



# 2022-23 Corporate Plan

Accelerating Discovery



**Digital Research  
Alliance** of Canada

**Alliance de recherche  
numérique** du Canada

Funded by the  
Government  
of Canada

**Canada** 

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# Digital Research Infrastructure resources are invaluable.

For Randall Sobie, professor and director of the Subatomic Physics and Accelerator Research Centre at the University of Victoria, (digital research infrastructure) DRI resources are invaluable as the Canadian and international computing centres analyze the particles in the collisions and help understand the nature of the universe.

*“Our experiments collide particles in the middle of large detectors, which are like electronic cameras. We collect billions of particle collisions per second and select the most interesting ones. The collision data collection is extremely large and is distributed to centres around the world, including some in Canada.”*

*“These computing resources in Canada are a key contribution to international projects. They are critical to our research, and they help contribute to Canada’s reputation abroad.”*

**Randall Sobie, University of Victoria, Chair of the Alliance Researcher Council**



# Part I: Executive Summary

## Summary of 2022-23 Activities

As the Alliance moves from 'scale- up' in 2021-22 to 'integrate & stabilize' in 2022-23, the organization will focus on the following activities. Underlying the activities and included in the focus of 'integrate and stabilize', is the on-going objective of enabling a smooth transition from Compute Canada to the Digital Research Alliance of Canada.

<b>Strategic Theme: Advanced Research Computing</b>	
<b>1. Design and implement risk mitigation measures to prevent service disruption for ARC services.</b>	<p>Activities / Outputs</p> <ul style="list-style-type: none"> <li>Develop a Risk mitigation plan to address key services and operations across the ARC National Platforms.</li> </ul>
<b>2. Develop a national strategy for the use and support of cloud services.</b>	<p>Activities / Outputs</p> <ul style="list-style-type: none"> <li>Investigate, document, and validate research use cases and costs for commercial cloud, vs DRI hosted cloud, vs traditional ARC services.</li> <li>Create a national strategy for the use of cloud services and expand the support model as needed.</li> </ul>
<b>3. Invest in additional traditional and cloud computing, and storage resources, and develop a sustainable financial plan for its maintenance and continual renewal.</b>	<p>Activities / Outputs</p> <ul style="list-style-type: none"> <li>Evaluate the demand of traditional and cloud computing resources and existing research infrastructure assets.</li> <li>Develop funding calls for multi-year investments in research infrastructure including high-performance computing and storage resources with sustainability plans built in.</li> </ul>
<b>Strategic Theme: Equity, Diversity, Inclusion &amp; Accessibility</b>	
<b>4. Establish guidelines, policies, practices, and metrics to ensure compliance with the Alliance's foundational EDIA</b>	<p>Activities / Outputs</p> <ul style="list-style-type: none"> <li>Formation of working groups that will focus on establishing guidelines and metrics.</li> </ul>



<p><b>principles in all decisions and activities.</b></p>	<ul style="list-style-type: none"> <li>• Develop a plan of activities to increase awareness and alignment of foundational EDIA principles.</li> </ul>
<p><b>Strategic Theme: National DRI</b></p>	
<p><b>5. Improve the current RAC process for DRI resources to better meet the needs of the researcher.</b></p>	<p>Activities / Outputs</p> <ul style="list-style-type: none"> <li>• Address key operational issues with the current RAC process based on previous analysis conducted.</li> </ul>
<p><b>6. Review the current risks of the existing user database from Compute Canada.</b></p>	<p>Activities / Outputs</p> <ul style="list-style-type: none"> <li>• Identify the current risks and enhancement opportunities within the system and develop a plan to implement enhancements.</li> </ul>
<p><b>7. Improve the security and protection of DRI systems and services.</b></p>	<p>Activities / Outputs</p> <ul style="list-style-type: none"> <li>• Implement the Cybersecurity action plans to implement processes, training, and security protocols to research systems and services.</li> </ul>
<p><b>Strategic Theme: National Service Delivery Model &amp; Funding Model</b></p>	
<p><b>8. 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.</b></p>	<p>Activities / Outputs</p> <ul style="list-style-type: none"> <li>• Define DRI service offerings at the national, regional, and local level.</li> <li>• Develop an evidence-based cost eligibility framework for cost matching of ARC, RDM and RS activities within DRI.</li> <li>• Develop Service Level Agreements with each service provider.</li> </ul>
<p><b>9. Promote access to and awareness of DRI tools and services.</b></p>	<p>Activities / Outputs</p> <ul style="list-style-type: none"> <li>• Develop and launch a DRI service catalog.</li> <li>• Create awareness campaigns to increase use of national DRI services.</li> <li>• Leverage user experience best practices in the design of services and workflows.</li> </ul>



<b>10. Develop formal funding processes and agreements between federal and provincial funders for national, regional, and local services.</b>	Activities / Outputs <ul style="list-style-type: none"><li>• Partner for long-term investment into DRI from provincial governments and institutional funders.</li><li>• Create a harmonized approach to funding both capital expenditures and operating expenditures.</li><li>• Define roles and responsibilities across different service layers in the ecosystem.</li></ul>
<b>11. 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.</b>	Activities / Outputs <ul style="list-style-type: none"><li>• Develop an initial set of partnership agreements and memberships with international organizations that will be foundational as we further build a portfolio of partnership opportunities.</li></ul>
<b>Strategic Theme: Research Data Management</b>	
<b>12. Develop programs to support the adoption of best practices for RDM throughout the research lifecycle.</b>	Activities / Outputs <ul style="list-style-type: none"><li>• Improved curatorial knowledge sharing.</li><li>• Adopting open science practices.</li></ul>
<b>Strategic Theme: Research Software</b>	
<b>13. Develop programs to support the adoption of best practices of RS management.</b>	Activities / Outputs <ul style="list-style-type: none"><li>• Support the implementation of FAIR4RS principles through the Inaugural Funding Opportunity.</li><li>• Develop a Research Software funding call for launch in 2022-23.</li></ul>
<b>Strategic Theme: Self-determination &amp; data sovereignty for Indigenous Peoples in Canada</b>	
<b>14. Introduce measures supporting Indigenous data sovereignty and advance access and use of DRI.</b>	Activities / Outputs <ul style="list-style-type: none"><li>• Provide The Alliance employees and their service provider partners access to OCAP® training.</li></ul>



### Strategic Theme: The Alliance's Transition into DRI

**15. 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.**

#### Activities / Outputs

- Develop processes and procedures internally to support the Alliance's role in investing in DRI.
- Communicate updates and changes to the impacted stakeholders as the transition progresses.
- Assess the current structure of ARC, RS and RDM groups, teams, and committees to align towards a DRI focus.

### Strategic Theme: Training & Development

**16. Develop a unified DRI training platform and programming in partnership with regional organizations to promote the programs and tools available to researchers across Canada.**

#### Activities / Outputs

- Working with national and regional training providers, evaluate and procure a central training platform to provide a centralized repository of training materials and promote a consistent user experience.



## 2022-23 Milestones and Timelines

The following chart illustrate the critical dates associated with Contribution Agreement reporting and Corporate Plan milestones.

