



UNIVERSITY OF
CALGARY

Institutional Data Governance Operating Model of Roles and Responsibilities

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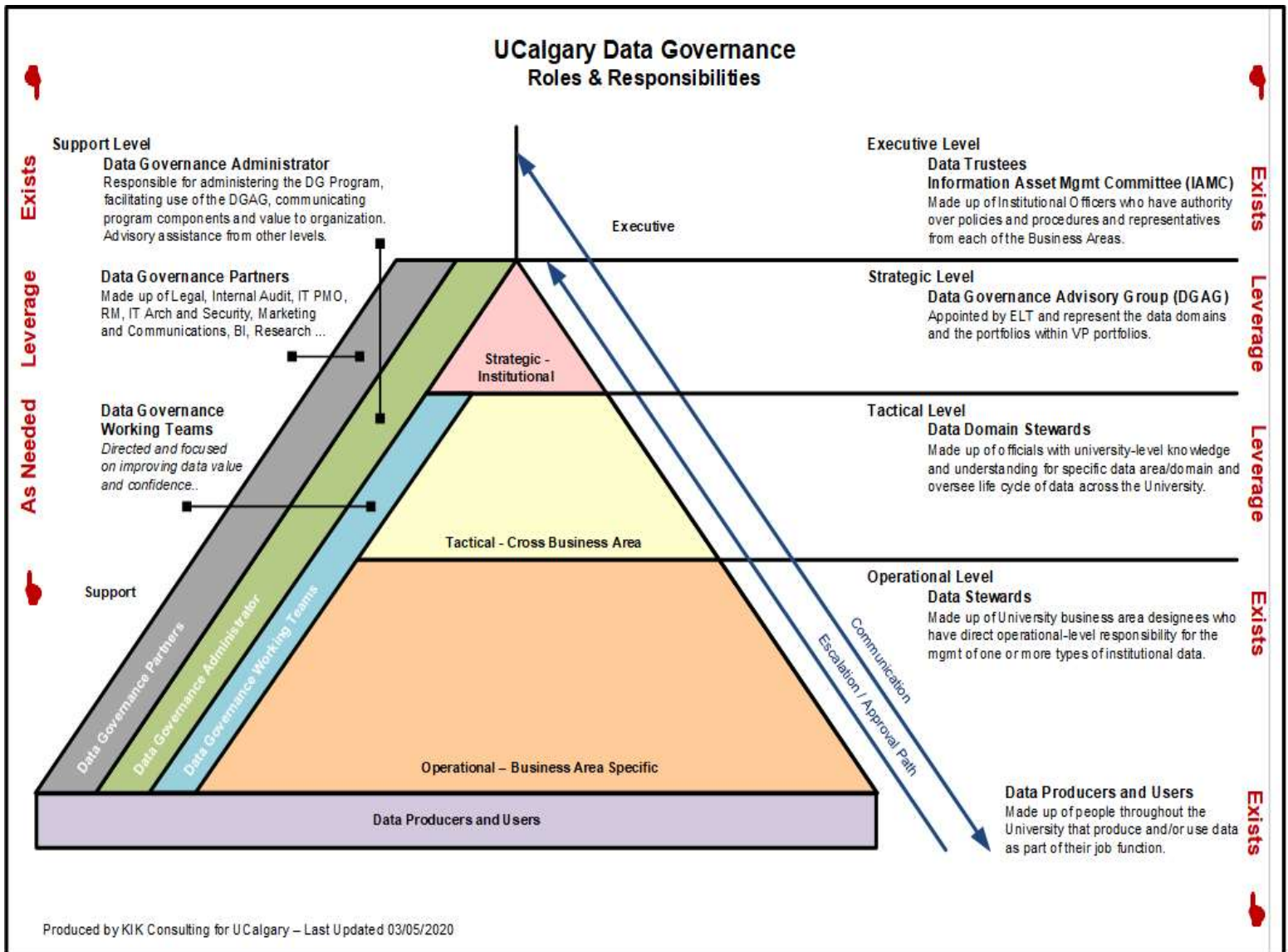
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University of Calgary Institutional Data Governance (IDG) Practice – Roles and Responsibilities

This document describes the operating model or framework of roles and responsibilities associated with each level of support in the (IDG) Practice. The diagram below shows the primary levels and support groups of the IDG Practice.



