



Digital Research Alliance of Canada

Rebecca Davis, Ph.D.

Alliance Research Council, Member

Associate Professor

Department of Chemistry

University of Manitoba

Rebecca.Davis@umanitoba.ca



Digital Research Alliance of Canada

Alliance de recherche numérique du Canada

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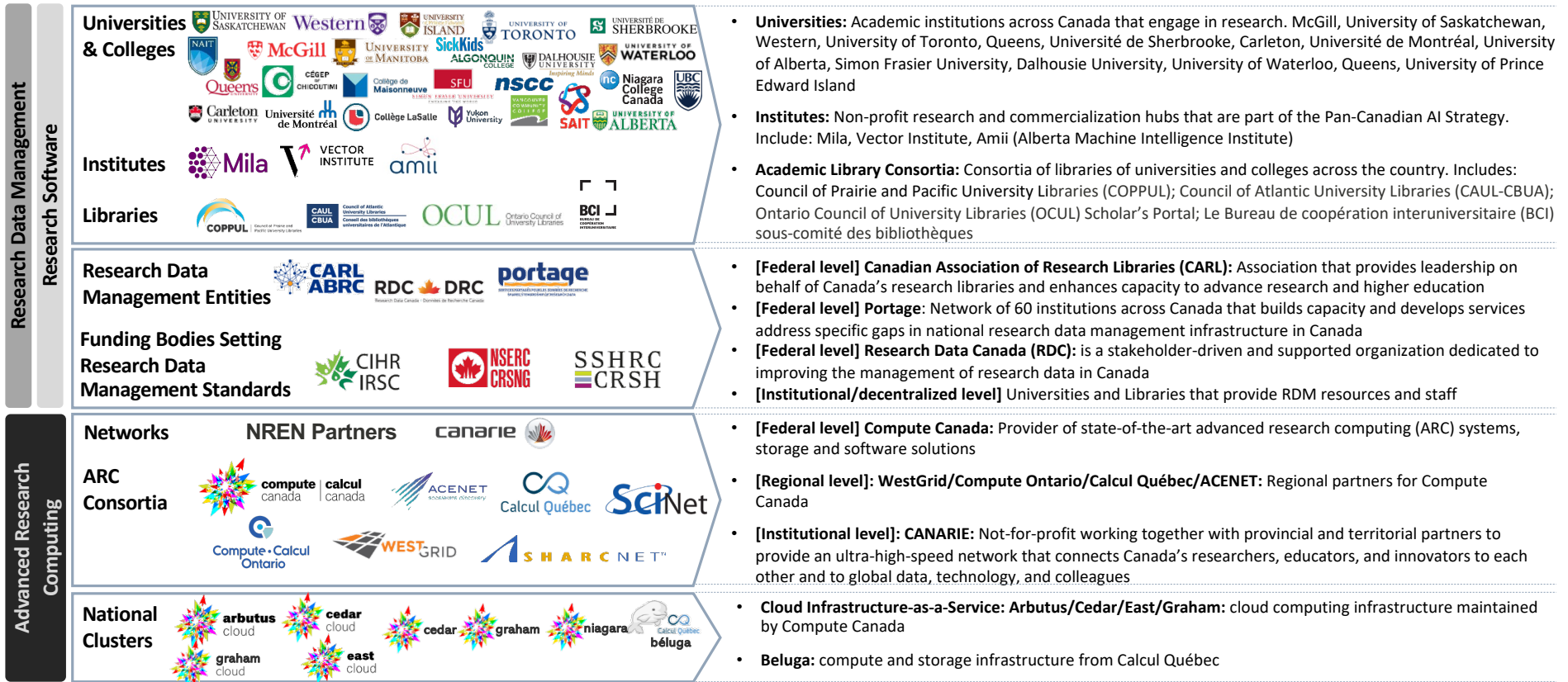
What is Digital Research Infrastructure?

DRI is the shared digital systems and services required by researchers in creating and/or mobilizing knowledge.