	Target Date	Progress
<b>Launch of Researcher Needs Assessment Summary and Current State Assessment Reports</b> <ul style="list-style-type: none"> <li>• The Current State of Research Data Management in Canada</li> <li>• The Current State of Research Software in Canada</li> <li>• Current State of Advanced Research Computing in Canada</li> <li>• Researcher Needs Assessment Summary</li> </ul>	February 2022	On track
<b>Cybersecurity Framework</b>	March 2022	On track
<b>Transition Milestone #2: ISED ARC Expansion Program Funding ends and the Alliance Funding Leadership begins</b>	March 2022	On track
<b>Transition Milestone #3: Canadian Foundation for Innovation Major Science Initiative Funding (Operations) ends, and the Alliance assumes full leadership of ARC</b>	March 2022	On track
<b>Transition Milestone #4: Data Management (DM) and Research Software (RS) Funding from CANARIE ends and the Alliance assumes full leadership of DM and RS</b>	March 2022	On track
<b>National Service Delivery and Funding Model (NSDM) Proposal</b>	April 30, 2022	On track
<b>National Service Delivery and Funding Model (NSDM) Implementation Plan</b>	June 30, 2022	On track
<b>Annual Report</b>	July 31, 2022	On track
<b>Multiyear Funding Proposal 2023-25</b>	September 30, 2022	On track
<b>Annual General Meeting</b>	September 2022	On track
<b>Progress Report</b>	October 31, 2022	On track
<b>Corporate Plan – 2023-24</b>	January 2023	On track



The financial plan for 2022-23 includes \$21.1M to fund program expenditures, and \$17.3M to fund the operating expenditures of the Alliance. The funds will be leveraged by an additional \$16.5M from other sources, for a total investment of \$54.9M in the Canadian DRI ecosystem.

The Alliance will assess and record risks and mitigation strategies at least once per year or upon any material changes. The Alliance senior leadership team, in collaboration with the DRI community and the Audit, Finance, Risk and Investment Committee of the Board, has identified 14 potential risks and suggested mitigation strategies. Risk, mitigation strategies and solutions are tracked in the Alliance Issue and Risk Register.



# Message from the Chief Executive Officer

## Integration and stabilization

The Digital Research Alliance of Canada's goal and vision is to harmonize and improve access to digital tools and services for Canadian researchers.

We are shaping the future of research in Canada together and the Alliance's role in innovating that future through high-performance computing, research software and research data management — in subject areas from astrophysics and music theory to Atlantic salmon farming and COVID testing — has never been more important. The Alliance provides researchers with the tools they need to propel Canada as a leader on the global stage of the knowledge economy.

We know from experience that technology can be used in compelling ways — for positive outcomes and achieving breakthroughs. And yet by its very nature,

technology will continue to evolve and proliferate. Our job in the year ahead is to produce a roadmap and a path to channel the specific proliferation of advanced research computing, research software and research data management in productive ways that will serve Canada's researchers — all researchers, — as we promote fair and equitable access to DRI, with a keen eye on security.

DRI is a powerful resource to put Canada at the forefront of research across many disciplines. Together, we will accelerate change, discovery, and innovation.

Thank you, Merci, Miigwech

Nizar Ladak  
CEO

Digital Research Alliance of Canada





## Part II: Introduction

The Digital Research Alliance of Canada serves Canadian researchers, with the objective of advancing Canada's position as a leader in the knowledge economy on the international stage. By integrating, championing, and funding the infrastructure and activities required for advanced research computing (ARC), research data management (RDM) and research software (RS), we provide the platform for the research community to access tools and services faster than ever before.

We have an ambitious mandate — to transform how research across all academic disciplines is organized, managed, stored, and used. We work with other ecosystem partners and stakeholders across the country to help provide Canadian researchers with the support they need for leading-edge research excellence, research, innovation, and advancement across all disciplines.

This work would not be possible without the vision and leadership in the national DRI Strategy from the Alliance's funder, the Government of Canada through Innovation, Science and Economic Development Canada.

### Strategic Focus

The strategic focus, and what will guide our work in 2022-23, is grounded in four strategic directions.

#### **1. Provide quality service to all researchers**

The needs of the Canadian research community are as diverse as they are complex. Understanding this nuance and acknowledging the growing reliance of researchers on DRI (Advanced Research Computer, Research Data Management, and Research Software) for their research workflows, the Alliance is committed to supporting all researchers in Canada and to meet their DRI needs with consistent and high-quality service, regardless of their disciplines, geographic region, or institutional affiliation.

The tools and services available to researchers, and how to access them is core to an equitable DRI strategy. The availability of these tools and services will be complemented by a robust program of on-going training for researchers that builds their skills in DRI, from introductory to specialized tools and techniques, and that welcomes unique disciplinary needs. Nonetheless, such a researcher-centered approach cannot be achieved without national and international partnerships. We will work closely with peer organizations, academic institutions, and the broader research community to ensure its offering of services truly responds to the evolving needs of its users.



## **2. Optimize organizational structure and enhance capacity**

As the Alliance establishes itself as a national organization, we must implement an organizational structure that effectively supports a centralized delivery of core DRI capabilities and coordinates national efforts and service provision. Such a model will ensure that researchers can always find the right support. This organizational structure reconciles the need for coordinating a consistent baseline of service delivery with the sourcing of capabilities internally as well as through external partners. Most importantly, this structure fully reflects the organization's vision and mission.

Developing and retaining professional support personnel is critical to Canadian research and innovation.

## **3. Work together for an integrated DRI landscape**

As we identify which capabilities and services will be developed and provided internally or through partners, we will also define the scope of national, regional, and local services. Therefore, in collaboration with partners, it will be essential to identify roles and responsibilities to minimize overlapping services and mandates. This is especially important given our efforts to streamline processes and reduce the administrative burden on researchers.

Beyond our efforts to create integrated national DRI services, we will adopt a proactive approach to broker both public- and private-sector partnerships for the benefit of Canadian researchers and the Canadian society at large.

## **4. Maximize public investments to accelerate innovation**

The Alliance is part of the Government of Canada's national DRI strategy. As such, it will steward the government's contribution based on established target service levels, prioritizing full funding of pan-Canadian services and cost-sharing with provinces and territories for regional provision.



## Part III: Accomplishments for 2021-22

Part of moving forward is reflecting on what has been accomplished. From harmonizing our three services — research data management, research software and advanced research computing, which are at the heart of everything we do — and establishing cyber-security priorities, to rebranding ourselves from NDRI (New Digital Research Infrastructure Organization) to the Alliance and completing the transition of operations from Compute Canada's national office to that of the Alliance, we have had a busy year. We have also developed a strategic plan that looks ahead as far as 2025 and we have finalized a corporate vision, mission, and values for our new organization. We rebranded our corporate website and social media channels and made diversity and inclusion, including developing a First Nations, Inuit, and Métis engagement strategy, as well as using both official languages, priorities. From a human resources perspective, we added several new team members, building a strong and competent team. Add to that the fact that this activity all happened during a global pandemic, and it is clear the accomplishments are something to celebrate as we look forward to furthering successes in 2022-23.

This section describes key accomplishments from the past year, with an itemized list following.

