

Data Governance Framework

Purpose

This document describes the data governance framework for University of Saskatchewan (USask) university data. It identifies designated roles within the university that have specific decision-making accountabilities regarding university data, as well as defines the roles and accountabilities for data stewardship and data management. This framework exists to support the university's Data Management Policy.

This framework establishes a well-aligned data governance structure by delineating roles, aligning data stewardship accountabilities with the university organizational structure, and facilitating holistic and inclusive data management decision-making. This is achieved through adoption of data governance industry standards in areas such as data classification, data quality dimensions, and data access.

Data Stewardship Organizational Structure

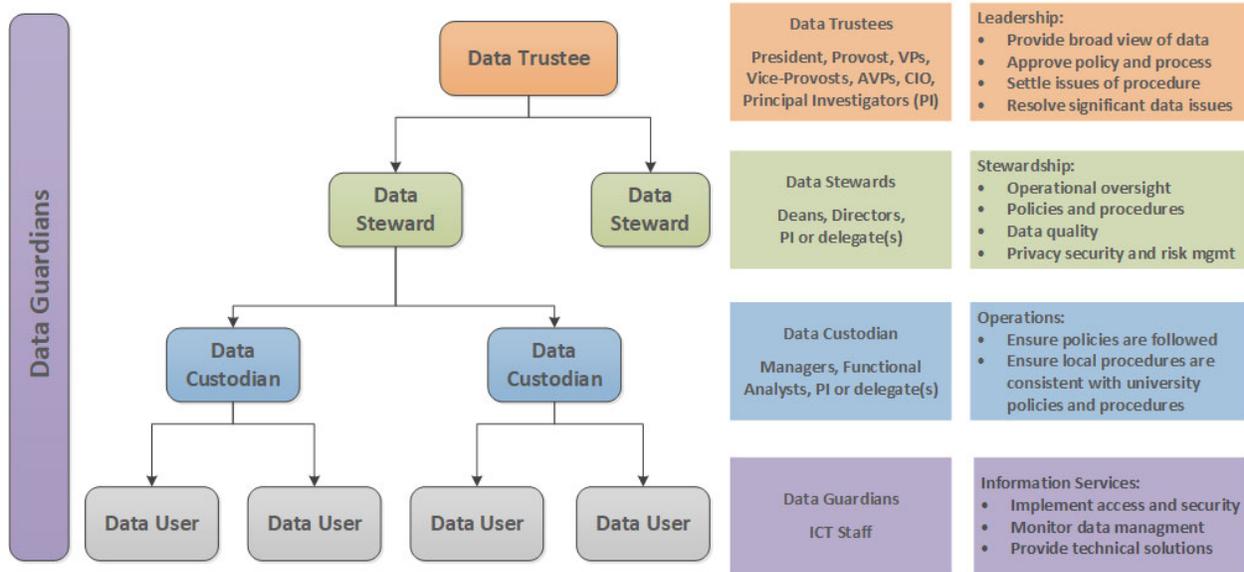
The USask data governance framework establishes five roles within the data stewardship organizational structure. These five roles each have different roles and responsibilities for decision-making regarding university data. The five roles are:

1. Data Trustees – Highest-ranking individuals accountable for what happens with and to university (e.g. institutional, research, etc.) data.
2. Data Stewards – Individuals who are responsible for promoting appropriate data use through planning, policy, and protocols at the university.
3. Data Custodians – Individuals responsible for ensuring that policies are followed within a specific area and that local processes are consistent with university policies and procedures.
4. Data Guardians – Individuals in IT who have operational level responsibility for data management activities related to the creation, storage, maintenance, cataloguing, use, dissemination, and disposal of data.
5. Data Users – Individuals who access and use university data.

The relationship between these roles and their responsibilities as applicable at the university are shown in the diagram below and are described in more detail in the following section. Appendix A includes a list of university Data Trustees, while appendix B provides data management-related definitions.



