Methods for Building Enterprise Architecture

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5.1 Evolution of Systems Development Methodologies

- Software Engineering
- Information Engineering
- Evolution of Object-Oriented Methods

5.2 Review of Enterprise Architecture

- Business Knowledge Is Needed for Enterprise Architecture.
- Technology Decisions Using Enterprise Architecture.
- 5.2.1 Business Knowledge Is Needed for Enterprise Architecture

5.2.2 Technology Decisions Using Enterprise Architecture

- ✓ What costs are involved in building the particular plant/system?

- ✓ What benefits will be delivered by the completed plant/system? How long will it take for the completed plant/system to realize the benefits?

- ✓ What is the expected ROI that will be delivered by the completed plant/ system?

- ✓ Will the completed plant/system enhance (or inhibit) future business flexibility?

5.2.3 Enterprise Architecture and the Pace of Change

- Accounting
- Banking
- Building
- Building processes

5.3 Government Methods for Building Enterprise Architecture

- 5.3.1 Federal Enterprise Architecture Framework
- ✓ Level1
- ✓ Level2
- ✓ Level3
- ✓ Level4
- ✓ Layer 1
- ✓ Layer 2
- ✓ Layer 3
- ✓ Layer 4

The Technical Reference Model (TRM),for which Version1.0 is now available, was created to:

► Provide a government-wide reference model that unifies agency TRMs and existing e-government guidance.

► Focus technology standards, specifications, and recommendations on those that embrace the Internet and related approaches.

► Create a foundation that focuses heavily on the secure delivery and construction of service components and their interfaces.

► Identify layers of a component-based architecture, the supporting technologies, and recommendations for each.
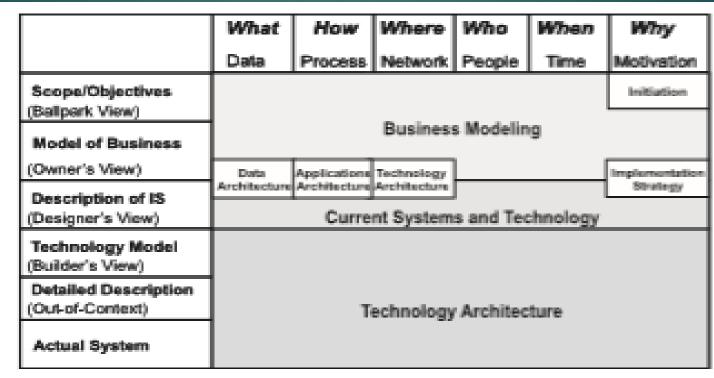
5.3.2 Relating the FEAF to the Zachman Framework

	What Data	**How** Process	**Where** Network	**Who** People	**When** Time	**Why** Motivation
Scope/Objectives (Ballpark View)			Business Modeling			Initiation
Model of Business (Owner's View)						Implementation Strategy
Description of IS (Designer's View)	Data Architecture	Applications Architecture	Technology Architecture			
		Current Systems and Technology				
Technology Model (Builder's View)			Technology Architecture			
Detailed Description (Out-of-Context)						
Actual System						

Figure 5.4 Broad mapping of Spewak EAP and FEAF to the Zachman framework. (From: [24]. © 2005 Robert Weisman, CGI. Reprinted with permission.)

5.4 Department of Defense Architecture Frameworks

► 5.4.1 Defence Planning Terminology

► 5.4.2 The Need for Defence Interoperability

✓ Approach 1: common integrated technology environments;

✓ Approach 2: integrated technology and information environments;

✓ Approach 3: partially integrated technology and information;

✓ Approach 4: federated information and technology environment