University of Toronto Institutional Research Data Management Strategy

Version 1.1 Mar 1st, 2024

Institutional Commitment to Research Data Management

The University of Toronto (U of T) is one of the world's leading research-intensive institutions with diverse research interests and academic pursuits. U of T is committed to achieving excellence in all research activities. Data are valuable research outputs, and the proper management and handling of data are fundamental to research integrity.

The **University of Toronto Institutional Research Data Management Strategy** outlines the institutional commitment to responsible practices for the management of data created, collected, and utilized throughout the research process at or under the auspices of the University of Toronto.

The University is committed to providing supports for researchers to implement research data management (RDM) practices ensuring the proper care, stewardship, and leverage the potential of data. Supports developed respect the diverse and distinct approaches required for RDM activities across disciplines, types of data, and project partner requirements.

Importance of Research Data Management

For the value of data to be fully realized, specific treatment of data is needed throughout the course of research and beyond. RDM refers to the processes and actions throughout a project which guide the collection, documentation, storage, sharing, and preservation of research data. Responsible RDM practices help to ensure the quality, reliability, security and integrity of research data, which can enhance the credibility and impact of research findings. What constitutes research data will differ by project. Further, different kinds of data, research methodologies, and the characteristics of individual datasets will require distinct practices to maximize the utility of data. Therefore, it is beneficial to plan how data will be managed at the start of a research project through the creation of a data management plan (DMP), which helps to conceptualize and develop consistent actions for data across project stages. Datasets should be prepared, deposited, and retained, in an appropriate repository to ensure the preservation of research data. Making datasets and documentation available for reuse as a research output and enabling the recognition of contributors responsible for the data production potentially furthers the reach and impact of the research investment. Well-managed data and supporting documentation made available to others makes it easier for studies to be replicated and results to be validated. Data supporting research findings should also be made available for reuse when possible, following the [FAIR Principles](#) guidelines of making data Findable, Accessible, Interoperable, and Reusable. This can open new channels for collaboration, discovery, and reuse, and contribute to global understanding, knowledge building, and innovation.

Scope

This document outlines the direction for expected research data practices, support services, and resources at the University of Toronto (U of T). It encompasses all research conducted at or under the auspices of the University, regardless of funding source, and includes all three campuses.

The Strategy does not contain new institutional policy. Rather, it describes actions that are consistent with U of T policies, statements, and agreements, and Tri-Agency policies and requirements including the Tri-Agency Research Data Management Policy, Tri-Agency Framework: Responsible Conduct of Research (2021), and the Tri-Agency Statement of Principles on Digital Data Management. This document is not fixed; rather it will incorporate new institutional learning about RDM practices and will be reviewed after three years.

The U of T Digital Research Infrastructure (DRI) Portal is a resource hub that points researchers to the available RDM guidance and supports.

Key Terms used in this document are described in Appendix A.

Research Data Management Principles

The **University of Toronto Institutional Research Data Management Strategy** is in alignment with the **Research Data Management Principles** shared by our affiliated institutions.

These Principles are:

- Promote Research Integrity and Excellence
- Recognize the Value of Data
- Encourage the Implementation of Data Management Plans
- Facilitate Long-Term Access Through Data Deposit
- Reflect Institutional Practices and Standards
- Honour Indigenous Community-Driven Principles
- Foster a Culture of Inclusive Representation and Public Trust
- Observe Jurisdiction and Legalities
- Strengthen Partnership and Collaboration
- Mitigate Risk Related to Sensitive and Confidential Data
- Safeguard Human Data
- Integrate Excellence in all Disciplinary Approaches
- Connect through Communication and Engagement Opportunities
- Provide Infrastructure that Supports Diverse and Complex Programs of Research
- Ensure Support Services are Available
- Commit to Advocacy and Support for Researchers' Needs

More details are provided in the Research Data Management Principles.

Expectations for Research Data Management Practices

Institutional Practices

It is expected that research conducted at or under the auspices of the University of Toronto adheres to institutional policies, guidelines, and recommendations for proper data handling (see Appendix B). Researchers should treat data with rigour and operate within institutional frameworks.

Researchers must ensure security requirements and guidelines are implemented and follow the institutional Information Security Control Standard and applicable actions based on levels of criticality in the Data Classification Standard. The appropriate selection and use of infrastructure should align with best practices and project needs. Approved and vetted resources should be considered first. If other resources are used, they must be in compliance with relevant policies, procedures, and security guidelines.

