



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

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1. This Transmits: HUD Handbook 3260.1, Enterprise Data Management (EDM) Policy.
2. Summary:

This policy institutes an Enterprise Data Management (EDM) practice for the United States Department of Housing and Urban Development (HUD). HUD's EDM practice seeks to align data management priorities with HUD's mission and program office objectives and to streamline data management functions across the enterprise. The EDM practice defines an organizational structure and a framework for governance to support the management of the Department's data resources as a strategic enterprise asset. HUD's EDM practice defines and establishes principles, standards and guidelines for data content and for all elements of the data management lifecycle.

3. Filing Instructions:

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Enterprise Data Management (EDM) Policy

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1-1 Purpose

This policy institutes an Enterprise Data Management (EDM) practice for the United States Department of Housing and Urban Development (HUD). Facilitated by the Office of the Chief Information Officer (OCIO), HUD's EDM practice seeks to align data management priorities with HUD's mission and program office objectives and to streamline data management functions across the enterprise.

The EDM practice defines an organizational structure and a framework for governance to support the management of the Department's data resources as a strategic enterprise asset. HUD's EDM practice defines and establishes principles, standards and guidelines for data content and for all elements of the data management lifecycle.

This policy does not alter or replace any existing Departmental policies or delegations of authority. It serves as a supplement to existing HUD data management-related policies, providing an enterprise data management organizational structure and governance framework that ensures coordinated action within the Department on enterprise data management issues.

2-1 Background

Acting under the authority of the Clinger-Cohen Act of 1996, the Office of the Chief Information Officer, with the assistance of the Office of the Chief Financial Officer (OCFO), initiated a HUD-wide Data Quality Improvement Program for the purpose of assessing and improving the quality of data within HUD's mission critical systems. This program has been conducted under the guidance of a Department-wide Data Control Board (DCB).

Following on from this initial effort, HUD now intends to establish an Enterprise Data Management (EDM) practice. Over and above data quality improvements, HUD's EDM practice will reduce duplicate and redundant data management functions, establish standards-based data management processes, improve levels of staff training and contractor support, and promote data sharing across the Department.

Under the guidance of a re-chartered Data Control Board, HUD's EDM practice will create and implement an organizational framework to enforce data management policy, promote data sharing, and reduce data redundancy across the Department.

3-1 EDM Practice

HUD's EDM practice reflects a set of principles for policy and governance. Standards and guidelines established by the EDM practice are implemented through the prioritization, selection and execution of IT projects through HUD's IT Capital Planning Process. To support this process and to ensure close collaboration with other enterprise-wide IT initiatives, the EDM practice is developed in close collaboration with HUD's Enterprise Architecture (EA).

A. EDM Policy Principles

HUD's EDM practice is based on the following principles:

1. HUD's data resources will be managed as an enterprise-wide asset.
2. The EDM practice will be developed through a cooperative effort facilitated by the OCIO, with the participation of Program Office representatives and technical experts from relevant subject matter domains.

3. All HUD organizations shall comply with the principles, standards and guidelines defined by the EDM practice.
4. The EDM practice will institute industry best practices for data management across the Department.
5. The EDM practice will assess the knowledge and skills required for HUD's workforce to support all phases of the data management lifecycle.
6. The EDM practice will be closely integrated with HUD's EA and the IT Capital Planning Process. The EDM practice will contribute to the IT Capital Planning Process by ensuring that Departmental investments comply with Federal and Departmental standard data architectures and data management best practices.

B. EDM Governance Principles

HUD's EA governance is based upon the following principles:

1. HUD has a single, unified EDM practice established in concert with HUD's EA practice.
2. The Data Control Board (DCB) oversees HUD's EDM practice. The DCB submits proposed data standards and guidelines to the Technology Investment Board Executive Committee (TIBEC) for review and approval in conjunction with EA standards and guidelines.
3. EDM practice compliance is mandatory for all HUD organizations, including contractors, that direct, develop, maintain or operate IT systems in support of the Department.

