

THE CRDCN: PROGRESS, OPPORTUNITIES AND CHALLENGES

NDSF Summit

Ottawa

January 24-25, 2019

What is the CRDCN?

- National research platform and one of Canada's major science initiatives (CFI MSI)
- Partnership between Statistics Canada and 30 Universities, established in 2000
- McMaster is the host university
- Provides access to Statistics Canada microdata for research and policy via Research Data Centres
- Core funding from CIHR-SSHRC, CFI, provincial governments and universities

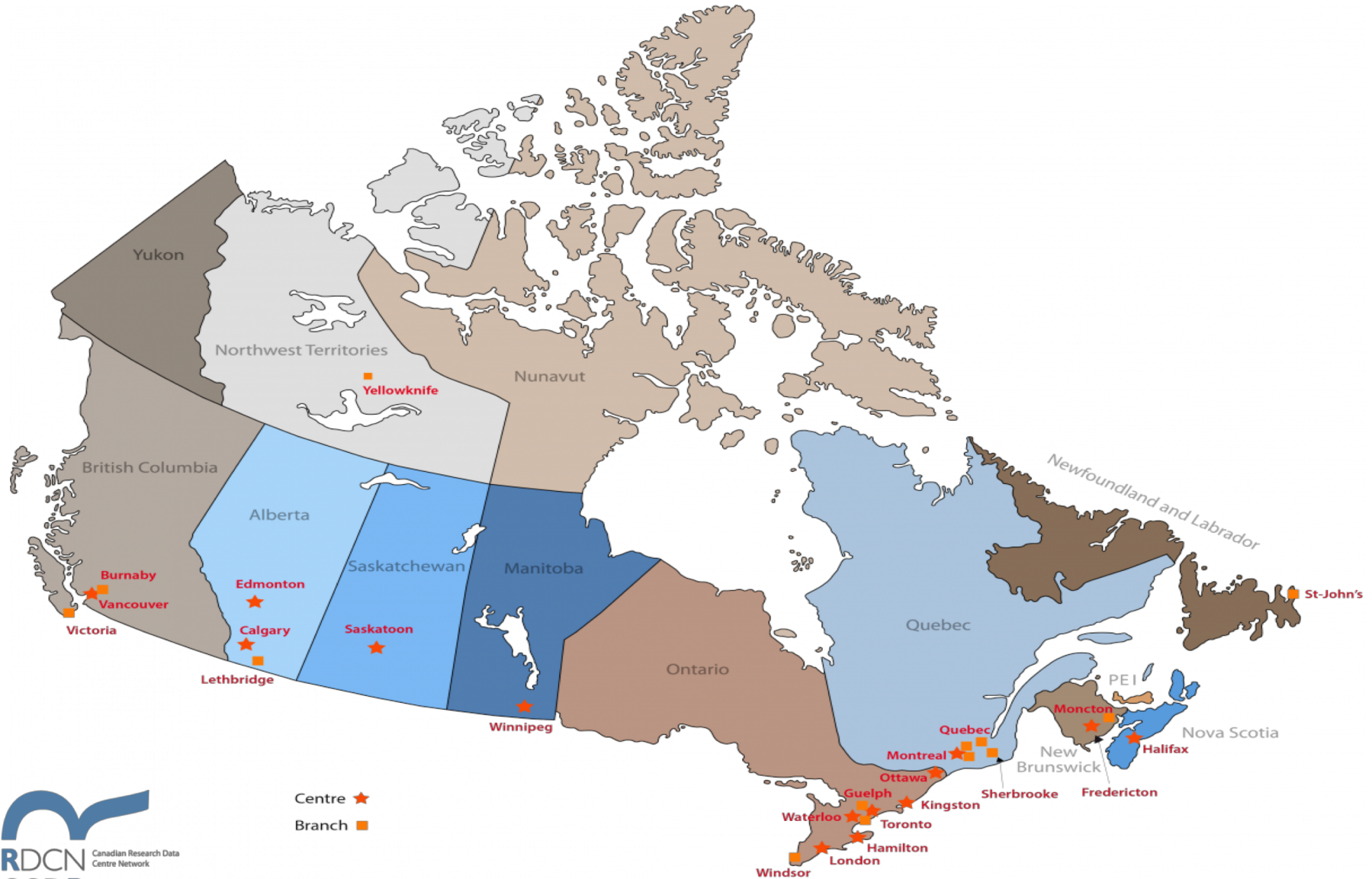


Statistics
Canada

Statistique
Canada



CRDCN National Network

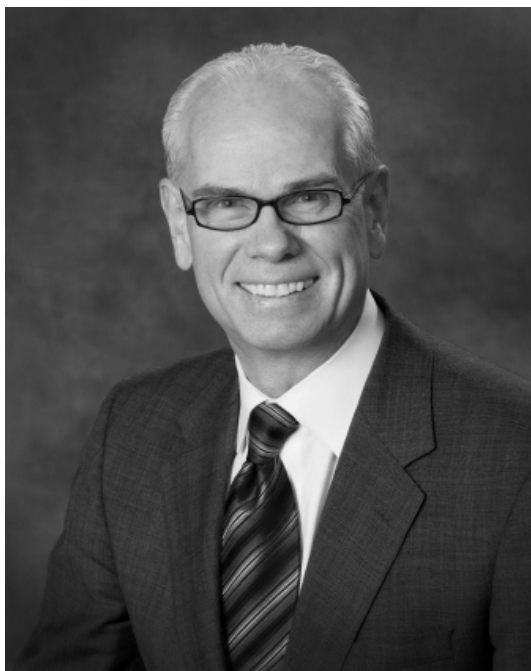


What are our goals?

- CRDCN research is recognized internationally as leading edge social science and health research
- CRDCN HQP are rising stars and emergent leaders in social science and health research and public policy
- CRDCN research recognized as a vital source for informing public policy by federal and provincial governments and NGOs
- CRDCN is an exemplar of the strategic and operational value of a social science and health research network

