NDRIO | NOIRN

New Digital Research Infrastructure Organization

Nouvelle organisation d'infrastructure de recherche numérique

Corporate Plan
2020-2021

Submitted to:
Innovation, Science and
Economic Development Canada

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Part I
Executive Summary

Beginning in August 2019, the New Digital Research Infrastructure Organization (NDRIO)'s first six to nine months focused on establishing the organization, consulting with stakeholders, and putting in place a governance and membership model from which to eventually transition and grow a new vision and national service delivery model for Advanced Research Computing (ARC), Data Management (DM) and Research Software (RS).

Accomplishments in 2019-20 included:

- Incorporation as a member-based not-for-profit organization.
- The approval of a Contribution Agreement with Innovation, Science and Economic Development Canada (ISED).
- The establishment of an inclusive, diverse Applicant Board and start-up management team.
- A formal process of stakeholder consultation to inform the membership and governance structure, in which about 220 members of the community participated.
- The development and release of the governance and membership model, including Guiding Principles.
- Recruitment for an independent Board of Directors, including a Chair and up to 14 Directors, 50% of whom will be independent. We expect this Board to be elected at the first Members' Meeting in March 2020.
- An inaugural call for Primary (Voting) Members and Associate (Non-Voting) Members, reaching out to 315 post-secondary institutions, research hospitals, colleges and related organizations across Canada. As of January 29, 2020, 135 applications have been received.
- Work to begin transitioning the CARL Portage program by October 1, 2020.

Planned activities for 2020-21, to begin April 1, 2020, include the following.

Summary of Activities 2020-21

Stream 1: Build the Organization	1. Finalize NDRIO's governance, organizational structure and HR plan.
	2. Establish the Researcher Council.
	3. Articulate the strategic plan, including a national vision and strategy for growth in ARC, RS and DM, based on a user needs assessment.
	4. Establish backroom finance and administrative functions, and management processes.
	5. Define the NDRIO brand and establish communications mechanisms.

Stream 2: Build the New Service Delivery Model	6. Build the new service delivery model, in collaboration with regions, host sites and other DRI partners. 7. Lead the development and delivery of pilot projects (ARC – DM – RS). 8. Safeguard DRI resources through enhanced investments and coordination in cybersecurity. 9. Develop a joint DRI Ecosystem Plan, working with CANARIE.
Stream 3: Coordinate Transition Activities	10. Develop and commence implementation of transition plans, providing for continuity of service delivery and the assessment of existing highly qualified personnel (HQP) and infrastructure. 11. Coordinate transition activities across organizations, at the management and governance levels. 12. Lead development of a change management strategy and professional development plan. 13. Complete transition of DM – Carl Portage.
Core to All Streams: Stakeholder Engagement	14. Lead researcher, partner and stakeholder engagement and communications.

With the Inaugural Board in place by March 2020, NDRIO will then recruit its permanent CEO, with additional executive-level leaders to be onboarded in the subsequent months. The current interim management team will allow for continuity and transition of resources.

The financial plan for FY 2020-21 reflects total revenue of $9,019K and planned expenditures of $8,470K, resulting in a planned $549K excess of revenue over expenditures. The planned excess of revenue over expenditures is due to planned membership revenue and investment income.

NDRIO will assess and record risks and mitigation strategies at least once per year or upon any material change. In collaboration with the DRI community, NDRIO has identified 10 potential risks, along with suggested mitigation strategies, for 2020-21. Outlined on page 22, these risks reflect: start-up risk; expectations and timing; continuity and quality of service; domain focus; community buy-in and mobilization; stakeholder reach; inclusivity; implications of funding models for regions and institutions; cash flow risk; and impacts to experimental approaches.

The organization has had a strong first year. Significant planning and change management lie ahead as NDRIO enters Year 2 of operations. Together with our ecosystem partners and stakeholders, we feel confident that the Government of Canada's historic investment in DRI will result in a harmonized and results-oriented system for Canada's research community.

Part II
Introduction

In support of the Canadian post-secondary research landscape, and to help it remain competitive and truly world-class, Innovation, Science and Economic Development Canada (ISED) has earmarked $572.5 million toward a digital research infrastructure strategy.

The New Digital Research Infrastructure Organization (NDRIO) is a new, national not-for-profit organization that will play a critical role helping advance the establishment of a researcher-focused, accountable, agile, strategic and sustainable Digital Research Infrastructure (DRI) ecosystem for Canadian researchers.

NDRIO and its Board will be trusted partners, bridge builders and collaborators. Together, we will work with other ecosystem partners and stakeholders across the country to help provide Canadian researchers the digital tools, services and infrastructure they need to support leading-edge scientific excellence, research, innovation and advancement across all disciplines.

NDRIO will fund activities in Advanced Research Computing (ARC); Data Management (DM); and Research Software (RS). These activities will advance and invest in national DRI activities.

Our mandate is critical to all of Canada's academic researchers, our country's ability to remain competitive globally, and our collective ability to benefit society. We are confident that this historic investment in DRI will result in a harmonized system that is simple, effective and results-driven for Canada's research community.