Researchers should be aware of the supports available through central and divisional services. Researchers should leverage opportunities to increase the understanding of RDM and utilize resources that aid in the implementation of responsible data management practices. Institutional and unit-level communication channels should also be used to stay abreast of developments, supports, and opportunities for feedback and engagement. All researchers, research team members, and students should be encouraged to build capacity and skills in data management activities and practices, and RDM concepts should be integrated into training and teaching when possible.

Data Management Plans

Research at U of T should reflect best practices in the planning and execution of projects, which includes the creation of a data management plan (DMP) to support research projects. DMPs are living documents that can be modified to accommodate changes in practices as the research evolves. Documenting processes in the planning stage of a project maintains data integrity and project efficiencies and helps to prepare data in ways that enable preservation and data sharing. Data management decisions are impacted by funding and project timelines and planning helps to ensure that necessary supports and resources are in place and included in budgets. When creating a DMP, researchers should note all ethical, legal, cultural, and intellectual property considerations, adhering to best practices, standards, disciplinary processes, and requirements or expectations outlined by sponsors, project partners, or publishers. DMPs in the context of Indigenous research must be co-developed and designed with community members and in consideration of community-driven principles.

Data Deposit

DMPs should include considerations and mechanisms to care for data after a project. Data that underpin research and publications should be prepared and packaged (along with any accompanying documentation, code, metadata, and supplementary materials) in a way that facilitates their long-term access and reuse. Researchers should retain these data with a designated custodian, repository, or archive for a defined period, determined by the researcher or as specified by a sponsor, project partner, or publisher requirement. Additionally, data retention periods should consider the need for the data to potentially verify findings, serve as inputs for future scholarly research, and support the public interest.

When possible, data should be deposited into an appropriate repository or archive and, when appropriate, made available to others. When depositing and sharing data, researchers should strive to adhere to standards and have datasets embody the FAIR Principles (making data Findable, Accessible, Interoperable, and Reusable) to enhance discovery and reuse. Research publications should link to data outputs or include information about where and how to access data and any conditions of use.

Influencing Factors for Research Data Management

Data are subject to a variety of factors that can shape the parameters in which research data management is conducted. These contextual factors must be considered in order to make informed and appropriate decisions throughout the research process.

Indigenous Research

Researchers must respect Indigenous cultures, honouring the authority and authenticity of Indigenous epistemological approaches to knowledge (Indigenous ways of knowing). Researchers must recognize Indigenous data sovereignty and jurisdiction over data about Indigenous peoples and communities in all stages of a research project. Any research involving Indigenous communities must adhere to all legal and ethical requirements and be conducted in accordance with community-driven principles (such as the CARE Principles and OCAP® Principles). Indigenous peoples, communities, and organizations must be engaged throughout the research lifecycle and be involved in all key decision-making. This includes co-developing the data management plan and creating written agreements to ensure the incorporation of holistic research approaches, defining responsibilities and expectations related to data, and outlining commitments to minimize harm to Indigenous communities. Outcomes of research should be shared and returned, and data should be used in ways that benefit the communities, promoting capacity development and community empowerment.

Inclusive Representation and Public Trust

Researchers have a responsibility to collect, use, and analyze data in a manner that preserves public trust and confidence in the research enterprise. All members of the research community should recognize that data are impactful and therefore research must be conducted in a transparent and socially responsible manner. Researchers should strive to recognize and mitigate potential harms and consider the ethical implications of findings. Steps should be taken to ensure that research is inclusive and equitable, and that data are appropriately managed. Researchers working with data that involve or are about equity-deserving groups should respect perspectives and engage with community members to design research approaches consistent with these values. This includes ensuring that research does not perpetuate discrimination or reinforce biases in data collection, interpretation, and dissemination.

Jurisdiction and Legalities

The collection, storage, and use of data are subject to laws and regulations that vary depending on jurisdictional boundaries. Researchers must determine which of these apply to the data for a project. Research conducted in Canada is subject to national and provincial regulations. Research outside of Canada must be conducted with the proper permissions and within applicable legal frameworks of that country, taking into consideration any transfer of, or access to, data across borders. Data generated with external partners may be subject to governance structures and processes that will dictate ownership, access, and use. Research spanning multiple institutions may involve constraints and requirements as per institutional policies. Data created by others and reused in research may also be subject to conditions set out in any agreements, licenses, and terms of use. This includes respecting intellectual property rights and ensuring the provenance of the data.