- computational capacity
- data storage
- research software
- research data management capabilities
- digital network
- support personnel
- cybersecurity

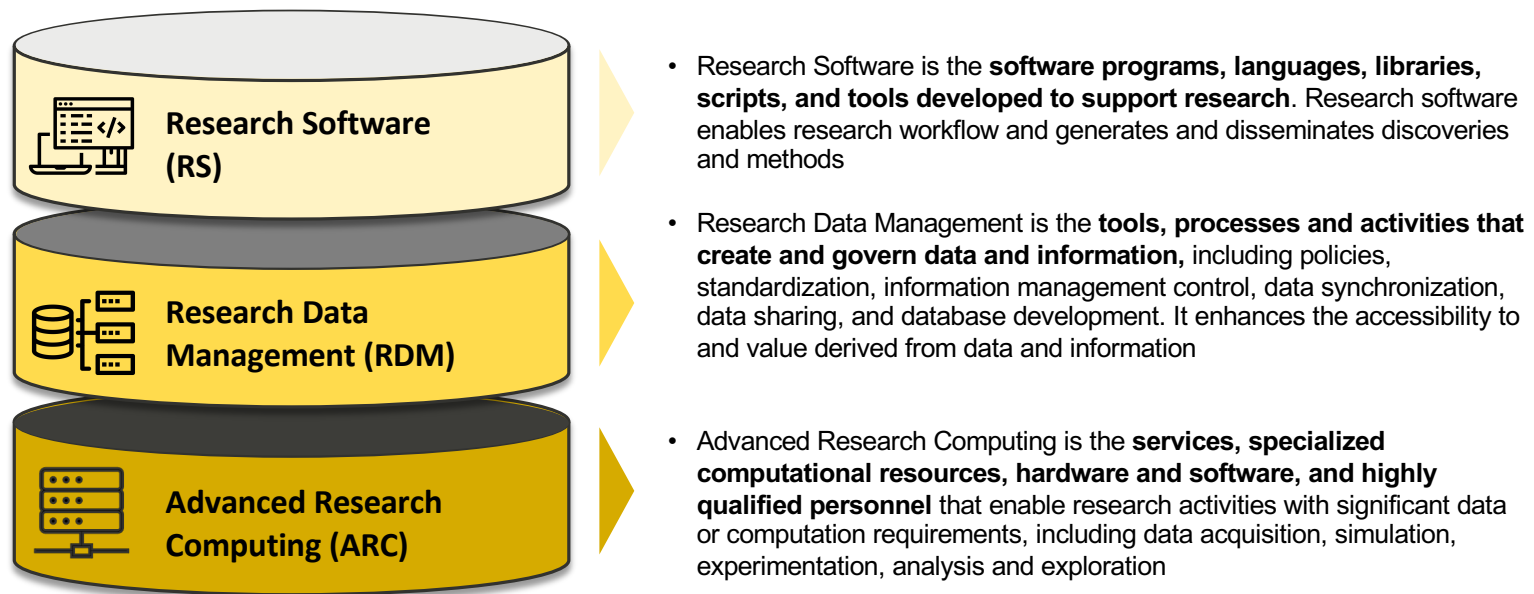
Overview of the Canadian DRI | Ecosystem Organizations

A vast ecosystem of organizations serving researchers at the federal, provincial, and local level