In August 2019, NDRIO submitted a proposal to ISED to fund our activities to March 2021. That proposal was reviewed and incorporated in the Contribution Agreement between ISED and NDRIO, which was signed on October 31, 2019.

Both 2020 and 2021 will require significant planning and change management to support the transition to a new model. We recognize the challenge of change and we will facilitate meaningful stakeholder engagement, along with a program of open and transparent communication, to help guide a transition is both understood and well implemented.

This Corporate Plan, as required by NDRIO's Contribution Agreement with ISED, reports on the accomplishments completed in 2019-2020 and provides our plans for the 2020-2021 year.

Part III
The First 6-9 Months: 2019-2020 Accomplishments

This section describes the accomplishments from August 2019 to January 2020, and activities planned from January to March 2020.

Leading and Coordinating Governance of the DRI Ecosystem

Incorporation and Contribution Agreement Approval

NDRIO was incorporated (11593765 Canada Association) as a member-based not-for-profit federally incorporated Corporation on August 28, 2019.

The agreement between ISED and NDRIO, ending March 31, 2021, was negotiated in September and October 2019 and signed on October 31, 2019.

Applicant Board

NDRIO is committed to ensuring it is inclusive and representative of the diversity of Canadian society in the adoption of services it provides, in programs it runs, in its engagement with stakeholders, and in its own organization.

The first meeting of the Applicant Board (four members) took place on August 19, 2019.

In accordance with NDRIO's principles, 50% of the Applicant Board members are women. It is also geographically diverse (Saskatchewan, Ontario, Quebec and New Brunswick) and represents the research, IT, and university communities as well as the corporate perspective. Both official languages are represented.

Community Consultation on Governance and Membership

NDRIO is committed to providing services that focus on the needs of researchers and that coordinate seamlessly with other partners in the DRI ecosystem.

In September and October 2019, NDRIO led six face-to-face meetings (Vancouver, Saskatoon, Toronto, Ottawa, Montreal and Halifax) to consult the DRI community on NDRIO's governance and membership model. In addition to the face-to-face meetings, five virtual meetings (one in French) took place in November. About 220 members of the community participated. The feedback from the DRI community informed NDRIO's work in establishing the Governance and

Membership Model that was communicated to the community for additional comments in December 2019.

As part of the governance model definition, specific attention has been paid to enable close collaboration with all stakeholders involved in the DRI ecosystem. This is reflected in the membership model and the Guiding Principles adopted by the Applicant Board. In keeping with these Guiding Principles, NDRIO will be researcher-centric; service-oriented; accountable and transparent; striving for excellence; and collaborative.

Advisory Committee Status

The establishment of an Advisory Committee was planned for 2019-2020. Although the Committee is not yet established, regular community consultations took place on an issue-by-issue basis. A Screening Committee was also established to review potential Board Directors, as part of the Inaugural Board recruitment process. A formal Advisory Committee will be established early in 2020 as a priority to the Inaugural Board.

Inaugural Board Recruitment and Call for Membership

Following a competitive process, the Applicant Board engaged executive recruitment firm Odgers Berndtson to support the recruitment process for the Inaugural Board of Directors. Subject to Inaugural Board direction, Odgers Berndtson has also been retained to undertake the CEO search.

NDRIO's recruitment process reflects equity, diversity and inclusion (EDI) principles that will result in a Board with 50% independent Directors, including the Chair. Independent Directors are defined as having no material relationship with the organization. NDRIO will apply best efforts to see the appointment of 50% female Directors. Furthermore, the Inaugural Board of Directors will reflect the geographic and linguistic diversity of the country as well as the complexity of the DRI ecosystem.

The call for interest in Director positions is an open process. The advertisement was posted in December 2019, and personalized communications were sent to a wide range of stakeholders to inform them of the process.

Potential Board Directors will be reviewed by a Screening Committee consisting of Applicant Board members and additional research community or external members. The objective is to present a slate of up to 15 Directors to the first general Members' meeting in March 2020. Using a skills-based assessment process, potential Board Directors will be assessed and appointed to staggered terms of one to three years.

In addition to the recruitment of Directors for the Inaugural Board, NDRIO also issued a wide call to invite potential Members to join the organization, reaching out to 315 post-secondary institutions, research hospitals, colleges and related organizations.

Membership is not required to access the programs of NDRIO, which will be made available to eligible researchers and research institutions across Canada. However, the new organization's governance will rest and draw upon the engagement and commitment of its membership.

As outlined in the Governance and Membership Model, there are two categories of membership: Primary Members (Voting) and Associate Members (Non-Voting). Primary Membership is available to public post-secondary institutions, research hospitals and/or affiliated institutes that are eligible for Tri-Council grants. Voting Members must have an explicit research mandate and demonstrable research activities. Associate Membership is available to organizations that are eligible but choose not to apply for Primary Membership. Associate Membership is also offered to national DRI-related associations that have a significant amount of activity in one of the three DRI pillars – ARC, DM and/or RS. Membership must be approved by the Board.

