



ORDER 200.2

Title:	ENTERPRISE ARCHITECTURE
Owner:	Mark Estel, Information Architect, Information Technology Division, Office of Institutional and Business Operations
Approving Official:	Thomas M. Torkos, Chief Operating Officer, Office of the Director {signature} <u>/s/ Thomas M. Torkos</u>
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Order 200.2, Enterprise Architecture

1. **PURPOSE**

- a. To establish the policy and implementation requirements for NETL's enterprise architecture (EA).

2. **APPLICABILITY**

- a. This order applies to all NETL employees and sites and the information produced by NETL.

3. **POLICY**

- a. As part of the Department of Energy's federated EA, NETL aligns its architecture with the departmental architectural objectives and direction. The DOE EA complies and is consistent with the Clinger-Cohen Act of 1996, OMB Circular A-130, and the Federal Enterprise Architecture (FEA). As a component of the Department's architecture, NETL actively participates as a member of the Department's Enterprise Architecture Working Group (EAWG). The EAWG focuses its effort on coordinating the Department's federated architecture and supports DOE's work to comply with OMB EA directives. In return for this outlay of resources, NETL gains knowledge about the federal EA direction, allowing NETL to more proactively support the overarching federal and departmental EA directives.

4. **IMPLEMENTATION**

a. Purpose of EA

- (1) EA shall meet stakeholder needs through improved organizational performance. EA improves performance through:
 - (a) Aligning NETL's information, applications, data and technology with its mission and goals.
 - (b) Providing timely and accurate information, which can lead to improved decision making.
 - (c) Performing process improvement within the context of NETL's ten information hubs (reference EA Strategic Structural Model).

b. Vision of EA

- (1) The vision of EA is that NETL is a respected and well-supported national laboratory whose success is based upon the generation, sharing, and management of information. Accurate and timely information supports effective technology development and decision making at all levels of the organization. Information is recognized as the primary product of the work performed and a laboratory-wide

asset. As a result, external stakeholders find value in the information products developed by the laboratory.

c. Benefits of EA

- (1) Many benefits result from the adoption and implementation of EA. Some important benefits are:
 - (a) Compliance with departmental and federal directives. Active participation in DOE EA activities and DOE/federal business solutions give NETL insight into planned DOE/federal solutions and in some instances provides NETL with a voice to influence final department/federal EA products.
 - (b) EA recognizes and leverages the IT solution/business process linkage. In many instances, when resources are applied to solving information needs, business processes are understood, improved, and then automated. In other instances, best-in-class solutions are deployed, which in turn drive the business process. This normally occurs in areas where no competitive or strategic advantage is realized by utilizing a solution unique to NETL.
 - (c) EA solutions focus on NETL enterprise-wide data management, endeavoring to provide data in a useful format when and where it is needed.
 - (d) EA-based solutions drive improvements in the underpinning technology that provides the services:
 - EA-driven solutions strive to be agile and flexible in order to adapt to changing business needs.
 - Agility requires loosely coupled modular software components that are flexible and adaptable.
 - It is desirable to build and integrate reusable components.

d. EA Team

- (1) An EA team will be created to oversee EA and will be sponsored by the chief operating officer and led by the director of the Office of Institutional and Business Operations.
- (2) The purpose of the enterprise architecture (EA) team is to be stewards of NETL's enterprise architecture, which is the practice of applying methods for describing a current or future structure for an organization's business functions, processes, information, resources, systems, and infrastructure so that they align with the organization's goals and strategic direction.

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- (3) The approach of the EA team will be to assist NETL in managing its corporate information resources. To do this, the EA team will:
 - (a) Establish the vision and principles for organizational information use and lead NETL in the development of a consistent, integrated enterprise architecture.
 - (b) Foster development of the necessary organizational attitudes and attributes that encourage all NETL employees to treat information as a corporate resource.
 - (c) Carry out the EA investment management process, considering costs, benefits, and risk to determine which EA projects should be pursued and with what priority.
 - (d) Serve as an intersection between the Information Technology Division and NETL business functions and representatives.
 - (e) Elevate to the appropriate level of NETL management those instances where cooperation between information management and business operations is necessary to support NETL business goals.
 - (f) Develop, update, and share common EA tools, processes, and vocabulary across the organization.
 - (g) Develop internal procedures, process agreements, and schedules to implement the requirements of this charter.
- (4) The EA team will:
 - (a) Develop EA team roles and responsibilities for implementing the EA vision and principles.
 - (b) Maintain and improve the current process for collecting and evaluating EA needs via the EA investment management process.
 - (c) Identify a high-level view of NETL's information flow.
 - (d) Maintain and publish a status list of active EA projects.
 - (e) Provide EA investment management process output for inclusion in the development of the NETL ITD 3-year plan.

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5. **RESPONSIBILITIES**

a. **Chief Operating Officer (COO)**

- (1) Is the sponsor of the EA team and acts at the liaison between the team and NETL senior management.

b. **Director, Office of Institutional and Business Operations**

- (1) Is the EA team leader and ensures that the EA team is functioning.
- (2) Ensure that the EA team is staffed with the appropriate team members.
- (3) Reports to the COO on any EA issues that need senior management attention.

c. **EA Team**

- (1) See responsibilities listed in section 4.d of this order.

d. **Director, Information Technology Division**

- (1) Serves as a member of the EA team.
- (2) Provides knowledgeable EA team support personnel.
- (3) Manages NETL's information technology resources.

6. **REQUIREMENTS**

- a. [Clinger-Cohen Act \(Information Technology Management Reform Act\) 1996.](#)
- b. OMB Circular A-130, [Management of Federal Information Resources.](#)
- c. [Federal Enterprise Architecture \(FEA\).](#)

7. **REFERENCES**

- a. Links to additional valuable information on the topic of federal enterprise architecture are provided below:
 - (1) OMB's E-Gov Website: [http://www.whitehouse.gov/omb/egov/a-1-fea.html.](http://www.whitehouse.gov/omb/egov/a-1-fea.html)
 - (2) DOE's CIO Website: [http://cio.energy.gov/enterprise-architecture.htm.](http://cio.energy.gov/enterprise-architecture.htm)
 - (3) Chief Information Officers Council Website: [http://www.cio.gov/.](http://www.cio.gov/)

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- (4) Chief Architects Forum: <http://colab.cim3.net/cgi-bin/wiki.pl?ChiefArchitectsForum%20>.
- (5) Wikipedia Encyclopedia: http://en.wikipedia.org/wiki/Enterprise_architecture.

8. **DEFINITIONS**

- a. **Business Function** — A group of related business processes contributing to a larger purpose. NETL’s strategic structural model defines the 13 functions performed by the organization.
- b. **Business Process** — A collection of actions, tasks, or operations resulting in a product or service.
- c. **Enterprise Architecture** — The practice of applying methods for describing a current or future structure for an organization’s business functions, processes, information, resources, systems, and infrastructure so that they align with the organization’s goals and strategic direction.
- d. **Federated Enterprise Architecture** — A collective set of architectures, operating collaboratively within the concept of federalism, in which governance is divided between a central authority and constituent units balancing organizational autonomy with enterprise needs. The Department of Energy is following a federated approach to EA.

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9. **REVISION HISTORY**

VERSION	DATE	SUMMARY OF CHANGES
Original	11/2/07	To establish the policy and implementation requirements for NETL's enterprise architecture (EA).

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