



California State University, Chico

Data Governance Working Group

Data Governance Program Charter

Document History/Revisions

Date	Author	Change
5/20/17	Andy Miller	Draft doc V1
6/29/17	Andy Miller	Draft doc V2 – Data Governance Framework updated
9/5/17	Andy Miller	Draft doc V3 – updates based on input from Rosenow, Juliano, Parks
9/23/17	Andy Miller	Draft doc V4 – added visual of overall environment
10/10/17	Andy Miller	Draft doc V5 – added Data Owners Group into the document
11/16/17	Andy Miller	Draft doc V6 – added AVP for Budget & Operations to Data Gov Working Group.
12/13/17	Andy Miller	Draft doc V7 Added AVP for Staff HR (delegate) and AVP for Financial Svcs (delegate) to Data Gov Working Group. Made several changes as recommended by Cagle: <ul style="list-style-type: none"> - Modified Figure 1 to include additional campus stakeholders. - Separated Governing Bodies and Campus Stakeholders into two separate images (Figure 3 and Figure 4), and separated those groups into two different sections in the document. - Added Subject Matter Expert (SME) as a type of stakeholder.
4/10/18	Andy Miller	Draft doc V8 – Modified Figure 3 to replace McCarthy w/Grassian

Background

Data has taken center stage as a strategic university business asset. However, it has become apparent that Chico State requires a better data governance structure to deliver data that are of high quality, appropriately secured, and well positioned to support campus-wide data-driven decision-making.

In 2009, Chico State’s WASC accreditation reaffirmation letter indicated the following:

*...it is clear that the University is “committed to the concept that planning must be informed by analyzed data,” and that key performance indicators must be met in support of each of the strategic goals. However, **while the establishment of an Enterprise Data Warehouse “has received applause from all areas of the University,” the institution is “still not at the point where the big questions are being informed by data.”***

In 2014-15, Information Resources led a campus-wide data services assessment to analyze issues surrounding data/reporting and to provide a series of recommendations to address those issues. That assessment revealed a number of challenges, which were each factored into the following underlying categories: (1) technology, (2) IT/data governance processes, and (3) resources. The assessment’s recommendations led to funding for a new set of tools, and the implementation of those tools began in earnest in spring 2016.

Creation and maintenance of a Data Governance Program will be critical in addressing the challenges identified in the assessment, and in properly supporting data-driven decision-making at Chico State. This Charter outlines the requirements and standards for Chico State’s Data Governance Program.

Vision/Mission

Vision

Chico State’s Data Governance Program will be top of class within the CSU and will support a strong culture of information literacy and campus-wide data-driven decision-making.