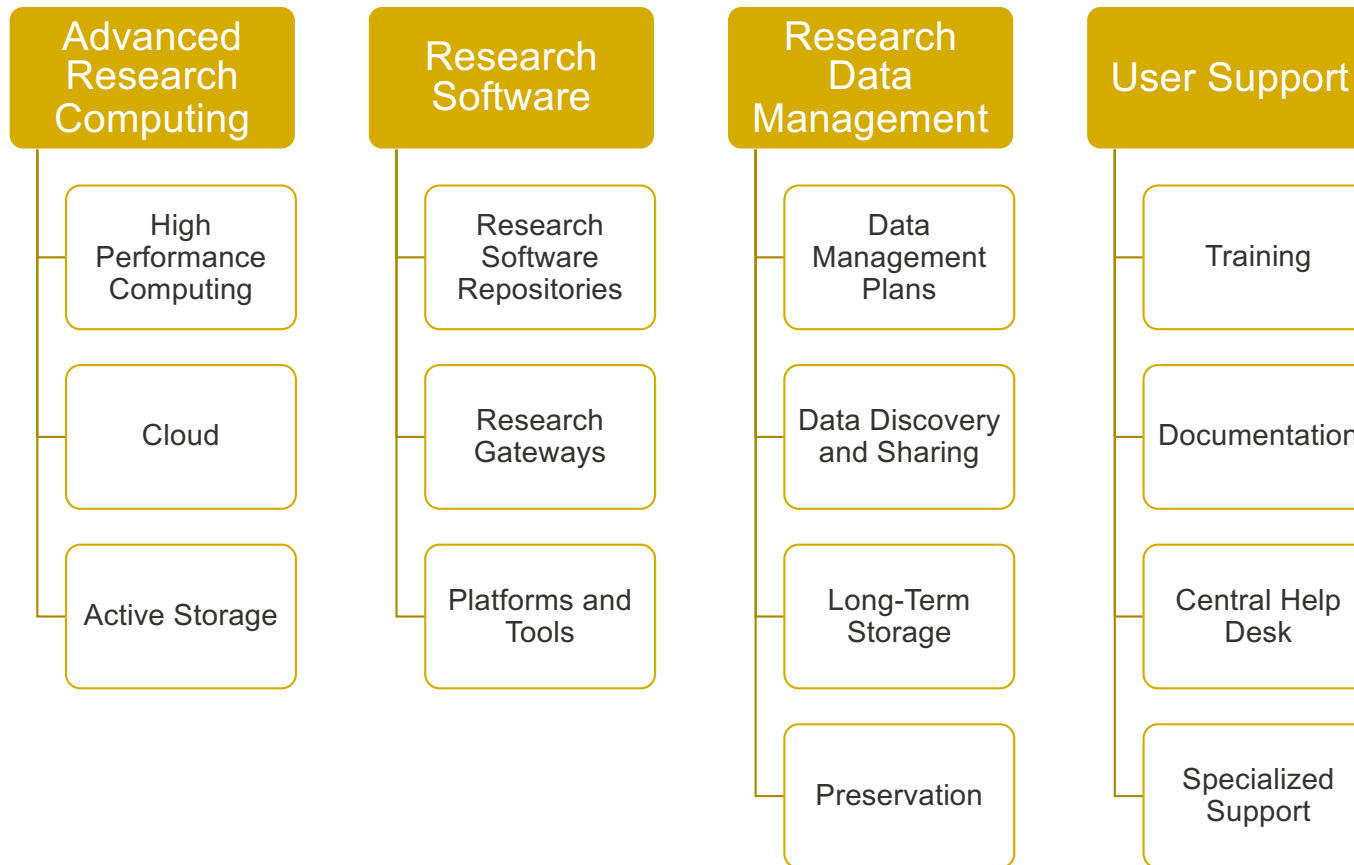
Main Components of the DRI Ecosystem in Canada

The DRI ecosystem is composed of three layers that intertwine and work together to ensure effective service delivery: Research Software, Research Data Management, and Advanced Research Computing



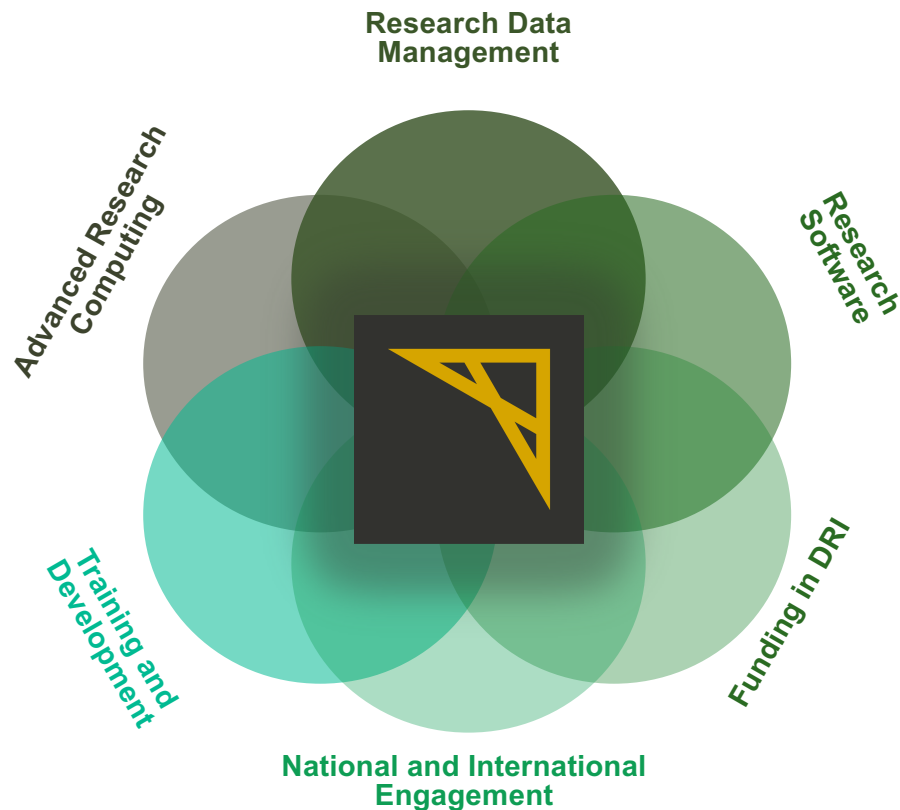
—> The **components of the DRI should be considered holistically** since no one component can function without the others

