CRDCN

**Canadian Research
Data Centre Network**

Strategic Plan
2024–2029

Foreword

The creation of a new strategic plan is a wonderful opportunity to both set out new ambitions and to align core goals with contemporary realities. It's a recommitment and a refresh, but most importantly for CRDCN, it has provided a platform for engagement, input and dialogue across the Network and its stakeholders. The process of building the plan has highlighted the value of the role we currently play in the research ecosystem and helped us envision roles we can play in the future as a Major Science Initiative with a renewed vision and a tremendous network of expertise.

Twenty-six years ago, a working group reported to the President of the Social Sciences and Humanities Research Council (SSHRC) and the Chief Statistician of Canada serious deficits in the Canadian research ecosystem: Canada lacked the capability to use the large-scale data and quantitative statistical methods required to address major social, health and economic concerns. Following an in-depth assessment of Canada's needs and existing research capacity to inform social and health policy, CRDCN was established in partnership with Statistics Canada. Financial support from the Canada Foundation for Innovation (CFI), Social Sciences and Humanities Research Council (SSHRC), the Canadian Institutes of Health Research (CIHR) and sustained commitment from Collaborating Institutions have enabled the Network to flourish and for research output in quantitative social and population health sciences to grow dramatically.

CRDCN is a singular research infrastructure enabling researchers to access detailed microdata held by Statistics Canada. These researchers address questions from many areas, including health, child development, income and economic security, labour adjustment and workplace change. But CRDCN is also much, much more. It is a platform for the development of the next generation of researchers. It is a catalyst for dialogue among researchers and between researchers and policymakers. It is an infrastructure that is helping to shape research priorities and practices across Canada. The outputs of its researchers inform the development of public policy, the evaluation of our social programs, and insights on the path forward for Canada in achieving its social, health and economic aims.

Dr. Janet Halliwell, FRSC
Board Chair

Dr. Natalie Harrower
Executive Director

Dr. Sylvia Fuller
Academic Council Chair

About the CRDCN

The Canadian Research Data Centre Network (CRDCN) is a national research infrastructure for the quantitative social and population health sciences. The Network provides unique access to Statistics Canada data to over 2,000 researchers annually to advance knowledge and inform policy. CRDCN also supports researchers through training, knowledge mobilization and advocacy.

CRDCN is hosted by McMaster University and acknowledges the collaboration and support provided by the Office of the Vice-President, Research, the Office of the AVP and Chief Technology Officer, and countless colleagues across the Finance, Research and IT departments.
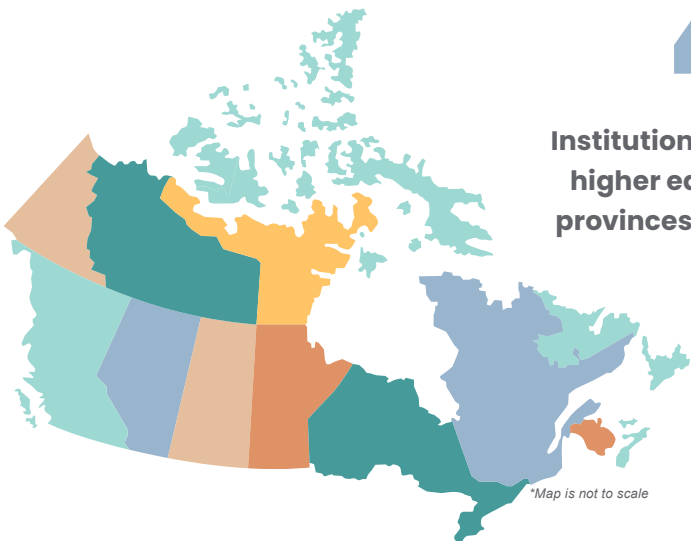
Land Acknowledgement

The Canadian Research Data Centre Network (CRDCN) is hosted by McMaster University, which is located on the traditional territories of the Mississauga and Haudenosaunee Nations, and within the lands protected by the Dish With One Spoon Wampum agreement.

Our Network stretches across the northern half of Turtle Island, and our Collaborating Institutions are situated in locations under modern treaty, unceded and un-surrendered territories, or traditional territories from which First Nations, Métis and Inuit Peoples have been displaced.