Roles and responsibilities are identified for the following groups:

- Data Trustees (executive level)
- Information Asset Management Committee (IAMC) (executive level)
- Data Governance Advisory Group (DGAG) (strategic level)
- Data Domain Steward (tactical level)
- Operational Data Steward (operational level)
- Data Governance Working Teams (DGWTs) (tactical and operational levels)
- Data Governance Partners (support level)
- Data Governance Administrator (DGA) (support level)

Data Trustees (Executive Level)

Data trustees are defined as institutional officers (e.g., vice presidents, vice provosts, deans and chancellors) who have authority over policies and procedures regarding business definitions of data and the access and usage of that data within their delegations of authority. Data trustees appoint data stewards for specific subject areas or data domains.

Item for regular meeting agenda: Address and discuss data governance items escalated by IAMC as needed. No scheduled meetings needed specifically for data governance.

Data Governance Responsibilities

- Stay informed about the activities of the Institutional Data Governance (IDG) Practice.
- Promote the adoption of the IDG Practice.
- Provide leadership, guidance and support to Information Asset Management Committee (IAMC) and the IDG Practice.
- Identify Data Governance Advisory Group (DGAG) representative and encourage their participation in the IDG Practice.
- Sponsor, approve, and champion the institutional strategic plan and policy for data governance.
- Communicate the expectations and requirements for data governance to the lines of business.

Information Asset Management Committee (IAMC) (Executive Level)

The Information Asset Management Committee (IAMC) is comprised of one representative from each of the following areas:

- legal services
- information technologies
- archives
- records management
- Provost or delegate
- Research and Scholarship Committee of the General Faculties Council, as determined by that committee
- Teaching and Learning Committee of the General Faculties Council, as determined by that committee
- Faculty Association

IAMC will determine other University representatives for participation on the committee on a permanent or ad hoc basis. The Executive Leadership Team, which includes Data Trustees, must approve permanent appointments.

IAMC oversees the management and protection of Information Assets including:

- In collaboration with Information Trustees, establishing and reviewing operating standards and practices relating to the receipt, creation, storage, handling, protection and disposition of Information Assets.
- Identifying legal, policy and other requirements relating to the management and protection of Information Assets.
- Coordinating risk assessment and compliance activities relating to the management and protection of Information Assets.
- In collaboration with human resources, developing training programs relating to the management and protection of Information Assets.

IAMC is chaired by the member from Legal Services. The chair of the committee provides the General Counsel with reports on the committee's activities and findings.

The Chair of IAMC is the Executive Sponsor for the Institutional Data Governance (IDG) initiative.

Item for regular meeting agenda: Address and discuss data governance items escalated by DGAG as needed. No scheduled meetings needed specifically for data governance.

Data Governance Responsibilities

- Support and sponsor the Institutional Data Governance (IDG) Practice. The Executive Sponsor provides oversight of the IDG Practice.
- Maintain representation of the University Business Units on the Data Governance Advisory Group (DGAG).
- Approve strategic direction and prioritization of data governance initiatives to be addressed by DGAG.
- Stay informed about the activities of the Data Governance Administrator (DGA) and the IDG Practice.
- Review IDG Practice success metrics and make decisions as needed.
- Foster cooperation among UCalgary Business Units as it relates to data governance.
- Approve data governance policies developed by the DGAG.
- Resolve issues escalated by the DGAG.

