**Research data** are contents that are used as primary sources to support research, scholarship, artistic activity or research-creation, and that are used as evidence in the research process and commonly accepted in the research community as necessary to validate research findings and results.

Canadian Tri-Agency

Research Data Management refers to the storage, access and preservation of data produced from a given investigation. Data management practices cover the entire lifecycle of the data...include: file naming data quality control and quality assurance; data access; data documentation

CASRAI
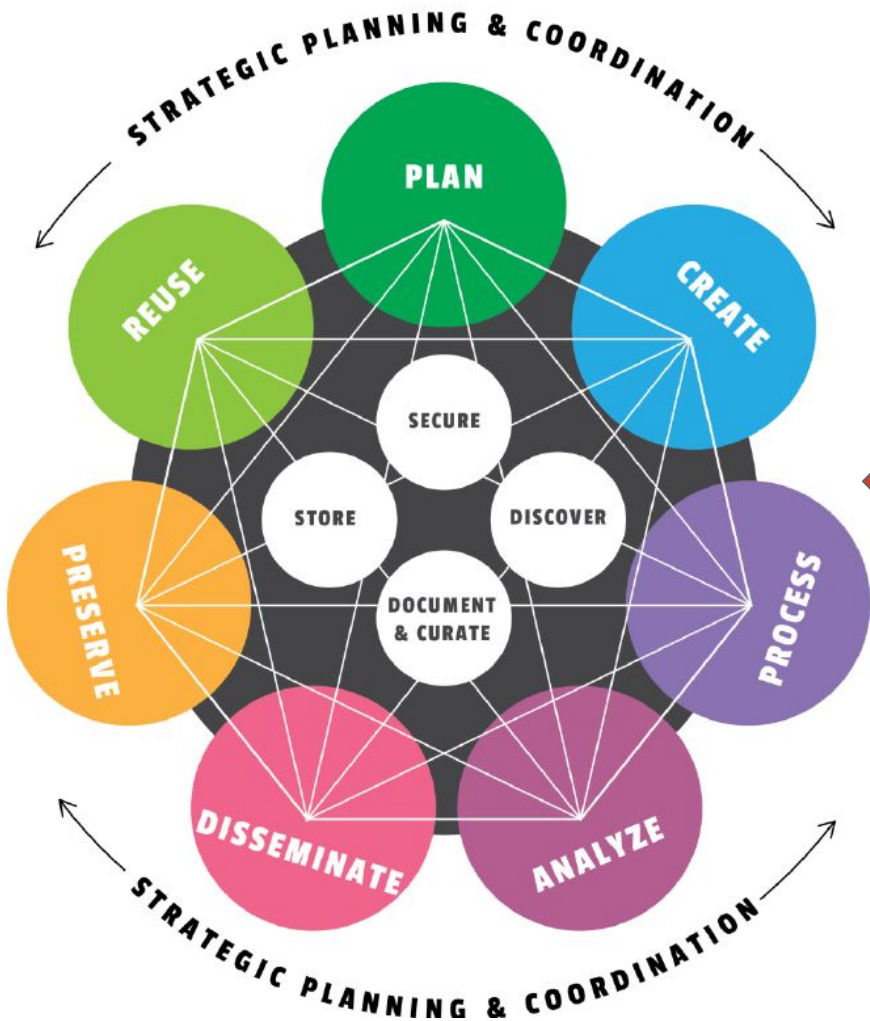
Research Data Management

is the active organization & maintenance of data throughout the **research data lifecycle** to ensure its security, accessibility, usability, and integrity

Applying RDM best practices benefits…

Researchers and their collaborators

✦ Improves research efficiency and productivity
✦ Provides extra credit for research work
✦ Increases research impact
✦ May help to meet funding requirements

Research Communities

✦ Accelerates discovery
✦ Enables validation and verification

Funders, governments and the public

✦ Improves return on investment
✦ Increases research transparency
✦ Data as a public good

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  - Policies and Guidelines
    - Open Access
    - Selecting the Appropriate Federal Granting Agency
    - Research Ethics
    - Responsible Conduct of Research
    - Public Communications

Tri-Agency Statement of Principles on Digital Data Management

1. Preamble

The Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council of Canada (NSERC), and the Social Sciences and Humanities Research Council of Canada (SSHRC) (the agencies) are federal granting agencies that promote and support research, research training, knowledge transfer and innovation within Canada.