Visit Native Land Digital, a space where non-Indigenous people can learn more about the lands they inhabit, the history of those lands, and how to actively be part of a better future going forward together: https://native-land.ca/

By the numbers

Inception of CRDCN: 2000

*Map is not to scale

Global number of institutions of research and higher education represented by RDC users (past 10 years)

46
Institutions of research and higher education in all ten provinces and one territory

138

357
Books authored
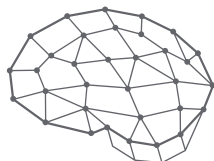
2,435
Current researchers

1,502
Current projects

674
Policy reports

620	433	Theses supported by the CRDCN over the life of the Network
Master's	Doctoral	

Current breakdown of CRDCN-supported researchers	Undergraduate	36	Post-doctoral	63
	Master's	167	Faculty & other researchers	1,779
	Doctoral	390		
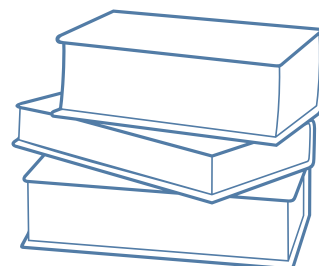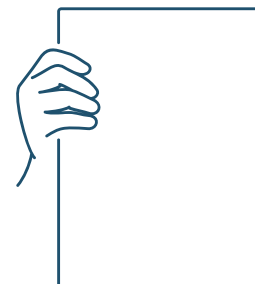
3,245
Peer-reviewed articles

CRDCN researchers by discipline/focus

Environmental Science / Studies

Industrial Relations / Management	Math / Stats	Economics	Education	Other Social Sciences	Epidemiology	Medicine	Other Health

Geography / Urban Studies

Other | Demography

Political Sciences | Psychology / Psychiatry | Nutrition | Public Health

Criminology / Law

Word frequency in publication abstracts

dietary characteristics family survey census capital physical longitudinal
population tax parental administrative youth migration income evidence risk
early mental poverty differences relationship changes children representative satisfaction alcohol
life important interventions immigration groups work people linked food Canada
energy individuals childhood factors gap young mobility inequality index older gender market
statistics prevalence patterns services Indigenous community men mortality cancer
women adults child impact public measures activity earnings trends social
policy labour living housing urban financial socioeconomic cannabis cohort economic workers
care rural data households employment

Top disciplinary research-to-policy connections

Epidemiology → Health Canada/Public Health Agency of Canada
Public Health → Education & Training Ministries
Economics → Employment and Social Development Canada
Sociology → Immigration, Refugees and Citizenship Canada

Available data sources by theme

- Health
- Children & youth
- Labour
- Income, pensions, spending and wealth
- Crime & justice
- Society & community
- Children & youth, education, training & learning
- Digital economy & society
- Environment
- Agriculture & food

Setting the Scene

The CRDCN will mark its 25th anniversary during this strategic plan, firmly establishing its status as a mature research infrastructure with a rich base of expertise across a range of research communities in Canada. The renewal of CRDCN as one of Canada's 19 Major Science Initiatives by the CFI is a sign of confidence in the Network's value as a collaborative, nationwide platform, and provides us with the stability required to support researchers while also undertaking new ventures.

The most transformative of these new ventures, the virtual Research Data Centre (vRDC), will radically improve access to Statistics Canada and other microdata by centralising computing resources, increasing compute power, and enabling remote access for CRDCN researchers for the first time. The vRDC will significantly help to democratise data access for researchers, and we see this as but

one element in a larger commitment to equality, diversity, inclusion, and accessibility. Researchers have requested access to more data, more efficient ways of working with the data, as well as streamlined processes for releasing the results of their analyses. We will strive to fulfill these expectations, to develop the capacity for research in our Network, and to harness the collective experience of the CRDCN community to play a stronger advocacy role in the research ecosystem itself, both nationally and internationally.

It is clear that the research ecosystem must be responsive to a range of contemporary technological, socio-economic, and political factors, both internal and external to the world of research. The rapid growth of artificial intelligence and heightened challenges to research security require acute attention. The international movement to advance

Open Science practices, aimed at greater research transparency and replicability of results, has renewed the attention given to the research process itself. We aim to guide CRDCN researchers through these changes, collaborating widely to support established researchers and equipping the next generation with the sophisticated skills required for successful careers in and across multiple sectors. Students constitute almost one-third of our researchers and their training needs will continue to shape our offerings.