Partnerships and Collaborations

Research is strengthened by partnership and collaboration. Strong partnerships and collaborations involve agreements between research partners with clearly articulated rights and responsibilities related to data. Researchers should know all partners and establish suitable agreements prior to the execution of the project and actions related to data must abide by the terms. These agreements may articulate responsibilities, conditions of access, and data practices including licenses, ownership, data/material transfer, security, storage, retention, and sharing. When conducting research involving partnership or collaboration, any actual or potential conflict of interest should be stated, and data collection and interpretation should not involve or be influenced by those interests.

Sensitive and Confidential Data

Data may be deemed sensitive because of where or from whom they have been collected and/or how they may be used. For moral and/or ethical reasons, such information should not be made available as doing so may cause harm to individuals, groups, organizations, national security, or society.

 Some data are also subject to legal or contractual obligation to remain confidential.   Early disclosure of data can also potentially cause harm to research endeavours and may undermine publication.

Data management actions will vary based on the level of risk associated with the classification of the data, the methodology of the research discipline, and applicable requirements. Researchers should ensure that risks to data are assessed, and that appropriate security controls and protection measures are implemented against malicious attacks, geopolitical or economic threats, data corruption, and data loss. Should there be any data breach or security incident, researchers have a responsibility to report violations to the appropriate authorities and risk mitigation strategies should be applied. Not all data must remain confidential in perpetuity and researchers may determine the timeframe in which to remove confidentiality. For some data, confidentiality is expected for the entire data lifecycle.

Human Data

Human data include information about individuals, communities, and groups and may be sensitive and/or confidential. Researchers' ethical obligations to research participants or subjects extend to how their data are managed. Researchers are responsible for considering the sensitivity of data to be collected or used, taking into account ethical principles such as privacy, confidentiality, and informed consent. Efforts must be taken to ensure that sensitive data are not disclosed to unauthorized access, to protect the privacy rights of participants, and to reduce potential harms to individuals and communities. Researchers must also abide by any practices vetted and approved by governing bodies, such as approaches detailed in an ethics application and informed consent obtained from participants.

Disciplinary Approaches

Practices and standards for managing data vary greatly by discipline, research method, data type, and volume of data generated. Research data are heterogeneous in nature and practices should reflect appropriate approaches that have been developed by research communities. Researchers should learn from and utilize community-developed disciplinary methods, standards, and best practices and incorporate disciplinary approaches into projects so that the most value can be derived from the outputs. Disciplines also benefit from the deposit and sharing of data, so whenever possible, researchers

should make their data available to others. Researchers are encouraged to engage with disciplinary communities of practice and contribute to the evolving efforts that advance RDM approaches and knowledge discovery.

Institutional Goals and Priorities

U of T faculty, librarians, and staff have demonstrated long-standing leadership in the practice of research data management. U of T faculty, through their outstanding innovative and global leadership, have advanced our efforts in RDM across a broad swath of disciplines ranging from genomics to astronomy to digital humanities. The University of Toronto Libraries (UTL) is the largest academic library system in the country and has a long-standing history of world-class preservation of physical and digital collections. UTL has offered data services, deposit, and preservation for nearly 40 years and a formalized research data management service since 2011. Our central and divisional research offices provide resources, systems, training and administrative services, assisting researchers to manage data in a broad range of areas spanning research ethics boards to data sharing agreements. Similarly, our information technology services teams host and supports a broad range of tools, while research information security provide training and services aimed at safeguarding researchers and data. Through these and many other initiatives, U of T has actively taken a demonstrable leadership role in influencing research data management policies and practices at a national level.

The goals and priorities outlined below endeavor to build on this strong foundation and signal the commitment to meet emerging expectations and community needs, while ensuring reliable, effective, and sustainable infrastructure and services. RDM requirements, related guidance, and supports will be maintained on websites such as [U of T Digital Research Infrastructure (DRI) Portal](#).

