Federal Agency Strategies for Enterprise Architecture Management

**Ground Systems**

**Architecture Workshop 2004**

Scott A. Bernard, Ph.D.
Syracuse University
School of Information Studies
sabernar@syr.edu
Overview

• Purpose of Enterprise Architecture (EA)
• Federal Agency Considerations
• EA Guidance – Pre 2002
• EA Guidance – Post 2002
• Strategies for Moving to the FEA
• Applying the FEA Reference Models
• Integrating EA into Governance
Purpose of Enterprise Architecture

I. Improved Governance
   • Support the President’s Management Agenda (PMA)
   • Provide a citizen-centric focus
   • Address the increasing reliance on information technology (IT)

II. Improved Management
   • Provide an enterprise-wide, business-based view of IT resources
   • Improve planning, implementation, and management of IT resources
   • Maximize the use of limited agency resources

III. Improved Service Delivery
   • Move toward more flexible, capable IT operating environment
   • Improve IT requirements analysis capability
   • Improve security planning capability
Federal Agency Considerations

**Mission Considerations**
- Customer and stakeholder expectations are rising
- Increasing role for IT
- Limited opportunities for multi-agency collaboration

**Resource Considerations**
- Limited funding available
- Limits on trained personnel
- Pressure to outsource / joint solutions
- Continuing high Optempo

**EA Considerations**
- Completion of current EA framework (FEAF/TEAF/DODAF)
- Migration to FEA and Reference Model approach
- Integration with strategy, capital planning, project management
EA Guidance – Pre 2002

Legislative Mandate:
Clinger-Cohen Act

Guidance:
OMB A-11: Agency Budget, Strategic, and Performance Planning
OMB A-130: Agency Management of Information Technology Resources

Accepted EA Frameworks:
Federal EA Framework (FEAF)
Treasury EA Framework (TEAF)
DOD - C4ISR EA Framework

Focus:
Establish and maintain an EA program
Document “as-is” and “to-be” views, a migration plan, and standards
EA Guidance – Post 2002

Legislative Mandate:
Clinger-Cohen Act
E-Government Act

Guidance:
OMB A-11: Agency Budget, Strategic, and Performance Planning
OMB A-130: Agency Management of Information Technology Resources
Federal Enterprise Architecture Program Management Office (FEAPMO)

Accepted EA Frameworks: Federal Enterprise Architecture (FEA)

Focus:
Maintain existing EA approach for intra-agency IT resource planning
Implement the FEA and move toward multi-agency planning & e-Gov initiatives
Reflect mostly FEA in Exhibit 300 submissions for FY 2006
Strategies for Moving to the FEA

- Promote IT alignment with agency strategic direction
- Enable performance improvement
- Support business transformation
- Facilitate business case development
- Enable results-oriented initiatives
Strategies for Moving to the FEA

Specific mapping from the FEA/DODAF to the FEA is to be determined

- **Lines of Business**
- **Agencies, Customers, Partners**

- **Performance Reference Model (PRM)**
  - Inputs, Outputs, and Outcomes
  - Uniquely Tailored Performance Indicators

- **Business Reference Model (BRM)**
  - Lines of Business
  - Agencies, Customers, Partners

- **Service Component Reference Model (SRM)**
  - Service Domains, Service Types
  - Business and Service Components

- **Data and Information Reference Model (DRM)**
  - Subject Areas, Classifications, Data Elements
  - Data Properties, Data Representations

- **Technical Reference Model (TRM)**
  - Service Component Interfaces, Interoperability
  - Technologies, Recommendations
Applying the FEA Reference Models

Business Reference Model

The Business Reference Model is a function-driven framework for describing the business operations of the Federal Government independent of the agencies that perform them.

The Business Reference Model Version 2.0 provides an organized, hierarchical construct for describing the day-to-day business operations of the Federal government. While many models exist for describing organizations - org charts, location maps, etc. – this model presents the business using a functionally driven approach. The Lines of Business and Sub-functions that comprise the BRM represent a departure from previous models of the Federal government that use antiquated, stovepiped, agency-oriented frameworks. The BRM is the first layer of the Federal Enterprise Architecture and it is the main viewpoint for the analysis of data, service components and technology.
Applying the FEA Reference Models

Performance Reference Model

The Performance Reference Model (PRM) is a framework for performance measurement that provides common application measures throughout the federal government.

It allows agencies to better manage the business of Government at a federal strategic level while providing a means for gauging progress towards the target FEA.
Applying the FEA Reference Models

Service Component Reference Model

The Service Component Reference Model (SRM) is a business and performance-driven, functional framework that classifies Service Components with respect to how they support business and/or performance objectives.

The SRM is intended for use to support the discovery of government-wide business and application Service Components in IT investments and assets. The SRM is structured across horizontal and vertical service domains that, independent of the business functions, can provide a leverage-able foundation to support the reuse of applications, application capabilities, components, and business services.
Applying the FEA Reference Models

Data Reference Model

The Data and Information Reference Model (DRM) will describe, at an aggregate level, the data and information that support program and business line operations. The model will aid in describing the types of interaction and exchanges that occur between the Federal Government and its various customers, constituencies, and business partners.
Applying the FEA Reference Models

Technical Reference Model

The TRM is a component-driven, technical framework used to identify the standards, specifications, and technologies that support and enable the delivery of service components and capabilities.

The TRM provides a foundation to describe the standards, specifications, and technologies to support the construction, delivery, and exchange of business and application components (Service Components) that may be used and leveraged in a Component-Based or Service-Orientated Architecture. The TRM unifies existing Agency TRMs and electronic Government (e-Gov) guidance by providing a foundation to advance the re-use of technology and component services from a Government-wide perspective.
Integrating EA Into Governance (FEAF)

The underlying implementation framework is Zachman/Spewak

Current Architecture + Capital Planning Process → Future Architecture

Current EA:
What we have now

IT projects need a valid business case and architectural alignment to be selected for investment

Target EA:
What we want to have

The target Enterprise Architecture documents the future IT/Business architecture in terms of where the agency wants to be in 2-3 years.

The underlying implementation framework is Zachman/Spewak
Integrating EA Into Governance (FEA)

The underlying implementation framework may need to change (i.e., EA³ Cube™)
Summary

• Government transformation is occurring – PMA is guidance
• Focus is on Executive Branch wide e-Gov initiatives that include DoD
• The role of IT is increasing in delivering public services
• EA approaches are changing – the FEA is emerging

• Some agencies have narrower mission areas / others are expanding
• Growing number of multi-agency initiatives
• Limited resources, due to budget cuts and current ops

• Seek out Joint and E-Gov opportunities – consolidation is coming
• Make EA central to agency e-Gov strategies
• Finish the FEAF/TEAF/DODAF and concurrently incorporate the FEA
• Reflect EA in Exhibit 300s and Project Management Plans
• Integrate EA into e-Governance