

## **UW Institutional Data Management Standards**

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Data Management Standards for the University of Washington's Institutional Data assets.

Applies To: All Departments and Units of the University

Issued By: Vice Provost of Planning & Budgeting, Dean of University Libraries, Assistant Vice Provost for Institutional Research and Data Management, and Associate Vice Provost for Information Management

Administered By: Data Management Committee

Delegated Authorities: Data Trustees and Data Custodians (defined below)

Date Issued: December 9<sup>th</sup>, 2010

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### **Purpose**

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Institutional Data Management Standards describe principles and minimum standards that users should strive to achieve in the course of managing Institutional Data (defined below). This standard should be read and applied in conjunction with the policy statements it serves, APS 2.1, "UW Information Systems Security" and APS 2.10, "Minimum Data Security Standards".

University leaders understand the strategic importance of Institutional Data and this standard outlines best practices for the proper maintenance, access and use of those data. This standard helps to ensure that:

- Information management is incorporated as a part of University decision making and delivery of services
- The value of Institutional Data is maximized by increasing the understanding and use of that data
- Users are educated with regards to all University, State, and Federal laws, policies and procedures that mandate and regulate Institutional Data
- The responsibility and roles for management of Institutional data is understood

### **Scope**

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The scope of this standard applies **only to administrative business information systems** (i.e. Finance and Accounting, Student Registration, Research Administration, etc.) Additional or superseding standards may apply to non-administrative business information systems. (i.e. Clinical & Patient Record Systems, Classified Research, Learning Management Systems, etc.) It is strongly encouraged that the same principles and minimum standards outlined in this standard be applied to all information systems.

## Definitions

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1. **Institutional Data** – “Institutional Data” is defined as data elements which are created, received, maintained, or transmitted by the University of Washington within the scope outlined above for administrative business information systems. Institutional Data are pieces of information that represent the qualitative and quantitative attributes of variables which record measurements and facts related to the business of the University.
2. **Institutional Information** – “Institutional Information” is defined as a collection of Institutional Data which can be **contained** in any form, including but not limited to documents, databases, spreadsheets, email and web sites; **represented** in any form, including but not limited to letters, numbers, words, pictures, sounds, symbols, or any combination thereof; **communicated** in any form, including but not limited to handwriting, printing, photocopying, photographing, and web publishing; and **recorded** upon any form, including but not limited to papers, maps, films, prints, discs, drives, memory sticks and other information systems.
3. **Institutional Metadata** – “Institutional Metadata” is data collected, maintained and used to describe and define the processes around the management of Institutional Data. Examples of Institutional Metadata include:
  - Definitions regarding the purpose, usage and context of Institutional Data
  - Identification of which system is the official system of record of Institutional Data
  - Who is responsible for management of Institutional Data
  - How Institutional Data is transferred, derived, and stored
  - What security and privacy practices are used to safeguard Institutional Data
  - Risk and compliance classifications for Institutional Data
  - Rules around retention of records and Institutional Data
4. **System of Record** – A “System of Record” is an information system that is designated by Data Custodians (defined below) as holding **official values** of Institutional Information. Official values are the data designated as the most accurate representation of the meaning and context of Institutional Data elements which are recorded as facts. Official values are not necessarily the originally entered values, and as such, a System of Record may not necessarily be the system where values are originally entered. When questions arise over the meaning or interpretation of data elements, or their values, the System of Record is used to resolve discrepancies.
5. **Institutional Data Warehouse Repositories** – Institutional Data is often copied from Systems of Record into other systems, for ease of access, or to facilitate historical storage of data. The UW’s Enterprise Data Warehouse is an example of this type of additional data repository. Since Systems of Record may purge Institutional Data on defined schedules, these types of additional data repositories contain Institutional Data that survives beyond what the System of Record contains. They then become a System of Record holding official values of Institutional Data. These additional Institutional Data Warehouse Repositories are designated by Data Custodians (defined below) and are subject to the same policies and procedures that govern the use of Institutional Data.
6. **Departmental / Unit / Local Data Repositories** – Various UW academic and administrative departments or units copy Institutional Data from Systems of Record into their own departmental, unit or local data repositories. Any Departmental / Unit / Local

Data Repository that contains a copy of Institutional Data are subject to the same policies and procedures which govern the use of Institutional Data.