Data Governance Advisory Group (DGAG) (Strategic Level)

Members of the DGAG are appointed by ELT-Ops / IAMC. They represent the portfolios of the trustees and can represent the data domains within the VP portfolios. The composition of the DGAG includes representation from the following business units and can expand at the direction of the DGAG, IAMC or the trustees:

- Academic - Registrar's Office
- Finance
- Human Resources
- Facilities
- Research
- IT
- Legal
- Development and Alumni Engagement
- OIA (supportive role)

Time Commitment

- One standing monthly 1 - 1.5 hour meeting and meet on an ad hoc basis as the group needs.
- Monthly hourly commitment: 4 - 6 hours.

Items for regular meeting agenda:

- 1) Review / address / resolve / escalate DG related issues raised.
- 2) Review/approve DG standards, practices and processes.
- 3) Review and make decision on DG projects.

Data Governance Responsibilities

- Set the vision and direction for Institutional Data Governance (IDG) Practice.
- Represent UCalgary business units to understand and align data governance activities with University and business unit strategies.
- Instill and promote a culture of collaboration to enable the institution to use information with confidence.
- Advocate and promote the adoption of the IDG Practice across the University.
- Be an advocate for the change and continuous improvement of the IDG Practice.
- Push data governance into their areas by actively promoting improved data governance practices.
- Work towards eliminating data silos and promote usage of data from authoritative sources.
- Review and recommend creation of new data governance policies and/or amendments to existing policies to IAMC.
- Review and approve standards, practices and processes to operationalize data governance.
- Review and approve IDG core artifacts.
- Provide strategic direction and prioritization of data governance initiatives.
- Monitor and review Working Team initiatives and status.
- Make decisions at a strategic level in a timely manner given the appropriate knowledge and authority to make that decision.
- Make decisions to resolve IDG Practice issues that cannot be resolved at the tactical level by data stewards and Data Governance Working Teams, and if needed, escalate issues to IAMC. This responsibility should occur in less than 5% of all cases.
- Authorize data governance messaging and dissemination to business units as necessary.
- Measure and manage data related risks.
- Attend meetings (or send designate), read minutes to stay informed of IDG Practice activities.

Data Domain Steward (Tactical Level)

Data domain stewards provide university-level knowledge and understanding for a specific data area/domain (e.g., student data, financial data, HR data, or alumni development data) that could include multiple business units. They make data available to the institution, thereby playing a key role at the heart of collaboration, supporting institutional research, assessment, and analytics efforts that involve the data subject area. This role is critical to the success of business intelligence and analytics programs.

Time Commitment

- 1) Meet with Data Governance Administrator (DGA) and business unit data stewards monthly.
- 2) The Domain Stewards are typically subject matter experts in the data area who are engaged in most or all of the Data Governance responsibilities listed below. It is estimated that this effort represents 10-15% of work time.
- 3) Domain Stewards will receive support from the Institutional Data Governance Administrator and other stewards in carrying out their responsibilities.

Data Governance Responsibilities

The following apply to the data domain that the steward is responsible for. In collaboration with the business units within the data domain:

Critical Data Elements

- Identify critical data elements for the data subject area.
- Ensure that each critical data element has a clear definition and is still being used - or retiring those that are not - and that adequate documentation is developed, maintained, and communicated appropriately across the data domain.
- Review and approve data definitions, compliance and data classifications (i.e., UCLASS).
- Define the scope of business data domains and approving changes.

Data Quality

- Establish data-quality metrics and requirements, such as defining acceptable values, ranges, and parameters.
- Establish processes and procedures for detection and correction of data issues, contributing expertise to understand the root cause and implement corrective measures.
- Establish procedures and internal controls affecting the quality of data.
- Provide subject matter expertise to guide the discovery, design and development of data solutions focused on improving confidence in data within their domain.
- Review quality metrics and assessment of progress toward improvements in data quality.
- Prioritize and/or resolve stewardship issues for data elements within the data domain.
- Participate as necessary on Data Governance Working Teams to achieve quality data.