Our Board Chair and Vice Chair

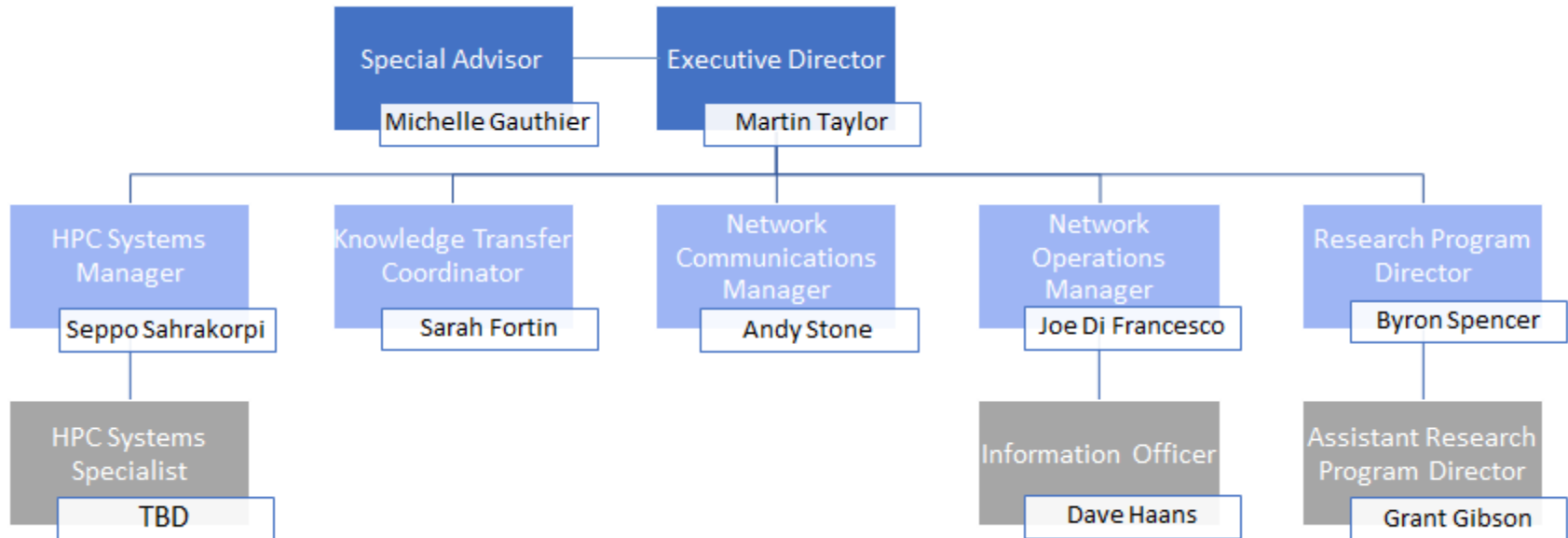
Andy Bjerring and Céline Le Bourdais



Our Academic Council Chair Ted McDonald



Our Management Team



CRDCN Researchers

DISCIPLINE	NUMBER OF RESEARCHERS
ECONOMICS	641
PUBLIC HEALTH / EPIDEMIOLOGY	362
SOCIOLOGY / ANTHROPOLOGY	286
PSYCHOLOGY / PSYCHIATRY	108
GEOGRAPHY / URBANISM	105
MATHEMATICS / STATISTICS	78
MEDICINE	66
INDUSTRIAL RELATIONS	61
DEMOGRAPHY	60
NUTRITION	47
POLITICAL SCIENCE	28
EDUCATION SCIENCE	22
PHYSICAL REHABILITATION SCIENCE	15
NURSING	15
LAW / CRIMINOLOGY	13
INORMATION TECHNOLOGY / APPLIED SCIENCES	9
OTHER HEALTH SCIENCE	91
OTHER SOCIAL SCIENCE	90

Key Performance Indicators (2017-18) (CFI; CIHR-SSHRC)

Mandatory KPIs

- Advancement of research/knowledge transfer
 - 940 additions to the CRDCN bibliography
- Contribution to the training of highly qualified personnel
 - 654 student RDC users
- Access to the network
 - 1726 RDC users
- Optimal use of the network
 - 1.09 Usage to capacity ratio
- Level of user satisfaction
 - 88% satisfied or very satisfied

Key Performance Indicators (2017-18) (CFI; CIHR-SSHRC)

CRDCN Specific KPIs

- Data files in the RDCs
 - 38 new data files added
- Level of satisfaction of Board members
 - 80% satisfied or very satisfied
- Public Policy Engagement
 - 195 media mentions and policy reports

CRDCN Research Impacts

- **Indigenous Peoples' Health and Well-Being**

- Analysis of Aboriginal Peoples' Survey by CRDCN researchers
