



National Data Services Framework: Summit 2020 Discussion Document

Prepared for the *3rd National Data Services Framework Summit*
(February 5-6, Ottawa, ON)

Research Data Canada
NDSF Working Group, Infrastructure Committee

*Eugene Barsky, Jane Burpee, David Castle, Mark Leggott, Jeff Moon, Karen Payne, Rebecca Ross, Barton Satchwill,
Diane Sauvé, Byron Spencer, Felicity Taylor, Ela Yazdani*

***NOTE: French versions of this document will be made available
before December 23, 2019.***

Version 0.5

Background

The research data management (RDM) ecosystem is evolving rapidly everywhere, and Canada is no exception. Governments worldwide have embraced “open” in all its contexts, whether open government, open dialogue, open data, or open science. The Tri-Agencies are working on the final version of a Data Management Policy, which will facilitate making the outputs of research more widely accessible. The new Policy is expected to be launched in early 2020.

Canada’s own tenure as Chair of the [Open Government Partnership \(OGP\)](#) resulted in Canada hosting the 2019 OGP Summit on Ottawa, and Canada continues to show leadership in the G7 Science Ministers group. The September 2017 statement¹ from the G7 Science Ministers’ meeting highlighted Global Research Infrastructures and Open Science and supported the work of the [G7 Open Science Working Group](#). The WG’s efforts highlighted 2 key foci:

1. incentives and the researcher ecosystem;
2. infrastructures for optimal use of research data.

These and other priorities are also reflected in recent activities to define a new digital research infrastructure (DRI) organization, with oversight for high-performance computing (HPC), RDM, and research software (RS). It is anticipated that the new DRI organization (NDRIO) will be fully operational in 2022. The opportunity to deliver robust and sustainable DRI services to the research community is entering an exciting new phase.

This document is intended to provide background for the 2020 NDSF Summit (February 5-6), including the approach to drafting the proposed outcome of that meeting. It also provides a bridge between two recent documents that represent a view on the priorities for the RDM ecosystem in the coming years.

1. [Data Management Roadmap – 2019-2024](#)² (*DM Roadmap*) was authored by a broad stakeholder group, and it relied on the recommendations from the document submitted by [CUCCIO](#) to ISED in 2017³, and which was influential in the current approach to the creation of NDRIO. The DM Roadmap highlights specific areas of focus in 3 areas: Coordination; Infrastructure, Tools and Platforms; Capacity, Fostering a Network of Experts, and Community of Practice. Recommendations are focused on the 1-2-year transition period to the full launch of NDRIO. This Roadmap is intended to reflect areas of activity for a number of organizations, including CANARIE, Portage, RDC, and others, so while it can be considered a consensus of a small group of DM stakeholders, it does not reflect the input of the broader community.
2. *Data Management in Canada: A Background (DM Background)* [\[EN / FR\]](#) document was derived from the document submitted by [CUCCIO](#) to ISED in 2017, and reflects an

¹ http://www.g7italy.it/sites/default/files/documents/G7%20Science%20Communiqu%c3%a9_1/index.pdf

² Data Management Roadmap – 2019-2024: For Submission to Innovation, Science and Economic Development (ISED). March 29, 2019. (Available in English only)

³ Developed by the Leadership Council for Digital Research Infrastructure, DM Working Group. <https://digitalleadership.ca>

updated summary of the RDM ecosystem in Canada. This document is intended to be updated every 1-2 years. The Backgrounder provides detail on the nature of the RDM landscape, including the elements of the research lifecycle, and a description of some of the key actors in this space. A key missing piece in the Backgrounder is a description of core domain-specific infrastructure and communities of practice. The 2020 NDSF Summit is designed partly to provide an update on the actors and services in this domain-specific context.

The *NDSF 2019 Kanata Declaration (Kanata Declaration ver 1)* [[EN](#) / [FR](#)] was the primary outcome from the 2019 National Data Services Framework Summit, and does reflect a very broad stakeholder consensus on what is needed to support researchers in the coming years. It is deliberately high-level but does reflect the broadest swath of the stakeholder community as any of the documents produced to date. It will also be used as a primary conversational context for the 2020 NDSF Summit through this comment-able version: [EN](#) / [FR](#).

Crafting the Details of the NDSF

Desired Outcomes

The 2020 NDSF Summit will provide a context for the broader stakeholder community to reflect on the DM Roadmap, DM Backgrounder, and most specifically the Kanata Declaration, and deliver on a specific set of desired outcomes:

1. consensus on what minimal requirements define a NDS;
2. consensus on what works best at the institutional, provincial, regional, national, and international levels;
3. consensus on existing Canadian national data services (NDSs), both machine and human services, that provide either models for, or operational examples of, NDSs (e.g. CANFAR⁴, CANARIE Identity Management Services⁵, DMP Assistant⁶);
4. consensus on key gaps not articulated in either the DM Roadmap or Kanata Declaration;
5. consensus on priorities as we move forward.

