



Research Data Canada – Données de Recherche Canada

Canadian National Data Services Framework Summit - Sep 22, 2017 Summary

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Developed by the RDC stakeholder community

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Summit Introduction and Agenda

The Canadian National Data Services Framework Summit gathered a broad stakeholder community to discuss the opportunities and challenges of building National Data Services in support of research data stewardship in Canada.¹ Scheduled for the day after the Research Data Alliance (RDA) 10th Plenary in Montreal, the Summit provided an overview of approaches in other countries, an update on what is happening in Canada, and ample time for discussion on how to advance current efforts. Goals for the Summit included: a high-level articulation of requirements for national data services; intersections with the Tri-Agencies' draft Data Policy and implications for institutional support; a 12-month work plan for RDC's National Data Services Framework Working Group, including an articulation of intersections between Canadian and international outputs.

The Summit took place on September 22 2017, at the Centre Mont-Royal in Montreal Canada in room Cartier 1. Links in the agenda table below provide access to the slide decks for speakers that provided them.²

Time	Session Title
7:30 - 8:30	Breakfast
8:30 - 8:45	Welcome and Agenda (David Castle, University of Victoria/RDC)
8:45 - 9:00	Background for the Canadian Conversation (Mark Leggott, RDC)
9:00 - 9:30	<i>Breakout #1: What do we see as key elements of a Canadian NDS Framework?</i>
9:30 - 10:30	International Context
	Netherlands (Ingrid Dillo, DANS)
	United Kingdom (Dom Fripp, Jisc)
	Australia (Ross Wilkinson, ANDS)
	European Open Science Cloud (Wainer Lusoli, European Commission)
10:30 - 11:00	Break
11:00 - 11:30	<i>Breakout #2: What can we learn from the international NDS context?</i>
11:30 - 12:30	Canadian Context Part 1
	Government of Canada and Open Data (Portia Taylor, Treasury)

¹ This document and the original agenda document are available in [English](#) and [French](#).

² All items are also accessible in the [RDC Zenodo community](#).

	Board Secretariat)
	Higher Education (Jeff Moon , CARL Portage Network / Steve Cundy, UBC)
12:30 - 1:30	Lunch
1:30 - 2:30	Canadian Context Part 2
	Commercial and Domain-Specific Contexts (Mark Leggott , RDC / David Schade , CADC)
	Funding Agencies (Matthew Lucas, SSHRC / Kevin Fitzgibbons, NSERC)
2:30 - 3:00	Break
3:00 - 3:30	<i>Breakout #3: What should be our next steps in advancing the Canadian NDS Framework?</i>
3:30 - 4:30	Breakout Reporting/Closing Plenary

Notes from the NDSF Summit

The notes below are a summary of personal reflections from participants, and the final Plenary reporting from the 3 breakouts which are listed in the agenda. In each case, participants were asked to consider the question and highlight interests from their institutional context, as well as from the research data management ecosystem in general. They were also asked to highlight any activities which could be considered as actions for RDC and its stakeholder community. This document will be discussed at the next RDC Steering Committee meeting (scheduled for mid-November), and will also be reflected in the current Task List for the RDC Executive Director. Activity on Actions will be reported back to the RDC stakeholder community via this document and the RDC online newsletter - if you would like to make sure you are on that newsletter mailing list you can access the form here:

<https://rdc-drc.ca/subscribe>

Acronyms:

- DM: Data Management
- EOSC: European Open Science Cloud
- FAIR: Findable, Accessible, Interoperable, Reusable
- GoC: Government of Canada
- NDSF: National Data Services Framework
- RI: Research Infrastructure
- ROI: Return on Investment
- TC3: Tri-Agencies, SSHRC, CIHR, NSERC

General

1. Gaps

- a. Need to establish/reinforce:
 - i. Sustainable funding models.
 - ii. Coordination at the National level, including clarity around scope of organizations, mandated from GoC.
 - iii. DM at the national level is a shared responsibility, but need to clarify who is in charge.
 - iv. Benchmarks from the beginning, especially those that can show ROI.
 - v. Accessible training and education.
 - vi. RDC role as convener and advocate for the stakeholders.
- b. RI software resources are especially needed to provide expert capacity in domains without existing platforms.
- c. Develop other examples of ROI, along the lines of David Schade's "curve" of research outputs, bearing in mind areas where research impact of "more" is minimal. Also highlight other examples, as more research is not the only motivator.