Canada and the world are facing a host of complex societal challenges. Climate change, geopolitical stability, social resilience, global health, and cybersecurity – to name a few – dominate the agendas of governments, funders, and beyond, and demand comprehensive responses. CRDCN researchers, embedded in universities and institutes across Canada and
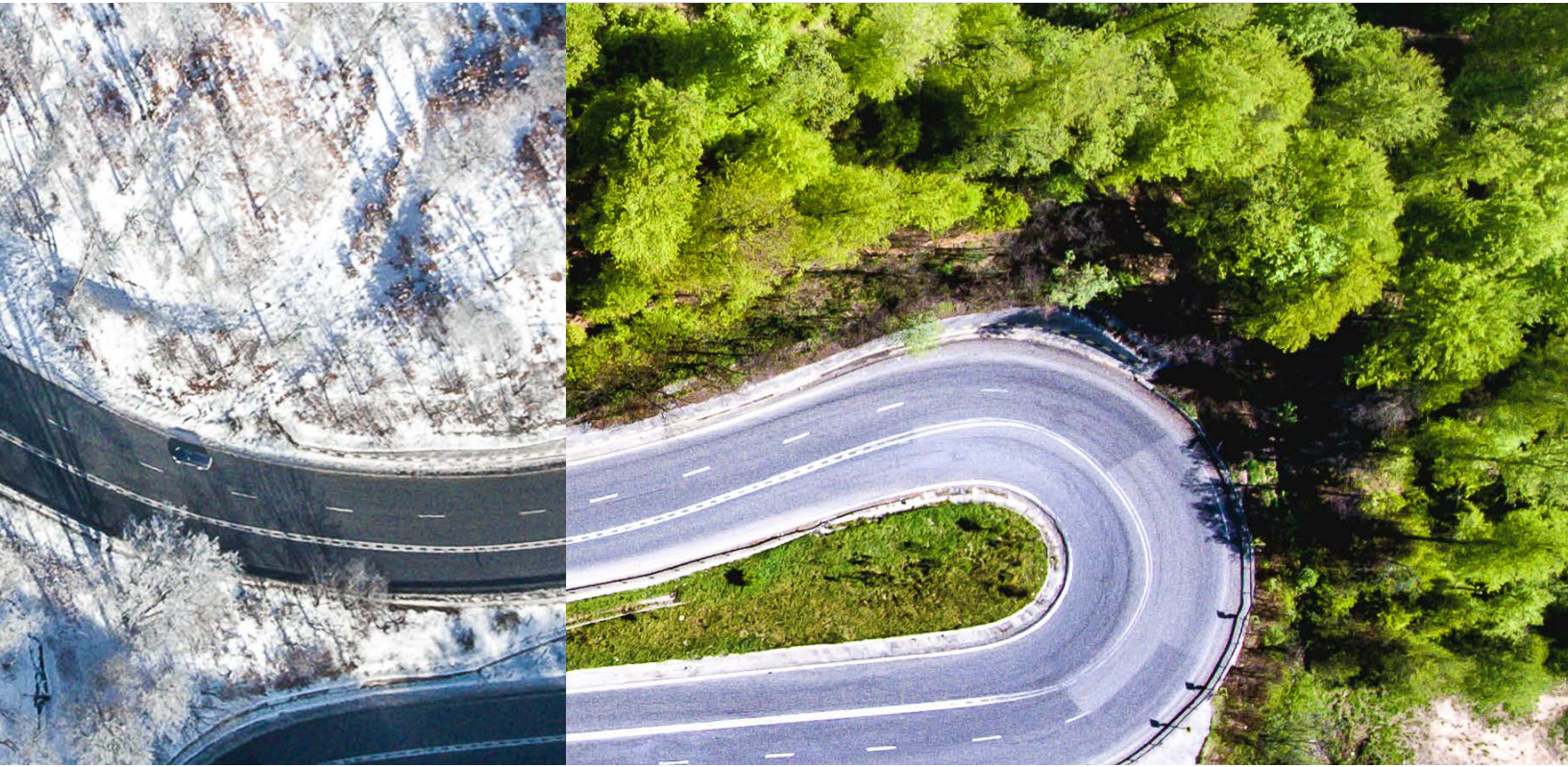
working across a broad spectrum of research disciplines in the social and population health sciences, are engaged in work that is clearly aligned with these larger challenges that confront individuals, communities, professions, and industries. Within this complex environment, we want to help build the research communities and associated capabilities that can be leveraged to conduct quantitative research of the highest quality. Research excellence, which is a key value for CRDCN, supports an effective response to the impacts of evolving world circumstances. The research that is enabled by CRDCN's research infrastructure is a fundamental contributor to a resilient Canada.