The Core DRI Services



Service & Funding Model Facets

The Alliance's main activities regarding its services can be illustrated with six overarching facets, in which the Alliance's Guiding Principles, vision and mission are reflected








The Alliance Facets

Facets are the groupings of activities and services that the Alliance makes accessible to its stakeholders. The facets are defined by specific stakeholders, processes and technology being leveraged. They answer the question: *"What does the Alliance do?"*

The Alliance's Guiding Principles

A service delivery facets work to achieve the goals and aspirations arising from its vision and mission:

-  **Researcher-Centric**
NDRIO promotes researcher excellence by understanding and fulfilling researcher DRI needs. This includes considerations such as Diversity, Equity and Inclusion integrated in its activities
-  **Service-Oriented**
NDRIO exists to best serve the research community by ensuring a comprehensive set of services
-  **Accountable and Transparent**
NDRIO aims to be accountable and transparent in all key processes to maintain a sense of trust in the community and to ensure sustainability and stability of funding and services
-  **Striving for Excellence**
NDRIO enables ecosystem excellence through best practices and maintaining a minimal technological standard, catalyzing research for the benefit of all
-  **Collaborative**
NDRIO facilitates connections and collaborations within the Canadian DRI ecosystem as well as internationally

Alliance Researcher Council

Established September 2020 to facilitate regular consultation between the Alliance and researchers across Canada to help the Alliance establish a researcher centric DRI ecosystem.