4-1 EDM Organizational Structure

A. Overview

HUD's Enterprise Data Management (EDM) practice provides an organizational structure to establish, monitor and enforce principles, guidelines, standards and procedures for enterprise data management.

The following sections describe the roles and responsibilities for organizational entities in support of HUD's enterprise data management practice and other data management initiatives. *HUD's Enterprise Architecture Policy (Draft)* describes the relationship between the EA practice and the IT Capital Planning process, including the role and responsibilities of HUD's Technology Investment Board Executive Committee (TIBEC).

B. Data Control Board

1. Role

The Data Control Board (DCB) oversees HUD's enterprise data management (EDM) practice. The principal role of the DCB is to review and recommend policies, standards, and procedures in support of the EDM practice, and to submit draft materials to the Technology Investment Board Executive Committee (TIBEC) for review and approval. In addition, the DCB oversees HUD's Data Quality Improvement Program as a component of the EDM practice.

The DCB also reviews IT project proposals that are of significant data management interest. In this role, the DCB prioritizes data management requirements and recommends projects to the Technology Investment Board Executive Committee (TIBEC) that will contribute to the goals of HUD's EDM practice.

Chaired by a representative of the Office of the Chief Information Officer, the DCB is comprised of representatives from all major program and support offices plus ad hoc members as appropriate.

2. Responsibilities

- Establish an enterprise data management practice and promote the management of HUD's data as a strategic enterprise asset.
- Review and recommend EDM policies, standards and procedures for submission to the TIBEC and through existing Departmental clearance processes, as appropriate.
- Promote data accuracy, completeness, consistency, validity and timeliness across HUD's IT systems.
- Review and approve data quality plans and monitor certification for all HUD mission-critical data systems.
- Prioritize data management requirements and recommend related IT projects for submission to the TIBEC.

C. Enterprise Data Management Group

1. Role

The Enterprise Data Management Group (EDMG) within the Office of the Chief Information Officer serves to establish HUD's enterprise data management practice. The principal role of the EDMG is to define and execute an enterprise data management plan to establish HUD's enterprise data management practice. The EDM plan is developed through close coordination with the development of HUD's enterprise architecture.

Members of the EDMG serve as a resource to data stewards and project teams to support adherence to the principles and guidelines established by HUD's EDM practice and to provide technical assistance and quality assurance in all areas of the data management lifecycle, including database design, development, deployment, administration, quality assurance, and maintenance.

2. Responsibilities

- Develop and execute an enterprise data management plan.
- Provide an enterprise view of database management activities at HUD.
- Coordinate the implementation of EDM principles and guidelines on a project-by-project basis.
- Serve as a resource to data stewards and project teams engaged in database management activities.
- Perform quality assurance oversight on critical IT projects.
- Reduce data redundancy by promoting data sharing across the enterprise.

D. Data Stewards

1. Role

Data stewards are responsible for the content and quality of a data set that is created and maintained by a program office. The principal role of a data steward is to manage an individual data set to promote data accessibility and reusability across the Department, and to

meet the data content and data quality requirements of all users. Individual data stewards are appointed by a program office, and are the designated Department expert for a specific data set. Data stewards serve as a consultant to other program offices on the content, quality, and applicability of their data.

2. Responsibilities

- Collaborate with the EDM Group and the DCB to manage data in conformance with the principles and guidelines established by HUD's enterprise data management practice and to meet the requirements expressed by end-user organizations.
- Participate on working groups and communities of practice to define data management standards.
- Implement data management standards to promote data access and reuse across the Department.
- Serve as the principal consultant to end users on the content, quality and appropriate use of data sets.

E. IT Project Teams

1. Role

IT project teams that work on initiatives with significant data management components are responsible for conforming to the principles, guidelines and standards established by HUD's data management practice. To ensure conformance with HUD's enterprise data management practice, IT project team members should include representatives from EDM organizational entities, including the Enterprise Data Management Group and data stewards.