Data Lifecycle

- Compile retention, archival, and disposal requirements and ensure compliance with institutional policy, regulations, and business regulations.

Data Access, Privacy, Security, Risk Management

- Oversee privacy, security, and risk management pertaining to data in the domain.
- Define standards and procedures for access to data, including the criteria for authorization.

- Define the access request, approval, provisioning/deprovisioning processes to ensure they are appropriate and commensurate with risk.
- Establish guidelines and protocols that govern the proliferation of data to ensure that privacy controls are enforced in downstream systems and processes.
- Establish information security requirements, including data classification and identification.
- Be informed of regulatory and compliance requirements relevant to the domain data in order to evaluate risks to its confidentiality, integrity, or availability.
- Establish incident-detection controls.
- Evaluate any suspected or actual breaches or vulnerabilities in confidentiality, integrity, or availability and notify the DGA.

Advocacy and Collaboration

- Advocate for continuous improvement in the use of data as a result of practicing data governance.
- Participate in the collection and development of data documentation and other education / communication materials associated with data in the domain.
- Ensure data decisions are communicated to affected business units.
- Understand who and how their data is consumed, in and outside the domain.
- Work to ensure data consumers have an understanding of the data (in order to use effectively).

Operational Data Steward (Operational Level)

Individuals who are responsible for overseeing the life cycle of the data of a particular business unit within a data domain.

Time Commitment

- 1) Meet with Data Governance Administrator and Data Domain stewards monthly.
- 2) The Operational Data Stewards are typically subject matter experts in the business unit who are engaged in most or all of the Data Governance responsibilities listed below. It is estimated that this effort represents 10-15% of work time.
- 3) Operational Data Stewards will receive support from the Institutional Data Governance Administrator and other stewards in carrying out their responsibilities.

Data Governance Responsibilities

The following apply to the business unit that the steward is responsible for.

Critical Data Elements

- Ensure that each data element has a clear definition and is still being used - or retire those that are not - and that adequate documentation is developed, maintained, and communicated appropriately across the business unit.
- Review and approve data definitions, compliance and data classifications (i.e. UCLASS).

Data Quality

- Establish data-quality metrics and requirements, such as defining acceptable values, ranges, and parameters.
- Establish processes and procedures for detection and correction of data issues, contributing expertise to understand the root cause and implement corrective measures.
- Establish procedures and internal controls affecting the quality of data.
- Provide subject matter expertise to guide the discovery, design and development of data solutions focused on achieving quality data in their specific business units.
- Review quality metrics and assessment of progress toward improvements in data quality.
- Prioritize and/or resolve stewardship issues for data elements within the business unit.
- Participate as necessary on Data Governance Working Teams to achieve quality data.

Data Lifecycle

- Compile retention, archival, and disposal requirements and ensure compliance with institutional policy, regulations, and business requirements.

Data Access, Privacy, Security, Risk Management

- Oversee access, privacy, security, and risk management pertaining to data in the business unit.
- Define standards and procedures for access to data, including the criteria for authorization.
- Oversight of the access request, approval, provisioning/deprovisioning processes to ensure they are appropriate and commensurate with risk.
- Establish guidelines and protocols that govern the proliferation of data to ensure that privacy controls are enforced in downstream systems and processes.
- Establish information security requirements, including data classification and identification.

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- Be informed of regulatory and compliance requirements relevant to the business unit data in order to evaluate risks to its confidentiality, integrity, or availability.
 - Establish incident-detection controls.
 - Evaluate any suspected or actual breaches or vulnerabilities in confidentiality, integrity, or availability and notify the DGA.

Advocacy and Collaboration

- Advocate for continuous improvement in the use of data as a result of practicing data governance.
- Participate in the collection and development of data documentation and other education / communication materials associated with data in the business unit.
- Ensure data decisions are communicated to the business unit.
- Understand who and how their data is consumed, in and outside the business unit.
- Work to ensure data consumers have an understanding of the data (in order to use effectively).