- d. Clarify what is meant by Federal and National in all contexts.
- e. Clarify what groups to target with education, and how.
- f. Ensure publishers are part of the conversation.
- g. Identify key partners and players in Canada to connect with.
- h. Need metrics to facilitate compliance to policy.
- i. Ensure that there is discipline-specific repository interoperability.
- j. Need to ensure legacy issues are addressed with respect to preservation.
- k. NDSF needs a long-term sustainability, non-bursty, non-research-competing funding model that is decades long.

2. Opportunities

- a. Leverage strengths of RI and networks of expertise.
- b. Ensure support for data management For/In/From research. (Thanks Ross!)
- c. Key elements of a NDSF are Policy, People, Capacity.
- d. Incentivize with carrots as well as deposit policy so researchers embrace RDM.
- e. Use models/successes from specific disciplines (Astronomy, Polar Data Catalogue) elsewhere.
- f. Develop an approach to dealing with metadata issue, rather than adding complexity with new schemas.
- g. Strike appropriate balance between distributed/federated and centralized.
- h. Find a way to better understand and articulate the resistance to DM/FAIR/Open, which provides a context beyond the researcher's career.
- i. Develop/enhance pilot projects at various levels.
- j. Focus on need for Replication/Reproducibility, as in future lack of it may mean inability for researchers to publish.
- k. Work with service/resource organizations to ensure that developments in DM/RI are shared with all stakeholders.
- l. Define a minimal set of properties/attributes/components/services for a NDSF, and that reflect the heterogeneity of the ecosystem.
- m. National framework needs to include all parts and players: national coordination, regional expertise.
- n. Ensure intersections/integration of the Canadian NDSF with international efforts, including non-RDM focused groups like WHO, OECD, Cochrane, etc.
- o. Need tools/services to help with anonymization of data.
- p. Ensure modularity of services, or a-la-carte offerings.
- q. A national data service should make it easy to make USE of the data.
- r. Look for economies of scale across sectors and disciplines, e.g. portals, preservation services.
- s. Sponsor conferences/meetings where publishing of data is discussed and data is presented as a research output itself.
- t. GoC to develop a national research data strategy and associated funding for implementation.
- u. Build on existing services and federate across domains and sectors through common standards and shared governance.

- v. Promote a single national policy for RDM, as a unifying opportunity, as good practice is patchy.
- w. Canada's RDM community needs to become more involved in the RDA to participate in the global collaboration.
- x. Need to ensure connection between RDC-Portage for metadata alignment.

3. Outreach

- a. Work with internal stakeholders on effecting cultural change.
- b. Ensure CIO/VPR/UL (or equivalents) are a single team on implementation of institutional response.
- c. Need to make sure Canadian NDSF components are visible and interoperable internationally.
- d. Find ways to ensure all 70+ universities are involved in the effort.
- e. Create a U15 statement on FAIR Principles modelled on their statement regarding sustainable publishing.
- f. Create RDM internships for recent graduates, sabbaticals and senior scholars, within TC3 and individual institutions.
- g. Highlight that public funding comes with obligations, a principle that needs no incentives.
- h. RDC should meet with the GoC DG Council on Open Science and highlight intersections with higher education and other stakeholders.
- i. Work with the stakeholder community on effecting cultural change.
- j. Facilitate training nationally/internationally to deliver locally. Example of the RDA/CODATA Summer Institute.
- k. Create a "1-pager" that describes challenges, how the NDSF addresses it, and how it will help administrators.
- l. Create a framework for telling stories for all domains, show value, and help stakeholders develop strategies. Determine the bold steps in success stories that created momentum.
- m. Develop a "data as assets" approach to RDM in the NDSF.
- n. Good data plan = good science practice.
- o. Emulate the model of the DLI Train-the-Trainer approach to DM education.