The findings of CRDCN researchers reveal important insights into key social, economic and health challenges facing Canada. These results need to find

> The vRDC will significantly help to democratise data access for researchers, and we see this as but one element in a larger commitment to equality, diversity, inclusion, and accessibility.

consistent pathways into the decision-making processes of governments, not-for-profits, non-governmental organisations, and other civil society entities. Knowledge mobilization has been a longstanding function of CRDCN, and for this strategic plan we aim to build more sustainable pathways for consistent exchanges between researchers and decision-makers, providing arms-length expert guidance to inform key policy issues. Through this, we also aim

to help combat the spread of disinformation, build trust in the research process, and promote the value of a research-to-policy pathway.

While the value of data for informed decision-making is well known across sectors, the challenges and possibilities inherent in systematically deriving specific, nuanced and accurate insights from the data are less well understood. This is where the CRDCN's unique role in supporting the research lifecycle can be most powerful. At its core, CRDCN, in partnership with Statistics Canada, provides access to valuable microdata through a highly secure platform to talented researchers from a wide range of disciplinary backgrounds. This role is our strength, and we are excited to share, harness, and grow that strength in ambitious and meaningful ways through this strategic plan and beyond.

Vision

To be recognized in Canada and internationally for enabling robust research that leverages the power of microdata to influence policy and transform Canadian lives.

Mission

To facilitate access to trustworthy data, enabling a diverse pool of researchers to advance knowledge at the forefront of their disciplines.

To foster a professional community of emerging and established researchers and assist them to develop skills in quantitative research and in the responsible and skilled use of data.

To contribute to evidence-informed policy that addresses vital societal issues by connecting researchers with decision-makers and advocating for related improvements in the research ecosystem.