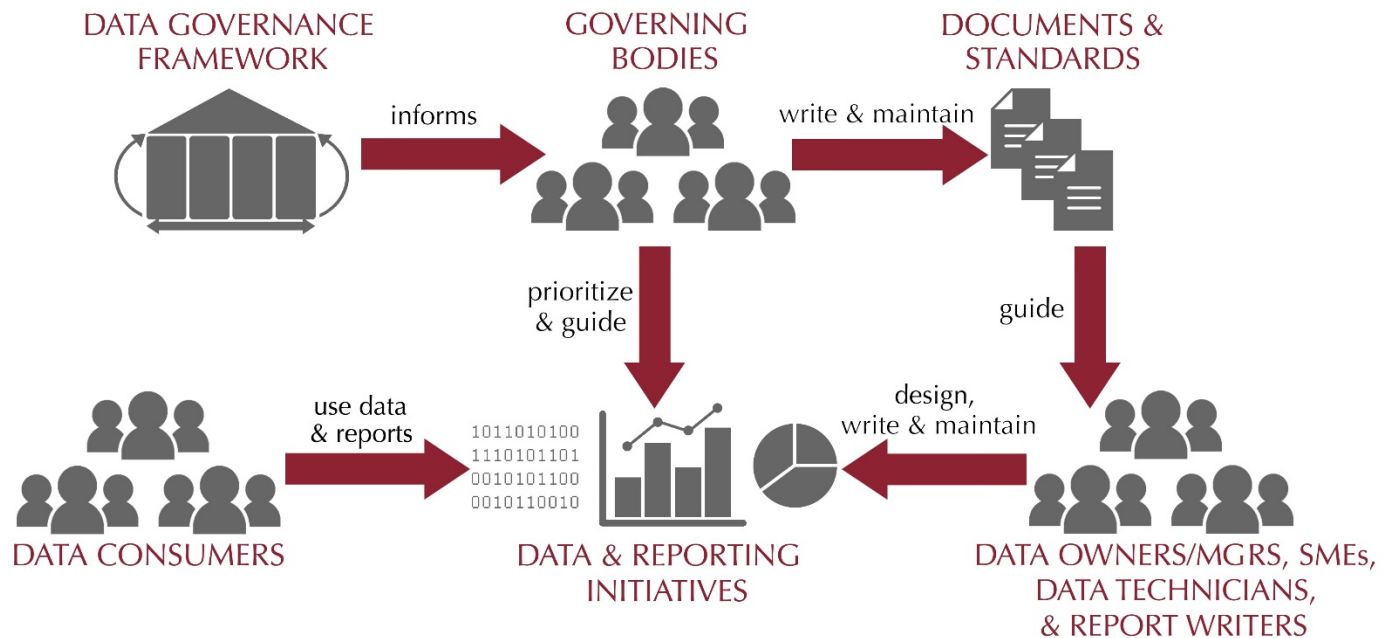
Mission

Chico State’s Data Governance Program is intended to create the best possible environment to support campus-wide data-driven decision-making. The Program seeks to identify data that currently exist and that need to exist in the future, defines responsibilities related to the ownership and management of that data, and assigns accountability of those responsibilities to specific groups or individuals within our institution. The Program keeps an enterprise perspective, but also allows for local/departmental flexibility. Lastly, the Program is considered an ongoing campus-wide effort that requires monitoring and maintenance to support continuous improvement; it is not a one-time Information Technology initiative.

Overview

At a high level, Chico State’s data/reporting environment is characterized by a data governance framework, which informs governing bodies, who are responsible for creating standards and for guiding/prioritizing largescale data/reporting initiatives and projects, for data that is managed and consumed by various campus stakeholders. This environment is represented in Figure 1. The individual components of this environment are explained throughout the remainder of this Charter.

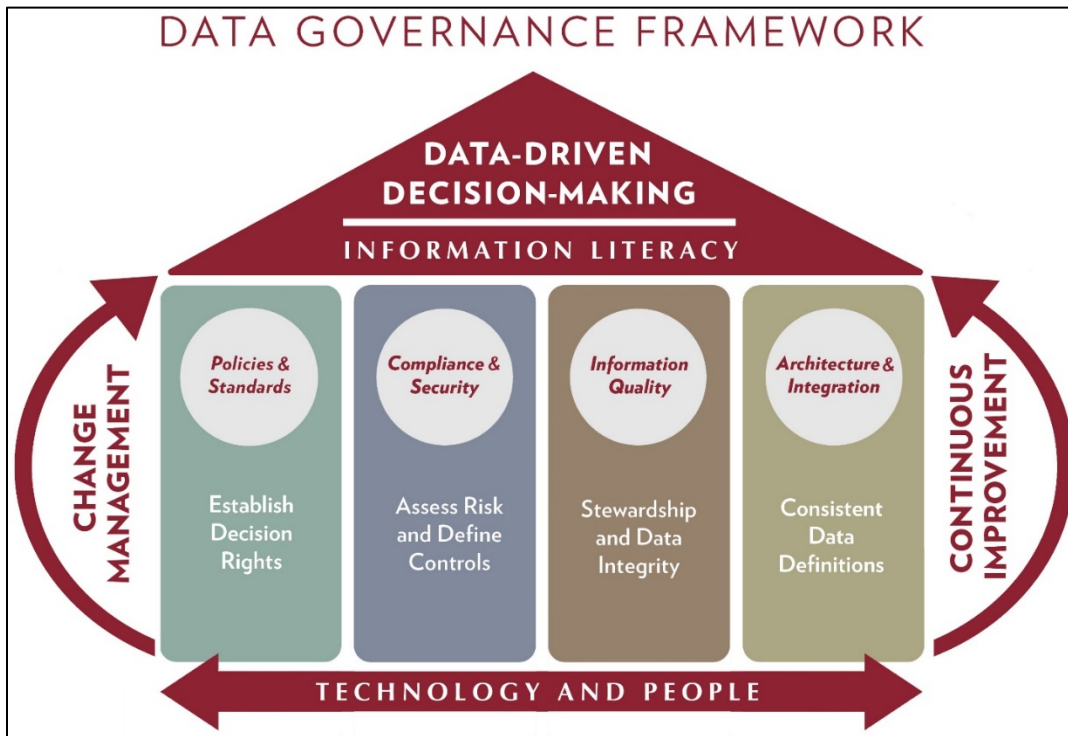
Figure 1: Environmental Overview



Data Governance Framework

A Data Governance Framework has been established to represent the theoretical framework and scope of the Data Governance Program at Chico State, as represented in Figure 2.