U of S Data Governance Organizational Structure



Based on: Educause Center for Analysis and Research (ECAR), "Establishing Data Stewardship Models", Dec 18, 2015

Roles and Responsibilities

Data Trustees

The **President** is the institutional data trustee and is the university's authority for university data and information. The institutional data trustee is responsible for:

- Ensuring that the university has a data management policy that safeguards and protects the university's data.
- Making decisions about university data in strategic and high-impact situations that could affect the entire university. These could include data decisions that may involve legal precedent, involve ransom of university data, or involve disclosure of information that significantly impacts the reputation of the university.

The **Vice-President Finance and Resources** is the designated Head for the purposes of section 2(e) of The Local Authority Freedom of Information and Protection of Privacy Act (LAFOIP). The Head has authority for all decisions made on behalf of the university pursuant to this policy and under the Act. The Vice-President Finance and Resources also oversees the Management of University Records policy.

The **Provost** is the institutional authority for decisions on the management and use of the university's data pertaining to institutional-level planning, resource allocation, budget frameworks, and the university's academic programs and academic policy.

The **Vice-Presidents, Vice-Provosts, the CIO, Associate Provosts and Associate Vice-Presidents** with senior leadership responsibilities for functional areas are data trustees for their data domain areas.

As a group, the above data trustees are responsible for:

- Actively participating in the Data Governance Leadership Committee.
- Approving data management policies, guidelines, standards, and procedures.
- Approving changes to the scope of functional areas.
- Resolving issues of procedure.

The **Principal Investigator (PI)** is the data trustee for their research and is accountable for all decisions regarding that data and for meeting the responsibilities outlined in the Responsible Conduct of Research Policy and as required by the funding agency.

As individuals, data trustees are responsible for appointing data stewards, delegating data stewardship accountabilities in their functional or research area, and establishing the data stewardship committee as appropriate.

Data Stewards

Senior university officials (typically at the level of directors, deans, and Principal Investigators or their delegate(s) in university units who are responsible for promoting appropriate use of data through planning, policy, and protocols at the university.

As a group, the data stewards for institutional data are responsible for:

- Actively participating in the Data Stewardship Committees.
- Reviewing quality metrics and assessment of progress toward improvements in data integrity.
- Prioritizing data issues for resolution.
- Defining the scope of data domains and approving changes.
- Managing collectively the data stewardship responsibilities for data that spans multiple functional areas and/or units.
- Resolving issues for data elements that span multiple functional areas and/or units. If there are any data issues that cannot be resolved at the Data Steward level, these should be escalated to the Data Trustee level.

In the case of research data, the PI (or delegate) is the data steward for the data associated with their research and is responsible for all decisions regarding that data. The PI (or delegate) is also responsible for meeting the responsibilities outlined in the Responsible Conduct of Research Policy and as required by their funding agencies.

As individuals, the data stewards also have specific responsibilities and authority for the management, access, use, definition, and quality of data that pertains to their functional areas and/or is deemed to be under their purview. These responsibilities include:

- Appointing data custodians and delegate operational stewardship accountabilities.
- Reviewing and approving data definitions, compliance, and access classifications (public,

internal, limited, and restricted).

- Approving the use of institutional data for which they are responsible, for the purposes of research.
- Approving and ensuring compliance regarding the release of, responsible use of, and access to data for which they are responsible.
- Approving the appropriate access of data by vendors and agents, while ensuring that agreements about the use and disclosure of such data are negotiated, documented, and compliant with regulatory requirements and university policies.

Both as individuals and collectively, the data stewards have a responsibility to promote and encourage a university view of the data resource, to give consideration to all stakeholders for that data, and to ensure that its use is in line with university policies and any relevant data sharing agreements.

Data Custodians

Managers, functional analysts, college data analysts, and Principal Investigators (or their delegates) who are responsible for ensuring that data management policies and procedures are followed within their specific data domain.