7. **Subject Area Domains** – Institutional Data is classified according to specific high-level “Subject Area Domains” for the purpose of assigning accountability and responsibilities over that data. The Subject Area Domains are defined in the UW Data Map and maintained by the Data Management Committee (defined below). The Data Management Committee refers to this classification as the **UW Data Map** and maintains a copy of it on its web site. (see reference 1 below) Examples of high-level Subject Area Domains are Human Resources, Academics, Financial Resources, University Advancement, etc. The UW Data Map also further defines specific **Business Domains** within each Subject Area Domain. Examples of Business Domains within the Academics Subject Area Domain are Curriculum and Courses, Financial Aid, Applications Admissions and Enrollments, Transcripts Degrees and Awards, etc.

## Principles

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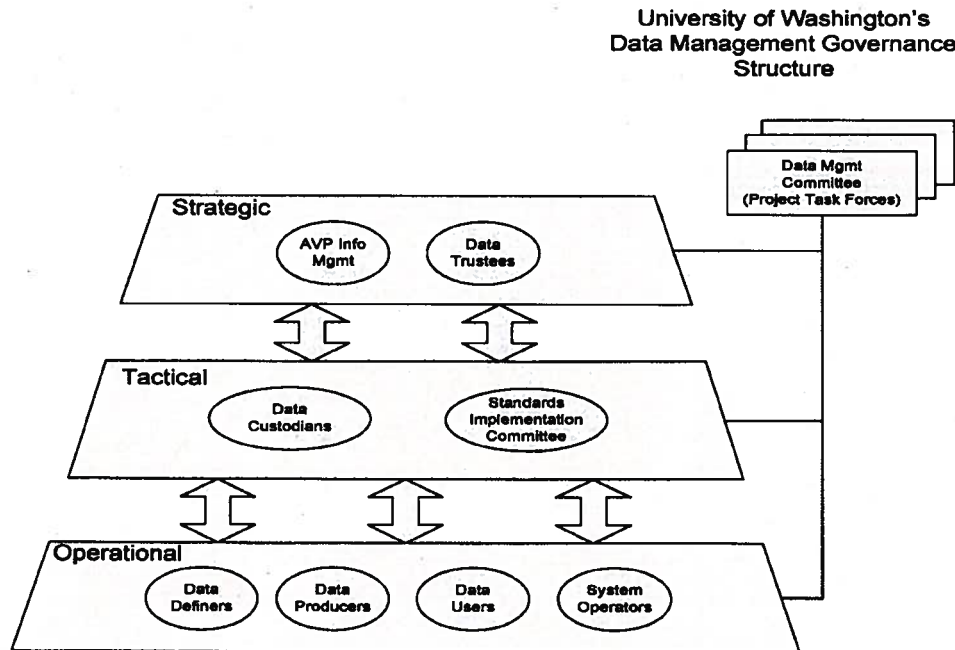
The following principles are set forth as minimum standards to govern the appropriate usage and management of Institutional Data.

- **Institutional Data is the property of the University of Washington and shall be managed as a key asset** – Institutional Data will be managed through defined governance guidelines, standards, policies and procedures.
- **Unnecessary duplication of Institutional Data is discouraged** – Data Custodians (defined below) shall be responsible for sharing Institutional Data out of official Systems of Record, when reasonable and according to policies and procedures, so as to minimize redundant storage and processing of that data in multiple repositories. Exceptions are allowed for purposes of business continuity and fail-over.
- **Unnecessary updating of Institutional Data is discouraged** – When the same Institutional Data elements exist in multiple Systems of Record the official values must be kept synchronized. When feasible, manual updates of Institutional Data should be performed in one System of Record and then automatically copied to as few other additional data repositories as possible. This eliminates redundant processing, increases integrity and provides better auditing capabilities.
- **Quality standards for Institutional Data shall be defined and monitored** – Data quality standards shall be defined, published, communicated, managed and applied according to reliability and risk levels established by appropriate Data Custodians (defined below). Examples of data quality standards include data validation rules, timeliness of updates, defined error rates, integrity monitoring processes, etc.
- **Institutional Data shall be protected** – Institutional Data must be safeguarded and protected according to approved security, privacy and compliance guidelines, laws and regulations established by the UW, the State, or the Federal government.
- **Institutional Data shall be accessible according to defined needs and roles** – Institutional Data and Metadata shall be accessible to all in accordance with defined access and use policies and procedures determined by the Data Management Committee and Data Custodians (defined below). Users requesting access shall be assigned to appropriate roles that have clearly documented guidelines in accordance with all UW, State, and Federal laws and regulations.