Goal 1: Continued leadership in national RDM conversations, providing support and contributions to national frameworks and services

U of T actively represents the interests of researchers at national, provincial, and collaborative tables through its contributions and support to various initiatives. Researchers and senior staff provide leadership to groups such as the U15 Group of Canadian Research Universities, Compute Ontario, Canadian Shared Security Operations Centre (CanSSOC), and committees for the Digital Research Alliance of Canada. Additionally, U of T serves as the national service provider for Borealis, the open research data repository infrastructure for over 65 participating institutions in Canada. U of T also hosts SciNet, one of Canada's largest supercomputer centres, and one of 5 national host sites for the Digital Research Alliance of Canada infrastructure.

Priorities:

- Advocate for, and contribute to, the development of national resources, training, tools, and supports in collaboration with peer-institutions and with national services providers such as the Digital Research Alliance of Canada. Coordinate and promote the dissemination of outputs from such initiatives and access to shared efforts.
- Expand national capacity for data deposit by continuing to act as the service provider for Borealis. Expand features of Borealis to align with research community needs across Canada.

- Contribute to the national discussion on securing research data through participation in provincial, federal and university research security and information security groups.
- Offer and expand advanced research computing services through SciNet including and beyond its role as a national host site.

Goal 2: Ensure the institutional coordination and integration of RDM supports

U of T has established mechanisms to provide direction on coordinated approaches for digital research infrastructure (DRI) through the formation of the DRI Advisory Committee and the DRI Researcher Council. This standing group brings together representatives from various academic and service units and sets strategic priorities in the work streams of Advanced Research Computing, Research Software, Cybersecurity, and Research Data Management. In addition, U of T's Centre for Research & Innovation Support (CRIS) established in 2019, is a central research resource hub to bring together expertise from research, libraries, information technology and security to provide integrated and coordinated services for our research community.

Priorities:

- Appoint an Academic Lead and form Working Group(s) to prioritize, oversee, and execute the goals and review of the RDM strategy.
- Leverage University of Toronto Communications (UTC) and CRIS to develop and implement a communications plan to continue strategic engagement and outreach from our research community.
- Catalogue, enhance offerings, and promote access to information and resources on RDM at U of T through a newly established DRI Portal.

Goal 3: Alignment and clarity to enhance collaboration and streamline administrative procedures and requirements

U of T recognizes the importance of collaboration both internally and externally. The Division of the Vice-President, Research & Innovation (VPRI) manages memberships and partnerships with a range of institutions, facilitating access to valuable services and resources. U of T works closely with affiliated and partner institutions to streamline procedures and share practices and resources. U of T has identified intersections and opportunities to clarify and align expectations among internal units at U of T as well as with external partners and organizations, such as government entities and publishers.

Priorities:

- Clarify expectations of responsible RDM practices and ensure institutional procedures are reflective of evolving best practices, principles, and mandates, including funder and publisher requirements.
- Align and integrate expectations and processes around research ethics review, grant submissions, data management plans, partnerships, and security protocols, incorporating information into current documentation and systems.
- Continue coordination with affiliated institutions to ensure streamlined and coordinated procedures.

- Work with Canadian universities and research institutes to streamline processes to reduce administrative burden.

Goal 4: Recognize our broad and decentralized nature, and the need for both central and unit-based supports

U of T provides a wide range of support services, operating at both a central and unit level to provide researchers with the resources and expertise needed to navigate the research process. At the central level, these services are available to all researchers across the University. Additionally, units provide support services and specialized resources, infrastructure, and expertise that are tailored to specific campuses, communities, or fields of study. Established mechanisms work to facilitate collaboration and knowledge sharing across units through institutional and representative committees, advisory groups, formal networks, and communities of practice. The combination of central and divisional connections and supports enable the University to provide a multi-faceted and streamlined support system for research.

Priorities:

- Embed capacity for data management practices at the unit level, with a focus on the unique challenges and needs by discipline. Leverage divisional staff, such as CORE (a network of divisionally based strategic research funding officers) and localized information technology and security expertise (e.g., EITU members) to provide direct and contextualized support to researchers.
- Work with academic and service units to articulate supports through the DRI Portal and provide mechanisms to tailor central resources to the local unit context.