Both as individuals and collectively, responsibilities of data custodians for institutional data include:

- Developing data definitions.
- Assessing and documenting data compliance.
- Categorizing data into access classifications (public, internal, limited, and restricted).
- Reviewing and approving requests for data access.
- Assessing data quality.
- Identifying and documenting data issues and ensuring the issues are addressed.
- Identifying source systems of record.

In the case of research data, the PI (or delegate) is responsible for meeting the data management responsibilities outlined in the Responsible Conduct of Research Policy and as required by the funding agencies.

Data Guardians

ICT personnel who have operational level responsibility for data management activities related to the creation, storage, maintenance, cataloguing, use, dissemination, and disposal of data.

Their data management responsibilities may include:

- Providing access to secure facilities and services to support data management activities.
- Developing data profiles to facilitate data quality assessments.
- Providing training and facilitation on data governance.
- Developing standards for data definitions, compliance, and access.
- Implementing access and security controls based on access classifications.
- Establishing and maintaining an easy-to-use, accessible data dictionary.
- Developing QA process to identify data issues.
- Maintaining the underlying data infrastructure.
- Facilitating and supporting the threat and risk assessment/privacy impact assessment (TRA/PIA)

process.

In the case of research data, the PI (or delegate(s)) is responsible to work with data guardians in ICT in order to meet their data management responsibilities to protect and secure their research data as outlined in the Responsible Conduct of Research Policy and as required by the funding agencies.

Data Users

Data users are individuals who need and use university data as part of their assigned duties or in fulfillment of their role at the University of Saskatchewan. In some cases, this includes individuals who are external to the university, such as auditors or researchers from a different institution.

Data users are responsible for:

- Complying with the institutional data policies and following established procedures.
- Understanding the definition, quality, and usage limitations of data.
- Protecting their data access privileges from unauthorized use.

Institutional Data Governance Structures

In order to support the institutional data governance activities of the university, a three-layered structure of governance bodies exists. Committees and working groups are organized around functional areas and data domains. They include:

- Data Governance Leadership Committee – Members include the Data Trustees.
- Data Stewardship Committees – Members include Data Stewards.
- Data Working Groups – Members include Data Custodians and Data Guardians.

These committees and working groups generally meet on a regular basis to address data issues appropriate for their level of responsibility.

Research Data Governance Structures

Principal Investigators (PI), in their role as Data Trustees for research data, are accountable for what happens with and to their research data. Given the variation in the scale and jurisdiction of different research projects, the PI may also act as data steward and data custodian for their research data, or choose to delegate those responsibilities to others involved in their research.

Additional data governance structures include:

- Research ethics boards
- Funding agencies (e.g. Tri-Agency)
- Partner entities



Appendix A – List of University of Saskatchewan Data Trustees

Data Trustees

The President, Provost, Vice-Presidents, Vice-Provosts, the CIO, Associate Provosts, Associate Vice-Presidents, and Principal Investigators with senior leadership responsibilities for functional areas.

As a group, the data trustees are responsible for:

- Actively participating in the Data Governance Leadership Committee.
- Approving data management policies, guidelines, standards and procedures.
- Approving changes to the scope of functional areas.
- Resolving issues of procedure.



As individuals, data trustees are responsible for appointing data stewards, establishing the data stewardship committees and delegating data stewardship accountabilities in their functional area.

List of Data Trustees to Support the Data Management Policy

Functional Area	Data Description	Trustee Position	Trustee Name
Institutional	University data	President	Peter Stoicheff
Institutional	Freedom of information and protection of privacy matters and Records Management	Vice-President Finance and Resources	Greg Fowler
Institutional	Data pertaining to institutional-level planning, resource allocation, budget frameworks, and the university's academic programs and academic policy	Provost	Melissa Just
Student	Student and student services data	Vice-Provost, Teaching, Learning and Student Experience	Patti McDougall
	Administrative data about teaching and learning activities		
	Health and wellness data		
Research	Data created or derived from research, scholarly, and artistic activity	Principal Investigator	Various
	Administrative data about research activities	Director, Research Excellence and Innovation	Dion Martens
Faculty Relations	Data contained in faculty Curriculum Vitae	Vice-Provost Faculty Relations	Kenneth Wilson
Employee	Human resources data	Associate Vice-President People & Resources	Cheryl Carver
Finance	Financial data	Associate Vice-President People & Resources	Cheryl Carver
Facilities	Data about the university's physical assets	Chief Strategist, Finance and Resources	Janelle Hutchinson