Values

Excellence

Equity, Diversity and Inclusion

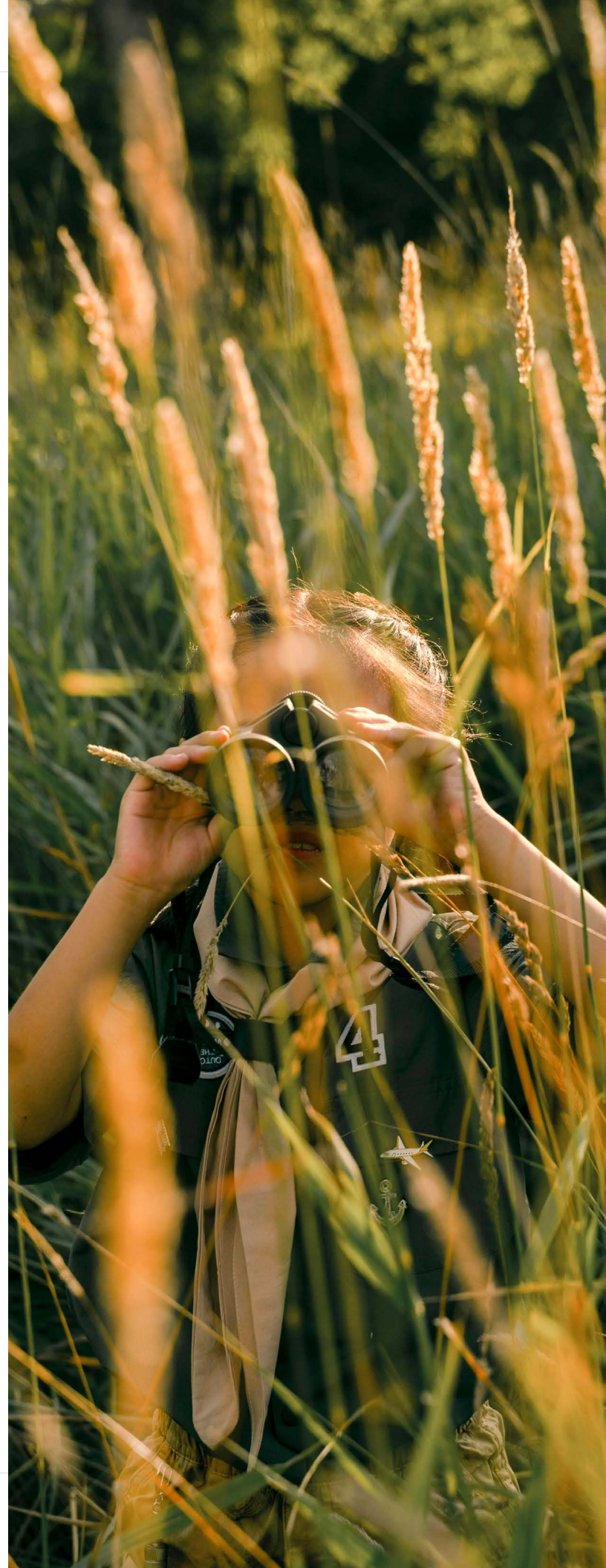**Accessibility**

Collaboration

Transparency

Reconciliation

Accountability

The Strategic Pillars

Data

Enable innovative research through expanded data access and use

Community & Capabilities

Develop skills and build expertise for data-intensive research topics and professions

Evidence-informed Decision-making

Strengthen the bridge between academic research and decision-makers

Research Ecosystem

Foster the continued development of best practices in the research and data ecosystem

Data

Providing researchers with secure access to a rich array of datasets is CRDCN's *raison d'être* and has propelled the partnership between CRDCN, Statistics Canada, and Canadian universities for over two decades. In the past ten years alone, CRDCN has enabled access to Statistics Canada microdata for almost 5,000 researchers, who have undertaken over 2,500 research projects, producing more than 3,000 publications. CRDCN plays a unique role in the research data ecosystem by providing the social and technical pathways that connect highly trained academic researchers with the data.

Data access is CRDCN's first and most central strategic priority. We will continue to work with Statistics Canada and other partners to both expand the sources of available data and improve the processes for accessing the data. We have several related goals for the Network over the next five years, starting with increasing the awareness among new and potential researchers about the data sources available, and helping researchers connect to the datasets that will best inform their research, analysis, or policy goals. Second, we will support Statistics Canada as they aim to significantly improve the procedures for working with data and linked datasets and for releasing the results of data analyses. And finally, we aim to improve administrative workflows for CRDCN members, and maximize the remote capabilities, speed, and collaboration features of the new virtual Research Data Centre (vRDC).

The implementation and continued operations of the vRDC – a powerful, state-of-the-art, centralised platform that also provides researchers with remote access to data – will play a significant role in advancing these goals and democratising access. Central pursuits of the CRDCN in the coming years will include supporting the vRDC and building its potential for improved workflows. As the vRDC makes remote access available to our Network members, local Research Data Centres (RDCs) will benefit from this increased remote flexibility, while also continuing to play a strong role in providing access to the most highly sensitive data and specialised training for all CRDCN researchers.

And finally, CRDCN will explore the potential to provide trustworthy stewardship of additional data sources that complement Statistics Canada's rich offerings. Leveraging the substantial federal, provincial and institutional investments in the vRDC, this exploration will be driven by the pursuit of the greater research impact made possible through enhanced and diversified data accessibility and interoperability.

To enable innovative research through expanded data access and use, CRDCN will:

- Raise awareness about available data and support expanded data linkages in the Network

- Harness the power of the vRDC to improve data access for research

- Explore potential CRDCN stewardship of additional data sources

Community & Capabilities

Data are often referred to as assets, yet the real assets at the heart of the CRDCN are the researchers, who come from a wide range of backgrounds across health and social sciences, positioning the CRDCN as the premier Canadian research infrastructure for quantitative research in these fields. Over the five-year period of the previous strategic plan, CRDCN collaborated with Statistics Canada and other partners in academia and government to offer an increasing variety and volume of training to support students and seasoned researchers. This has included everything from working with datasets to training in software applications, statistical methods, replication of research results, and more recently, in partnership with First Nations, Inuit and Métis organisations to provide guidance on working with Indigenous data. The strategic pillar of Community & Capabilities focuses on increasing researcher capacity and inclusion across the Network, while also harnessing the unique expertise and power afforded by the remarkable concentration of quantitative researchers within this Network.