Data Governance Partners (Support Level)

Data governance partners are staff members from teams that provide support services and will include members from the following teams:

- 1) Legal
- 2) Internal Audit
- 3) IT Project management
- 4) Records
- 5) IT Architecture and Security
- 6) University Relations (Communications, Marketing)
- 7) IT Communication
- 8) Business Intelligence, Analytics and Integration Services
- 9) Research services
- 10) Ethics
- 11) IT Partners

Time Commitment

- No scheduled data governance meetings.

Data Governance Responsibilities

- Provide business and technical advisory support for Data Governance activities and become actively engaged, as needed, in providing their expertise.
- Ensure that data documentation critical to achieving Data Governance is included in projects and other data-focused activities.
- Work with the Data Governance Administrator to ensure that all projects source and use data from the system of record in accordance with approved data standard and handling rules.
- Ensure that technical data meets all data classification requirements.
- Secure IT infrastructure on behalf of the UCalgary Business Units that have responsibility for the data.
- Assure that sensitive data, regardless of format, is protected at all times by only using approved equipment, networks, and other controls.
- Champion the integration of data governance within the standard project methodology.
- Ensure that standard project methodology is followed, and that policies, procedures and metrics are in place for maintaining/improving data quality and the creation, capture and maintenance of data documentation.
- Ensure that projects source and use data as much as is feasible from the designated system of record.
- Provide technical support for Data Governance efforts when required.

Data Governance Administrator (Support Level)

The Data Governance Administrator (DGA) will be a dedicated .25 - .5 FTE in the Office of Institutional Analysis (OIA). The DGA will lead and facilitate (prepare, manage and run) meetings with DGAG, Data Stewards, Business Unit Stewards and Data Governance Working Team(s). The DGO will liaise with the University stakeholders, drive requirements for data standards, and lead the overall institutionalization of the Data Governance framework. This individual will work collaboratively across the University and bring together an institutional view of the data needs and challenges.

Time Commitment

- .25 - .5 FTE

Data Governance Responsibilities

- Promote and educate the UCalgary business units about the Institutional Data Governance (IDG) Practice and its activities and benefits.
- Provide strategic advice to the Data Governance Advisory Group (DGAG) and follow their guidance and priorities to activate Data Governance Working Teams.
- Author standards, policies, and procedures in collaboration with the Data Governance Working Team (DGWT), Data Domain Stewards, Business Unit Stewards, and Data Governance Partners.
- Develop, review and monitor data governance metrics to assess performance and effectiveness of the IDG Practice.
- Manage all UCalgary-wide data governance activities and has the responsibility for reporting the results and status of the effort to the DGAG.
- Establish and ensure adherence to the Institutional Data Governance framework for data policies, standards, and practices, both at the UCalgary and business unit level.
- Serve as a point of escalation for governance, data quality and availability issues.
- Work closely with business and functional leadership to improve the availability and value of core data assets.
- Respond to operational requirements as well as support the strategic requirements for the UCalgary.

Data Governance Working Teams (Tactical and Operational Level)

The Data Governance Working Teams (DGWT) consist of the Data Governance Administrator (DGA) and business leaders (people that are the largest stakeholders in the subject area data, as well as representation from impacted business functions).

Time Commitment

- Monthly one hour meeting or as needed during projects.

Data Governance Responsibilities

- Convened by the Data Governance Advisory Group (DGAG) with assistance from and facilitated by the Data Governance Administrator (DGA) to address quality data issues or participate in data projects.
- Working groups should be formed and engaged to:
 - improve UCalgary Enterprise Data Definitions and Standards for Critical Data Elements (CDE)
 - improve Data Production and Collection
 - improve Data Usage and Understanding of Business Data Rules
 - improve Data Quality through Data Documentation and Metadata