Figure 2: Data Governance Framework



Goals

The Data Governance Framework establishes the following goals:

- **Support Information Literacy and Data-Driven Decision-Making.** To enable campus-wide departments to engage in data-driven decision-making, we must establish a campus culture of information literacy. Information literacy will be supported by the four pillars of data governance: Policies and Standards; Compliance, and Security; Information Quality; and Architecture and Integration.
- **Create Policies and Standards.** The Program will create structured accountability by defining roles and responsibilities, and by establishing decision rights relative to the recommendation and creation of policies, priorities, processes, and standards. The Program should also facilitate collaboration and education related to policies and standards.
- **Support Security and Compliance.** The Program will develop risk management strategies and will support standards for compliance with privacy, security, and record retention policies for different record types. The Program will ensure that campus frameworks are aligned with CSU, state, and federal policies in all of these areas.
- **Facilitate Information Quality.** Formal and professional data ownership and data management are essential to the Program. The Program outlines responsibilities of data owners and data managers for ensuring data integrity, data quality, and fitness for use. The Program also supports the notion that campus data consumers bear responsibility for providing input to data owners and data managers to support continuous service/data improvement.

- **Create Standardized Architecture and Integration.** Ensuring that we have common data definitions and that those definitions are made available across multiple platforms is essential to enabling data-driven decision-making. The Program also supports decisions on data definitions and on the technical support required to manage, integrate, and disseminate those definitions.
- **Support Change Management Standards.** Consistency and stability of the environment is a cornerstone to the success of the Program. Best-practices change management processes will be created to ensure this consistency and stability.
- **Support People and Technology.** The Program will ensure that the campus is providing sufficient human and technological resources to support the initiatives, projects, and environments that support data-driven decision-making.

Guiding Principles

The Data Governance Program is driven by the following principles:

- **Transparency.** It should be clear how and when decisions are made, and processes are created; decisions and processes should be audited to support compliance-based requirements.
- **Consistency.** All decisions should be applied consistently.
- **Stewardship and Custodianship.** Formal roles will be defined, and it will be the responsibility of campus data owners and data managers to ensure compliance with information quality, privacy, and data access/security.
- **Accountability.** All members of the campus community need to be accountable for their parts in supporting data governance. This includes not only data owners and managers, but also campus data consumers.
- **Agility.** All processes should be adaptable when appropriate.
- **Metrics-Driven.** We should monitor and report on our performance against our goals.