Building capabilities requires attention to both the immediate training needs of researchers and to potential career progression pathways for a diverse cohort of existing and next-generation researchers. To address a continuously evolving research landscape, CRDCN will offer training in the current skill sets, tools, and methods required for conducting data-intensive research, complementing the offerings of our university partners and contributing to the pursuit of research excellence. We will continue to develop key partnerships and to provide researchers more opportunities for collaboration, information exchange, and networking, which will assist in navigating key areas of the evolving research and data landscape and will contribute to the development of highly qualified personnel. These activities will strengthen CRDCN's role as an inclusive, professional network that supports the ambitions and aspirations of its researchers and its role as a collective voice for quantitative data researchers in the larger ecosystem.

It is widely acknowledged that addressing complex social, economic, and health issues requires research questions and

creative responses from a range of perspectives. So, in addition to supporting the development of necessary skills, we will also work to diversify the cohort of researchers engaged with CRDCN. Diversification in this case is informed by attention to equity and defined by efforts in seeking to engage and include researchers from a broader range of identities and lived experiences, as well as from more diverse disciplinary backgrounds, research interests, geographies and methodological approaches. A diverse and inclusive community, understood in these terms, cuts across researcher demographics, disciplines, datasets, and research questions posed.

Growth, when defined in terms of researchers, is not only a quantitative goal, but is a qualitative one as well. In support of greater inclusivity, we will work to widen the diversity of researchers and, by extension, the research that is undertaken. We will also seek to engage meaningfully with First Nations, Inuit, and Métis researchers and leaders to develop fruitful collaboration, in keeping with the aims of Truth and Reconciliation. And finally, we will develop ways to better connect researchers across the Network with each other to exchange research questions and insights. This will vary from providing support to researchers working on specific datasets, to encouraging interdisciplinary collaboration, to creating opportunities for networking and knowledge exchange that attract new researchers and promote new connections and insights.

To develop skills and build expertise for data-intensive research topics and professions, CRDCN will:

- Enhance the development of skills in response to evolving researcher needs

- Strengthen the role of CRDCN as a professional network to broaden and diversify its researcher community

- Foster collaboration and interdisciplinary approaches among researchers to assist them in addressing complex questions

Evidence-informed Decision-making

Through its core funding, the Network has long fostered the pursuit of investigator-driven research into questions that require the granularity that comes with access to quality microdata. As we work to improve data access and to support researchers with the skills and professional networks necessary to conduct data manipulation and analysis, we will also continue to mobilize the knowledge that is created through that research, by strengthening the bridge between academic researchers and decision-makers. CRDCN research is based on trusted, high-quality, sensitive Canadian microdata. Our goal is to ensure that research contributes to transparency and informs a diverse array of programs and policies that benefit the lives and communities on which those data are based.

In recent years, CRDCN has developed strategic collaborations with policy and program partners to provide funds for research projects on themes of shared interest. Our strategic priority to expand the range of partnerships includes building collaborations at scale, broadening them across the policy areas where CRDCN researchers hold expertise, and developing the mechanisms that enable timely research questions to be addressed in responsive and agile ways. In addition, our goal is to develop collaborations that support mission-driven research, where partners can harness the rich expertise of academics as key sources of insight to inform the design of policies and programs. To support these collaborations, we will also work to build a better understanding of the evolving expertise of researchers within the Network, to attract a diversity of new researchers, and to connect researchers across disciplines and geographies.

The challenges facing Canada, its residents, communities, and governments are complex, requiring a range of perspectives, nuanced understandings of factors specific to very particular environments, as well as factors that are global in scope. Our goal is to create better pathways for researchers to connect with each other and across stakeholder groups on areas of mutual interest. Being part of the Network fosters research excellence, knowledge exchange, and interdisciplinary collaboration, and enables the richness of perspective that comes from including a diversity of perspectives.