- **Institutional Metadata shall be recorded, managed, and utilized** – Metadata will be used to model, define and organize data in order to maximize the value of Institutional Data. Institutional Metadata will be published and communicated clearly and consistently.
- **Institutional representatives will be held accountable to their roles and responsibilities** – Roles and responsibilities for data management will be clearly defined, and individuals assigned to specific roles will be held accountable to performing data management responsibilities, as a part of their regular job responsibilities.
- **Necessary maintenance of Institutional Data shall be defined** – Maintenance of Institutional Data to ensure appropriate backup, retention, destruction, de-identification, etc. will be defined by appropriate Data Custodians and System Operators.
- **Resolution of issues related to Institutional Data shall follow consistent processes** – The Data Management Committee shall coordinate the resolution of issues related to risks, costs, access, management and use of Institutional Data with the appropriate Data Custodians and Data Trustees.

## Roles and Responsibilities

The following roles and responsibilities are defined, for both individuals and groups, for the purpose of establishing clear governance and accountabilities over Institutional Data. The terms and conditions for appointments and assignments are outlined for each. The following governance chart summarizes the relationships between these roles.



- **Data Trustees** – Data Trustees are high-level employees, (i.e. Vice Presidents, Vice Provosts, Deans, Chancellors, etc.) appointed by and report to the President or Provost and Executive Vice President, that have authority over Rules, Policies, Standards and Guidelines regarding **business definitions** of data, and the **access** and **usage** of that data, within their delegations of authority. Each Data Trustee appoints Data Custodians for their specific Subject Area Domains. For a list of domains and currently assigned Data Trustees and Data Custodians refer to the UW Data Management Committee web site. (see reference 1 below)
- **Associate Vice Provost for Information Management**– The Associate Vice Provost of Information Management is a Data Trustee with delegated authority over certain centralized Institutional Data Warehouse Repositories, like the Enterprise Data Warehouse. The Associate Vice Provost for Information Management is also responsible for setting and enforcing standards and guidelines for **data management technologies** and **systems** related to appropriate: computing infrastructures, data processing performance, data delivery and integration, data architectures and structures, data quality, data domain definitions, metadata repositories, naming conventions and syntax, and access control mechanisms.
- **Data Management Committee (DMC)** – Data Management Committee members are responsible for providing guidance and recommendations for strategic directions and priorities, creating and maintaining policies and procedures, creating and overseeing special task groups, and assisting with the development of proposals for special data management needs. DMC members are appointed by and accountable to the Provost. Membership on the committee is reviewed annually. The DMC recommends solutions to Data Trustees when disputes arise in the definition or usage of Institutional Data. The DMC is responsible for communicating, creating awareness, and making data management policies, standards, guidelines and procedures available to appropriate data management personnel. The DMC is responsible for maintaining a web site that includes information and links to relevant policies, standards, guidelines and procedures, communicating the status of task force projects, and informing all data management personnel of best practices for managing Institutional Data. (see reference 1 below)
- **Standards Implementation Committee (STIC)** – STIC members are individuals assigned by, and accountable to, the Data Management Committee. Membership is assigned by appointment from the DMC on a rotating basis. STIC committee members are responsible for oversight, and communication of DMC related policies, procedures, standards and guidelines. They review and steward data management standards and issues according to defined procedures, standards and guidelines published on the Data Management Committee web site. (see reference 1 below) They track and record revisions to procedures, standards and guidelines. When delegated, they assist Data Custodians in implementing and enforcing procedures, standards and guidelines.
- **Data Custodians** – Are appointed by and report to the Data Trustees. Data Custodians help interpret, define, implement, and enforce data management policies and procedures within their specific Subject Area and Business Domains, as defined in the UW Data Map. For a list of domains and currently assigned Data Custodians refer to the UW Data Management Committee web site. (see reference 1 below). In conjunction with the UW Institutional Data Management Standard, and prescribed technology and systems standards and guidelines established by the Associate Vice Provost of Information Management, Data Custodians are responsible for performing several key data management functions including:

- o Identifying Systems of Record containing Institutional Information
- o Categorizing Institutional Information within Systems of Record according to University Rules and Policy statements on security and privacy
- o Defining access, quality and usage guidelines for Institutional Information
- o Reviewing and approving requests for access to Institutional Information
- o Documenting and maintaining Institutional Metadata
- o Educating and sharing best practices with other data management personnel

Data Custodians have knowledge of and work in accordance with numerous standards and policies across the University, including.

- o Standards, policies and procedures established by the Privacy Assurance and System Security (PASS) Council of the University. (see reference 2 below)
  - o Record retention and public disclosure rules and regulations as outlined on the Records Management web site. (see reference 5 below)
  - o Public records and Open Meeting standards, policies and procedures defined by the Office of External Affairs. (see reference 6 below)
  - o Electronic Discovery and Disclosure Guidelines as outlined on the UW Attorney General's web site. (see reference 7 below)
- **Data Management Committee - Project Task Forces** – The Data Management Committee, from time to time, will create and oversee task forces to help with various data management projects. Task force members will generally be comprised of Data Custodians and various other data management personnel. These task forces may be formed to help review, plan, and administer data management activities across all subject area domains. Task forces will create charters and deliverables and be accountable to the Data Management Committee for implementation of those. For a list of current task forces refer to the Data Management Committee web site.
  - **Data Definers / Users / Producers** – Everyone that defines, uses, and produces Institutional Data shall do so in accordance with standards, guidelines, policies and procedures established by the UW Information Technology, Data Custodians and the Data Management Committee.
  - **Systems Operators** – Operation and administration of information systems, including Systems of Record and Institutional Data Warehouse repositories, shall be performed by System Operators in accordance with standards, guidelines, policies, and procedures established by System Owners, Data Custodians and the Data Management Committee. System Operators and System Owners are further defined in the UW Information Systems Security Policy APS 2.1 (see reference 3 below)
  - **Researchers** – University research personnel may have additional special data management responsibilities according to the nature and type of research being performed. The UW Office of Sponsored Programs maintains a separate web site providing policies, procedures and guidance for researchers. (see reference 4 below)

## References

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1. UW Data Management Committee web site <http://www.washington.edu/provost/oim/dmc/>
2. UW Privacy, Assurance and System Security (PASS) Council web site <http://passcouncil.washington.edu/psg/>
3. UW Information Systems Security Policy <http://www.washington.edu/admin/rules/APS/02.01.5.html>
4. UW Office of Sponsored Programs web site <http://www.washington.edu/research/osp/policy.html>
5. UW Records Management web site <http://www.washington.edu/admin/recmgt/index.php>
6. UW Office of External Affairs web site <http://depts.washington.edu/pubrec/index.shtml>
7. UW Guidelines for Electronic Discovery and Disclosure web site <http://www.washington.edu/admin/ago/ediscovery.html>

Paul Jenny  
Vice Provost, Planning & Budgeting

Signature: 

Date: 14-JAN-10

Lizabeth (Betsy) Wilson  
Dean of University Libraries  
Chair of the Data Management Committee

Signature: 

Date: Jun 14, 2011

Todd Mildon  
Assistant Vice Provost for Institutional Research and Data Management  
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Sara Gomez  
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Date: 1/14/2011