Diverse group of 24 researchers

Represent a range of cultures, languages, identities, and expertise

From academic institutions and laboratories across Canada



Randall Sobie,
University of
Victoria,
Chair



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



Anmol Verma,
Unity Health Toronto,
Vice Chair



*Wahab
Almuhtadi,
Algonquin College,
Ottawa



Girma Bitsuamlak,
Western
University,
London



Bruno Blais,
Polytechnique
Montréal



Guillaume
Bourque,
McGill University,
Inaugural Interim
Chair



Susan Brown,
University of
Guelph



Carl D'Arcy,
University of
Saskatchewan



*Emmanuel
Château-Dutier,
Université de
Montréal



Carolyn Côté-
Lussier,
Institut National
de la Recherche
Scientifique, Ottawa



Constance
Crompton,
University of
Ottawa



Rebecca Davis,
University of
Manitoba



Philippe Després,
Université Laval



Erin Dickie,
Centre for Addiction
and Mental Health,
Toronto



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,
Toronto



Michele
Piercey-Normore,
Memorial University
of Newfoundland



Rebecca Pillai
Riddell, York
University, Toronto



*Terry Peckham,
Saskatchewan
Polytechnic

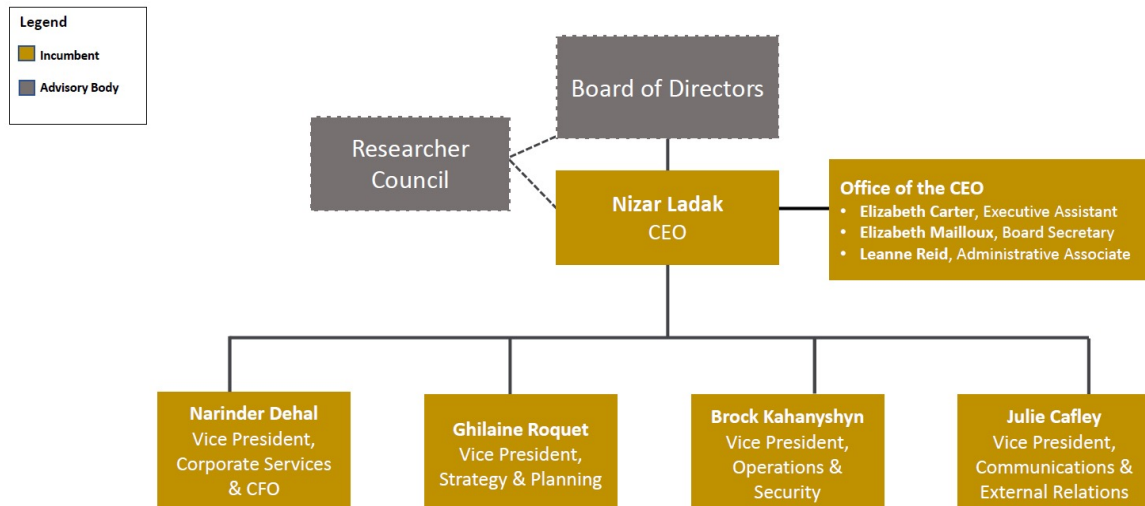


Pekka Sinervo,
University of Toronto
Chair Governance

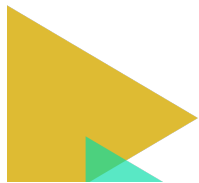
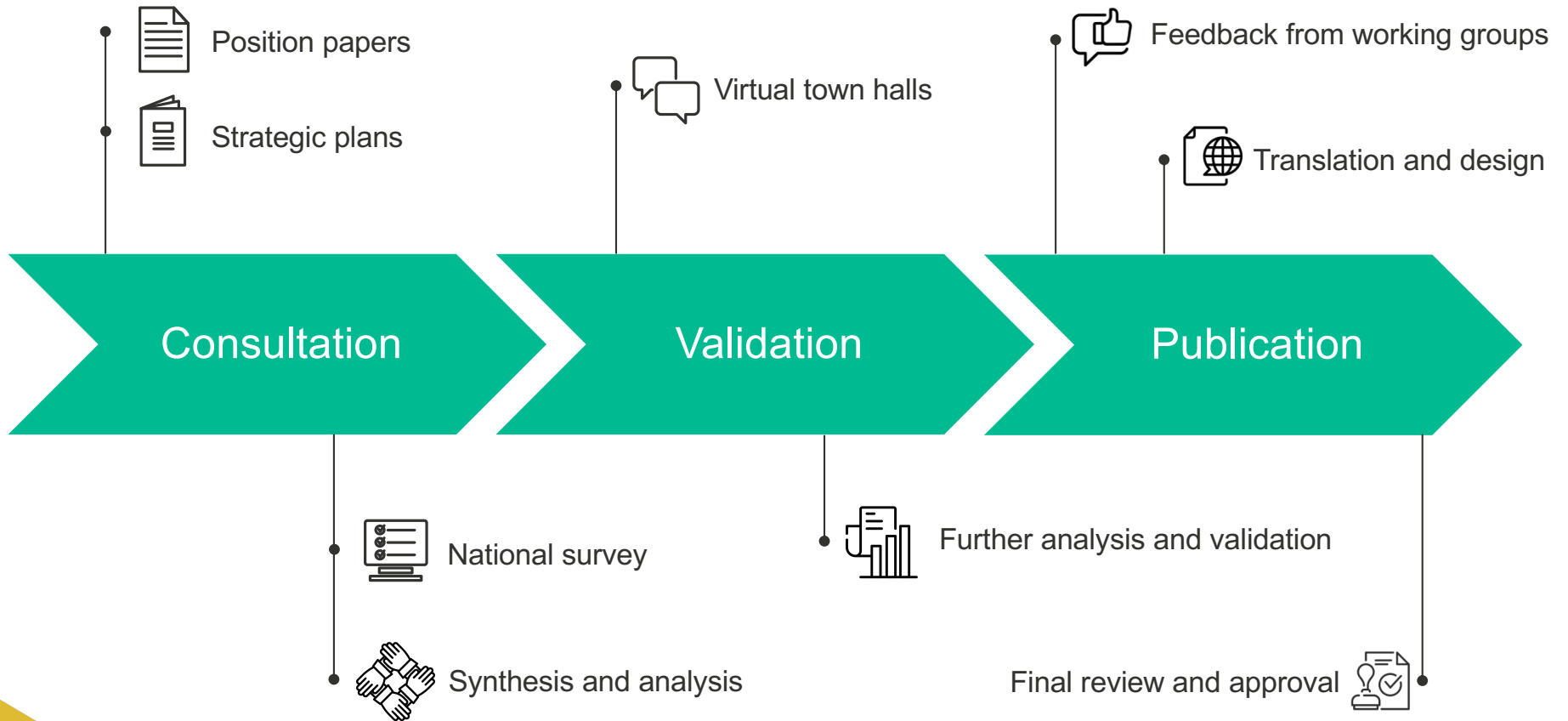
Appointed by the Board and ratified by the Member Organizations
Members have a 3-year term (renewable)
Chair is also a member of the Alliance Board of Directors