Responses to both the Inaugural Board recruitment process and the call for Members have been positive. As of January 29, 2020, NDRIO has received 51 applications for Primary (Voting) Membership and 84 applications for Associate (Non-Voting) Membership. Eligible institutions will have the opportunity to join NDRIO throughout the year.

Management and Administration

The start-up team began its mandate in September and October 2019. The positions include:

- Interim Executive Director
- Interim Chief Financial Officer
- Interim Director, Governance and Policy
- Interim Director, Planning and Operations
- Interim Advisor, Strategic Governance and Operational Support

Additional resources were added later to answer specific needs (administrative assistance, translation, communication, project management, etc.).

The composition of the start-up team also respects diversity principles, as more than 50% are women and it is also geographically diverse (British Columbia, Ontario, Quebec and New Brunswick). Both official languages are also represented.

The Applicant Board is responsible for oversight of the fiduciary and operational aspects of the organization. An interim CFO was appointed, and policies have been adopted with respect to conflict of interest, a code of conduct, confidentiality, Interim Executive Director delegation of authority from the Board and travel expenses.

Part IV
Year 2: 2020-2021 Planned Activities

Leading and Coordinating Governance of the DRI Ecosystem

NDRIO will continue to take steps to be inclusive and representative of the diversity of Canadian society within the organization and on how it engages with the community. It will also help ensure that members of underrepresented groups are able to engage in any pilots of service delivery it undertakes, with attention given to the inclusion of Indigenous groups and associations.

NDRIO will adopt EDI principles and policies for the selection of the Board Directors, for hiring within its organization, for stakeholder engagement and for pilot service provision.

The Inaugural Board will be approved at the general meeting of Members to take place in March 2020 in Ottawa. Its first task will be to complete the governance and program frameworks of NDRIO and formulate a vision and mission statement for the new organization. In addition, the Board will begin the hiring process for the Inaugural CEO.

The Inaugural Board will also be involved in the appointment of external auditors and approval of certain investment policies consistent with the obligations of the Contribution Agreement.

The Board will also establish the Researcher Council and any other council or working group required to support robust participation of the DRI ecosystem in the governance of NDRIO, including finalizing Board Committees with Terms of Reference and supporting policies.

Strategic Plan – 2021-2024 Proposal

NDRIO's Strategic Plan will form the core of the proposal to ISED to fund its activities for the years 2021 to 2024. NDRIO's Strategic Plan will respect the following Guiding Principles:

- Working collaboratively with partners to align investments and maximize impact to increase capacity and availability of ARC, RS and DM resources; and
- Promoting productive networks and collaboration among Canadian universities and colleges, to enhance research outcomes and maximize efficiencies.

The team will prepare a detailed plan, including a critical path, to help ensure that activities required to deliver the needs assessment, the service delivery model and the strategic plan are synchronized.

Inputs and Outputs

1. National strategy and vision, for ARC, RS and DM
2. Researcher Council guidance
3. Stakeholder analysis
4. User needs assessment
5. Review of current services:
   - Services to maintain, augment or remove
   - Identification of upcoming needs for new services
   - Analysis and definition, current state and service modeling
6. Position paper and roadmap for RS
7. Roadmap updates for ARC and DM
8. New Service Delivery Model:
   - Future-state modeling, by domain, by layer and by service
   - National-, regional-, and local-service definition, including expected service levels and KPIs, and roles and responsibilities of all stakeholders
9. Resource planning, and retention and development plan for HQP
10. Transformation plan: Moving from current state to desired state, including HQP impact

Transition

NDRIO will plan to prepare for a smooth transition of the delivery of national-level services. NDRIO aims to establish the required structure, policies, procedures and controls to accommodate seamless transfers with no impact on users. Early next year, NDRIO will work with CANARIE and Compute Canada to establish appropriate coordinating mechanisms to oversee the two years transition planning at the governance and management levels.

- Transition of ARC services – this transition involves coordination with many DRI ecosystem partners, most notably Compute Canada, regions, national host sites and institutions.
- NDRIO will also work with CFI regarding ARC service transition, to provide for effective funding coordination.
- Transition of RDC/RDM and RS activities from CANARIE to NDRIO.
- Transition of the CARL Portage Program to NDRIO.

Support of Highly Qualified Personnel

NDRIO will work with partners and stakeholders to provide for proper change management in establishing and executing the new Service Delivery Model and the Transition Plans.

NDRIO will also expand research and job opportunities by providing support through the research infrastructure for the development of highly qualified personnel (HQP).

ARC Resource Allocations

As an input to the strategic plan, NDRIO will update ARC's Roadmap that was initially defined in the Advanced Research Computing (ARC) Position Paper published by LCDRI in 2017.