Goal 5: Provide training and upskilling opportunities to the U of T community

U of T is committed to providing research data management training and education for students, faculty, and staff. Workshops on RDM-related topics are offered through many units, including University of Toronto Libraries, academic units, Research Ethics, Information Security, Data Sciences Institute, and SciNet, to help researchers better understand and navigate best practices in RDM. CRIS provides a central consolidated list of these programs to ensure visibility to these resources. Additionally, disciplinary training is offered in various academic units, helping researchers understand RDM in the context of their specific field of study.

Priorities:

- Design a training framework, including a series of information sessions, workshops, and instructional opportunities, hosted through CRIS with content generated in collaboration with internal and external expertise.
- Raise awareness and determine the pathway to embed RDM topics in graduate research curricula through in-class instruction and sessions facilitated through the School of Graduate Studies.
- Identify disciplinary experts within U of T and provide opportunities for access to data stewards, disciplinary experts, mentorship programs, and communities of practices.

- Communicate training opportunities provided by external partners and organizations.

Goal 6: Support the creation of robust Data Management Plans

U of T provides a range of services to support the creation and implementation of Data Management Plans (DMPs). These services include consultations, resources, and documentation to help researchers understand and meet the requirements of funding agencies and other stakeholders when creating DMPs, as well as guidance on best practices and institutional tools and infrastructure that can be utilized in research projects.

Priorities:

- Develop guidance and training, including assessment rubrics to assist researchers with DMP development.
- Create a bank of example institutional DMPs representing a variety of research areas and approaches.
- Create consistent, documented information and sample language for institutional and unit-based resources that can be modified by researchers for inclusion in DMPs.

Goal 7: Develop user-centered resources for RDM that reflect the diversity of our research

U of T provides a wide range of RDM resources available through units across the university. The University conducted surveys, consultations, and inventories to better understand the needs of researchers and to identify opportunities to align and streamline the resources available. In addition, the DRI Portal facilitates research data support and coordinates the provision of services.

Priorities:

- Develop best practice information, checklists, and templates that incorporate disciplinary practices and considerations such as sensitive data or data with associated risk and/or partnership and community obligations.
- Create resources and provide expertise to help researchers make informed decisions about data requirements, navigate appropriate tool and resource selection, and identify points of contact for direct assistance.
- Provide engagement opportunities to gather community input to inform the direction and development of RDM supports.

Goal 8: Work with the Indigenous Research Network to identify supports and gaps related to research done in partnership with First Nations, Métis, and Inuit communities

As is the call to all Canadians, U of T is committed to fully responding to the challenges issued by the Truth and Reconciliation Commissions of Canada (TRC). These commitments are laid out as a series of Calls to Action, in the [Final Report of the Steering Committee for the University of Toronto Response to the Truth and Reconciliation Commission of Canada](). The University established the Indigenous Research Network (IRN) as an interconnected and collaborative community of researchers involved in Indigenous research. The IRN's research network begins its work by respecting Indigenous peoples' ownership of

their forms of knowledge and data and how it is stored; and, more importantly, how that data is shared with researchers.

Priorities:

- Provide education opportunities for non-Indigenous researchers on Indigenous ways of knowing, the historical harms that have been done, and training on community-driven principles to guide partnerships.
- Conduct a series of consultations with First Nations, Métis, and Inuit communities to identify opportunities for partnership and incorporate community-driven principles (such as OCAP® and CARE) to research data and institutional approaches.

Goal 9: Expand infrastructure and computing solutions, including systems and networks for storage, computing and processing resources, and software, tools, and applications

U of T offers a range of infrastructure options and expertise to support researchers in their data storage, computing, and processing needs. Researchers can access institutional offerings for storage and collaboration, vetted cloud-based compute resources, and the high-performance computing facility at SciNet. The University's academic units provide specialized computing and storage facilities, and the staff to support local researcher needs.

- Explore options for data processing infrastructure, including expanding cloud-based computational and storage solutions.
- Expand secure, trusted research infrastructure that processes confidential and sensitive data.
- Develop a central research software toolbox of national, institutional, and unit-based resources to help simplify access, select appropriate tools, and aid in the coordination of licensing software for research purposes.

Goal 10: Advise on security and technical best practices

U of T is committed to protecting the confidentiality, integrity, and availability of research data through security best practices. The University has implemented protection measures based on the institutional Information Security Control Standard, Data Classification Standard, and a security framework for research infrastructure. The University offers a wide range of services providing security support and technical expertise to help researchers manage their research data. Additionally, tools are available to enable researchers to undertake risk assessment to safeguard their research from potential geopolitical threats.