2. Responsibilities

- Execute data management components of the defined scope of work in conformance with principles and guidelines established by HUD's enterprise data management practice.
- Create work products and artifacts in conformance with standards and guidelines established by the EDM practice.
- Execute projects in accordance with project management guidelines including technical review and approval.
- Coordinate prescribed project tasks with HUD's Enterprise Data Management Group.

F. Communities of Practice

1. Role

A community of practice is a group of individuals who communicate because they share work practices, interests or aims. Communities of practice exchange information and knowledge on a shared topic of interest.

Communication within the community of practice is facilitated through regular systems of interchange such as e-mail, meetings, and working sessions. This process of collaboration raises the level of knowledge within the community of practice and raises the level of related resources and services across the enterprise. A principal role of communities of practice is to contribute to the definition of standards for data content, data quality or data management.

2. Responsibilities

- Apply knowledge and experience to contribute to a component of HUD's enterprise data management practice.
- Provide input to other organizational entities during the definition of HUD's enterprise data management practice.
- Research and review industry best practices related to the shared topic of interest.
- Review components of HUD's enterprise data management practice.
- Create and maintain enterprise data management practice artifacts in conformance with standards and guidelines established by the EDM repository.
- Establish regular systems of interchange to facilitate knowledge exchange and retention, i.e. e-mail list, group meetings, and working sessions.

G. EDM Repository

1. Role

In the simplest terms, the EDM repository performs a library function. The repository collects, organizes, and disseminates work products (knowledge) created by the development and implementation of HUD's enterprise data management practice. The principal role of the EDM repository is to support a culture and environment for knowledge exchange, and to define and implement a knowledge management framework for In the simplest terms, the EDM repository performs a library function. The repository collects, organizes, HUD's enterprise data management practice.

The EDM repository is a function of the Enterprise Data Management Group. The repository serves as a knowledge broker between individuals and groups who create enterprise data management work products, and individuals and groups who seek knowledge and guidance related to enterprise data management. Work products are collected and cataloged under the guiding principle that all enterprise data management work products are to be submitted to the repository. Relevant work products are disseminated in response to requests for information, and in response to established procedures for the publication of components of HUD's enterprise data management practice.

Enterprise data management work products include (but are not limited to) the following:

- Enterprise data management plan
- EDM principles
- EDM guidelines
- Organization chart, roles and responsibilities
- Governance framework
- DCB minutes
- "Communities of practice" artifacts
- EDM project artifacts
- EDM standards
- Metadata repository

2. Responsibilities

- Define and implement standards for the creation of enterprise data management work products (including artifacts and repositories) in accessible formats.
- Define project management guidelines for the creation and maintenance of EDM work products, and submission of EDM work products to the repository.
- Conduct quality assurance checks on work products to ensure compliance with approved standards and guidelines.
- Create and maintain a multi-faceted taxonomy of enterprise data management (EDM) concepts to be used to classify work products.
- Manage all enterprise data management work products to support end-user access and retrieval.
- Respond to customer requests for work products.
- Create and maintain entry-points for access to the EDM repository including internet and intranet portals.