Pilots

NDRIO has committed to preparing a funding proposal to ISED for pilots and quick-win projects to engage the DRI ecosystem. These projects will help NDRIO prepare to provide and enhance national-level service delivery of existing or new services, by exploring new approaches and collaborations with other DRI ecosystem partners. This funding proposal will be additive to the budget presented in this document.

NDRIO, in collaboration with Compute Canada and other DRI ecosystem partners, will identify and undertake selected, targeted pilots in Advanced Research Computing.

Possible examples:

- A pilot considering how private cloud providers might be used for burst compute capabilities at peak load times
- Using the cloud to provide researchers with sandboxes (testing environments that isolate untested code and outright experimentation from the production environment or repository) on demand
- Evaluating the addition of quantum computing

National Layer RS Activities

As an input to the strategic plan, and under the guidance of the Researcher Council, NDRIO will prepare an RS Position Paper.

Pilots

NDRIO is committed to enhancing the capabilities of researchers to work with appropriate research software that is robust, scalable and sustainable, and to ensuring software capabilities are protected through a collaborative approach to enhanced cybersecurity.

NDRIO, in collaboration with CANARIE, Compute Canada and other DRI ecosystem partners, will identify and undertake one or more selected, targeted pilots to support Research Software.

Possible examples:

- Investigate tools for easing the movement of research software from one cloud stack to another
- Enhance the visibility of existing software to encourage reuse (catalogues, online training tools, etc.)
- Develop additional modules for existing research software

National DM Activities

As an input to the strategic plan, NDRIO will update DM's Roadmap that was initially defined in the Data Management Position Paper published by the Leadership Council for Digital Research Infrastructure (LCDRI) in 2017.

Pilots

NDRIO is committed to enhancing the capabilities of researchers to manage their data, and to ensuring these capabilities are protected through a collaborative approach to enhanced cybersecurity.

NDRIO, in collaboration with CANARIE and other DRI ecosystem partners, will identify and undertake one or more selected, targeted pilots to support Data Management.

Possible examples:

- Integration of domain-specific data repositories into national dataset exploration services
- A certification program for data repositories
- A summer school on data management

DM – CARL Portage

The CARL Portage program will be the first to transition to NDRIO on October 1, 2020 as its funding, now provided through CANARIE, will end on September 30, 2020. In addition, NDRIO will support participation in the DM portion of the strategic planning, and the last phase of the Geodisy project (an open-source spatial discovery platform for Canadian open-research data, including map-based search to complement the Federated Research Data Repository (FRDR)).

National Data Stewardship Support

- Provide national data stewardship support through an enhanced Portage Secretariat.
- Implement new Coordinator positions to support policy, privacy and sensitive data, and researcher intelligence-gathering initiatives. These new positions will directly support the work of existing Portage Expert and Working Groups, including the Responsible RDM Practices for the Sensitive Data Working Group and the Research Intelligence Expert Group.
- The Portage Director, supported by a Strategic Planning Officer, will work with the NDRIO-led working group to develop the DM component of its Strategic Plan 2021-2024.
- Improve the layout, content and design of the Portage website to better support the needs of researchers and data professionals.
- Translate Portage outputs (documents, guidance, tools) to be available in both official languages and, where appropriate, internationalization of Portage platforms and services.

RDM Platform, Services and Ecosystem Development

Discovery, Access and Reuse Support

- Operational funding for the Federated Research Data Repository (FRDR) will act as a full-scale national service by the end of Q2 2020.
- Provide support for domain repositories to attain certification. This project will contribute towards the development of a network of certified data repositories in Canada.
- Promote the adoption of Digital Object Identifiers (DOIs) – an internationally recognized standard for persistent identifiers for digital objects – among Canadian repositories.
- Support the growth of a nascent network of Preservation Service Providers (PSPs) in Canada. PSPs will be responsible for the preservation and stewardship of important Canadian research data over the long term.

Data Management Planning (DMP) Support

- Continued operational support for the DMP Assistant, which is launching a new platform in Q1 2020. The DMP Assistant is a web-based, bilingual tool for developing DMPs.

RDM Ecosystem Support

- Support the ORCID-CA consortium. Membership will provide premium access to the ORCID API, enabling the development of more advanced integrations with ORCID.
- Support an ORCID-CA promotional campaign for increased adoption of ORCID iDs by Canadian researchers.
- International outreach and alignment through the partial support, along with other Canadian funders, for a Research Data Alliance, Region North America (RDA-RNA).

Management and Administration

In its second fiscal year, NDRIO will focus on working with partners to create a vision of a coordinated DRI ecosystem, and to initiate planning towards a coordinated operating ecosystem.

NDRIO will develop a vision and strategic plan for the organization and its delivery of national-level Advanced Research Computing, Data Management and Research Software services.