Priorities:

- Support the mission of the University of Toronto Information Security strategy that empowers and enables the community to make informed choices.
- Improve the information security framework, which is used as the basis for safe and trusted research infrastructure.
- Provide security and technical guidelines, assist with the implementation of security controls, and support the use of research computing services through technical training.

- Create research security resources to assist researchers in making appropriate decisions based on risk to aid in the protection of research data from geopolitical threat.

Goal 11: Expand data deposit offerings

U of T offers services and infrastructure for the deposit and preservation of research data. University of Toronto Libraries hosts the institutional data repository, U of T Dataverse in Borealis, and offers preservation services and expertise in areas such as data curation, metadata, and data sharing. The University also supports national infrastructure efforts to ensure that researchers have access to the tools and resources needed to deposit data.

Priorities:

- Develop retention and preservation guidelines to ensure long-term access to datasets.
- Increase awareness and integration of the FAIR Principles (findable, accessible, interoperable, and reusable) to facilitate the discovery, reuse, and impact of data.
- Extend U of T Dataverse to include secure storage for sensitive data deposit and restricted access sharing.
- Develop a process to gain Research Ethics Board approval of repositories that are created containing human research data.

These goals reflect the institutional commitment to prioritize and support effective research data management at U of T. These goals and priorities will continue to evolve as needs and expectations change. By implementing this strategy, U of T aims to establish a culture of responsible data management practices that enhance the quality and impact of research.

Oversight

Review period

The strategy document will be reviewed every three years and updated as necessary to ensure its continued relevance and effectiveness.

Document Administration

This document was created under the oversight of the [Digital Research Infrastructure Advisory Committee and Researcher Council](). These committees seek to create and sustain a coordinated, agile, rich, diverse, effective, efficient, and secure collection of digital research infrastructure and services that meet the complex and varied needs of our research community.

The University of Toronto Institutional Research Data Management Strategy fulfills the requirement of the [Tri-Agency Research Data Management Policy]() that the institutional strategy be finalized and publicly available by March 1, 2023.

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Feedback Mechanism

Questions or comments related to the **University of Toronto's Institutional Research Data Management Strategy** can be submitted to cris@utoronto.ca.

Version Information

Date	Version Code	Description
March 1, 2024	Version 1.1	*University of Toronto Institutional Research Data Management Strategy Version 1.1, 2024-03-01*
March 1, 2023	Version 1.0	*University of Toronto Institutional Research Data Management Strategy*
January 30, 2023	Draft 2.0	Draft University of Toronto Institutional Research Data Management Strategy Version 2.0, 2023-01-30
October 24, 2022	Draft 1.0	*Draft University of Toronto Institutional Research Data Management Strategy Version 1.0, 2022-10-24*
September 30, 2022	Draft 0.3	*Draft University of Toronto Institutional Research Data Management Strategy Version 0.3, 2022-09-30*
August 17, 2022	Draft 0.2	*Draft University of Toronto Institutional Research Data Management Principles, Strategy and Guidance Documents Version 0.2, 2022-08-17*
May 31, 2022	Draft 0.1	*Draft University of Toronto Approach for Research Data Management Strategy Version 0.1, 2022-05-31*

Appendix A – Key Terms

Terms and concepts used throughout this document are in alignment with University of Toronto policies and the definitions contained in the **Tri-Agency Research Data Management Policy and FAQs** and the **Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2).** These include:

Research data – 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 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. What is considered relevant research data is often highly contextual and determining what counts as such should be guided by disciplinary norms. *Definition from the Tri-Agency Research Data Management Policy and FAQs*

Research data management (RDM) – RDM refers to the processes applied through the lifecycle of a research project to guide the collection, documentation, storage, sharing and preservation of research data. *Definition from the [Tri-Agency Research Data Management Policy and FAQs](#) and adapted from the [Digital Research Alliance of Canada](#)*

Sensitive data - Sensitive data refers to information that if disclosed could cause harm to individuals, organizations, national security or society. There is a moral and/or ethical obligation to enforce controls and protections for sensitive data to prevent unauthorized access or release.