Services	Data about the university's operational services	Associate Vice-President Services	Wade Epp
Advancement	Alumni, donor relations, and communications data	Vice-President University Relations	Debra Pozega-Osburn
Library	Data about library collections and circulation	Dean, University Library	Charlene Sorensen
Institutional Planning	Data used to measure and report on institutional planning	Associate Provost, Institutional Planning and Assessment	Dena McMartin
Master Data	Data pertaining to central identity services that are shared across all functional areas	Associate Vice-President, Information and Communication Technology and Chief Information Officer	Shari Baraniuk

Appendix B – Definitions

- **Academic home** –The college, school, division, department or unit in which the Principal Investigator holds their primary appointment.
- **Administering unit** – The college, school, division, department, centre or other university unit that accepts administrative responsibility for a Funded or Non-Funded Research Project. In cases where the Administering Unit is not the Academic Home of the Principal Investigator, they may transfer administrative responsibility for a Funded or Non-Funded Research Project to an Administering Unit with approval from their Academic Home and the Administering Unit that accepts the administrative responsibility.
- **Data classification** – The act of grouping data into categories that are used to facilitate access to institutional data. The categories balance the sensitivity of the data with business need to access the data, while taking into consideration the impact of unintended disclosure of the data.
- **Data domain** – A sub-grouping of data within a functional area or a research project.
- **Data governance** – Establishing and maintaining the processes by which decisions regarding data are made. It includes establishing the data governance framework, approving data processes and resolving disputes concerning data issues.
- **Data management** – Encompasses activities that relate to the creation, collection, storage, maintenance, cataloguing, use, dissemination and disposal of university data.
- **Data stewardship** – Ensuring that institutional data are reliable, consistent and of high quality and that they are accessible for appropriate purposes, people and systems; ensuring that institutional management practices comply with government legislation (e.g. PIPEDA, HIPA) and industry standards (e.g. Payment Card Industry Data Security Standard).
- **Derived data** – Data that is transformed from other data using a mechanism such as an arithmetic formula, composition, or aggregation.
- **Functional areas** – A broad category of data that groups data based on type and use, such as student, employee, and advancement. These can be further divided into data domains. In the case of research data, the functional area is the research project.
- **Principal Investigator (PI)** – The individual responsible for the intellectual leadership of a Research Project or Research Program. For clinical Research, the PI is defined as the person responsible for the conduct of clinical Research at a Research site, which is where the clinical trial related activities are conducted.
- **University community** – All students, employees, faculty, postdoctoral fellows, researchers, alumni, agents, contractors, authorized guests, persons or organizations acting for or on behalf of the university.
- **University data** – Data that is created, collected and stored (either electronically or in hard copy) by units and members of the university community, in support of academic, research, and administrative activities. University data may include the following (these are not mutually exclusive):
 - **Institutional data** – Data that is created, collected, and stored by all units and members of the university community, in support of academic and administrative activities. Data about research,



scholarly and artistic activity, such as research grants held and publications generated, is considered institutional data.

- **Research data** – Data that is created by or derived from research, scholarly, and artistic activities.
- **Personal data** – Data that contains personal information about an identifiable individual as defined in the Provincial Local Authority Freedom of Information and Protection of Privacy Act (LAFOIPP). This data, if compromised or used inappropriately, would have implications to the privacy of an individual.
- **Third-party data** – Data that is created or owned by a third party and is being used in support of academic, research and administrative activities. This data if compromised or used inappropriately would have implications for the third party. This includes data such as licensed software or software components, and copyrighted material.