Research Data Strategy Working Group

December 9, 2008 CNI Meeting, Washington Pam Bjornson

Research Data Canada Building on Past Efforts

2004 National Consultation on Access to Scientific Research Data Report 2005

NCASRD

National Consultation on Access to Scientific Research Data

CNADRS

Consultation nationale sur l'accès aux données de la recherche scientifique

Research Data Canada NCASRD Vision

Vision of 2020

- > National system of open access to research data
- Open but secure access to powerful and globally assembled data
- Institutions and publicly funded research laboratories have fully operational scientific data capture, storage, access, re-use and archiving processes, procedures and infrastructure

Research Data Canada Canadian Digital Information Strategy

Vision

Canada's digital information assets are created, managed and preserved to ensure that a significant Canadian digital presence and record is available to present and future generations, and that Canada's position in a global digital information economy is enhanced.

- CDIS initiated by Library Archives Canada
- Broader remit than data consultation, but overlap in goals

Several recommendations related to data:

- Standards
- Tools and best practices for creators
- Funding programs that support ... data management plans; data quality control plans; standards-based metadata; timely online publication of research outcomes; and deposit of data and research outcomes with appropriate repositories.

CDIS - Outcomes

 Develop a distributed network of Trusted Digital Repositories (TDRs)

Research Data Canada Scale of the Challenge

The scale of the challenge regarding the stewardship of digital data requires that responsibilities be distributed across multiple entities and partnerships that engage institutions, disciplines, and interdisciplinary domains

Data Players

- Researchers
- Disciplines
- Publishers
- Institutions
- Libraries
- Computing
- Private sector
- Granting bodies
- International

individuals, teams domain specific approaches commercial, not-for-profit universities, government university, national networks, consortia e.g. Google Data, MS, IBM private, public Portico, Internet Archive, CODATA, domain projects

Research Data Canada Canada's S&T Ecosystem



Activities to Date

Stewardship of Research Data in Canada: Gap Analysis

- Analysis of current state versus ideal state via 10 indicators
- Identification of gaps
- Final Report to be posted shortly

Three Task Groups formed:

- Policies, Funding and Research
 - Team Lead Walter Stewart, CANARIE
- Infrastructure and Services
 - Team Lead Chuck Humphrey, U. Alberta Data Centre
- Capacity (Skills, Training, Rewards System)
 - Team Lead Margaret Haines, Carleton University Librarian

Action Plan in progress

Research Data Canada Research Data Strategy

What it is

A collaborative effort to address the challenges and issues surrounding the access and preservation of data arising from Canadian research.

Who it is

Multi-disciplinary group with representation from university research libraries and CIOs, national institutions, federal granting agencies, federal research institutes, and individual researchers

CARL, CUCCIO, LAC, NRC-CISTI, CANARIE, NSERC, SSHRC, CIHR, CFI, CODATA Canada

www.data-donnees.gc.ca



Research Data Canada Curre

Indicator





Research Data Canada Gaps – Data Production

Priority is on immediate use, rather than potential for long-term exploitation.

- Limited funding mechanisms to prepare data appropriately for later use.
- Few research institutions require data management plans.
- No national organization that can advise and assist with application of data standards

Research Data Canada Gaps - Dissemination

- Lack of policies governing the standards applied to ensure data dissemination.
- Researchers unwilling to share data, because of lack of time and expertise required.
- Some policies require certain types of data be destroyed after a research project is over.

Research Data Canada Gaps- Longterm Management

- Lack of coverage and capacity of data repositories.
- Preservation activities in repositories are not comprehensive.
- Limited funding for data repositories in Canada.
- Few incentives for researchers to deposit data into archives.

Research Data Canada Gaps - Discovery and Repurposing

- Most data rests on the hard drives of researchers and is inaccessible by others.
- Per per view and licensed access mechanisms are common where data is available
- Many researchers are reluctant to enable access to their data because they feel it is their intellectual property.

Research Data Canada RDS WG Next Steps

- Engagement Strategy
- Policy and Funding
- Infrastructure and Services
- Capacity

Next Steps: Engagement Strategy

- Develop talking points and other materials to promote awareness of data issues
- Develop a draft vision and action plan to implement the vision
- Convene a roundtable to bring in senior leaders/champions to create a roadmap:
 - Key areas of focus to be addressed
 - Frameworks
 - Tools
 - Infrastructure
 - Capacity and culture

Research Data Canada Next Steps: Policy and funding

- Problem statement that reflects urgency/risks
- Compose several case studies to provide compelling narratives re value of data
- Policy framework for research data management in Canada (see Gap Analysis annex)
- Review funding models for data management
- List of inexpensive /straightforward things that policy makers and other stakeholders can do

Research Data Canada Next Steps: Infrastructure/ Services

- Guidelines for preparing a lifecycle data management plan
- Clear description of the infrastructure needed including cost/benefit analysis
- Guidelines for establishing a scientific data repository

Research Data Canada Next Steps: Capacity

- Develop a pilot research data management course/workshop to be delivered in at least one university and evaluate
- Develop a report on research data management training in Canada with recommendations
- Develop a pilot training course for libraries (project with CARL)



- Need core support from influential leaders (champions)
- Momentum decisions, small steps, milestones
- Involvement from private sector e.g. storage/ archiving
- Policy and regulatory levers critical
- Bottom-up and top-down

- Governance and Regulatory Frameworks
- Cross-jurisdictional
 - Federal and academic institutions have vast gap in funding, often cannot collaborate on projects for this reason.

Challenges

- Focus on commercialisation/IP to show value
- Champions may have to come from each sector to be effective
- New funding challenge economic times, priorities
- Show value and benefits to Canadian innovation and competitiveness to engage leaders

Research Data Canada Tipping the balance towards action?



NRC-CISTI Data Activities

- Continued sponsorship of CNC/CODATA, active involvement and leadership
- ICSTI Conference June 2009
- Develop a gateway website to provide access to Canadian datasets (using CODATA report as starting [point) and other important data repositories
- Develop expertise in metadata about scientific datasets
- Review CISTI Depository of Unpublished Data and expand to make data in digital form more accessible
- Work with federal science-based departments and agencies (SBDAs) to create awareness of issues among researchers



Research Data Strategy Working Group Gap Analysis <u>www.data-donnees.gc.ca</u>

ICSTI Data Management Conference, Ottawa June 2009 CISTI <u>www.cisti.gc.ca</u>