### Researcher Needs Assessment journey

The Canadian DRI ecosystem is a complex and intertwined network that has evolved organically in response to distinct needs of research groups, disciplines, and DRI domains. The Alliance aims to coalesce and coordinate these efforts in alignment with the Government's National DRI Strategy, and ensure all Canadian researchers have access to the cutting-edge digital tools and resources they need to conduct their research.

We embarked on an extensive consultation to fully understand the current and future DRI needs of the Canadian researchers, as well as the geographical and disciplinary distribution of the tools, services, and resources available to them. We thus devoted 2021 to build the foundations for our journey ahead. We published the Current States of Research Data Management and Advanced Research Computing in Canada—which provide updated perspectives to the 2017 reports from the Leadership Council for Digital Research Infrastructure (LCDRI). And we published a first Current State report on Research Software. This work would not have been possible without the many individuals from across the DRI ecosystem that participated in our working groups, and who helped describe in detail the evolving nature of the DRI ecosystem, and the many players involved in it.

We also wanted to hear first-hand from the researchers about how they use the DRI, and what role the Alliance could play moving forward. This Needs Assessment included a call for Position Papers, a national survey, and Virtual Town Halls. We worked closely with DRI partners to ensure that we fully reflect their interests as we moved forward. The Portage Network and Research Data Canada transitioned just in time to support our Virtual Town Halls, where a



tremendous attendance required the participation of everybody in the Alliance. The publication of the Researcher Needs Assessment Summary is the culmination of the work of many members of the Alliance and the provides a clear picture of the tasks ahead and highlight the importance of being researcher centric as we work closely with our partners to shape the future DRI in Canada.

## Working towards an integrated DRI

We developed our Strategic Plan for the next three to five years through extensive engagement with the DRI community, where we collected feedback and recommendations for the years to come. Our Board of Directors was an active and integral participant in this process. Through their leadership the Alliance has also defined our vision, mission, and values to reflect who we are as an organization.

As a connector in the Canadian DRI ecosystem, we have engaged with over 150 different stakeholders to design a new model for how we will structure our joint service delivery and coordination. This New Service Delivery and Funding Models are a collection of processes, criteria, roles, and responsibilities focused on how we will deliver, design, support, and fund DRI services while maintaining a researcher-centric, and service-based approach. The Alliance's role as a connector extends out to the international DRI community: the International Engagements strategy and policy will help place the Alliance in a leadership role internationally.

## A catalyst for innovation

True to its mandate, the Alliance has engaged with multiple DRI stakeholders to develop a Canadian DRI ecosystem that promotes research excellence and innovation. In October we held our first Industry Roundtable to discuss first-hand their priorities and plans for the near future. This two-day event was an ideal venue for networking for over 100 attendees, which included Chief Information Officers from academic institutions, DRI service and support providers, and Alliance employees.

We also awarded \$120K to 12 Canadian research data repositories to apply for the CoreTrustSeal Repository Certification—an internationally-recognized standard for repository quality and FAIR-ness. As national and international funders increasingly require the open sharing of research data, the CoreTrustSeal Certification helps researchers and stakeholders know that the repository is trustworthy and sustainable.

As part of a general effort to promote a culture of responsible research data management, the Alliance launched the Data Champion Pilot Project Funding Call on January 4, 2022 and hosted two information sessions with over 120 attendees. This Call will award a total value of \$916K to members of the community to serve as ambassadors and promote training and awareness activities to their peers.



## Supporting researchers

The Alliance has advanced many initiatives with direct benefits for Canadian researchers. The Federated Research Data Repository (FRDR) Sensitive Data Repository Pilot is an ambitious project that involves many partners and institutions to address both technical and policy-harmonization challenges associated with storage and discovery of sensitive data. This adaptation of FRDR will provide a robust and secure Canadian repository to support the needs of researchers generating or working with sensitive data (e.g., health researchers). The COVID-19 Data Curation Pilot supports the curation of data on a cohort of COVID-19 research projects into recognized repository storage for future reuse. A total of \$336K were awarded to 11 COVID-19 projects.

With the upcoming Tri-Council policy on Research Data Management, Canadian researchers will require tools and training that respond to their specific needs. The Data Management Plan (DMP) Assistant has been upgraded to improve researcher's experience when drafting and submitting their plans to the Tri-Council. Similarly, we delivered a series of workshops and webinars to academic institutions to help them prepare their institutional RDM strategies. This multi-layered approach will allow Canadian researchers to have access to local and national resources to fulfill these new requirements.

## Equity, Diversity, Inclusion, and Accessibility (EDIA)

EDIA is core to our culture, and we have been able to begin this important work as we shape our organization. We have established an EDIA Committee to develop and oversee our EDIA Framework. All employees of the Alliance were invited to join distinct Working Groups to deliver on the activities described in the Framework, and to advance an overall culture where equity, diversity, and inclusion are core to who we are as an organization.

Recognizing that EDIA is a journey of continuous growth, we have relied on partners and experts for guidance.

INclusion INcorporated, Engaged HR, and MESH/diversity have provided specialized training for the foundation for our EDIA work ahead. Our recent Culture Benchmark Survey, for example, will allow us to measure our organization's cultural health, and ensure we provide a safe work environment as we continue to grow.

## Reconciliation

The Alliance recognizes the unique rights and needs of Indigenous Peoples in Canada. As a first step towards our efforts of reconciliation with First Nations, Inuit, and Métis, we have made training on the First Nations principles of Ownership, Control, Access, and Possession (OCAP) available to all our employees, Board of Directors, and Researcher Council. This is just the first step of a long journey of learning and collaboration with Indigenous partners.



## A growing organization

With the transition of the Portage Network and Research Data Canada into the Alliance, the recruitment and onboarding of high performing individuals has been a continuous focus to ensure our services and operations can also grow. We have hired dedicated, professional, and highly capable team members at every level of the organization. As of April 2022, the Alliance has successfully hired a very competent and skilled team, made up of full-time and seconded staff. We look to continue supporting the growth of the organization by identifying, recruiting, and retaining high-performing individuals. This includes the rollout of a comprehensive employee onboarding guide to support employee orientation and retention.

As the Alliance grows, we have made considerable progress in deploying initiatives and systems that lay the groundwork for future operational excellence and near-term organizational benefits. Our focus continues to be a sustainable and high-performing organization, with a culture that attracts the best talent. We continue to establish human resource policies and practices that underpin operational requirements, effectiveness, and efficiency.

**A responsible employer** The Alliance strives to be an employer of choice. We continuously identify opportunities to engage with staff, maximize their potential, and implement systems to make their lives easier. We monitor our efforts via regular touchpoints and make changes as required. On November 30, 2021, on the one-year anniversary of our Benefits Plan, we completed a full review of current utilization rates and market, along with an employee survey to determine their feedback on our current offering of benefits. This work will continue in 2022, as we look to identify areas of opportunity to create a benefit offering that best supports the needs of our team members.

In Q3 we upgraded our payroll system to include a comprehensive Human Resource Management System. (HRMS). This system facilitated time/attendance, performance, and talent management as well as recruiting. Our attention will now move to building out the talent and reporting/analytics functions on the system to expand our internal human resources management capabilities.