4. Policy

- a. TC3 should launch the consultation on the draft RDM Policy and move to adoption as soon as possible.
- b. Institutions should start developing policy frameworks now.
- c. Leverage work of the Portage Expert Group working on Policy Strategy templates.
- d. Clarify how RDM activities intersect with Promotion and Tenure.
- e. Work with the TC3 on the emerging RDM Policy.
- f. Setup a Working Group to clarify roles in DM/RI space and provide a draft framework for institutional RDM policies.
- g. Ensure integration of OCAP Principles and First Nations data concerns into the NDSF.
- h. Ensure data quality/description is a key factor in the development of repositories.
- i. Include copyright/licensing/ownership in development of policy.

- j. Policy without infrastructure/services = failed / toothless policy; infrastructure without policy = no uptake.

5. Metrics and Ecosystem Analysis

- a. Conduct/update surveys and gap analysis of the available repositories, as well as services and RI at institutions.
- b. Define meaningful metrics and performance indicators, including an intersection with international connections.
- c. Complete mapping of the actors, services and resources in the ecosystem in Canada and elsewhere.
- d. By pooling well-mapped resources, would have a more cost-effective and sustainable approach.
- e. Develop an approach to funding/supporting a RDM Champions program.
- f. Work with other stakeholders to duplicate success of “UBC Survey” at other institutions.

Action Items for RDC

Given the 3 outcomes identified for the Summit (listed below), and the conversations that took place, the following Action Items for RDC have been identified. These will be discussed in more detail by the RDC Steering Committee and Standing Committees in order to facilitate the Summit outcomes:

1. a high-level articulation of requirements for National Data Services Framework;
2. intersections with the Tri-Agencies' draft Data Policy and implications for institutional support;
3. a 12-month work plan for RDC's National Data Services Framework Working Group, including an articulation of intersections between Canadian and international outputs.

1. Stakeholder Meetings/Outputs

- a. Work with the VPsR and U15 to define a U15 statement on FAIR and that intersects with the RDC and TC3 Principles and policies.
- b. Work with GoC stakeholders to setup a meeting with the GoC DG Council on Open Science and present on the DM landscape, FAIR, and RDC's role.
- c. Complete the RDA NDS Summary document and distribute to this group and all RDC stakeholders.
- d. Meet with the First Nations Information Governance Council to determine best way to ensure intersections with RDC.

2. Ecosystem

- a. Complete the Ecosystem Mapping started with the [ResearchLink](#) project.
 - i. Update/complete entries.
 - ii. Define a maintenance approach/process.
 - iii. Include a taxonomy for indicating if listed services/resources are accessible via a NDSF.
 - iv. Include links from entities in the ResearchLink system to appropriate RDA Interest and Working Groups to facilitate greater intersections for the Canadian community.
 - v. Find ways to indicate links between policy and services/resources, along the lines of FAIRsharing.³

3. RDC Committees and Working Groups

- a. Communications, Outreach and Education Committee
 - i. Committee of the Whole
 1. Develop an approach to regular reporting to the CIO/VP/UL and equivalents at all stakeholder organizations to facilitate coordinated action on RDM.
 2. Create a proposal for DM Internships and Champions programs and discuss with the funding agencies
 - ii. [ResearchLink Working Group](#)

