

Quality Data Matters at KSU!

Data & Metadata Governance Structure at KSU

Importance to KSU

The quality and integrity of the data that are stored in KSU's transactional Banner and PeopleSoft databases, census records and data warehouses are vital for reliable and accurate institutional and unit reporting, sound data analysis, and effective decision support. Stated simply, good information cannot be generated from bad data. Anomalies in our data fouls the accuracy of important internal and external reports, it undermines the decisions that may be driven by that data and can be frustrating and embarrassing, as well as damaging to the creditability of KSU and our information systems. When such data anomalies contribute to errors in fee collections or expenditure records, it can be costly financially to the institution and problematic when data errors surface in audit findings and in the media.

The lack of concentrated attention paid to sound data governance practices, as well as effective data stewardship and data management across the entire University System of Georgia, including KSU, is a major contributing factor to the existence of anomalies in our data, in our operational databases and information systems. At the end of 2008, Enterprise Information Management at KSU reorganized its leadership team to address this critical need by establishing the position of Director of Data Quality Initiatives which has since been assumed by Leigh Funk. In 2009, Enterprise Information Management is leading the effort to establish a formal data governance structure which will focus on four essential dimensions of our institutional data:

Data Quality: Accuracy of the data contained within the institutional databases and official census records.

Data Integrity: Processes and procedures to ensure the quality, validity and trustworthiness of institutional data.

Data Integration: Ability to connect and interrelate data from different and independent databases.

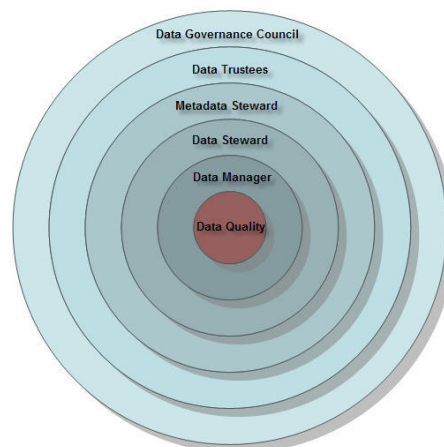
Data Monitoring: Periodic systematic data scanning and metadata checking that ensures the continuing quality, integrity and integration of the data over time.

What is Data Governance?

"The organization and implementation of policies, procedures, structure, roles and responsibilities that outline and enforce rules of engagement, decision rights, and accountabilities for the effective management of information assets" (McGilvray, D. *Executing Data Quality Projects*. 2008, p. 296)

The Data and Metadata Governance Structure outlined here is strategically designed to shift KSU from its position of advocacy for improved data quality into a position of systematically managing data governance policies and procedures that ensure improved data quality, data integrity, data integration and data monitoring within and across institutional functions.

Levels of Data Governance Responsibility



Levels of Data Governance Responsibility

The levels of responsibility for data management that are required at KSU to ensure proper handling of institutional data are outlined in the BOR USG Business Procedures Manual 12.0. Those roles were modified and expanded to include a metadata focus, governance council, and data integrity task forces and are operationally defined at KSU as follows:

Data Owner. KSU is the data owner of all institutional data and databases. Individuals, academic and administrative units may have responsibilities for overseeing and managing subsets of KSU's data or databases, but no single person, academic or administrative unit within the institution "owns" that institutional data or the associated database. The President is ultimately accountable for ensuring that the institutional interests in KSU's data are managed appropriately.

Data Governance Council. The Data Governance Council's purpose is to protect the Data Owner's (KSU's) interests and ensure campus-wide data quality, data integrity, and data integration through ongoing data monitoring. The CIO serves as the chairman of KSU's Data Governance Council representing the interests of the President and the institution. The Director of Data Integrity Initiatives serves as the assistant chair of the Data Governance Council and coordinates the agenda and related functions of KSU's Data and Metadata Governance Structure, including the formation and facilitation of Data Integrity Response Teams (DIRT). Data Trustees serve as members of KSU's Data Governance Council.

Key Responsibilities of the Data Governance Council include:

- Establishing and monitoring institutional data governance policies and procedures for KSU's data and metadata management that protect the Data Owner's interests and ensure data quality, data integrity, and data integration.
- Reviewing and approving the integration of operational databases into KSU's SAS Enterprise Intelligence system, mappings and metadata structures and clarifying the identities of the data trustee, data stewards, and data managers associated with those operational databases, including the expansion of Council membership as needed.
- Reviewing and approving the implementation, creation, modification or deletion of key data elements and their coding structures that have significant impact on other data trustees, stewards, managers or users as well as on enterprise operations, including data integration, reporting, and analytics for decision-support.
- Arbitrating issues of conflicting data management practices and procedures across and within KSU's databases and across data governance levels of responsibility and organizational divisions.
- Verifying that policies and procedures established to ensure data quality, integrity and integration are implemented continuously and result in the expected level of data quality over time.

Membership:

In the Data Governance structure at KSU, these individuals are typically senior level administrators such as:

Areas of Data Responsibilities	Trustee Title
All Institutional Data	KSU's Chief Information Officer
Metadata Repository	Director of Data Quality Initiatives
Registration & Student Records	Registrar
Undergraduate Admissions Records	Director of Undergraduate Admissions
Graduate Admissions Records	Director of Graduate Admissions
Financial Aid Records	Director of Financial Aid
Accounting Records	Controller
Budget Management Records	Director of Budget & Planning
Human Resources Records	Director of HR Operations
Undergraduate Academic Records Management	Associate VP for Academic Affairs (Undergraduate)
Graduate Academic Records Management	Vice President for Research and Dean of Graduate College
Facilities and Planning	Vice President for Facilities Services

Chief Data Officer. As required by the USG Board of Regents, the KSU CIO has appointed the EIM Executive Director to serve as the institution's Chief Data Officer.