Metrics

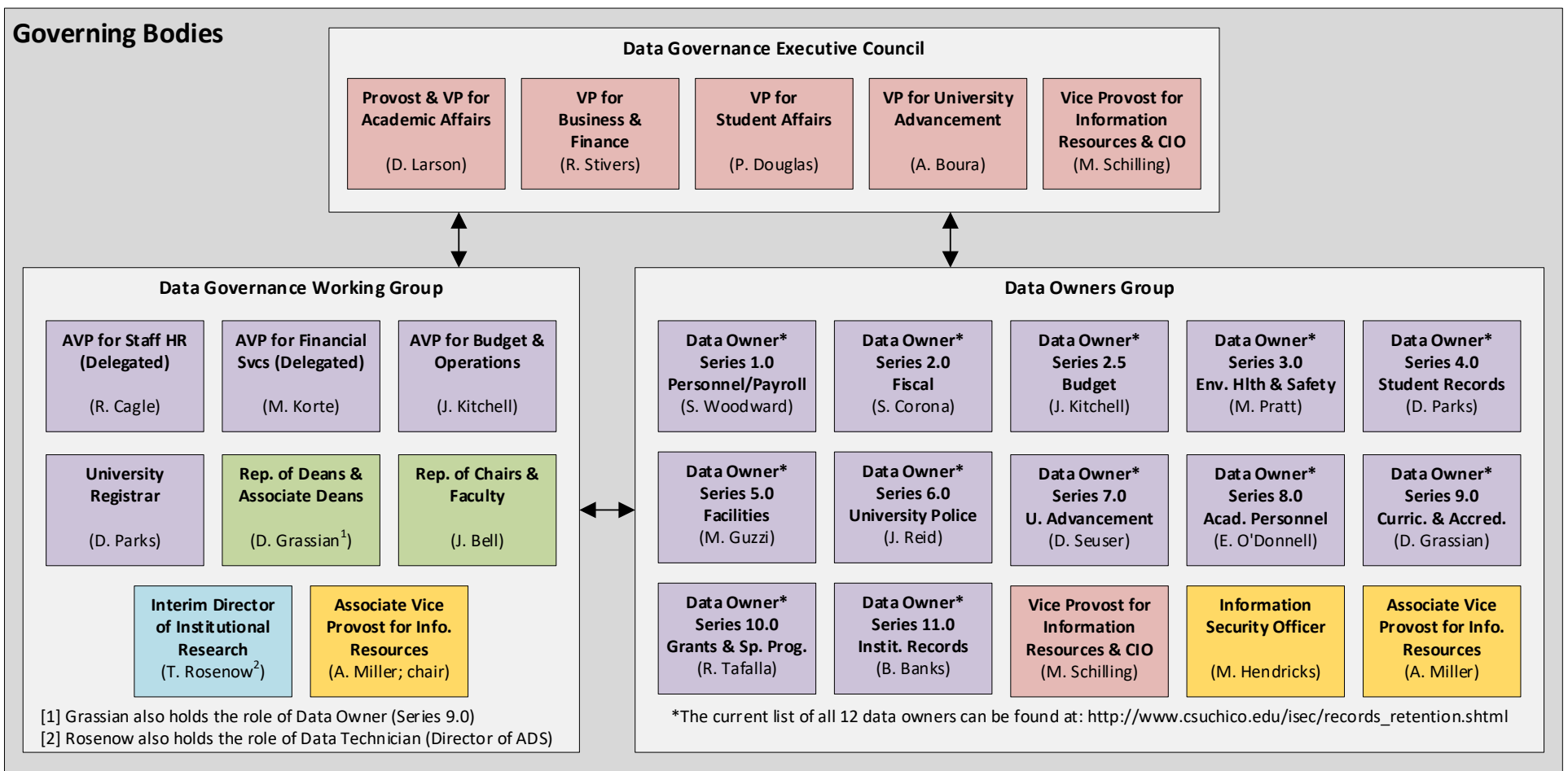
The Data Governance Program will create metrics in the following categories to measure progress:

- Accessibility
- Accuracy
- Completeness
- Consistency
- Compliance
- Training/Education
- Efficiency
- Security
- User satisfaction

Governing Bodies

The Data Governance Program is governed by three distinct governing bodies: the Data Governance Executive Council, the Data Governance Working Group, and the Data Owners Group. These groups are generally responsible for creating and approving policies and procedures and in promoting environments that support data-driven decision-making. The relationships between the governing bodies are shown in Figure 3.

Figure 3: Data Governance Program, Governing Bodies



Note: Color coded roles on this diagram are intended to match the color coding on the [Campus Stakeholders diagram](#) in Figure 4.

Data Governance Executive Council

The Data Governance Executive Council consists of senior campus leaders who provide executive level guidance to the Data Governance Program. Responsibilities include:

- Approve policies based on input/recommendations from the Data Governance Working Group
- Prioritize and approve high-level data-related projects
- Award financial assistance for high-level data-related projects

Data Governance Executive Council operations are as follows:

- The group will meet bi-annually at minimum
- Formal decisions on policy will be communicated to the Data Owners Group and the Data Governance Working Group

Data Governance Working Group

The Data Governance Working Group consists select data owners, data managers, data consumers, and information technology managers who can speak to critical campus data/reporting needs and create plans to meet those needs. The primary focus is on enabling data-driven decision-making. Responsibilities include:

- Draft and recommend policies to the Data Governance Executive Council.
- Create and maintain the Data Governance Program Technical Articles.
- Recommend appropriate levels of resources (staff, technical infrastructure, etc.) and ensure that proper planning protocols are in place to support the data needs of the entire university.
- Prioritize the implementation of major elements of the new data warehouse and reporting environments, including new reports/analytics that can answer campus data questions.
- Promote appropriate data quality and data integrity, including consistent data definitions and their application throughout connected systems.
- Promote data governance across the University.
- Contribute to the development/delivery of a campus data training program.

Data Governance Working Group operations are as follows:

- The group will meet bi-monthly at minimum.
- A quorum is met if three quarters of the group are present.
- Formal recommendations to the Executive Council and/or updates to the Data Governance Program Technical Articles need to be ratified by a quorum.
- Minutes will be taken for each meeting and will be approved at the next meeting.