³ <https://fairsharing.org/>

1. Detail a new work plan for 2017-2019, with a focus on launching [ResearchLink](#).
 2. Ensure the new work plan will include Actions from this list, and especially #2: Ecosystem.
- iii. [Outreach Working Group](#)
1. Acquire methodology used by David Schade to produce the graph of research outputs from Canadian astronomy data and determine if this can be applied to a few other disciplines with well-defined open data repositories.
 2. Create a section on the RDC website highlighting stories of successes from Open Data, including other jurisdictions that have done this.⁴ Consider something along the lines of the In the Field site⁵, and one that intersects with RDA stories.
- iv. [RDM Outreach Survey Working Group](#)
1. Ensure work by the WG considers a survey instrument for all sectors, and also works in collaboration with CARL institutions' survey efforts.
- b. Infrastructure Committee
- i. [National Data Services Framework Working Group](#)
 1. Detail a new 2017-2019 Workplan for the WG.
 2. Confirm membership, filling in gaps where appropriate.
 3. Call a meeting of the WG and review the work plan, set dates and expected outcomes.
 4. Ensure the new work plan will include Actions from this list, and especially #4: NDSF.
 - ii. [Survey of Capacities Working Group](#)
 1. Ensure work by the WG considers a survey instrument for all sectors.
- c. [Policy Committee](#)
- i. Committee of the Whole
 1. Review the RDC RDM Principles and determine if this plus the TC3+ policies and GoC OSIP framework can be worked into a single national policy framework.
 2. Intersect with the Portage DM Strategy Working Group to ensure consideration of multiple sectors and domains.
 - ii. Data Privacy and Protection Working Group
 1. Create a Charter for a new Data Privacy and Protection Working Group to facilitate a review of the issues/tools.
 2. Expand the remit for the RG by including components previously intended for a new Data Governance Working Group.
- d. [Steering Committee](#)
- i. [Data and Economic Growth Working Group](#)
 1. Add recommendations for ROI metrics to the WG report.
 2. Add discussion of "data as Assets" to the report.

⁴ For one example, a Webinar in October: <https://register.gotowebinar.com/register/4714807400649009666>

⁵ <https://www.inthefieldstories.net/>

4. National Data Services Framework

- a. Create a concise description of the Canadian NDSF
 - i. Include a clear statement of ownership and mandate (leadership) to move forward with a reasonable scope to act on.
 - ii. Gather materials from the EOSC project as a model for the description of the Canadian NDSF.
- b. Plan a 2-day NDSF Summit for Fall 2018.

5. Education and Outreach

- a. Develop an approach to delivering the RDA/CODATA Summer Institute⁶ in Canada.
 - i. Continue the conversation underway with the Institute with the goal of a first Canadian Summer School in late 2018.
- b. Determine ISED's process for communication of LCDRI Reports and communicate back to stakeholders.

⁶ <http://www.codata.org/working-groups/research-data-science-summer-schools>

Speaker Biographies

Dr. **David Castle**'s research focuses on social aspects of life science innovation including science policy, democratic engagement, regulation and governance, and intellectual property and knowledge management. He has published extensively on the social dimensions of science, technology and innovation, has held several major research awards, and has considerable experience leading strategic research initiatives and research project management. Dr. Castle has consulted widely to government and industry on issues such as the impact of national technology transfer policies and programs, intellectual property and knowledge management strategies, and the role of non-scientific considerations in the regulation of science and technology.

Steve Cundy is the Director, Advanced Research Computing and Associate Director Research Computing Services at the University of British Columbia. Steve has been in a number of senior roles at the University and has been providing support to researchers at UBC for over a decade.

Ingrid Dillo studied history and wrote a PhD thesis at Leiden University on the Dutch East India Company. Ingrid is a generalist who over the last twenty-five years has mainly been active in the field of policy development. After a period as policy researcher at Research voor Beleid in Leiden she worked for many years as a senior policy advisor at the Dutch ministry of Education, Culture and Science and at the Koninklijke Bibliotheek, the National Library of the Netherlands. Ingrid is now director policy at DANS (Data Archiving and Network Services). Among her areas of interest are research data management and the certification of digital repositories. Internationally Ingrid is the acting Secretary General for the Research Data Alliance and active in the ICSU World Data System and the Knowledge Exchange.

Kevin Fitzgibbons joined NSERC in October 2013. He works to support NSERC's role in federal science, technology and innovation policy, to drive strategic and integrated planning, and to oversee corporate planning and policy management throughout the organization. Kevin has over 25 years of experience in the public sector and was previously the Director of Innovation Science and Technology at the Department of Foreign Affairs, Trade and Development where he oversaw international science, technology and innovation cooperation projects and investments. He has also worked as the Executive Director of the Office of the National Science Advisor, and as a strategic planning and policy advisor with the National Research Council Canada (NRC).