We have made numerous efforts to ensure continued participation and engagement with our staff. We hosted Personality Dimensions workshops where employees learned about their “true colours” by identifying their unique strengths and qualities and learned how to appreciate the difference in others. We similarly held our first all staff retreat in Ottawa, where 74% of staff attended in person. This was a hybrid event where staff was able to attend in person or virtually.

We are also developing our organizational culture through monthly all staff meetings and socials, and weekly coffee chats. These events offer an opportunity to get to know others within the organization, as well as the roles and projects being undertaken by peers. Our whole organization participated in the creation of our corporate values that begins to create the building blocks that provides a collective purpose and defines the aspirations of the Alliance.



## Highlights of Activities and Outcomes in 2021-22

This section recaps the accomplishments from April 2021 to March 2022. The focus has been on learning, validating, building and transition.

### Stream 1: Build the Organization

	Activities / Outputs	Outcomes
Further refine communications mechanisms.	<ul style="list-style-type: none"> <li>Membership Plan.</li> <li>New brand and visual identity.</li> <li>Refreshed website.</li> <li>Equity, Diversity, Inclusion and Accessibility (EDIA) Policy &amp; Plan.</li> <li>Official Languages Policy &amp; Plan.</li> </ul>	<ul style="list-style-type: none"> <li>Member, researcher and stakeholder awareness, knowledge, and satisfaction with the Alliance.</li> <li>Demonstrated leadership in EDIA.</li> </ul>
Provide RDM services resources and support to meet researcher needs.	<ul style="list-style-type: none"> <li>Provide RDM tools, platforms, processes, standards, and procedures.</li> <li>Provide expert advice, support, and training in RDM best practices.</li> <li>Advanced CoreTrustSeal Repository Certification Pilot and COVID-19 Data Curation Project.</li> <li>Launched the first major funding call – Data Champions Pilot Project.</li> </ul>	<ul style="list-style-type: none"> <li>Maintained continuity of services to users.</li> <li>Researcher, disciplinary and institutional RDM needs are met.</li> <li>Improved research visibility, reusability, and impact.</li> </ul>



### Stream 2: Prepare the Alliance's 2022-25 Strategic Plan

	Activities / Outputs	Outcomes
Build the National Service Delivery and Funding Models, in collaboration with regions, host sites and other DRI partners.	<ul style="list-style-type: none"> <li>Conducted a strategic assessment of the International DRI landscape looking at the current state and future needs of our Researchers while adopting an iterative design and development approach with our stakeholders on the service delivery model.</li> </ul>	<ul style="list-style-type: none"> <li>Understanding the intersections of service and aligning our offerings.</li> <li>Clear, harmonized, and effective DRI service and funding delivery to Canada's researchers.</li> <li>Researcher and stakeholder satisfaction.</li> <li>Published reports for February 2022.</li> </ul>
Prepared Strategic Plan 2022-25.	<ul style="list-style-type: none"> <li>Developed corporate vision, mission, and values.</li> <li>Established 8 Strategies to guide our work.</li> <li>Strategic Plan launch by March 2022 which includes a succinct strategic plan printout, marketing campaign, and dedicated website.</li> </ul>	<ul style="list-style-type: none"> <li>Clarity of purpose, Key Performance Indicators (KPIs), activities and resource requirements to achieve the vision.</li> <li>Community alignment / social licence to implement the strategy.</li> </ul>
Safeguard DRI resources through enhanced investments and coordination in cybersecurity.	<ul style="list-style-type: none"> <li>Collaborate with other organizations to prepare a cybersecurity framework and brand.</li> <li>Participated in two Compute Canada Federation Cybersecurity Committees: Cybersecurity Advisory Committee and the National Security Council.</li> </ul>	<ul style="list-style-type: none"> <li>Enhanced protection of Canada's Digital Research Infrastructure from cybersecurity threats.</li> <li>Establishing cybersecurity priorities and investments with an outcome-driven approach.</li> </ul>



### Stream 3: Coordinate Transition Activities

Transition Activities – harmonizing of RDM, RS and ARC research data management services in Canada.	Activities / Outputs	Outcomes
Coordinate transition activities across organizations.	<ul style="list-style-type: none"> <li>• Completed transition of Research Data Management from Research Libraries (CARL).</li> <li>• Finalizing transition turnover for March 31, 2022.</li> <li>• Managing staff status.</li> <li>• Transfer licences, and assets.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Continuity of service to Canada's researchers.</li> <li>▪ HQP / talent retention.</li> <li>▪ Transitions are executed well.</li> <li>▪ Risks are identified and mitigated.</li> <li>▪ Building brand and reputation.</li> </ul>
Lead development of a change management strategy and professional development plan.	<ul style="list-style-type: none"> <li>• Support Alliance employees, incoming staff, and Alliance DRI. professionals in transition</li> <li>• Standardized onboarding and orientation practices.</li> <li>• Began development of the Performance Excellence Program; creating performance goals aligned with Corporate Plan.</li> </ul>	<ul style="list-style-type: none"> <li>▪ HQP / talent retention.</li> <li>▪ Employee support and retention, drives satisfaction.</li> </ul>



### Stream 4: Core to All Work Streams: Stakeholder Engagement

Lead researcher, partner and stakeholder engagement and communications.

#### Activities / Outputs

- Creation and implementation of a Membership and Stakeholder Plan.
- Launched a cohesive and modern brand and visual identity.
- Hosted numerous events establishing a frequency and communications channels with the ecosystem.
- Participate in relevant national and international associations.

#### Outcomes

- Member, researcher and stakeholder awareness, knowledge, engagement, and satisfaction with the Alliance.
- Enhanced reputation and established credibility.



# High-performance computing – a necessity.

Marie-Jean Meurs, associate professor with the department of computer science at the Université de Montréal, studies the mental state of social-media posters and the health of urban forests. Her team works with colleagues in psychiatry to provide indications on the mental state of people based on their social media posts. A second project involves protecting urban forests through the development of open-source software with which communities can interact. Professor Meurs says she couldn't do either project without high-performance computing.

*“The amount of data isn't so big. It's more about the complexity of the calculation. Even with a small amount of data, your model can be quite huge.”*

**Marie-Jean Meurs, Université du Québec à Montréal, Vice Chair of the Alliance Researcher Council**



## Part IV: Planned Activities 2022-23

The operating plan is created annually and reviewed and updated on a quarterly basis throughout the year. It defines upcoming actions which together, over various cycles, support the strategic goals of the Alliance. The operational plan determines how strategic decisions and initiatives translate into annual initiatives and drive our day-to-day work.

### Integrate and Stabilize

As the Alliance integrates services and stabilizes itself as the definitive provider of digital research infrastructure to researchers across Canada, we will put into practise this operational plan. We want to provide services to researchers and organizations in all disciplines and regions and to reach out to underserved and Indigenous groups in the DRI community.

Underlying the activities and included in the focus of 'integrate and stabilize', is the on-going objective of enabling a smooth transition from Compute Canada to the Digital Research Alliance of Canada. Our goal is to build trust with these researchers and establish ourselves as leaders in building a culture and community for digital research in Canada. Our services will be dedicated to collaboration, accountability, transparency and driving continued excellence in research.

