



# **Research Data Management (RDM) Strategy**

**March 2023**

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## Introduction and/or Background:

In March 2021, Natural Sciences and Engineering Research Council (NSERC), Social Sciences and Humanities Research Council (SSHRC), and Canadian Institutes of Health Research (CIHR) hereby known as the Tri-Agencies, released the Tri-Agency Research Data Management (RDM) Policy<sup>1</sup> which applies to any tri-agency fund recipients and fund administrators. The focus of this new RDM policy is to ensure research excellence through effective data management and planning. As the tri-council agencies are responsible for dispersing public funding, they advocate for the results of research to be easily accessible by others<sup>2</sup> as supported by the FAIR (Findable, Accessible, Interoperable, and Reusable) guiding principles.

Holland College actively pursues the creation of new knowledge and the application of existing knowledge in new and creative ways to develop social and economic benefits<sup>3</sup>. Holland College recognizes the importance of scholarly research as fundamental to the pursuit of knowledge, truth and objectivity as well as enhancing quality of life and socio-economic opportunities of all Canadians. Honesty, integrity, and high ethical standards are essential to the process of scientific investigation and innovation<sup>4</sup>. Through this, it is important that all research be conducted in a manner that will ensure research data be collected in an ethical and efficient method and be organized and secured so that it can live on to guide future research initiatives and reduce duplication.

The Tri-Agency RDM policy states institutions will need to meet the following 3 milestones:

1. Each post-secondary institution eligible to administer Tri-Agency funding will need to create an RDM strategy, notify the agencies when complete and post it to the institution website by March 1, 2023.
2. Since April 2022, a phased in approach has been taken by the Tri-Agency that data management plans are required for certain funding applications and will be considered as part of the review process for certain funding opportunities moving forward.
3. All digital research data, metadata and code that supported the research conclusions must be submitted into a safe and secure digital repository that will preserve the data.

To meet the requirements of this new policy, Holland College has established an informal working group to provide insight and expertise from various backgrounds and perspectives into the creation of this Research Data Management Strategy. This working group includes Library Services, IT Services, Quality Office, Institutional Research, and the Research Ethics Board. The Holland College RDM strategy utilizes the Digital Research Alliance of Canada template to guide the creation of this document<sup>5</sup>.

## Importance of Research Data and Research Data Management:

The effective management of research data is important at Holland College for the following reasons:

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<sup>1</sup> Tri-Agency Research Data Policy

<sup>2</sup> Tri-Agency Statement on Principles on Digital Data Management

<sup>3</sup> Holland College Administrative Regulation 60-05-1

<sup>4</sup> Holland College Board Policy on Research

<sup>5</sup> Institutional Research Data Management Strategy Development Template V.3.0

- Easily accessible data saves resources and time.
- Allows for validation and replication of findings, accountability, and safety.
- To meet certain funding requirements.
- Reduce errors and improve the quality of data.
- Facilitates the sharing and succession of data<sup>6</sup>.

The overarching purpose of this strategy will be to empower researchers with the tools and knowledge to create sound RDM plans, which in turn improves the culture and level of excellence of research at Holland College.

### Scope:

The Holland College RDM strategy encompasses all college faculty, staff, students, and external researchers involved in, or on behalf of Holland College. To meet the necessary requirements for this RDM strategy, ensuring researchers receiving support from the Tri-Agency have the necessary technology and tools to demonstrate effective data management.

### Oversight and Review:

The Applied Research department will oversee the progress on this strategy with support from interested stakeholders. The strategy and oversight will be reviewed annually for effectiveness as part of the college's quality procedures. This strategy will also support and align with (where applicable) the college's overall Data Governance Policy (in development).

### Institutional Support:

Holland College Applied Research, along with the RDM working group, will support strategy adoption by:

- Introducing the strategy to all senior management, faculty, staff and students through an effective communication plan,
- Create training opportunities for interested stakeholders to better learn and understand the fundamentals of research data management,
- Improve and update college policy and work with the quality office to ensure Research Data Management is included within the overarching Holland College Data Governance Policy (in development),
- Develop the tools, infrastructure and resources required for successful data management by researchers.