As publicly funded organizations, the agencies are strong advocates for making the results of the research they fund as accessible as possible. In promoting access to research results, they aspire to advance knowledge, avoid research duplication and encourage reuse, maximize research benefits to Canadians and showcase the accomplishments of Canadian researchers. These aspirations align with the Government of Canada's commitment to open science, as described in *Seizing Canada's Moment: Moving Forward in Science, Technology and Innovation* (2014).

Research data include observations about the world that are used as primary sources to support scientific and technical inquiry, scholarship and research-creation, and as evidence in the research process.[1] Research data are gathered through a variety of methods, including experimentation, analysis, sampling and repurposing of existing data. They are increasingly produced or translated into digital formats. When properly managed and responsibly shared, these digital resources enable researchers to ask new questions, pursue novel research programs, test alternative hypotheses, deploy innovative methodologies and collaborate across geographic and disciplinary boundaries. The ability to store, access, reuse and build upon digital research data has become critical to the advancement of science and scholarship, supports innovative solutions to economic and social challenges, and holds tremendous potential for Canada's productivity, competitiveness and quality of life.

Tri-Agency Statement of Principles on Digital Data Management
http://www.science.gc.ca/default.asp?lang=En&n=83F7624E-1

Tri-Agency Statement of Principles on Digital Data Management: **Expectations**

- Data management planning
- Constraints and obligations
- Adherence to standards
- Collection and storage

- Metadata
- Preservation, retention and sharing
- Timeliness
- Acknowledgement and citation

- Efficient and cost-effective

Tri-Agency Statement of Principles
on Digital Data Management: **Responsibilities**

Researchers

- incorporating best practices
- developing DMPs
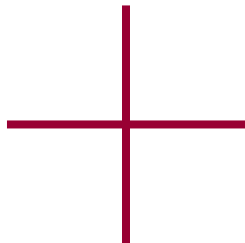- adhering to policies and standards

Research Institutions

- supporting best practices
- providing access to resources
- creating guidance and policies

Research Communities

- developing & promoting standards
- fostering excellence
- selecting repositories

Research Funders

- developing policies & guidance
- promoting data management
- providing peer reviewers

Draft Tri-Agency RDM Policy

Tri-Agency [draft data management policy](#)[1] — June, 2018
- Applies to grant recipients and institutions administering tri-agency funds.
- June-Sep, 2018: consultation period; feedback to inform policy

3 pillars:

1. **Institutions**: Institutional Strategy
2. **Researchers**: Data Management Plans
3. **Researchers**: Data Deposit

Phased and incremental implementation

[1]http://www.science.gc.ca/eic/site/063.nsf/eng/h_97610.html [shortened: https://bit.ly/2OsJB8w]

Invited Panelists (in alphabetical order)

Krysha Dukacz - Data Manager, McMaster Global Water Futures

Dr. Lawrence Grierson - Associate Professor, Family Medicine

Dr. Antonio Paez - Professor, School of Geography and Earth Sciences

Dr. Ranil Sonnadara - Director, RHPCS; Special Advisor to the VP Research

Dr. Michael Veall - Professor, Economics

Discussion Questions

1. Briefly describe a research project that you are currently undertaking--how are you managing data for that project, and what are the biggest data-related challenges that you face? (5 minutes)

2. How might the pending Tri-Agency Research Data Management policy affect your work? What questions do you have about the policy and its implementation? (5 minutes)

3. What opportunities exist at McMaster to better support researchers' data management needs? (5 minutes, time permitting)