### 2022-23 Highlights of Planned Activities

The primary focus of the Alliance in fiscal 2022-23 will be to transition into our new role as service provider, service coordinator and funder in DRI. This includes the implementation of the new service delivery model and funding model as well as the development of internal processes to support transparency for several needed processes and model including the new service delivery and funding model, investment governance model, and the integration of groups, teams, and committees with an extended focus on ARC, RDM and RS. A summary of planned activities by functional area follows.

Core to achieving the Alliance's strategic objectives are its 2022-23 planned activities which are grouped between Operating the Organization and Advancing the Strategic Plan.

### Strategic Activities

Advancing the Strategic Plan activities are organized within the four strategic directions:

- Provide quality service to all researchers.
- Optimize organizational structure and enhance capacity
- Work together for an integrated DRI landscape
- Maximize public investments to accelerate innovation.



## Strategic Direction # 1: Provide quality service to all researchers

The consolidated offering of the Alliance brings the core components of DRI under the operation of a single organization and requisite strategy. Researchers will be able to access Advanced Research Computing, Research Data Management, and Research Software services from a single organization, leading to greater efficiencies and effectiveness.

- i. **Develop programs to support the adoption of best practices for research data management throughout the research lifecycle (e.g., data management planning, data curation and preservation, data sharing and reuse).**

Canada's national data discovery service (FRDR Discovery Service) will undergo a redesign to meet evolving user needs. This project aims to integrate map-based searching with the existing discovery platform and enhance search capabilities in an overhaul of the discovery interface.

- ii. **Design and implement risk mitigation measures to prevent service disruption for Advanced Research Computing (ARC) services, such as critical host site maintenance.**

Create and implement a risk mitigation plan that addresses critical services and operations across the ARC National Sites. The plan will account for back-up operations for administrative, operational and end-user data; a schedule for systems maintenance to minimize service disruption and considerations for automated resource sharing and workload transfer to handle service outages.

- iii. **Develop a national strategy for the use of in-house and commercial computing clouds. Invest in additional traditional and cloud computing, and storage resources, and develop a sustainable financial plan for its maintenance and continual renewal.**

Evaluate the uses for cloud computing within the Research community and develop a strategy to promote the adoption and support of cloud through funding, building capacity for training, promoting adoption of best practices, leveraging expertise across domains for high performance computing.

Benchmark and test technology to define the specifications of the next generation of the national platform. This preliminary work is required for future infrastructure investments. Augment available benchmarks and tests by establishing collaborative agreements with other jurisdictions. Address inefficiencies in system usage to improve availability and capacity.



## Strategic Direction # 2: Optimize organizational structure and enhance capacity.

- i. **Develop, communicate, and execute the Alliance's transition plan into the role of a DRI service provider, service coordinator and a funder in DRI. Including the transfer of responsibilities help by Compute Canada and the Federation.**

Maintain service continuity to promote a positive user experience during the Transition of services and operations from Compute Canada to the Alliance. Engage frequently and collaborate with the communities we serve, as we integrate and stabilize the functions and activities in this year.

Develop a stakeholder engagement strategy to ensure that all relevant and impacted stakeholders are included as part of the Compute Canada / CCF (Compute Canada Federation) Transition Project.

Assess the current structure of ARC, RS and RDM Groups, Teams and Committees to adjust towards a DRI focus.

- ii. **Establish guidelines and metrics to ensure compliance with the Alliance's foundational EDIA principles in all decisions and activities.**

Develop EDIA benchmarks for continuous evaluation of service provision to different research segments. Assess current national services, processes and tools and services provided by the Alliance to consider user accessibility from the onset and to identify where improvements could be made.

## Strategic Direction # 3: Work together for an integrated DRI landscape.

- i. **Establish a DRI service classification model that can differentiate services between National, Regional and Local to identify responsibility of funding and service delivery.**

Map the DRI service offerings and classify the dependencies between the service delivery partners at the national, regional, and local level. Determine which DRI capabilities the Alliance is prepared to centralize and offer in-house and which DRI capabilities The Alliance would be offered through partner organizations. Coordinate delivery of capabilities not offered directly by partnering with appropriate public or private organizations. Coordinate and support those partner organizations to ensure researchers have access to these types of services.

- ii. **Clearly define the scope of services that will be delivered between the Alliance and its partners for customized service delivery at each level.**



The development of service level agreements (SLA) with each national and regional service provider will itemize and clarify standards and quality objectives of working together. To improve user support, the Alliance will investigate developing agile and adaptable communication and ticketing service beyond the traditional help desk.

**iii. Define the responsibilities of partners at the national, regional, and local levels to ensure alignment with the funding allocation principles.**

Work with regions to standardize the service portfolio across systems and establish a centralized one-stop-shop of DRI services available to all researchers across Canada regardless of who offers the service. Additionally, the Alliance will lead in establishing a process for service scalability that facilitates local and regional service proof-of concepts or pilots to become available and accessible to all researchers across Canada.

**iv. Introduce measures that respect and support Indigenous data sovereignty and advance and use of the National DRI.**

Develop a plan for engagement to build relationships with First Nations, Inuit, and Métis communities and peer organizations to ensure appropriate identification and understanding of First Nations, Métis and Inuit researcher priorities within the Alliance and DRI services.

In 2022-23, all Alliance employees and service partners will have opportunities for OCAP training so that they are informed on First Nations principles of data sovereignty and engage in other professional development opportunities to build capacity on Indigenous data sovereignty.

**v. Develop programs to support the adoption of best practices of RS management.**

Support the development of a Research Software funding call that supports the implementation of FAIR4RS principles and related practices (e.g., software management, planning documentation, licensing, research reproducibility, etc.) during the development and use of research software.

## Strategic Direction # 4: Maximize public investment to accelerate innovation

**i. Evaluate and improve the current process for allocating DRI resources to better meet the needs of researcher.**

The current Resource Allocation Competition (RAC) process is to be reviewed to create a plan to resolve key operational issues. Work will be done collaboratively with the ecosystem.

Develop a fair and transparent process for the planning and selection of research infrastructure investments across Canada that ensures ongoing sustainability and maintenance of those investments.



**ii. Develop formal funding processes and agreements between federal and provincial funders for national, regional, and local services.**

Incentivize and advocate for long-term investment into DRI from provincial governments and institutional funders by building allyship with these partners. Develop a governance model for DRI funding across the ecosystem that includes a peer / merit-based review process for the evaluation and decision on funding awards while ensuring funding sustainability plans.

Create a stable funding environment with robust partnerships that help the Alliance share responsibility for maintaining and growing the DRI ecosystem.



## Foundational and Operational Activities

This section summarizes additional and on-going activities, not identified as strategic initiatives but are critical to integrating and stabilizing in 2022-23. Organized by team, it serves to identify additional focus and work product. Although listed by department, most work is cross-functional and all inclusive.

### Strategy and Planning

Working in collaboration with the Operations and Security, Communications and External Relations and Corporate Services teams, the Strategy and Planning team leads the planning, design, and delivery of strategic and major initiatives while supporting the adoption and support of new digital research products, services, and tools for the DRI research community.

#### Design and Implement Performance Measurement and Monitoring Processes

- Develop the process for the collection and updating of performance metrics and their associated measurements to be able to adjust and update on a quarterly cadence in collaboration with our national and regional partners.