Dom Fripp is a Senior Curation Metadata Developer at Jisc. Dom is part of the core team developing the Research Data Shared Service, focusing on the architecture data model, interoperability challenges and reporting capabilities. He is also involved in the development of standards and protocols for the global Research Data community including SWORD v3 and a research data rights toolkit.

Mark Leggott is the Executive Director of Research Data Canada, a CANARIE-funded stakeholder driven organization dedicated to ensuring a sustainable research data management ecosystem in

Canada. Prior to that Mark was the University Librarian at the University of PEI, Founder of the open source Islandora Project, and President of discoverygarden Inc., a private company providing services for Islandora. Mark is passionate about open data, open science, and open source, and the benefits they bring to society.

Matthew Lucas joined the Social Sciences and Humanities Research Council (SSHRC) in September 2015 as the Executive Director, Corporate Strategy and Performance, and has a background in the area of science, technology and innovation policy. Prior to SSHRC, Matthew worked at Industry Canada (now Innovation, Science, and Economic Development Canada) where he held a number of different positions, including Acting Director of the NSERC Liaison Directorate, Senior Policy Advisor to the Science, Technology and Innovation Council Secretariat, and Departmental Advisor to the Minister of State for Science and Technology. Matthew received his PhD from the University of Toronto in 2005.

Dr **Wainer Lusoli** is the Principal administrator for the European Open Science Cloud Initiative and based at the DG Research & Innovation, European Commission, where he has also worked on the Responsible Research and Innovation program. From 2008 until 2012 he was a Scientific Officer and Senior Scientist at the Joint Research Centre (European Commission), Institute for Prospective Technological Studies, and an Honorary Visiting Research Fellow at the University of Chester. Previously, he was a Senior Lecturer at the University of Chester and a Research Fellow at the University of Salford and at the London School of Economics and Political Science.

Jeff Moon is the incoming Director of Portage, a national, library-based research data management network launched by the Canadian Association of Research Libraries (CARL) in 2015. Prior to this, Jeff served as Data Librarian at Queen's University Library and as Academic Director of the Queen's Research Data Centre. He also managed the Queen's Research Data Management (RDM) Service. Jeff also teaches a graduate-level RDM course at Western University.

David Schade did his PhD at the University of Victoria in 1990 studying the evolution of high-redshift quasars. He did Postdoctoral work at Cambridge University and the University of Toronto on the evolution of galaxy populations. He has long been associated with major survey projects such as the Canada-France Redshift Survey and the Canadian Network for Observational Cosmology and producing large data volumes and he has made extensive use of Hubble Space Telescope data. In 1996 he joined the Herzberg Institute of Astrophysics (National Research Council Canada) as a member of the Canadian Astronomy Data Centre in 2002. He is involved with the International Virtual Observatory Alliance activities and is dedicated to the advancement of data management to strengthen astronomy and other areas of research.

Portia Taylor is a Senior Policy Analyst in Open Government with the Treasury Board Secretariat of Canada. Her professional background has spanned policy and programming in environment, international relations and health. She works on diverse approaches to making science, data and information more accessible to Canadians.

Dr. Ross Wilkinson is the Executive Director of the Australian National Data Service (ANDS), a program funded by the Australian Government to develop research data infrastructure and enable

more effective use of Australia's research data assets. After completing a Ph.D. in mathematics at Monash University, Ross researched computer science at La Trobe University, RMIT and CSIRO. His research fields have included document retrieval effectiveness and technologies that support people to interact with their information environments. Ross has published over 90 research papers: ORCID 0000-0002-4192-1522. He is a Council Member of the Research Data Alliance, an international initiative aiming to build the social and technical bridges that enable better sharing of data. His professional interests include document computing, text management, information retrieval, document standards, corporate memory and tailored information delivery.