The 2020 NDSF Summit outcomes will be distributed widely in the Canadian DRI ecosystem, and directly to ISED and the emerging NDRIO organization.

Models

The Summit will continue to use the 6-part European Open Science Cloud (EOSC)⁷ model, which is listed in the Kanata Declaration, and repeated below. This model has proven useful

⁴ <https://www.canfar.net/en/>

⁵ <https://www.canarie.ca/identity/>

⁶ <https://assistant.portagenetwork.ca/>

⁷ <http://ec.europa.eu/research/openscience/index.cfm?pg=open-science-cloud>

both in the Canadian NDSF context, and also to ensure a stronger intersection with efforts in other “national” contexts.

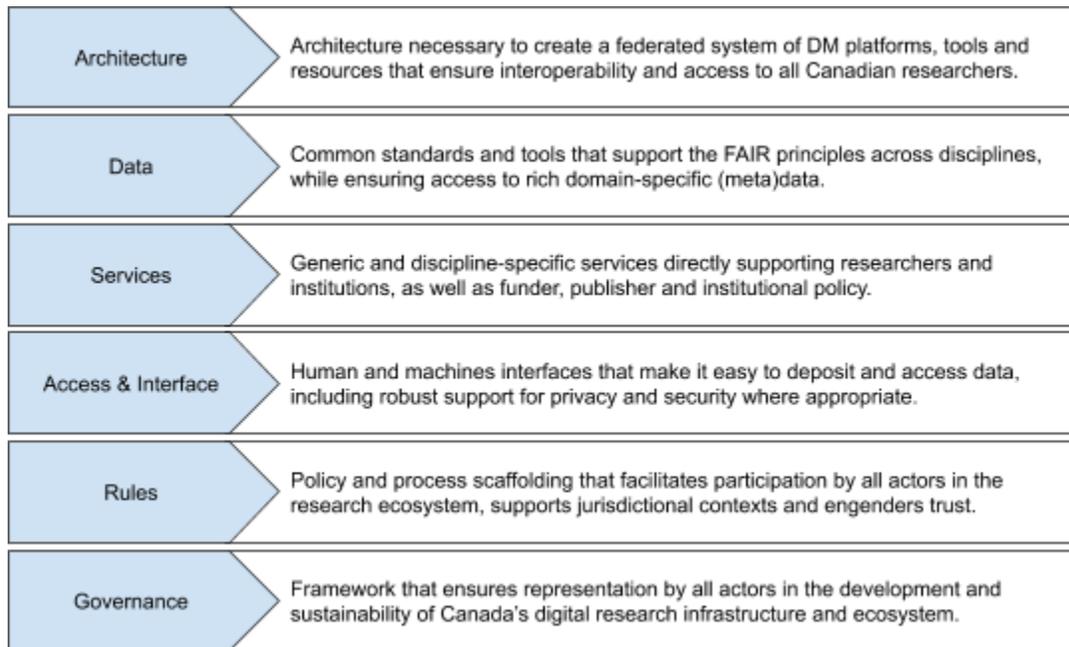


Figure 1: The European Open Science Cloud Model (edited for use in Canada)

The Canadian community has also been using a high-level architectural model to guide conversations and activities around the NDSF, both in general discussions, and in response to specific funding calls. The 2020 NDSF Summit will provide as a way for the community to fill in additional details of the NDSF model depicted below.