To strengthen the bridge between academic research and decision-makers, CRDCN will:

- Facilitate the use of data-driven research to inform changes in policies and programs

- Connect researchers to other sectors to enable collaboration and research-informed practice

- Become the go-to organisation to access researchers who can help address complex questions and large-scale societal challenges

Research Ecosystem

To amplify the value of a quarter century of Network growth, CRDCN will contribute to the development of best practices across the research ecosystem, bringing to the national and international table existing strengths in research administration, quantitative research, sensitive data management, and research expertise from disciplines across the social and population health sciences.

The preceding three priorities in this plan focus on strengthening the arteries through which data flow to support research and decision-making. This fourth priority focuses on the research ecosystem, looking outward to the partnerships, collaborations and initiatives that will enable CRDCN to play a leadership role that reflects its strengths as a

Canada Foundation for Innovation (CFI) Major Science Initiative, and as a Social Sciences and Humanities Research Council (SSHRC)-Canadian Institutes of Health Research (CIHR) strategic research platform. In the same way that we will direct our attention to the training requirements to support researchers in a changing research, data, and technology landscape, we will also advocate for systemic improvements to that landscape itself by collaborating with universities, networks and alliances to build a more robust and competitive research and data ecosystem in Canada and internationally.

At a national level, we will take a leadership role in cultivating a coordinated and sustainable future for Canadian research

infrastructures and in nurturing the growth in research capacity that comes with furthering diverse, equitable, and inclusive research opportunities and environments. At the international level, we will build connections and participate in fora that strengthen research as a global pursuit and treat best practice as an ever-evolving ambition that is best pursued in collaborative environments. Through thoughtful engagement in the Network's strategic areas of expertise, we aim to raise the profile of CRDCN internationally, creating opportunities for partnership and ensuring that the Network functions at the state of the art.

Our interest in engaging more widely with the research ecosystem

also includes a commitment to supporting the processes that enable transparent, secure, and reproducible research. The aspirations of Open Science have established a strong foothold both in Canada and globally in the past decade, particularly in the realm of publicly funded research. Academic journals, for example, are requiring researchers to clearly document data and code alongside their submissions to enable reproducibility. In the same way that we aim to support the implementation of FAIR (findable, accessible, interoperable, and reusable) practices across the Network, we also aim to help define what these practices look like for our relevant disciplines, and how they are best pursued in research

environments that work with sensitive, secure, and restricted microdata.

The FAIR principles require approaches that work in tandem with security and privacy concerns by supporting best practices in data management, stewardship, and governance. Statistics Canada, Canadian universities, research funders, and governments are incorporating FAIR practices into their requirements, and providing guidance around FAIR in their research support offerings. As a national research infrastructure that focuses on the responsible use of quality data, CRDCN can help to build public trust and accountability in data sharing, and greater literacy around the value of data-driven research.

To foster the continued development of best practices in the research and data ecosystem, CRDCN will:

• Collaborate nationally and internationally to adopt and develop both capacity and best practices in the research ecosystem

• Support the processes that enable transparent, secure, and reproducible research

• Build public trust in research practices and outcomes and demonstrate the value of research in Canada and internationally

Delivering the Plan

This plan sets out a strategic approach for 2024-2029, based on the ambitions of the Network and the role that CRDCN can play in achieving its vision and mission during this time. We have created a plan that contains strong and sometimes bold priorities, yet we have attempted to articulate them in ways that will enable their execution to be agile and responsive to changing environments. The capabilities of artificial intelligence pose both potential for rapid developments, but also challenges for integration into workflows, and of course, for academic integrity and research ethics more broadly. The resources available in the ecosystem also encounter periods of retrenchment that result in challenges to progress in a fiscally responsible way. And

finally, the global landscape is shifting, with various movements and priorities making their way onto research agendas.

To deliver this plan, we will set out annual work plans that create specific goals and activities to operationalise the strategy and we will develop key performance indicators and metrics to measure our progress. As always, planning and assessment will be developed under the guidance of our Board of Directors and Academic Council, and in dialogue with partners, funders, researchers, and our broader community of stakeholders. CRDCN's robust governance structure promotes transparency and accountability.