List of Attendees

First Name	Last Name	Affiliation
Richard	Akerman	Environment & Climate Change Canada
Kathryn	Athonisen	CANARIE
David	Baker	CASRAI
Claudia	Bauzer Medeiros	University of Campinas
Bernard	Bizimana	HEC Montréal
Suzanne	Board	Social Sciences and Humanities Research Council (SSHRC)
Karim	Bouayad-Gervais	RDATA
Ernie	Boyko	CNC CODATA
Barb	Carra	Cybera
David	Castle	University of Victoria/RDC
Shannon	Cobb	Natural Sciences and Engineering Research Council (NSERC)
Steve	Cundy	University of British Columbia
Mylene	Deschenes	Fonds de Recherche du Québec
Viletta	Diamantopoulos	Environment & Climate Change Canada
Ingrid	Dillo	DANS/RDA
Hugo	Dominguez	McGill University
Edith	Dominique	University of British Columbia
Kevin	Fitzgibbons	Natural Sciences and Engineering Research Council (NSERC)
Alexandra	Freeland	National Research Council Canada
Dom	Fripp	Jisc
Michelle	Gauthier	Canadian Research Data Centre Network
Jeremy	Geelen	Social Sciences and Humanities Research Council (SSHRC)
Grant	Gibson	Canadian Research Data Centre Network

Robert	Hache	York University
Susan	Haigh	Canadian Association of Research Libraries (CARL)
Natalie	Harrower	Digital Repository of Ireland
Zach	Hayes	Innovation, Science and Economic Development Canada
Jason	Hlady	University of Saskatchewan/Compute Canada
Simon	Hodson	CODATA
Charles	Humphrey	CARL Portage Network
Keith	Jeffrey	University of Saskatchewan/Compute Canada
Reyna	Jenkyns	University of Victoria/Ocean Networks Canada
Bala	Kathiresan	BCNet
Christine	Kirkpatrick	San Diego Supercomputer Center
Karmela	Krleza-Jeric	Ottawa Group-IMPACT
Lise	Lafontaine	PlumCopy
Daniel	Lajeunesse	Université de Montréal
Aubert	Landry	Université de Montréal
Andre	Lapointe	Computer Research Institute of Montréal
Amber	Leahey	University of Toronto/Scholars Portal
Mark	Leggott	Research Data Canada (RDC)
Danielle	Levasseur	Université de Montréal
Amy	Lorencz	Saint Mary's University
Matthew	Lucas	Social Sciences and Humanities Research Council (SSHRC)
Wainer	Lusoli	European Commission
Jessica	Mankowski	CIHR
Leslie	McIntosh Borelli	Research Data Alliance/US
Jeffrey	Moon	CARL Portage Network
Pat	Moore	Carleton University

Donald	Moses	University of Prince Edward Island
Tanja	Niemann	Université de Montréal
Renata	Osika	National Alliance of Provincial Health Research Organizations
Dugan	O'Neil	Simon Fraser University
Louise	Poissant	Fonds de Recherche du Québec
Jenn	Riley	McGill University
Pierre	Roberge	Université du Québec à Montréal
Marc-Etienne	Rousseau	Compute Canada
Suthee	Sangiambut	Open North
Diane	Sauve	Université de Montréal
David	Schade	National Research Council Canada (NRC)
Kathleen	Shearer	Confederation of Open Access Repositories (COAR)
Kimberly	Silk	Canadian Research Knowledge Network (CRKN)
Lea	Starr	University of British Columbia
Martin	Taylor	Canadian Research Data Centre Network
Portia	Taylor	Treasury Board Secretariat
Kristi	Thompson	University of Windsor
John	Thompson	University of Waterloo
Todd	Trann	University of Saskatchewan/Compute Canada
Bo	Wandschneider	University of Toronto
Peter	Webster	Saint Mary's University
Nicole	White	Simon Fraser University
Ross	Wilkinson	Australian National Data Service
Lee	Wilson	CARL Portage Network/ACENet
Lynn	Yarmey	Research Data Alliance/US