### Stakeholders:

A preliminary list of Stakeholders in the RDM strategy at Holland College has been identified and invited to be part of the working group as listed above. Once the strategy is launched, consultations and communications will begin and be on-going with senior management, programs, corporate services, IT,

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<sup>6</sup> University of Pittsburgh, Library System

HR, foundations, REB, and Student Union. Feedback from stakeholders will be channeled through the working group to ensure this strategy meets the needs of all those who fit under the purview.

### Ethics Considerations:

All research conducted by Holland College, (*Holland College Research Board Policy*) that involves human participants shall comply with the standards established by the Tri-Council Agencies, and stipulated in its

policy statement (TCPS2) on the Ethical Conduct for Research. All projects that have ethical implications, (not only limited to human subjects) that meet these criteria are reviewed by the Holland College Research Ethics Board.

### Indigenous Data Considerations:

Holland College will recognize and adhere to the First Nations Principles of OCAP®. These principles “establish how First Nation’s data and information will be collected, protected, used, or shared. Standing for ownership, control, access, and possession, OCAP® is a toll to support strong information governance on the path to First Nations data sovereignty. Given the diversity within and across Nations, the principles will be expressed and asserted in line with a Nation’s respective world view, traditional knowledge, and protocols.”<sup>7</sup>

### Other Relevant Strategies and Policies:

#### Internal Policies:

Holland College Shaping Futures Strategic Plan  
Holland College Applied Research Strategic Plan  
Holland College Board Policy Applied Research (BP-60-05)  
Holland College Administrative Regulation (AR-60-05-1)  
Holland College Board Policy on Intellectual Property (BP-20-06)

#### External Policies:

Digital Research Alliance of Canada’s Institutional Research Data Management Strategy  
Tri-Agency Research Data Management Policy  
Tri-Agency Framework on the Responsible Conduct of Research

### Definitions:

**Research:** Research is a process of systematic inquiry that entails collection of data; documentation of critical information; and analysis and interpretation of that data/information, in accordance with suitable methodologies set by specific professional fields and academic disciplines.

**Applied Research:** Applied Research is a focus on applying the latest knowledge and technologies in the creation of useful products, services, and processes.

**Research Data:** “Research data are data that are used as primary sources to support technical or scientific enquiry, research, scholarship, or creative practice, and that are used as evidence in the

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<sup>7</sup> The First Nations Principles of OCAP®

research process and/or are commonly accepted in the research community as necessary to validate research findings and results. Research data may be experimental data, observational data, operational data, third party data, public sector data, monitoring data, processed data, or repurposed data.”<sup>8</sup>

Metadata: data that define and describe the characteristics of other data. Accurate and relevant metadata are essential for making research data findable. A principle to help determine what information should be included in metadata is the open archival information system model criterion that the information be “independently understandable.” “Independently understandable” means enough information has been provided in the metadata for someone else to be able to understand the data set without needing its creator to explain it.<sup>9</sup>

Holland College RDM Working Group: A working group comprised of volunteers from several college departments including Library Services, IT Services, Institutional Research, and Quality Office.

Research Data Management: “the storage of, access to, and preservation of data produced from one or more investigations, or from a program of research. Research data management practices cover the entire lifecycle of the data, from planning the investigation to conducting it, and from backing up data as it is created and used to preserving data for the long term after the research has concluded. It also includes data-sharing, where applicable”<sup>10</sup>

Data Management Plan: A data management plan (DMP) is a living document, typically associated with an individual research project or program that consists of the practices, processes and strategies that pertain to a set of specified topics related to data management and curation. DMPs should be modified throughout the course of a research project to reflect changes in project design, methods, or other considerations.<sup>11</sup>

## Timelines:

March 1, 2023- Holland College to post Institutional Research Data Management Strategies

Post- March 2023- Tri-Agency to review strategies and phased approach to DMPs.

Holland College Research Data Management Strategy will be introduced to all departments and embedded within college policy over the next 12 months.

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<sup>8</sup> Tri-Agency Research Data Management Policy: FAQ

<sup>9</sup> Tri-Agency Research Data Management Policy FAQ

<sup>10</sup> Social Sciences and Humanities Research Council **Definition of Terms**, Government of Canada 2021

<sup>11</sup> Tri-Agency Data Management Policy FAQ.