- This work will require engaging with DRI ecosystem partners (e.g., ISED; Compute Canada; CANARIE; and national, regional and local DRI providers) to prepare transition plans and to define roles and responsibilities across the national, regional and local layers of the DRI ecosystem's service delivery model.
- NDRIO will consult the research community to assess current services and identify priority-based needs for computing, data and software.
- These efforts will be informed by, and build on, existing work undertaken by DRI ecosystem partners, and will include engagement with the community.
- NDRIO will produce a strategic plan that is endorsed by its Board and submitted to ISED by December 2020.
- NDRIO will partner with CANARIE to produce a Joint DRI Ecosystem Plan that will be submitted to ISED on January 31, 2021.
- Finally, NDRIO, in consultation with other DRI partners, will prepare a Cybersecurity Framework to be submitted to ISED on March 31, 2021.

The interim executive-level team will remain in place until the appointment of the new CEO, who will then gradually replace interim employees with permanent employees. An overlap of resources has been included in the budget to provide for a smooth transition. To facilitate continuity, expert advisors will be called upon, including members of the Applicant Board and others.

The implementation of a permanent team will require organizational development, including the definition of key executive roles and drafting of position profiles. It will also require the development of a recruitment strategy, and management and strategic planning processes.

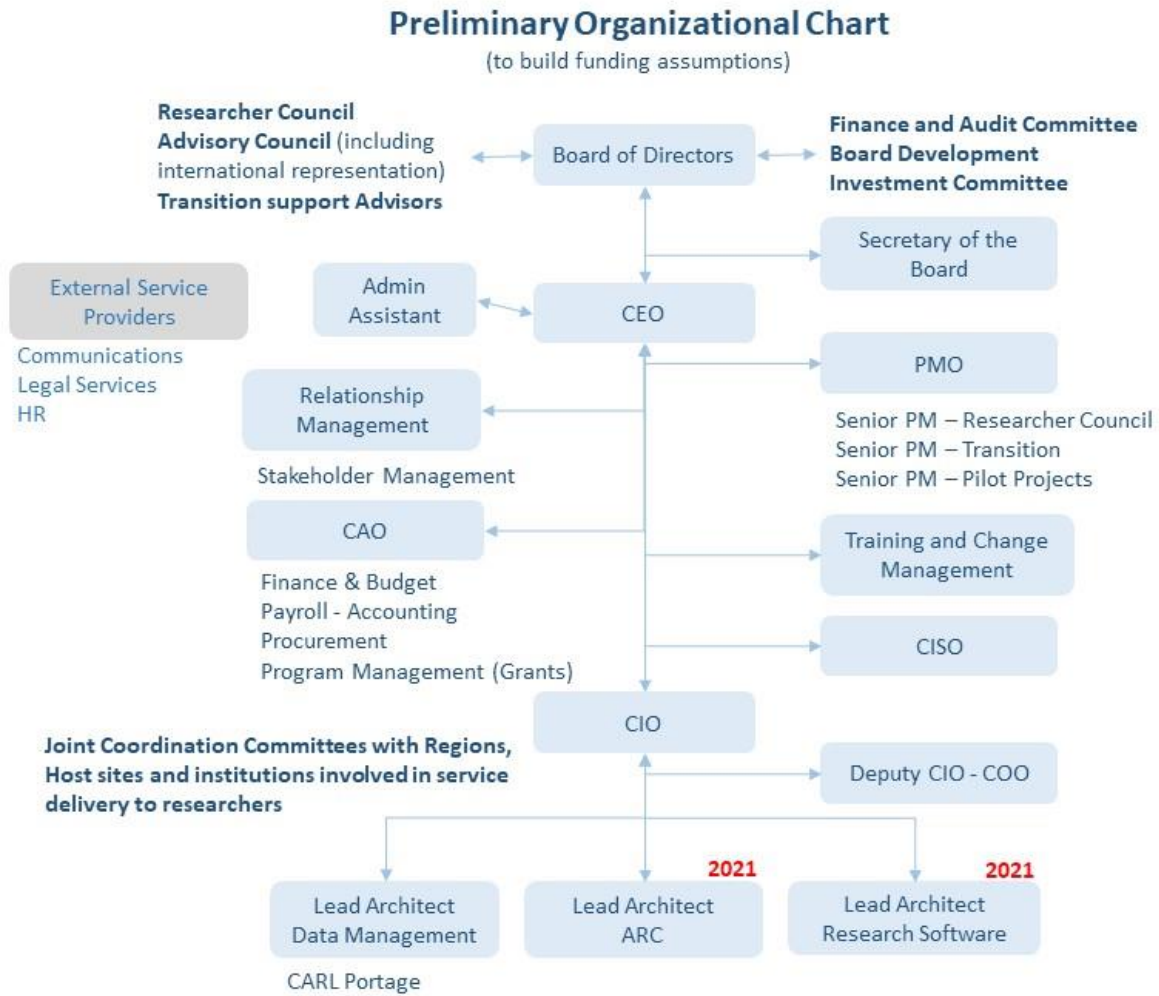The expansion of the current team will support the core activities of 2020-21.