#### Development of Architectural Framework

- Develop an architectural framework by creating a strategy for the design and use of HPC, Cloud, Storage, Software and Hosting Services that considers the current architecture and desired future state collaboratively with our internal partners.
- Design processes to evaluate infrastructure investments within the DRI ecosystem that considers technology, security, and integration into existing infrastructure as part of a solution through the development and integration of an Architectural Review Board that will be integrated into the Project Management process.

#### Development of Project Management Office

- Develop an integrated reporting dashboard for projects across the organization to monitor and measure the progress of work.
- Establish a project governance model that promotes collaboration and community engagement while having a clear path for decision making.

#### Development of International Relations and Engagement Strategy

- Develop an international engagement framework and policy across all 3 Alliance pillars.
- Undertaking specific engagements that will help position the Alliance in a leadership role in the international DRI community.



## Operations and Security

Operations and Security oversees operations for Research Data Management, Research Software, Advanced Research Computing and Cybersecurity. Activities includes the following

- ▶ Aligning RDM work with broader DRI efforts of the Alliance and the Federation.
- ▶ Continue to lead and nurture the RDM Network of Experts and Community of Practice.
- ▶ Continue to facilitate growth of a network of Preservation Service Providers (PSP).
- ▶ Coordinate and support the inaugural cohort of Data Champions.
- ▶ Working with the Federation, review and implement solutions to ensure Research Software and Research Data Management is integrated into operational practices and governance.
- ▶ Work jointly with CANARIE on cybersecurity services and projects.
- ▶ Work with the Federation to advance several broad initiatives:
  - ▶ Developing service support agreements for services provided to researchers.
  - ▶ Completing a review of the current committee governance and practices and determine where efficiencies could be made.
  - ▶ Complete a review of key support practices related to Service Management.

## Communications and External Relations

Communication and External Relations oversees communications and external relations, membership, and stakeholder strategy, along with training and development. Working across the organization and within the DRI ecosystem, the Communications team maps our stakeholder relations and communicates with key groups to advance the change management process on a timely basis and to elevate the reputation of the Digital Research Alliance of Canada.

### Communications and External Relations

- ▶ Building awareness and usership for the Alliance as *the* Canadian organization to improve access to digital tools and services for researchers.
- ▶ Ensuring an active presence of the Digital Research Alliance of Canada on social media platforms, specifically LinkedIn and Twitter.
- ▶ Launching a new website for the Alliance.
- ▶ Elevating the important work of Canadian DRI researchers, and specifically members of the Researcher Council.
- ▶ Consolidating communications to the research universe and audience segments that encompasses the full, united, offering for: RDM, ARC, and RS.
- ▶ Supporting numerous upcoming Alliance events, Communications and External Relations will hire a full-time Event Planner. This position will be funded via membership fees.
- ▶ Facilitating collaboration and connection through communications initiatives across the Alliance DRI Professionals (previously referred to as HQP (Highly Qualified Personnel)).



- ▶ Ensuring regular meetings and communications with members of the Alliance Federation. Creating opportunities for connection and networking, learning, along with information sharing.

#### Training and Development

- ▶ Developing a Training and Development portfolio that regroups multi-faceted activities for knowledge transfer to current and future users of the national DRI

### Corporate Services

Corporate Services and the Chief Financial Officer oversees Human Resources, Procurement and Grant Management, and Finance. The Corporate Services team supports the key foundational organizational structures to address the needs of the other functional areas within the Alliance.

#### Human Resources

- ▶ Performing a review of human resources policies and practices that ensure efficiency and capacity building while remaining sustainable within our maturing organization.
- ▶ Supporting the growth and stability of the organization through proactive workforce planning and the recruitment of high-performing individuals.

#### Procurement and Grant Management

- ▶ Drafting internal documentation to simplify competitive bid processes and post-award.
- ▶ Implementing a robust and comprehensive structure for funding calls, including but not limited to administrative guidelines, processes and templates for application, adjudication and post-award, and reporting.
- ▶ Participating in the adjudication process, contract negotiations, and delivery assessment of submitted and awarded proposals.

#### Finance

- ▶ Performing a comprehensive review of the finance-related policies to ensure they remain relevant for a maturing organization.
- ▶ Developing and documenting a comprehensive internal controls framework.
- ▶ Develop a framework and carry out several recipient audits.



# RDM & Research Software in action.

Laura Estill, associate professor of English and Canada Research Chair in Digital Humanities at St. Francis Xavier University, uses research software and research data management tools to do her work. She creates transcriptions of centuries-old manuscripts to make the contents searchable using metadata, so scholars — and everyday people — can better understand how people read and understood these examples of early modern drama.

*“Increasingly, making manuscripts searchable is going to change the way we understand reception history. I am also interested in how we represent these plays online; through the digital resources we create to understand literature. What do we highlight and emphasize, and what gets pushed to the margins?”*

**Laura Estill, St. Francis Xavier University**



## Part V: Financial Plan

The Digital Research Alliance of Canada is funded through contribution agreements with the federal government, through Innovation, Science and Economic Development Canada (ISED).

In 2022-23, the Alliance will plan calls for proposals in ARC, RS, and RDM. The Alliance will consult with stakeholders of the DRI ecosystem on the parameters of these calls for proposals, including the requirement for a cost match from provincial, institutional, and industry partners. The launch of these calls for proposals will be contingent on approval from ISED.

Using funding to be received from 2022-23 contribution agreement, the Alliance plans to incur \$21.1M in program expenditures and \$17.3M in Alliance operating expenditures. All planned expenditures are eligible costs per the contribution agreement. The table below provides a breakdown of the planned expenditures.

Table 1: Planned Expenditures in 2022-23

<i>[in \$K]</i>	<b>2022-23</b>
<b>Program Expenditures</b>	
Support of Highly Qualified Personnel	11,241
Advanced Research Computing	6,383
Research Data Management	3,434
	<b>21,058</b>
<b>Alliance Operating Expenditures</b>	
Salaries and wages	8,130
Benefits	1,423
Services	6,977
Supplies	66
Transportation and communication	313
Other expenses	400
	<b>17,309</b>
<b>Total</b>	<b>38,367</b>



The table below presents the allocation of total expenditures to eligible activities, as defined in our contribution agreement with ISED.

Table 2: Planned Expenditures Allocated by Eligible Activities

*[in \$K and %]*

**Eligible Activities**

Leading and Coordinating the Governance of the DRI Ecosystem	3,823	10%
ARC Infrastructure Acquisitions and Operations	6,383	17%
ARC Resource Allocations	1,381	4%
HQP Support	12,622	33%
National RS Activities	-	0%
National DM Activities	6,427	17%
Cybersecurity	3,101	8%
Management and Administration	4,630	12%
<b>Total</b>	<b>38,367</b>	<b>100%</b>

Through its programs, the Alliance requires 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 following table shows the planned expenditures from the Alliance, the estimated leveraged funding from other sources, and the total investment in the Canadian DRI ecosystem.