Role of the Researcher Council

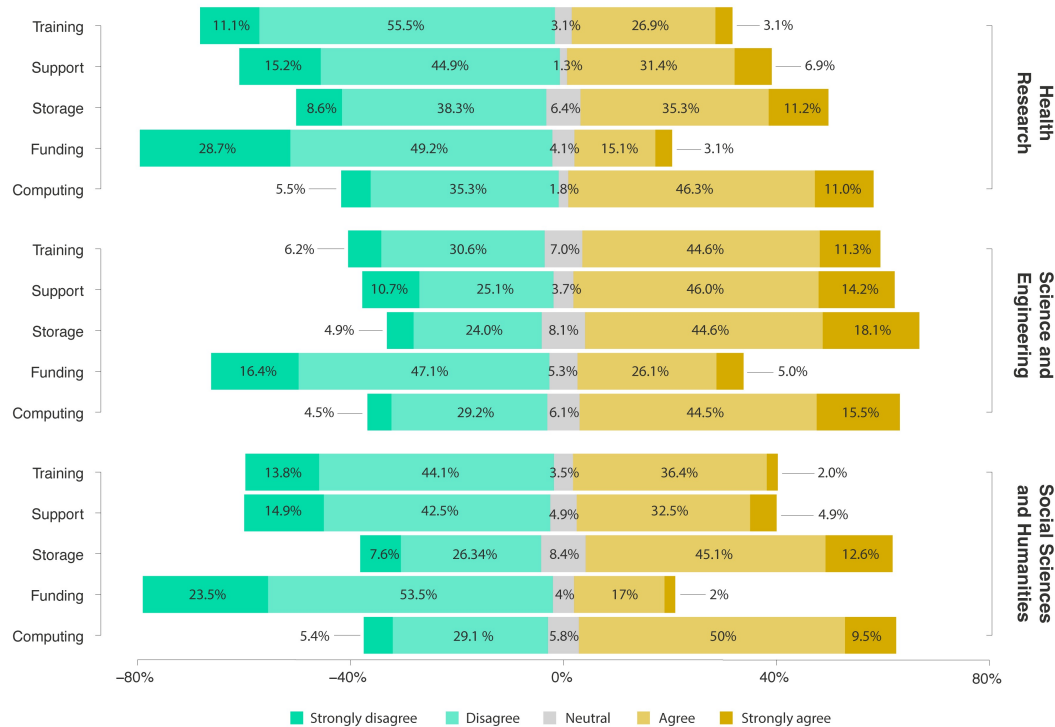
Provides advice to the Alliance Management and Board of Directors on researcher needs for DRI infrastructure and services, contributes to the Alliance's strategic vision, and serves as ambassadors for the Alliance's mandate.



Researcher Needs Assessment



How satisfied are researchers with the current DRI?



- Training:** Additional personnel are needed to help researchers make use of DRI.
- Support:** Professional Support Staff are equally important component of DRI as physical infrastructure, if not more so.
- Storage:** There is a growing demand for more and faster support. Improved file management systems could also alleviate storage issues in national platforms.
- Funding:** Current processes to access funding are cumbersome and time consuming. Eligibility of expenses is not consistent across disciplines.
- Computing:** There is an increasing demand for CPU and GPU computing and secure environments for the analysis of sensitive data. For some disciplines, there is need for better workflows and customized and integrated software.