5-1 Glossary for HUD's EA Policy and EDM Policy

Term	Definition
Annual Select	The decision-making process within which all new, ongoing, and operational IT projects are considered for inclusion in the HUD IT investment portfolio. The select process combines rigorous technical reviews of project proposals and performance with the application of uniform portfolio selection criteria.
Community of Practice	A group of individuals who communicate because they share work practices, interests or aims. Communication within the community of practice is facilitated through regular systems of interchange such as e-mail, meetings, and working sessions. This process of collaboration raises the level of knowledge within the community of practice, and raises the level of related resources and services across the enterprise.
Current Architecture	A dynamically updated representation of the "as-is" business, data and IT environment. The current architecture is one of three maintained states of HUD's enterprise architecture.
Domain Team	Applies the collective knowledge and experience of its individual members, industry best practice, and other knowledge sources to define and document a specific component of HUD's enterprise architecture.
EA Core Team	The technical component of the EAPMO. Develops formal standards and manages architectural processes. The EA Core Team includes technical architects, architecture consultants and technical writers.
EA Practice	A framework of policy and process to define, implement and leverage the enterprise architecture for IT planning and investment. Established by the OCIO, HUD's EA practice facilitates the definition and approval of the enterprise architecture, and the execution and monitoring and control of the principles, guidelines and standards defined by the EA.
EAMS (Enterprise Architecture Management System)	A web-based repository used to store and access architectural information and the relationships between architectural elements.

Term	Definition
EAMS Baseline	An official, static version of the current architecture that is established each year prior to the annual select.
EAMS Target	An official, static version of the target architecture that is established each year prior to the annual select.
Enterprise Architecture (EA)	A strategic asset base that defines the business, the information necessary to operate the business, the technologies necessary to support business operations, and the transitional processes necessary for implementing new technologies in response to the changing business needs.
Enterprise Architecture Program Management Office (EAPMO)	A dedicated team within the Office of the Chief Information Officer (OCIO) with the principal responsibility for establishing HUD's EA practice and defining the Department's enterprise architecture. The EAPMO is led by the Chief Architect.
Enterprise Data Management	A principle of HUD's Enterprise Architecture. This principle expresses that HUD's data resources should be managed as a valuable enterprise-wide asset.
Enterprise Data Management Plan	A stepwise process to implement, monitor, and review a Department-wide data management practice. Each step in the plan represents a specific task or milestone. Major milestones include the definition of an organizational structure, framework for governance, and principles, guidelines, standards and procedures for enterprise data management.
Enterprise Data Management Practice	An organizational framework to establish, monitor and enforce principles, guidelines, standards and procedures for enterprise data management.
Gap Analysis	A structured process to define the differences between the current architecture and target architecture. The results of a gap analysis provide valuable input to the prioritization of IT projects and the definition of the interim target architecture.
ITIPS (Information Technology Investment Planning System)	HUD's web-based IT Investment Management System.

Term	Definition
Information Technology (IT)	Hardware and software operated by an organization that processes information to accomplish a business function, regardless of the technology involved, whether computers, telecommunications, or others.
IT Project	The defined set of activities and resources surrounding or supporting the use of information technology to address HUD's strategic and programmatic objectives, and to support managerial and administrative functions. An IT project should be described in a project plan, with articulated goals and performance objectives; cost, schedule, and technical baselines; and a clear discussion of project risks, likely impacts, and risk management and mitigation measures.
Interim Target Architecture	A representation of one instance of progression towards the "to be" (target) business, data and IT environment. Official interim targets are established annually subsequent to the annual select and are updated following quarterly control review actions. The interim target architecture is one of three maintained states of HUD's enterprise architecture.
Quarterly Control	The management of IT projects that are not yet operational, including the on-going monitoring of project performance against cost, schedule and technical baselines, and the continuous identification, management and mitigation of project risk. Lessons learned from the control phase are fed back into the selection phase to further refine and improve the formulation and maintenance of the HUD IT Investment Portfolio.
Target Architecture	A dynamically updated representation of the "to-be" business, data, and IT environment achieved at a future time. The target architecture is one of the three maintained states of HUD's enterprise architecture.
Technology Investment Board Executive Committee (TIBEC)	Chaired by the Secretary, co-chaired by the Deputy Secretary, and comprised of HUD Assistant Secretaries and Principals. The TIB makes management decisions regarding the effective use of HUD IT investments and resources, including systems development, infrastructure, maintenance and IT consulting.

6-1 References

Clinger-Cohen Act of 1996 (formerly Information Technology Management Reform Act (ITMRA)), Public Law 104-106. February 10, 1996.