Data Owners Group

The Data Owners Group consists of the entire group of 12 formally identified campus data owners who have policy-level managerial responsibility for data within their functional areas, along with a select group of information technology managers. The primary focus is on compliance and security issues. Responsibilities include:

- Draft and recommend policies to the Data Governance Executive Council.
- Make recommendations for improvements to the Data Governance Working Group.
- Review and discuss compliance and security issues to ensure that they are reasonably and consistently addressed within the University's information security technical and business guidelines, standards, procedures and practices.
- Provide input to the Data Governance Working Group to inform the Data Governance Program Technical Articles.

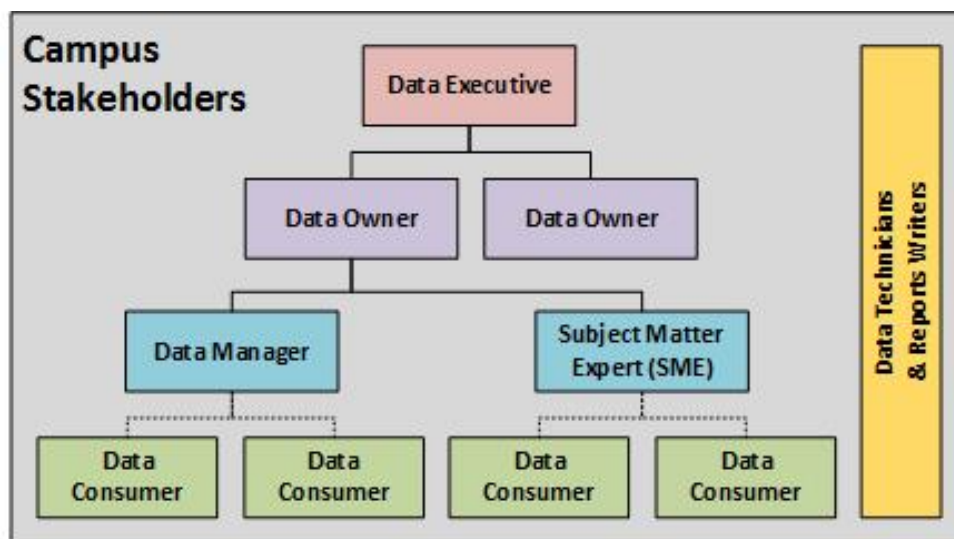
Data Owners Group operations are as follows:

- The group will meet every other month at minimum.

Campus Stakeholders

Campus stakeholders are people across campus who are responsible for the daily management/delivery of data, and data consumers who access/use data and reports for the purpose of data-driven decision making. These groups are also responsible for compliance with the policies and procedures that are designed and approved by the governing bodies. The relationships between the campus stakeholders are shown in Figure 4. It is worth note that the Data Governance Work Group and Data Owners Group are comprised of people who are campus stakeholders; but not all campus stakeholders are members of the governance groups.

Figure 4: Campus Stakeholders



Note: Color coded roles on this diagram are intended to match the color coding on the [Governing Bodies diagram](#) in Figure 3.

Data Executives

Data executives are the highest-ranking individuals accountable for what happens with and to university data. They represent the highest oversight to which issues are escalated, and have authority for setting strategy and policy. Responsibilities include:

- Provide a broad, university-wide view of data.
- Ensure that major data initiatives are consistent with and in support of university strategic plans.
- Designate official Data Owners for data record series within their purview. If a Data Executive does not designate a Data Owner for a particular data series, then the Data Executive implicitly holds the Data Owner responsibilities.

Data Owners

Data Owners play the primary leadership role in ensuring the integrity, quality, and security of Chico State's data. Data Owners are typically designated by, and have an organizational reporting relationship to, Data Executives. Please see the [Chico State ISEC Records Retention website](#) for the current list of official campus Data Owners. Responsibilities include:

- Grant access to data, and ensure appropriate controls are in place to protect, information assets based on [ICSUAM 8060 Access Control](#) and [ICSUAM 8065 Information Asset Management](#) policies