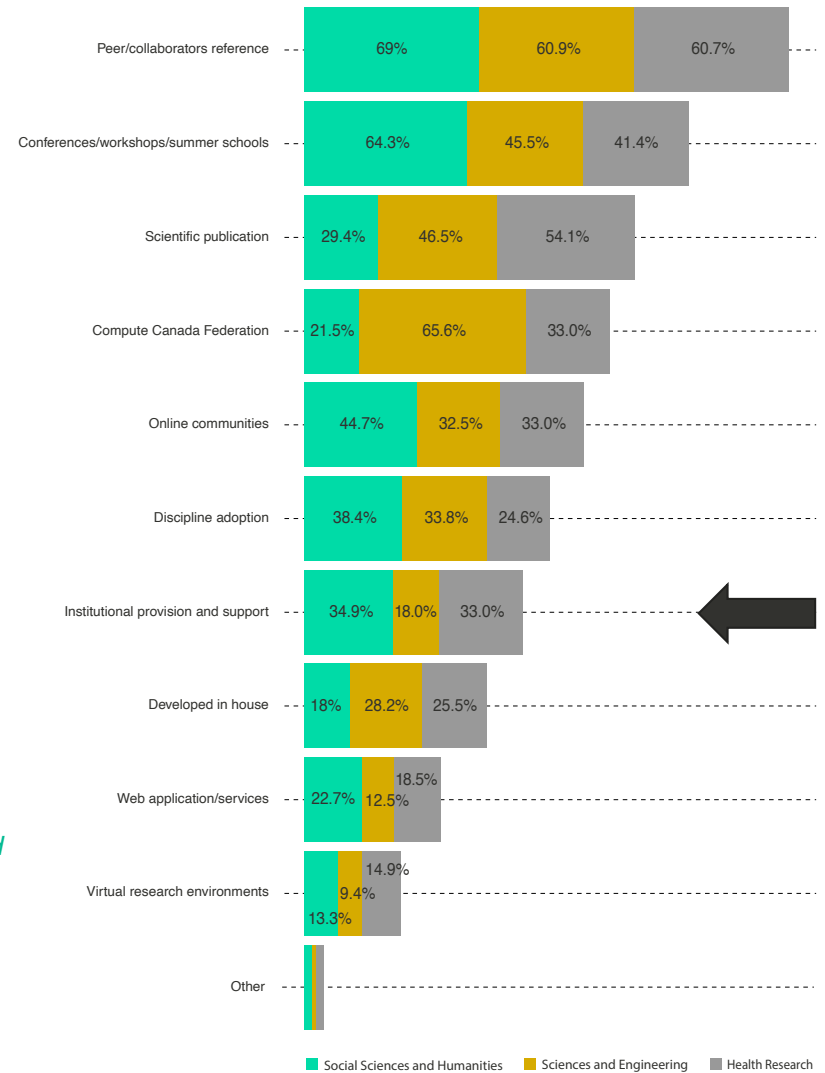


How do researchers discover the tools they use?

- The tools, services, and resources that researchers often need already exist, but awareness about them varies across disciplines.
- Local liaisons who direct researchers to the appropriate national DRI resources available to them are essential. Without the local layer of support, researchers would not be properly onboarded and walked-through the discovery of the tools and services the Alliance would offer.

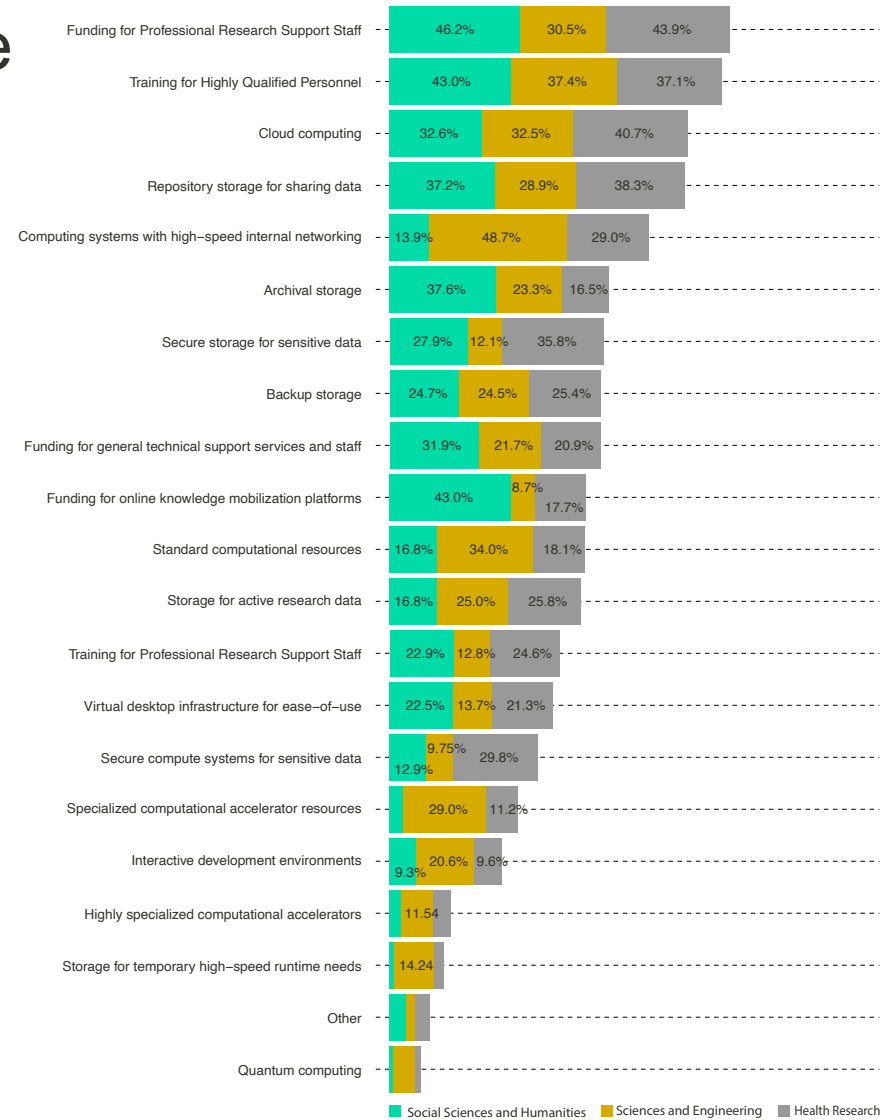
“Interfaces through which users interact with Alliance’s technologies will shape the future of Canada’s research community.”