- May 2017 CRDCN-INAC Workshop and Report
- Research results and workshop are informing INAC's policy and program planning

- **Gender Equity**

- Waterloo team's federally funded research on occupational segregation, skills, and the gender wage gap
- Presentation and report to the federal Pay Equity Office
- Results inform Government of Canada's economic growth, labour force and working family policies

- **Healthy Eating**

- Impact analysis of policy to ban junk food in schools
- Policy report on the health and economic impact of a tax on sugary drinks in Canada to leading NGOs
- First Canadian evidence of the effectiveness and impacts of these policies

Engaging Our Research Partners

- **Theme areas**

- Income and Employment
- Immigration and Settlement
- Education and Social Development
- Population Health and Health Services

- **Shared purposes**

- Data Acquisition
 - Data Analysis
 - Knowledge Mobilization
- Data Access
Collaborative Programs

Engaging Our Research Partners

- **Federal Partners**

- Employment and Social Development Canada
- Immigration Refugees and Citizenship Canada
- Indigenous and Northern Affairs Canada
- Status of Women Canada

- **Provincial Partners**

- Provincial Research Funding Agencies
- Ontario Ministries of Community and Social Services, Finance, Health and Long-term Care, Advanced Education and Skills Development
- BC Ministry of Education
- Saskatchewan Ministry of Justice