- Duties include, but are not limited to, classifying, defining controls, authorizing access, monitoring compliance with campus/security policies and standards, and identifying levels of acceptable risk.
- Ensure development of appropriate role-based or attribute-based permissions and employment groups that allow appropriate access to be granted efficiently.
- Review and approve security roles created in enterprise systems which structure how appropriate access is provided to the relevant set(s) of data.
- Ensure that access to records is reviewed and/or removed when an individual with access is transferred to a different position/department on campus or when separated from campus.
- Oversee records retention and disposition processes. For more information, please see the [Chico State ISEC Records Retention website](#), the CSU [Records Retention and Disposition Schedules website](#), and the [CSU EO-1031 website](#).
 - Identifying business units and systems that are not compliant with CSU records retention requirements, and ensure that those units/systems are aware of their non-compliance.
- Comply with CSU and Chico State data classification and protection standards. For more information, please see the [Chico State ISEC Data Protection website](#).
- Ensure that the Annual Sensitive Data Inventory is completed by all units under their responsibility.
- Address issues of data quality that are identified by Campus Stakeholders.
- Ensure that all data elements have clear and unambiguous definitions.
- Ensure that data elements that are no longer in active use are retired/removed.
- Participate in the definition/design/review of reports as appropriate
- Facilitate communication regarding business process changes that may affect downstream systems or analytics relating to specific data elements.
- Contribute to the development/delivery of a campus data training program,
- Designate official Data Managers for specific data sets *within* the record series within their purview. If a Data Owner does not designate a Data Manager for particular data sets, then the Data Owner implicitly holds the Data Manager responsibilities.

Data Managers (AKA Data Custodians or Data Stewards)

Data Managers manage and support the day-to-day business processes that are used to maintain university data. Data Managers are typically considered subject matter experts on specific sets of data elements, and they understand how the data are used by Data Consumers. Data Managers are often designated by, and have an organizational reporting relationship to, Data Owners. Responsibilities include:

- Comply with Chico State and CSU policies and follow established business process in the handling of data.
- Understand and comply with records retention and disposition responsibilities for records in their care. For more information, please see the [Chico State ISEC Records Retention website](#), the CSU [Records Retention and Disposition Schedules website](#), and the [CSU EO-1031 website](#).
 - Identify business units and systems that are not compliant with CSU records retention requirements, and ensure that those units/systems are aware of their non-compliance (in coordination with Data Owners where appropriate).
- Ensure that the Annual Sensitive Data Inventory is completed by all units under their responsibility (in coordination with Data Owners where appropriate).
- Identify and/or address issues of data quality that are identified by Campus Stakeholders (in coordination with Data Owners where appropriate).
- Provide input to Data Owners and the Data Governance Working Group to inform the creation of effective business and governance processes.
- Provide input to Data Owners to ensure that all data elements have clear and unambiguous definitions.

- Provide input to Data Owners to ensure that data elements that are no longer in active use are retired/removed.
- Provide input to Data Owners to facilitate communication regarding business process changes that may affect downstream systems, reports, and analytics.
- Participate in the definition/design/review of reports as appropriate
- Contribute to the development/delivery of a campus data training program.

Subject Matter Experts (AKA Business Analysts)

Subject Matter Experts (SMEs) perform many of the same duties as Data Managers. The primary difference is that Data Managers hold some official compliance responsibilities that SMEs do not hold (e.g. records retention, sensitive data inventory, etc.). SMEs support the day-to-day business processes that are used to maintain and/or analyze university data. SMEs understand how the data are used by Data Consumers.

Responsibilities include:

- Comply with Chico State and CSU policies and follow established business process in the handling of data.
- Identify and/or address issues of data quality that are identified by Campus Stakeholders (in coordination with Data Owners where appropriate).
- Provide input to Data Owners and the Data Governance Working Group to inform the creation of effective business and governance processes.
- Provide input to Data Owners to ensure that all data elements have clear and unambiguous definitions.
- Provide input to Data Owners to ensure that data elements that are no longer in active use are retired/removed.
- Provide input to Data Owners to facilitate communication regarding business process changes that may affect downstream systems, reports, and analytics.
- Participate in the definition/design/review of reports as appropriate
- Contribute to the development/delivery of a campus data training program.

Data Consumers

Data Consumers include the people, organizational units, and information systems that are granted access to data for specific uses such as analysis and reporting. They can also include downstream information systems that ingest and/or transform data for a specific purpose. Responsibilities include:

- Provide input to Data Managers and/or Data Owners about data/reporting needs.
- Access data/reports for the purpose of data-driven decision-making.
- Identify and report issues of data quality.
- Attend training to clearly understand their own responsibilities relative to the data entrusted to them, and follow procedures to ensure data security.