Activities and success measures will be reviewed annually with the

CRDCN Board of Directors and other stakeholders. This approach to delivering the plan will enable CRDCN to leverage areas of success while also identifying ways to overcome obstacles or, where appropriate, to modify the course of action. The annual touchpoint for delivering the strategic plan will be used as an opportunity to identify how new or existing partnerships could play a role in overcoming shared challenges.

In a dynamic and rapidly changing research data ecosystem, this approach will enable CRDCN to seize opportunities as they arise, act on lessons learned, and deliver a powerful research infrastructure that is marked by the spirit of collaboration and research integrity and reflects the strengths of the CRDCN research community.

CRDCN Governance and Partners

CRDCN is a collaboration between the CRDCN central staff headquartered at McMaster University, Statistics Canada, and 46 institutions of research and higher education across the country. CRDCN is grateful for core operational funding provided by the CFI as a Major Science Initiative, as well as both the CIHR and SSHRC as a strategic research platform. CRDCN is also grateful for funding provided by Statistics Canada,

provincial partners, and by our Collaborating Institutions.

The Network has a robust governance structure that guides decision-making and ensures continuous exchange with key representatives from the range of stakeholder groups. This includes the CRDCN Board of Directors and four standing committees: Executive Committee; Finance Committee; Governance and Human Resources Committee;

and the Joint Operations Committee. The Academic Council has representation from Statistics Canada, the CRDCN Board of Directors, and Academic Directors from the Collaborating Institutions. The CRDCN Research Advisory Committee, although not a committee of the Board, serves in an advisory function to the CRDCN research team on the central staff.

Primary Federal Partners

INNOVATION
Canada Foundation for Innovation
Fondation canadienne pour l'innovation

CIHR IRSC
Canadian Institutes of Health Research
Instituts de recherche en santé du Canada

Social Sciences and Humanities Research Council of Canada
Conseil de recherches en sciences humaines du Canada

Statistics Canada
Statistique Canada

Host Institution	McMaster University	**Collaborating Institutions**	ACADIA UNIVERSITY	Brock University	Cape Breton University
Carleton University	Concordia	DALHOUSIE UNIVERSITY	HEC MONTRÉAL	INRS Institut national de la recherche scientifique	McGill
McMaster University	MEMORIAL UNIVERSITY	MOUNT SAINT VINCENT UNIVERSITY	NIPISSING UNIVERSITY	Queen's UNIVERSITY	SFU SIMON FRASER UNIVERSITY
Saint Mary's University	ST. FRANCIS XAVIER UNIVERSITY	St. Thomas UNIVERSITY	Toronto Metropolitan University	UNIVERSITÉ DE MONCTON EDMUNDSTON MONCTON SHIPPAGAN	Université de Montréal
UdS Université de Sherbrooke	UNIVERSITÉ DU QUÉBEC	UQÀM Université du Québec à Montréal	UNIVERSITÉ LAVAL	UNIVERSITY OF ALBERTA	UBC THE UNIVERSITY OF BRITISH COLUMBIA
UBC THE UNIVERSITY OF BRITISH COLUMBIA Okanagan Campus	UNIVERSITY OF CALGARY	UNIVERSITY OF GUELPH	University of Lethbridge	University of Manitoba	UNB UNIVERSITY OF NEW BRUNSWICK
UNBC UNIVERSITY OF NORTHERN BRITISH COLUMBIA	u Ottawa	UNIVERSITY of Prince Edward ISLAND	University of Regina	UNIVERSITY OF SASKATCHEWAN	UNIVERSITY OF TORONTO
University of Victoria	UNIVERSITY OF WATERLOO	University of Windsor	THE UNIVERSITY OF WINNIPEG	Western UNIVERSITY · CANADA	LAURIER WILFRID LAURIER UNIVERSITY
YORK UNIVERSITÉ UNIVERSITY	**Provincial Partners**		Alberta	BRITISH COLUMBIA	CIQSS QICSS
Manitoba	New Nouveau Brunswick CANADA	NOVA SCOTIA	Ontario	Fonds de recherche Québec	Saskatchewan
IT and Software Partners		canarie	Digital Research Alliance of Canada / Alliance de recherche numérique du Canada	esri Canada	sas