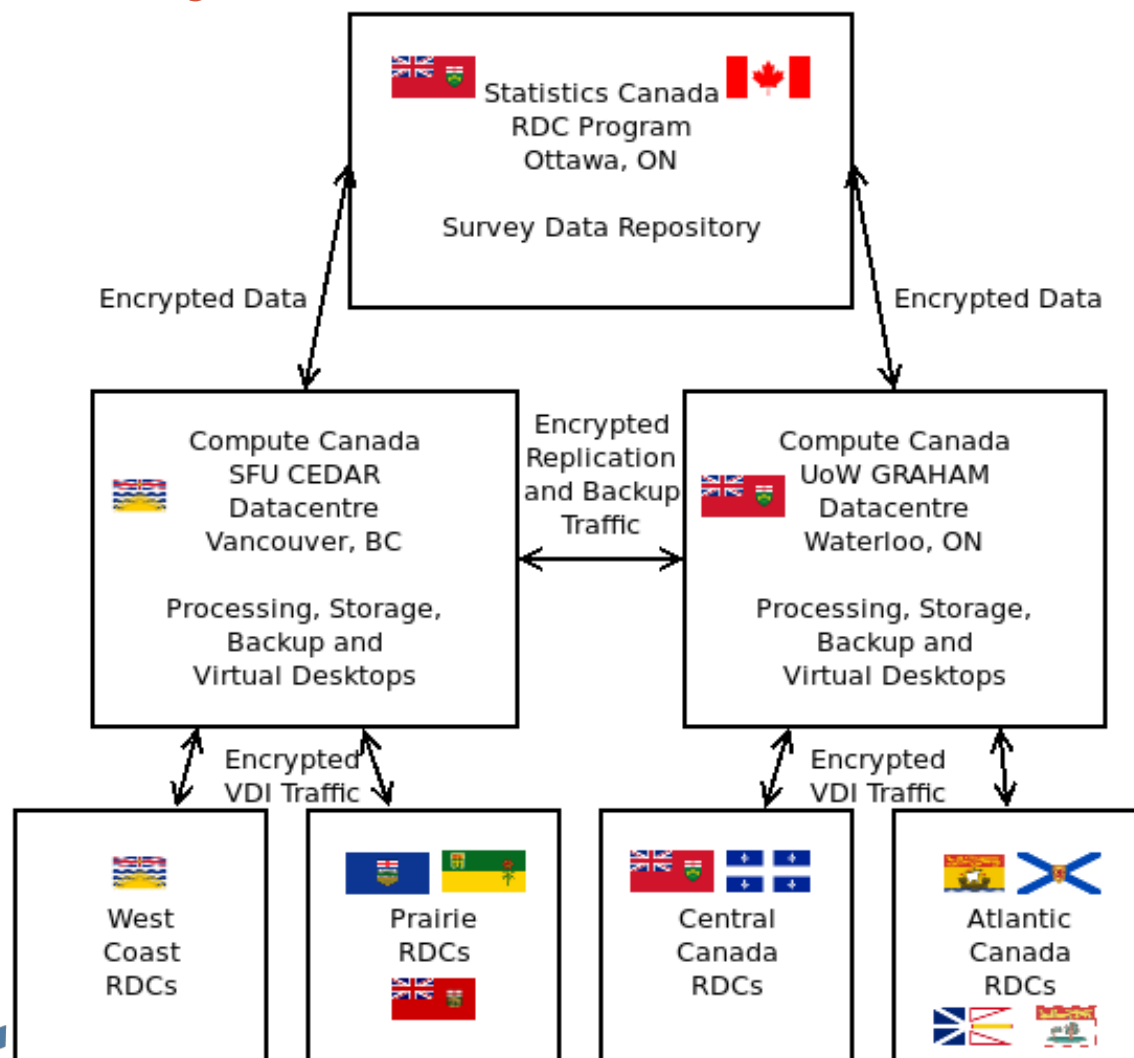
High Performance Computing

- The CRDCN Transition to HPC: Liberating Data for Research and Policy
 - Enables advanced computing of big data files (admin. and linked data)
 - PI: Byron Spencer/ Mike Veall (McMaster U)
 - CFI Innovation Fund Award (\$9.3M)
- CRDCN-StatCan-Compute Canada Partnership
- System Architecture
 - Two national data centres (CC sites at SFU and Waterloo)
 - 30 RDCs served through a thin client network
- Timeline
 - 2019-20 System build and pilot testing
 - 2020-21 Full system roll-out

Stakeholders

- McMaster University and Partner Universities
- Statistics Canada
- Compute Canada
- CFI, Provincial Research Funding Agencies, CIHR-SSHRC
- CRDCN Board and Management
- CRDCN Academic Directors and Researchers

HPC System Architecture



Implications of the HPC implementation

- CFI IF award based on CRDCN achieving a quantum advance in its research productivity and impacts, HQP training, and socio-economic and health benefits to Canada
- The HPC system will:
 - enable high speed analysis of large and complex data files
 - recruit new and retain existing academic users
 - attract new public and private sector end-user engagement in collaborative research programs
 - achieve operating cost efficiencies and additional revenue generating opportunities
 - position CRDCN more centrally in the research data ecosystem through its partnership with Compute Canada
 - extend and strengthen CRDCN's partnership with StatCan and its modernization initiative

What are our key opportunities and challenges?

- **Opportunities**

- CRDCN as one of Canada's major science initiatives
- Transition to a high performance computing platform
- Access to more administrative data, business data and linked data files
- Collaborative programs of policy-relevant research

- **Challenges**

- Positioning within Canada's digital infrastructure ecosystem
- Financial sustainability in the longer term
- Building collaborations with government and other partners
- Demonstrating research impact

Thank You