Summary of Activities

Stream 1: Build the Organization	
1. Finalize NDRIO's governance, organizational structure and HR plan	- Onboard Inaugural Board of Directors - Establish bylaws, committee structures and supporting policies - Establish Researcher Council - Recruit the CEO and executive-level team - Undertake organizational development work, envisioning growth in the delivery of services
2. Establish the Researcher Council	- Provide for a Researcher Council that is multi-disciplinary (including social sciences and humanities); reflective of the diversity of research institutions across the country; representative of the researcher community at various points in their careers; and diverse and inclusive in its make-up - Provide for appropriate linkages between the Researcher Council and Board
3. Articulate the strategic plan, including a national vision and strategy for growth in ARC, RS and DM, based on a user needs assessment	- Conduct a user needs assessment, under the guidance of the Researcher Council - Develop a national position paper on Research Software, with community input - Update the ARC and DM roadmaps
4. Establish backroom finance and administrative functions, and management processes	
5. Define the NDRIO brand and establish communications mechanisms	

Stream 2: Build the New Service Delivery Model	
6. Build the new service delivery model, in collaboration with regions, host sites and other DRI partners	▪ Conduct a current-state assessment ▪ Develop a future-state design ▪ Develop transformation plan ▪ Work with host-site institutions, regional groups and other institutions involved in the delivery of services to researchers to provide for an effective transition to the new model
7. Lead the development and delivery of pilot projects (ARC – DM – RS)	▪ Engage the community to articulate pilot project needs
8. Safeguard DRI resources through enhanced investments and coordination in cybersecurity	▪ Develop a plan in consultation with the community ▪ Collaborate with other organizations to establish a longer-term national vision on cybersecurity
9. Develop a joint DRI Ecosystem Plan, working with CANARIE	
Stream 3: Coordinate Transition Activities	
10. Develop and commence implementation of transition plans, providing for continuity of service delivery and the assessment of existing HQP and infrastructure	▪ CCF – ARC ▪ CANARIE – RDC/RDM and RS
11. Coordinate transition activities across organizations, at the management and governance levels	▪ Establish joint transition governance between NDRIO and Compute Canada, and between NDRIO and CANARIE
12. Lead development of a change management strategy and professional development plan 13. Complete transition of DM – CARL Portage	▪ Support members of NDRIO and highly qualified personnel (HQP) in transition
Core to All Work Streams: Stakeholder Engagement	
14. Lead researcher, partner and stakeholder engagement and communications	▪ Develop and implement a multi-channel strategy ▪ Participate in relevant national and international associations

The following organizational chart (to be validated by the Inaugural Board and new CEO) will be used as a model to add resources, as needed.

Preliminary Organizational Chart
(to build funding assumptions)

Researcher Council
Advisory Council (including international representation)
Transition support Advisors

Finance and Audit Committee
Board Development
Investment Committee

Board of Directors

Secretary of the Board

External Service Providers

Communications
Legal Services
HR

Admin Assistant

CEO

PMO

Senior PM – Researcher Council
Senior PM – Transition
Senior PM – Pilot Projects

Relationship Management

Stakeholder Management

CAO

Finance & Budget
Payroll - Accounting
Procurement
Program Management (Grants)

Training and Change Management

CISO

CIO

Joint Coordination Committees with Regions, Host sites and institutions involved in service delivery to researchers

Deputy CIO - COO

Lead Architect Data Management

CARL Portage

Lead Architect ARC

2021

Lead Architect Research Software

2021

Management Functions

In addition to core activities, NDRIO will put in place management functions required to support its operations.

- Support for the Board, the Researcher Council and other councils and working groups
- Finance and procurement policies, processes and procedures
- HR policies, processes and procedures (including an executive management hiring process)
- Performance, Evaluation, Risk and Audit Framework, to be submitted to ISED by December 2020
- Project management, tracking and controls
- Accounting and payroll
- Reporting – Annual Report, Corporate Plan and Progress Report
- Communications and stakeholder relations
- Grant program support
- Space, infrastructure and back-office systems

Grant Program Management

Although ongoing delivery of existing services (on existing infrastructure) will be funded directly by NDRIO, expansion or delivery of new services will be funded by grant programs managed by NDRIO or by procurement of commercial services. To implement the new Service Delivery Model, NDRIO will develop a new Grant Program Management model, moving from a project-based approach to a service-based one.

- Pre-Award Phase – Funding opportunities and application review
  - Selection Committee
  - Selection and evaluation criteria
- Award Phase – Award decisions and notifications
- Post-Award – Implementation, reporting and closeout

Part V
Delivery Timeline 2020-21

First Members' Meeting	March 2020
Election of Inaugural Board of Directors	March 2020
Establishment of Researcher Council	June 2020
Recruitment of CEO	by September 2020
Development and Delivery of Pilot Projects	from September 2020
By-laws, committee structures and supporting policies	September 2020
Draft Service Delivery Model	September 2020
Integration of CARL Portage	October 2020
Organization name and brand identity	November 2020
Change Management Strategy and Professional Development Plan	December 2020
Backroom Finance, administrative functions and management processes	December 2020
Grant Program Management Model	December 2020
Delivery of 2021-2024 Strategic Plan	December 2020
Operational Transition Plan – Compute Canada	January 2021
Operational Transition Plan – CANARIE	January 2021
Joint (with CANARIE) DRI Ecosystem Plan	January 2021
Cybersecurity Framework	March 2021

Part VI
Financial Plan

The following charts illustrate the 2020-21 financial plan annual cash flow requirements.