Data Trustees. At KSU, Data Trustees have high-level administrative oversight responsibility for key institution-wide data systems and all of the data sets typically managed by the personnel and units reporting to them and for the appointment and accountability of their Data Stewards and Data Managers.

Key Responsibilities of Data Trustees include:

- Overseeing and continuously improving business practices in their areas of responsibility to ensure the quality, integrity and integration of the data systems and subsets for which they are responsible in accordance with KSU, USG, and federal policies and procedures and KSU's metadata standards.
- Ensuring that changes in business practices that result in significant changes to KSU's metadata repository are reviewed and endorsed by the Data Governance Council before being implemented.

Metadata Stewards. These are individuals at KSU with institution-wide data and information management responsibilities that entail internal and external reporting, census data collections, integrated data warehousing and enterprise intelligence facilitation. These enterprise information management functions include stewardship responsibilities for KSU's metadata. Metadata is broadly defined as "data about data" stored in a metadata repository. A metadata repository includes more than a typical data element dictionary. A comprehensive metadata repository standardizes and stores information about data in terms of their data sources, content, codes, business rules, interrelationships, history etc. in a centralized and widely accessible repository that is usable by information technology specialists as well as non-technical end users.

Key Responsibilities include:

- Mapping of data elements across databases to establish fully integrated enterprise intelligence and data warehousing capabilities.
- Developing, maintaining and expanding KSU's metadata repository which contains institution's standards for governing data quality, integrity and data integration.
- Establishing and overseeing business practices to ensure the quality, integrity and integration of the institution's official census data and data warehouse.
- Investigating institutionally pervasive data quality issues.
- Communicating changes in the metadata repository to the data trustees, stewards, managers and users.
- Implementing electronic data monitoring and metadata error detection strategies to proactively identify and verify data quality, integrity and integration over time.

Membership:

Metadata Steward Titles

Executive Director of Enterprise Information Management
Director of Data Quality Initiatives
Associate Director of Data Warehousing
Director of Enterprise Academic Reporting
Director of Enterprise Financial Reporting

Data Stewards. These key support personnel have high-level responsibilities for managing one or more major subsets of data, typically under the oversight of a Data Trustee. They may supervise or also serve as data managers in the day-to-day capture and maintenance of specific sub-sets of data in related transactional databases. The Stewards ensure that data quality and integrity are preserved in accordance with established governance policies and practices on behalf of the best interests of the institution.

Key Responsibilities of Data Stewards include:

- Establishing, overseeing and continuously improving business practices in their areas of responsibility to ensure the quality, integrity and integration of the data systems and subsets for which they are responsible under the supervision of the data trustee and in accordance with KSU, USG, and federal policies and procedures and KSU's metadata standards.
- Ensuring that changes in business practices that result in significant changes to KSU's metadata repository are communicated to the data trustee and reviewed and endorsed by the Data Governance Council before being implemented.
- Proactively identifying, analyzing and resolving data quality, integrity and integration problems involving their areas that cross multiple units or divisions.
- Recommending new or modified business practices within their areas that advance data quality, integrity and integration of institutional data elements.
- Collaborating with the Director of Data Quality Initiatives who is the data trustee for the metadata repository to document data definitions, business practices and metadata details about data for which they are responsible so that all users are aware of the definitions, restrictions, interpretations or other issues in place to ensure the correct use of the data.

Data Integrity Response Teams (DIRT). These are typically ad hoc task forces established and facilitated by the Director of Data Integrity Initiatives at the request of the CIO, a Data Trustee, a Metadata Steward, or a Data Steward to diagnose and devise proposed solutions for data integrity problems and issues. Conclusions and recommendations of these DIRT task forces will be shared with Data Stewards and be reviewed and approved by the Data Trustees Governance Council.

Data Managers. These are support staff designated by the Data Stewards who have responsibility for managing and documenting the administrative processes, day-to-day capture, maintenance, and integrity of specific sub-sets of data or data elements. Their work in that capacity is subject to KSU's data governance policies and procedures and metadata standards.

Key Responsibilities of the Data Managers include:

- Implementing business practices in their areas of responsibility to ensure the quality, integrity and integration of the data systems and subsets for which they are responsible under the supervision of the data steward and in accordance with KSU, USG, and federal policies and procedures and KSU's metadata standards.
- Ensuring that changes in business practices that result in significant changes to KSU's metadata repository are communicated to the data steward.
- Proactively identifying data quality, integrity and integration problems involving their areas that cross multiple units or divisions and working with the data steward to address those issues.
- Recommending new or modified business practices to their data steward that advance data quality, integrity and integration of institutional data elements.

Data User. KSU employees who use or combine data elements in the course of their job responsibilities, and/or external constituents who consume informational or data reports produced using KSU institutional data and SAS enterprise intelligence tools. In some instances, data trustees, stewards and managers are also data users. In other instances, KSU personnel who do not have data management responsibilities are also data users. KSU's SAS Specialists typically serve multiple roles in the data governance structure as data trustees, stewards, managers as well as data users.