Table 3: Planned Expenditures and Leveraged Funding

*[in \$K and %]*

	<b>Expenditures</b>	<b>Leveraged funding</b>	<b>Total</b>
<b>Program Expenditures</b>			
Support of Highly Qualified Personnel	11,241	13,384	24,625
Advanced Research Computing	6,383	3,157	9,540
Research Data Management	3,434	-	3,434
	<b>21,058</b>	<b>16,541</b>	<b>37,599</b>
<b>Alliance Operating Expenditures</b>	<b>17,309</b>	<b>-</b>	<b>17,309</b>
<b>Total [in \$K]</b>	<b>38,367</b>	<b>16,541</b>	<b>54,908</b>
<b>Total [in %]</b>	<b>70%</b>	<b>30%</b>	<b>100%</b>



# Part VI: Risk Management

Alliance 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 level and is responsible to help ensure 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 of Directors carries responsibility for overall risk (including security and reputational risk), the committee risk assessment reports and the risk register are reviewed at regular quarterly meetings.

The Alliance's senior leadership team, in collaboration with the DRI community and the Audit, Finance, Risk and Investment Committee, has identified the following potential risks during the 2022-23 year:

<p>Expectations and timing</p> <p>Initial projects delivery timelines may lag given the complexity of the subject matter, the aggressive schedule and limited resource availability. This could affect the Alliance's ability to fully meet community expectations.</p> <p>There is also a risk of fragmentation among the DRI community — including competing funding proposals and regional and discipline-specific approaches rather than a unified national approach — if the Alliance cannot meet expectations.</p>	<ul style="list-style-type: none"> <li>▶ The Alliance has a fully articulated workplan and resource allocation, which was developed with the full engagement of the community. In balancing the needs of the workplan with project timelines, it has had to adjust its critical dates to meet its commitments to the community.</li> <li>▶ To mitigate against unfulfilled expectations, the Alliance will provide concrete demonstrations of delivering capacity and services, including an agile approach with inaugural projects. For example, the Alliance is working towards removing disadvantages/barriers for under-represented groups, such as digital humanities, small institutions, and Indigenous researchers, when drafting funding calls, as well as involving coordinating bodies such as the First National Information Governance Centre (FNIGC), with access to 10 regions and First Nations data specialists.</li> </ul>
<p>Continuity and quality of service</p> <p>The transition of ARC, RDM and RS to the Alliance combined with the continuity of current operations may be complex to execute without impacting quality of service. The transition to a production-type environment will require Service</p>	<ul style="list-style-type: none"> <li>▶ The Alliance will utilize the researcher needs assessment publication, to align objectives, as it focuses on both future needs and existing requirements.</li> <li>▶ During the transition planning, special attention will be given to ensuring a seamless transfer of operations from existing organizations to the Alliance.</li> </ul>



<p>Level Agreements and KPIs (Key Performance Indicators) to assess performance. Current resources may not have the skills and/or experience to manage this transition. In addition, retention of Alliance DRI professionals may prove difficult the longer the transition takes.</p>	<ul style="list-style-type: none"> <li>▶ It will develop and implement an aggressive outreach and communications strategy.</li> <li>▶ The Alliance will undertake change management and professional development for Alliance DRI professionals.</li> </ul>
<p>Domain focus</p> <p>Although ARC is more complex and involves more resources (Alliance DRI professionals and budget), transition planning for ARC should not be to the detriment of RDM and RS.</p>	<ul style="list-style-type: none"> <li>▶ The new National Service Delivery and Funding Models will be inclusive of ARC, RDM and RS.</li> <li>▶ Strategic planning will reflect the differential status within each of these domains.</li> <li>▶ Leads for each domain, with appropriate resource allocation, will participate in the planning process to provide for a balanced approach to transition.</li> </ul>
<p>Community buy-in and mobilization</p> <p>The implementation of the Alliance 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.</p> <p>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>	<ul style="list-style-type: none"> <li>▶ Whenever possible, current existing forums will be used to optimize community participation.</li> <li>▶ 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.</li> <li>▶ 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.</li> <li>▶ The Alliance will continue its efforts to communicate often and 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.</li> </ul>
<p>Stakeholder reach</p> <p>The Alliance needs to involve the DRI ecosystem in its planning and operations. Significant effort has been made to</p>	<ul style="list-style-type: none"> <li>▶ The Alliance is developing a stakeholder engagement strategy, including the implementation of leading stakeholder engagement tools.</li> </ul>



<p>identify all stakeholders, but there may be unintentional omissions.</p>	<ul style="list-style-type: none"> <li>▶ The Alliance will consult regularly with key stakeholders to augment its lists.</li> </ul>
<p><b>Inclusivity</b></p> <p>Well-established research communities may unintentionally crowd out groups that are not traditionally represented in this arena.</p>	<ul style="list-style-type: none"> <li>▶ The Alliance will undertake specific, targeted EDIA activities in the Alliance governance, organizational and advisory functions.</li> <li>▶ It will explore means to build capacity and support engagement for underrepresented groups.</li> </ul>
<p><b>Security – confidentiality</b></p> <p>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>	<ul style="list-style-type: none"> <li>▶ Personal information is restricted to HR (Human Resources) staff.</li> <li>▶ The Alliance will actively monitor and secure access to data / files.</li> <li>▶ The Alliance will ensure data centres are applying cybersecurity best practices.</li> </ul>
<p><b>Security – integrity</b></p> <p>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>	<ul style="list-style-type: none"> <li>▶ Access to this information is restricted and data is backed up as needed.</li> <li>▶ The Alliance will proactively consider the likelihood of this risk as part of transition plans being established.</li> <li>▶ 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.</li> </ul>
<p><b>Infrastructure</b></p> <p>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>	<ul style="list-style-type: none"> <li>▶ 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.</li> <li>▶ Host site leaders to consider timeliness and costs for equipment maintenance.</li> <li>▶ Planning will take into account the exceptional logistical challenges posed by global supply chain issues affecting procurement and transport of equipment.</li> </ul>



<p>Finance</p> <p>Risks include adverse financial audit opinion and delays in developing the back office.</p>	<ul style="list-style-type: none"> <li>▶ Active engagement with Auditors on engagement letter and review audit plan with the Board's Audit, Finance and Risk Committee.</li> </ul>
<p>Human resources</p> <p>Failure to recruit qualified personnel and the inability to integrate benefits structure among transitioning organizations.</p>	<ul style="list-style-type: none"> <li>▶ The Alliance has completed a market study of our compensation offerings (salary scale and benefits program) and will offer fair and competitive compensation and benefits packages.</li> </ul>
<p>Reputation</p> <p>Failure to manage stakeholder expectations, failure to serve the research community; the Alliance Contribution Agreement not met.</p>	<ul style="list-style-type: none"> <li>▶ The organization will ensure transparency with stakeholders and follow through on commitments; we will maintain regular and effective communications.</li> <li>▶ The Alliance will actively engage with the Researcher Council and encourage them to serve as ambassadors for the Alliance and to receive and share progress.</li> <li>▶ It will resource projects during budget development and embrace good project management.</li> </ul>
<p>Governance / collaboration</p> <p>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>	<ul style="list-style-type: none"> <li>▶ The Alliance has adopted best practice governance standards: corporate By-Laws and policies, a skills matrix, self-assessment, diversity, and Board sub-committees.</li> <li>▶ Working with Board Stakeholder and Member Committee to define value proposition.</li> <li>▶ Staggered terms mitigate loss of organizational memory. Governance and Nominating Committee is assessing the implications of Board terms.</li> </ul>
<p>Funding</p> <p>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>	<ul style="list-style-type: none"> <li>▶ Work plan development with milestones. Buffer built in to work plans to ensure slippage is not detrimental.</li> <li>▶ ISED and the Alliance are engaged in on-going conversations with provincial ministries and regional ARC organizations to assess likelihood of provincial match.</li> <li>▶ Extensive engagement, involvement and community consultation planned to ensure</li> </ul>