Chart 1

STATEMENT OF OPERATIONS	Consolidated 2020-21 Budget	ISED Funding Only 2020-21 Budget
Revenue		
ISED Contribution	8,470,000	8,470,000
Membership Revenue	500,000	
Investment Income	48,500	
Total Revenue	9,018,500	8,470,000
Expenses		
Operations		
Salaries and Wages	1,136,000	1,136,000
Benefits	221,000	221,000
Transportation and Communication	830,000	830,000
Services	3,068,000	3,068,000
Supplies	7,000	7,000
Total Operations	5,262,000	5,262,000
General & Administration		
Salaries and Wages	1,537,000	1,537,000
Benefits	231,000	231,000
Transportation and Communication	197,000	197,000
Services	1,174,000	1,174,000
Supplies	69,000	69,000
Total General & Administration	3,208,000	3,208,000
Total Expenses	8,470,000	8,470,000
Excess of Revenue over Expenses	548,500	0

Chart 2

CASH FLOW	Q1	Q2	Q3	Q4	Total
Planned Expenses					
Operations					
ISED (DRI Governance)	775,000	746,000	371,000	370,000	2,262,000
CARL/Portage related activity	77,000	62,000	973,000	1,888,000	3,000,000
Total	852,000	808,000	1,344,000	2,258,000	5,262,000
General and Administration					
ISED (DRI Governance)	330,000	561,000	1,057,000	1,260,000	3,208,000
Total Planned Expenditures	1,182,000	1,369,000	2,401,000	3,518,000	8,470,000
Planned Revenue					
ISED from 2020-21	1,959,125	5,877,375	-	-	7,836,500
ISED carryforward from 2019-20	633,500				633,500
Membership Revenue	250,000	250,000	-	-	500,000
Interest Income	8,038	12,613	20,547	7,302	48,500
Total Planned Revenue	2,850,663	6,139,988	20,547	7,302	9,018,500
Cumulative Cash Flow	1,668,663	6,439,652	4,059,198	548,500	

Financial Plan – Chart 1

Fiscal 2020-21 is the Association's first full year of operations and the second year of the Contribution Agreement. ISED revenue reflects amounts in the Contribution Agreement.

Chart 1 illustrates two (2) financial plans:

1. A consolidated view that includes all revenue and expenditures.
2. Revenue and expenditures excluding membership revenue and investment income.

The financial plan reflects total revenue of $9,019K and planned expenditures of $8,470K, resulting in a planned $549K excess of revenue over expenditures. The planned excess of revenue over expenditures is due to planned membership revenue and investment income.

Anticipated Revenue

Anticipated revenue includes:

- $7,836.5K – 2020-21 ISED Contribution for leading and coordinating governance of the DRI ecosystem, associated management and administration, and national DM activities.
- $633.5K – Requested carryover of 2019-20 ISED Contribution.
- $500K for membership revenue.
- $48.5K for investment income.

Planned Expenditures

Planned expenditures amount to $8,470K and are composed of:

- Operations (DRI governance)
  - $3,000K for national DM activities
  - $2,262K related to DRI governance
- General and Administration
  - $3,208K related to DRI governance

Planned DRI governance expenditures have been categorized consistent with the Contribution Agreement.

Key expenditure assumptions include:

- Inaugural CEO to be hired by July 1, 2020.
- Balance of 2020-21 full time staff to be recruited two to three months after the CEO.
- 2020-21 FTE count: 10.2 FTEs, annualized to 21 FTEs.
- Expenditures (primarily travel) for Research Councils and Advisory Groups
- Interim part-time staffing to remain in place for one to two months after full-time staff have been hired. Additional interim part-time staff have been included to support both the planned initiatives and the inaugural CEO through transition.
- Additional Board and governance meetings in the inaugural year in support of orientation and start-up related matters.
- General administration expenses such as legal, audit, translation, rent, website design and support, and travel.

Cash Flow – Chart 2

Expenditures have been phased by quarter based upon the key assumptions noted above.

Revenue has been phased as follows:

ISED

- 25% April 1, 2020 – Assumes that the Corporate Plan is approved by April 1, 2020.
- 75% August 2020 – Assumes that the Annual Report is approved by mid- to late-August 2020. The Annual Report is due by July 31, 2020.
- Retention and carryover of the $633.5K funding from 2019-20. Cash is assumed to be on hand as at April 1, 2020.

Membership Revenue

Memberships are effective April 1, 2020. It is assumed that revenue will be received late in Q1 and early Q2.

Investment income

Investment income has been calculated on closing monthly cash balances and assumes even expenditures within the quarter.