Data Technicians and Reports Writers

Data Technicians and Reports Writers are supportive, but parallel, to the rest of the roles outlined here. They are typically made of technology personnel responsible for facilitating service requests, for monitoring and maintaining the systems and activities affecting data at rest and in transit, and for designing/developing reports and dashboards that are used by Data Consumers. Responsibilities include:

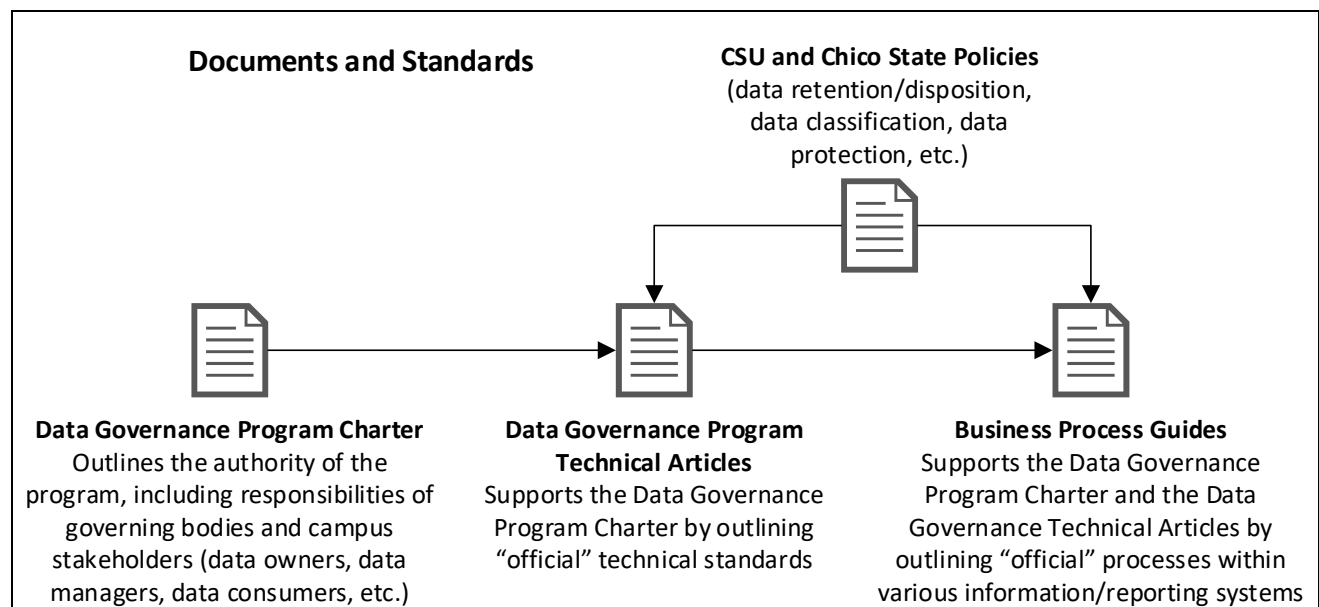
- Facilitate the service request process for new/modified data/reports and/or for access to reporting systems (or for individual reports within those systems).
- Design, develop, and support technology solutions that support data, reporting, and analytics environments that can effectively meet campus needs.

- Provide input to Data Managers, Data Owners, and the Data Governance Working Group to inform data management/governance policies/procedures that will help meet campus data needs and provide high data quality
- Implement data management procedures that comply with policies and procedures defined by Data Owners, the Data Governance Working Group (including the Data Governance Program Technical Articles), and/or the CSU.
- Implement access and security controls based on processes defined by Data Owners and based on data classification and data protection requirements
- Report issues of data/systems quality to Data Managers and/or Data Owners
- Contribute to the development/delivery of a campus data training program
- Maintain technical currency to support the technologies that deliver data/reports

Documents and Standards

The Data Governance Program authorizes the creation and alignment of several documents and standards, as shown in Figure 5.

Figure 5: Data Governance Program, Documents and Standards



Differing Data Types and Data Needs

It must be acknowledged that our campus deals with multiple types of data. The Data Governance Program will be flexible enough to handle varying types of data including:

- **Administrative Data** that are generated as a result of utilizing enterprise transactional systems, such as student records, employee data, financial information, etc.
- **Siloed/Local Data** that are captured across campus but aren't integrated or accessible to the enterprise systems and are needed to create a holistic view of the student life cycle
- **Research Data** that are created as part of a research study

Within administrative and siloed/local data sets, we recognize that there are different types of data sets and different usage needs, which include:

- **Operational Data** that represent ongoing transactions in various information systems. These data can be highly dynamic, often changing on a minute-by-minute basis. These data can be revealed granularly for day-to-day operational decision-making, but can also be revealed at high levels of aggregation (e.g. longitudinally over many semesters/years) for strategic analysis.
- **Census Data** that represent a static snapshot of student-related data, as they existed at the close of business on the fourth Friday of the semester. Census data are considered the “official” source of record for CSU and IPEDS purposes.