	<p>issues / concerns are identified early and dealt with in a timely manner.</p> <ul style="list-style-type: none"><li>▶ Provide required reporting to ISED on time.</li><li>▶ Ensure that ISED is kept informed of matters as they arise; promptly respond to ISED's request for information.</li></ul>
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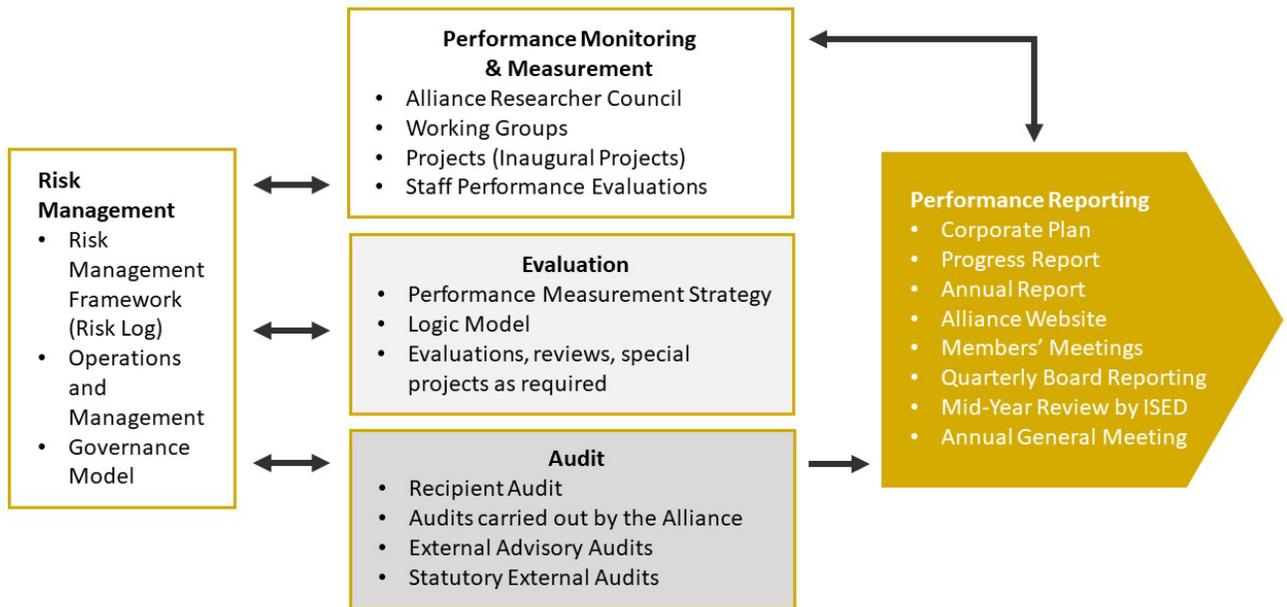


# Part VII: Performance Monitoring Strategies

## Performance, Evaluation, Risk and Audit Framework

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





## Part VIII: Conclusion

### Integration. Stabilization

The Alliance has experienced massive growth as a new organization in its inaugural year and fiscal 2022-23 can be characterized by two themes: **Integration and Stabilization**

The DRI ecosystem is extremely large, overlapping, and complex. Stabilizing its many interdependent parts while integrating the core areas of Research Software, Research Data Management, and Advance Research Computing are the focus, so as not to disrupt ongoing research. Many innovations and improvements will stem from this integrated and unified research offering.

Fiscal year 2022-23 is about stabilizing the recent growth and transition from fiscal 2021-22, while, developing key services to address unmet needs, and building for innovation in the coming year. Active, regular communication, transparency and consultation are the cornerstones of everything the Alliance does. Our sincere intent is to deliver excellence for the research community and position Canada as a key player in the global knowledge economy.



## 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 advanced research computing, research software and research data management. 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.



Janet M. Davidson O.C.  
Chair



Peter MacKinnon  
Vice-Chair



Dale Askey  
Director



David T. Barnard  
Director



Donna Bourne-Tyson  
Director



Jennifer Doyle  
Director



Chris Lumb  
Director



David MaGee  
Director



Gail C. Murphy  
Director



Sina Shahandeh  
Director



Jane Skoblo  
Director



Randall Sobie  
Director



Jeffrey Taylor  
Director



Denis Thérien  
Director



Martha Whitehead  
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 DRI infrastructure and services, contributes to the Alliance's strategic vision, and serves as ambassadors for the Alliance's mandate.



Randall Sobie,  
University of Victoria,  
Chair



Marie-Jean Meurs,  
Université du Québec à  
Montréal, Vice-Chair



Amol Verma,  
Unity Health Toronto,  
Vice Chair



Wahab Almuhtadi,  
Algonquin College and  
Carleton University



Girma Bitsuamlak,  
Western University



Bruno Blais,  
Polytechnique  
Montréal



Guillaume Bourque,  
McGill University



Susan Brown,  
University of  
Guelph



Emmanuel Château-  
Dutier,  
Université de Montréal



Carolyn Côté-  
Lussier,  
Institut National  
de la Recherche  
Scientifique



Constance Crompton,  
University of Ottawa



Carl D'Arcy,  
University of  
Saskatchewan



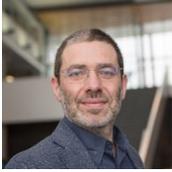
Rebecca Davis,  
University of  
Manitoba



Philippe Després,  
Université Laval



Erin Dickie,  
Centre for Addiction  
and Mental Health



Benoît Dupont,  
Université de  
Montréal



Laura Estill,  
St. Francis Xavier  
University



Benjamin Fung,  
McGill University



Catherine Lovekin,  
Mount Allison  
University



Anne Martel,  
Sunnybrook  
Research Institute



Terry Peckham,  
Digital Integration  
Centre of Excellence



Michele  
Piercey-Normore,  
Memorial University  
of Newfoundland and  
Labrador



Rebecca Pillai  
Riddell, York  
University



Pekka Sinervo,  
University of Toronto



# DRI is foundational.

Rebecca Davis, associate professor at the University of Manitoba, and her team rely heavily on modelling and high-performance computing (HPC).

*“I deal in a world where we can’t see what we’re studying. We’re using everything physics can give us to try and explain and predict the world around us and life in particular.”*

In fact, Davis says, her field wouldn’t exist without HPC.

*“Most of the DRI resources that I employ have been heavily in the modelling because we deal in very complex models and we need a lot of data.” Quantum mechanics is very advanced and “computationally expensive” because it’s modelling multiple atoms coming together. “My field simply wouldn’t exist without these resources. They’re the foundation of everything we do.”*

**Rebecca Davis, University of Manitoba**