“There is a need to promote the integration and closer collaboration of IT, libraries, and the VP-Research Office in universities. Current service provision is very siloed in many institutions.”

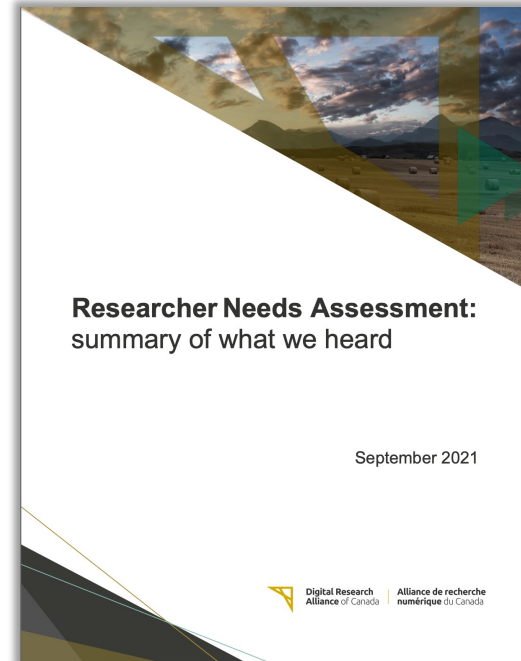


What should the Alliance prioritize to respond to researcher needs?

“I do not want to be a software developer or system administrator. I just want to do research and not wait for over 8 weeks for access.”



Summary of Findings



Alliance Strategic Directions



1. Provide Quality Service to all Researchers



2. Optimize Organizational Structure and Enhance Capacity



3. Work Together for an Integrated DRI Landscape



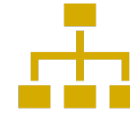
4. Maximize Public Investments to Accelerate Innovation





1. Provide Quality Service to all Researchers

- ▶ Expand the national **advanced research computing capacity** by building on Compute Canada Federation's infrastructure and services, improving access to on-premise and cloud high performance computing, expanding training, documentation and storage solutions
- ▶ Support **stewardship of research data** through sustainable services and infrastructure that upholds cybersecurity and Indigenous data sovereignty, facilitates long-term storage, sharing and preservation.
- ▶ Support **research software development** through targeted funding opportunities, training, service catalogues, policies and community development.



2. Optimize Organizational Structure and Enhance Capacity

- ▶ Work with partners to coordinate and grow professional service provider communities.
- ▶ Ensure the composition and distribution of DRI professional support personnel responds to the researcher community needs they serve.
- ▶ Establish a system for the ongoing DRI training and education of researchers and professional support personnel.



3. Work together for an integrated DRI landscape

- ▶ Drive partnership-building activities to increase collaboration and cohesion nationally and internationally.
- ▶ Seek to advance measures for interoperability, breaking down silos and enabling greater collaboration.
- ▶ The Alliance is committed to upholding the rights to data sovereignty of First Nations, Inuit and Métis individuals as a core requirement to promote their full participation and inclusion in the national DRI.



4. Maximize public investments to accelerate innovation

- ▶ Improve the annual resource allocation process to better respond to researcher needs and align with funding partners.
- ▶ Simplify funding for allocating resources holistically across ARC, RDM, and RS.
- ▶ Consider the addition of new funding streams to supplement federal funding.

For more information

alliancecan.ca

**Questions or Comments:
Rebecca.Davis@umanitoba.ca**