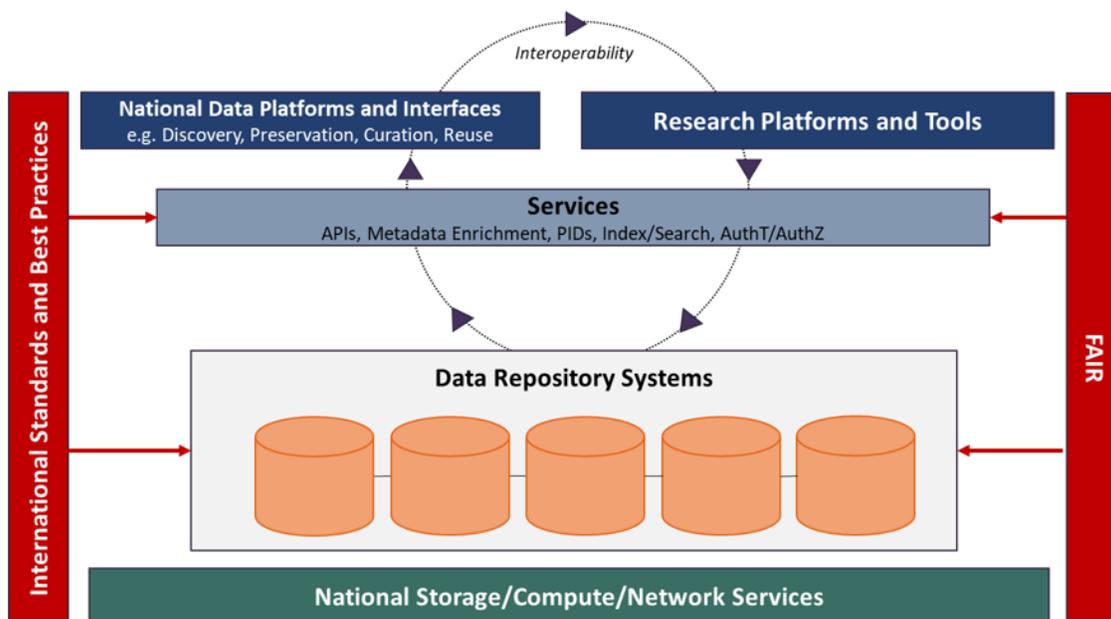


Figure 2. Research Data Canada NDSF Model

The research life cycle (RLC) models the stages in the research enterprise and facilitates the efforts of people and institutions who interface directly with the research community. The RLC version included below was developed for the document submitted by [CUCCIO](#) to ISED in 2017. Like many RLC models it reflects the primary stages in the outer circle, and intersections with core services that run across RLC and have an impact at every stage. In this case 4 examples are used, but there are more, some of them domain-specific.

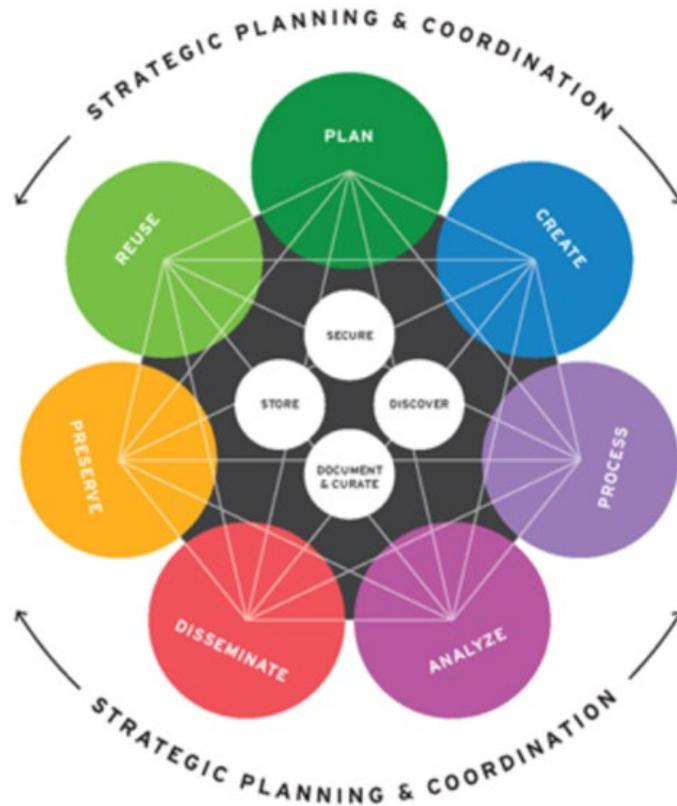


Figure 2. Data-Related Activities During the Research Process

Next Steps

The 2020 NDSF Summit will consist of a number of speakers, as well as 3 breakout sessions, and a process to confirm and aggregate results. The breakouts will see small groups of 6-8 respond to specific interventions intended to update the Kanata Declaration ver 1, and deliver on the outcomes listed above. Part of this will be an updated version of the Kanata Declaration, and a more detailed listing of NDSs.

Prior to the Summit event, the RDM community will have an opportunity to “annotate” the Kanata Declaration ver 1 with additional feedback, highlighting additional gaps, and listing

existing NDSs. This feedback will be integrated into a new draft version of the Kanata Declaration, which will be distributed 2-3 weeks prior to the Summit, and which will also form the foundation of the breakout sessions during the Summit. 2-3 months after the Summit, the outcomes will be distributed broadly to the DM community.