Part VII
Risk and Mitigation

NDRIO will assess and record identified risks in a risk register at least once per year or upon any material change.

The first meeting of the Inaugural Board will include professional training on the roles and responsibilities of Board members. At the inaugural meeting, a revised risk register will be prepared, and an Audit and Investment Committee of the Board will be formed. This committee will be responsible to help ensure a risk assessment is performed regularly, and the Board is informed of their risk management responsibilities.

The project team, in collaboration with the DRI community, has identified potential risks associated with the activities that will be accomplished during the 2020-2021 year:

Risk	Mitigation
Start-Up Risk NDRIO is a start-up organization composed of an interim team that will gradually be transformed into a permanent organization. At the governance level, care must be taken to preserve continuity between the Applicant Board to the Inaugural Board. At the team level, it will take several months to recruit a CEO and executive-level leadership. This will require the interim team to advance key workplan and transition activities, requiring the buy-in and engagement of the community in the process.	▪ The 2020-21 budget contains provision to overlap interim staff with permanent staff to provide for proper knowledge transfer. ▪ Key advisors, including previous members of the Applicant Board, will be available to the Inaugural Board to provide for continuity. ▪ The interim team is preparing a briefing book for the Inaugural Board and permanent staff, and is developing and implementing well-documented workplans. ▪ A stakeholder engagement strategy will be developed and implemented.

Expectations & Timing Corporate Plan delivery timelines may lag given the complexity of the subject matter, the aggressive schedule and limited resource availability. This could affect NDRIO's ability to fully meet community expectations.	▪ We will have a fully articulated workplan and resource allocation, which will be developed with the full engagement of the community. This will be prepared for review and approval of the Inaugural Board.
Continuity & Quality of Service The transition of ARC, DM and RS to NDRIO, 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 Level Agreements and KPIs to assess performance. Current resources may not have the skills and/or experience to manage this transition.	▪ We will undertake a user needs assessment focused on both future needs and existing requirements. ▪ We will develop and implement an aggressive outreach and communications strategy. ▪ During the transition planning, special attention will be given to ensuring a seamless transfer of operations from existing organizations to NDRIO. ▪ We will undertake change management and HQP professional development.
Domain Focus Although ARC is more complex and involves more resources (HQP and budget), transition planning for ARC should not be to the detriment of DM and RS.	▪ The new national service delivery model will be inclusive of ARC, DM and RS. ▪ Strategic planning will reflect the differential status within each of these domains. ▪ Leads for each domain, with appropriate resource allocation, will participate in the planning process to provide for a balanced approach to transition.
Community Buy-In & Mobilization The implementation of NDRIO 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.	▪ Whenever possible, current existing forums will be used to optimize community participation. ▪ Resources will be added to the interim team to support community involvement.
Stakeholder Reach NDRIO 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.	▪ We are developing a stakeholder engagement strategy, including the implementation of leading stakeholder engagement tools. ▪ NDRIO will consult regularly with key stakeholders to augment its lists. ▪ When important information is shared with stakeholders, NDRIO will request that the communication be forwarded to any person the recipient thinks might be interested.

Inclusivity Well-established research communities may unintentionally crowd out groups that are not traditionally represented in this arena.	▪ Undertake specific, targeted EDI activities in NDRIO governance, organizational and advisory functions. ▪ Explore means to build capacity and support engagement for underrepresented groups.
Implications of Funding Models for Regions & Institutions Establishing the new service delivery and funding models must take place without unintentionally causing differences in funding between provinces, territories, regions or institutions.	▪ NDRIO will articulate the funding requirements associated with the new service delivery model in collaboration with regions and institutions. ▪ NDRIO will work with ISED to provide for effective communications with Province and Territory partners.
Cash Flow Risk The receipt of cash-flow funding may be delayed and affect the roll-out of the Corporate Plan.	▪ NDRIO will submit its Corporate Plan to ISED in accordance with the Contribution Agreement requirements, so that the initial cash flow can occur in April 2020. ▪ NDRIO will deliver its Annual Report to ISED in accordance with the Contribution Agreement requirements, so that the remaining cash flow can occur shortly after July 31, 2020.
Impacts to Experimental Approaches Moving to a service-based model must be done without impacting the experimental approaches required in some research projects.	▪ CFI-funded projects (experimental) will be supported by NDRIO as well as services funded directly by NDRIO. ▪ The service model will include allocation of sandboxes, especially for pilots and software development and testing.

Part VIII
Performance Monitoring Strategies

NDRIO will develop and implement a performance, evaluation, risk and audit framework by the end of 2020. Meanwhile NDRIO will track its performance against the Schedule A – Annex A-2, Objectives and Expected Results of NDRIO's Contribution Agreement.

Part IX
Conclusion

NDRIO has had a strong and important first year. Significant planning and change management lies ahead as the organization enters Year 2 of operations; but, together with our ecosystem partners and stakeholders, we feel confident that the Government of Canada's historic investment in DRI will result in a harmonized and results-oriented system for Canada's research community.