Given the different nature of operational data (highly dynamic) and census data (highly static), there is a potential for confusion when Data Consumers read reports. This is especially true if operational data are inappropriately compared to census data; such comparisons would likely be “inappropriate” because *operational data and census data will necessarily differ*. To help avoid this confusion (and the subsequent challenges by Data Consumers to the quality/integrity of our data), reports must include clear descriptions and definitions.

It is also very important to acknowledge that campus Data Consumers have varying levels of skills and data/reporting needs, which include:

- **Canned Data** in the form of pre-packaged reports (with filters when appropriate) that offer a push-button solution for quick and easy access to reports that are run repeatedly.
- **Lightweight Explorable Data** that allow Data Consumers to take data of interest and join them together to perform lightweight statistical analysis that is not possible within the canned reports (all in a controlled manner). This exploration allows Data Consumers to find deeper meaning in the data, but requires a higher level of effort on their part.
- **Complex Explorable Data** that allow Data Consumers to take data of interest and join them together to perform complex statistical analysis and/or data mining (e.g. predictive analytics) (all in a controlled manner). This exploration allows Data Consumers to find the deepest meaning in the data, but also requires the highest level of effort on their part.

Although there are governance issues that are common between administrative and research data, it is important to recognize that there are many differences in how these different types of data are obtained, stored, retrieved, and protected. Administrative data are usually more easily accounted for, and the rules for protection and preservation are relatively consistent. The Program will formalize those rules as well as standardize the definitions of that data. Research data sets, on the other hand, may be comprised of many different sources, aspects of which may be very sensitive. The governing of research data will deal more with the training of people on the tools and processes available to ensure data is protected and stored appropriately.

In Scope

The systems that are currently within scope for the Data Governance Program include:

- **The central data warehouse**
- **Insight** reporting system (<https://insight-int.csuchico.edu/reports>)*
- **CRA** reporting system (<https://emsint.csuchico.edu/cra>)*
- **Cognos Analytics** reporting system (<https://csuc-bi.csuchico.edu/ibmcognos/bi/>)
- **Tableau** reporting system
 - **Externally accessible** (<https://wildcats-bi-ext.csuchico.edu/>)
 - **Internally accessible:** (<https://tableau-dev.csuchico.edu>)
- **Information Governance Catalog** (IGC) (<https://csuc-bi.csuchico.edu:9445/ibm/iis/igc/>)

*Chico State is implementing Cognos Analytics and Tableau in 2017, and we will be migrating away from Insight and CRA. Insight and CRA are considered in scope for grandfathering purposes, but new development in these systems should be limited to the greatest extent possible.

The Data Governance Working Group is responsible for developing and maintaining the Data Governance Program Technical Articles (documented separately). Those articles will outline the specific technical requirements, processes, and details relative to the systems that are in scope in the Program.

Out of Scope

It is recognized that there are existing committees and structures at Chico State that currently function in a data ownership/management capacity. Especially in the area of dealing with research data. This Data Governance Program would not include as part of its mission undertaking the following:

- Anything under the purview of the IRBs on campus. The research boards have their missions to ensure that policies of human research protection are being followed. The Data Governance Program would not overlap with anything under the purview of the IRBs.
- The Data Governance Program would not overlap/conflict with/speak to any conditions that may be put on external data sets with which a researcher may work. If the funding agency has a set of criteria or requirements that need to be followed, those would take precedence over any policies that may be developed as part of the Data Governance Program.
- Stewardship of research data.

Roles and Responsibilities

TBD

Acknowledgments

Large portions of this program were based on the data governance program at University of Wisconsin-Madison. Special thanks go to UW-Madison's Chief Data Officer, Jason Fishbain, for his excellent work and guidance in data governance.

References

The following documents can be considered as a background primer for data governance and as setting context for the needs of data governance at Chico State.

ECAR Working Group. (2015a). Establishing Data Stewardship Models. *Educause*. Retrieved from <https://library.educause.edu/~media/files/library/2015/12/ewg1514-pdf.pdf>.

ECAR Working Group. (2015b). The Compelling Case for Data Governance. *Educause*. Retrieved from <https://library.educause.edu/~media/files/library/2015/3/ewg1501-pdf.pdf>

Miller, A. (2015). Data Services Technology Assessment. *California State University, Chico*. Available upon request.