and risk, at both the senior management and Board levels.

**The Alliance's Performance, Evaluation, Risk and Audit Framework**





# Financial Plan

The Alliance is funded through contribution agreements with the Government of Canada through ISED, membership fees, and interest income.

The expenses of the Alliance can be broken out in three categories:

- **Program expenses:** the Alliance enters into agreements with Canadian institutions to fund defined activities that enable DRI services delivery to Canadian researchers.
- **National services expenses:** the Alliance coordinates and delivers DRI services to Canadian researchers, using its own staff and resources.
- **Management and administration expenses:** management, administrative and communications activities that support the other two categories.

The Alliance plans to incur \$165.5M in program expenses, \$10.3M in national services expenses and \$6.1M in management and administration expenses. All planned expenses are eligible costs per the contribution agreement.



The table below provides a breakdown of the planned revenue and expenses.

<i>[in \$K]</i>	<b>2024-2025</b>
<b>Revenue</b>	
Innovation, Science and Economic Development Canada funding	181,903
Membership fees	625
Interest income	430
	<b>182,958</b>
<b>Expenses</b>	
<b>Program Expenses</b>	
Advanced Research Computing Infrastructure	142,355
Research Support	19,294
Research Data Management	3,181
Cybersecurity	704
	<b>165,535</b>
<b>National Services Expenses</b>	
Salaries and benefits	7,294
Services	2,471
Supplies	54
Transportation and communication	342
Other expenses	144
	<b>10,304</b>
<b>Management and Administration Expenses</b>	
Salaries and benefits	3,673
Services	1,993
Supplies	34
Transportation and communication	167
Other expenses	197
	<b>6,064</b>
<b>Total expenses</b>	<b>181,903</b>
<b>Excess of revenue over expenses</b>	<b>1,055</b>

*Table 1: Planned Revenue and Expenses in 2024-2025*





The table below presents the allocation of total expenses to eligible activities, as defined in the Alliance’s contribution agreement with ISED.

<i>[in \$K]</i>	<b>Program Expenses</b>	<b>National Services Expenses</b>	<b>Management and Administration Expenses</b>	<b>Total</b>
<b>Eligible Activities</b>				
Leading and Coordinating the Governance of the DRI Ecosystem	-	2,449	-	2,449
ARC Infrastructure Acquisitions and Operations	142,355	1,548	-	143,903
ARC Resource Allocations	-	622	-	622
HQP Support	19,294	1,347	-	20,642
National RS Activities	-	408	-	408
National DM Activities	3,181	2,585	-	5,766
Cybersecurity	704	1,344	-	2,048
Management and Administration	-	-	6,064	6,064
<b>Total</b>	<b>165,535</b>	<b>10,304</b>	<b>6,064</b>	<b>181,903</b>

*Table 2: Planned Expenses in 2024-2025, Allocated by Eligible Activities*

Through its programs, the Alliance requires the ultimate recipients to raise funding from other sources, including provincial governments, institutions, corporations, and not-for-profits. These additional funds leverage the contribution from the federal government into a greater investment in the DRI ecosystem. The Alliance enters into agreements with the ultimate recipients only once leveraged funding has been secured and confirmed.



The following table shows the planned expenses from the Alliance, the estimated leveraged funding from other sources and the total investment in the Canadian DRI ecosystem.

<i>[in \$K and %]</i>	<u>Expenses</u>	<u>Leveraged funding</u>	<u>Total</u>
<b>Program Expenses</b>			
Advanced Research Computing Infrastructure	142,355	137,481	279,836
Research Support	19,294	13,949	33,244
Research Data Management	3,181	233	3,415
Cybersecurity	704	517	1,221
	<b>165,535</b>	<b>152,180</b>	<b>317,715</b>
<b>National Services Expenses</b>	<b>10,304</b>	-	<b>10,304</b>
<b>Management and Administration Expenses</b>	<b>6,064</b>	-	<b>6,064</b>
<b>Total [in \$K]</b>	<b>181,903</b>	<b>152,180</b>	<b>334,084</b>
<b>Total [in %]</b>	<b>54.4%</b>	<b>45.6%</b>	<b>100.0%</b>

*Table 3: Planned Expenses and Leveraged Funding in 2024-2025*