Data obtained or used for research that falls within "Sensitive Technology Research Areas"(Annex A of Policy on Sensitive Technology Research and Affiliations of Concern) should be considered sensitive.

Data generated in animal research and data that may be subject to a geopolitical or economic threat or research in areas that may be targeted for clandestine activities should also be considered sensitive.

Confidential data – Confidential data are subject to legal or contractual obligations to be kept private or restricted to authorized individuals or parties entrusted to safeguard them from unauthorized access, misuse, disclosure, modification, loss or theft.

Human data – Human data, including information obtained from or about individuals, communities, and groups, may be sensitive and/or confidential and may therefore be subject to specific ethical, legal, and contractual obligations.

Data that falls within the scope of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans should be considered human data.

Appendix B – Policies and Guidelines

U of T Policies and Guidelines

Data must be managed in accordance with applicable University of Toronto policies and guidelines, including:

- [Copyright policy](#), University of Toronto Governing Council
- [Data Classification Standard](#), Information Security, University of Toronto
- [General and Administration Access and Privacy Practices](#), Division of the Vice-President & Provost, University of Toronto
- Information Security Control Standard Information Security, University of Toronto
- [Institutional Strategic Research Plan (2018-2023)](#), Division of the Vice-President, Research & Innovation, University of Toronto
- [Intellectual Property Guidelines for Graduate Students & Supervisors](#), School of Graduate Studies, University of Toronto
- [Policy on Conflict of Interest – Academic Staff](#), University of Toronto Governing Council
- [Policy on Conflict of Interest – Librarians](#), University of Toronto Governing Council
- [Policy on Ethical Conduct in Research,](#) University of Toronto Governing Council
- [Policy on Information Security and the Protection of Digital Assets](#), University of Toronto Governing Council

- [Policy on Inventions](#), University of Toronto Governing Council
- [Policy on Publications](#), University of Toronto Governing Council
- [Statement of Institutional Purpose,](#) University of Toronto Governing Council
- [Safeguarding Research](#), Division of the Vice-President, Research & Innovation, University of Toronto
- [Statement on Research Partnerships](#), University of Toronto Governing Council
- [U of T Researchers guide to regulations: animals in scientific research](#), Research Oversight and Compliance Office, University of Toronto

External Policies and Guidelines

Data may be subject to policies and guidelines from external sources, including applicable laws and regulations, requirements from sponsors, or community-developed standards. Examples include:

- [Bill C-15: An Act respecting the United Nations Declaration on the Rights of Indigenous Peoples](#), Government of Canada
- [CARE Principles for Indigenous Data Governance](#), Global Indigenous Data Alliance
- [CIHR Publication-related Research Data, Tri-Agency Open Access Policy on Publications,](#) Government of Canada
- [FAIR Principles,](#) GO FAIR Implementation Networks
- [The First Nations Principles of OCAP®](#), First Nations Information Governance Centre
- [Freedom of Information and Protection of Privacy Act (FIPPA)](#), Government of Ontario
- [The Government of Canada's National Security Guidelines for Research Partnerships,](#) Government of Canada
- [National Inuit Strategy on Research](#), Inuit Tapiriit Kanatami
- [National Security Guidelines for Research Partnerships, Annex A: Sensitive research areas](#), Government of Canada
- [NEH Data Management Plans](#), National Endowment for the Humanities, USA
- [NIH Data Management & Sharing Policy](#), National Institutes of Health, USA
- [NSF Data Management Plan Requirements](#), National Science Foundation, USA
- [Personal Health Information Protection Act (PHIPA)](#), Government of Ontario
- [Principles of Ethical Métis Research](#), National Aboriginal Health Organization Métis Centre
- [Policy on Sensitive Technology Research and Affiliations of Concern](#), Government of Canada
- [Safeguarding Your Research,](#) Government of Canada
- [SSHRC Research Data Archiving Policy](#), Government of Canada
- [Tri-Agency Research Data Management Policy,](#) Government of Canada
- [Tri-Agency FAQs RDM Policy,](#) Government of Canada
- [Tri-Agency Framework: Responsible Conduct of Research (2021),](#) Government of Canada
- [Tri-Agency Statement of Principles on Digital Data Management,](#) Government of Canada
- [Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2),](#) Government of Canada
- [Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2), Chapter 9: Research Involving the First Nations, Inuit and Métis Peoples of Canada](#), Government of Canada