Enterprise Architecture (EA) Practitioners Guide

Course Number: WA2323

Duration: 2 days

Course Description

This course is a subset of WA2322 targeted for EA stakeholders involved with enterprise architecture, yet not responsible for producing architecture artifacts. The course will cover the same concepts. It will focus on understanding architecture activities and artifacts, instead of developing architecture artifacts.

Who Can Benefit

- Managers and stakeholders involved with EA activities.

Course Details

Outline

Chapter 1 - Introduction

- Introductions
- Course Outline
- Handouts & Appendices
- Practical Application: Building Skills
- Practical Application: Filling Your Toolbox
- Course Evaluation & Questions
- Course Delivery Overview

Chapter 2 - Enterprise Architecture (EA) Primer

- Architecture
- Architects
- Enterprise Architecture Definitions
- IEEE, TOGAF, & MIT Perspectives
- Group Discussion: Expectations of EA
- Enterprise Architecture Defined
- Architecture Framework: Foundation for a Common Vocabulary
- Industry EA Frameworks
- Dimensions of Architecture Scope
- Group Discussion: EA Partitioning
- Architecture Domains
- Depth: Strategic, Segment, and Capability Architectures
- Example: DOE Segment Identification
- Example: Segment Architecture
- Time: Baseline, Target, and Transition Architectures
- Various Solution Architecture Definitions
- Group Discussion: Solution Architecture
- Characteristics of a Solution Architecture
- Example Solution Architecture: SOA for Insurance
- Example Solution Architecture: Customer Contact Center
- Glossary
- Summary

Chapter 3 - EA Framework

- The Importance of a Framework for EA
- EA Framework Family Tree
- Group Discussion: Architecture Frameworks
- TOGAF
- TOGAF Components
- Architecture Development Method (ADM)
- Architecture Content Framework
- Views & Viewpoints

- TOGAF Viewpoints
- Catalogs, Matrices, Diagrams & Viewpoints
- Architecture Deliverables
- Group Discussion: Deliverables & Artifacts
- ADM Techniques
- ADM Guidelines
- Enterprise to Solution Architecture
- Example: Architecture Roadmap
- Zachman Framework
- Zachman Framework Matrix Overview
- TOGAF Artifacts Using the Zachman Framework
- Leveraging the Zachman Framework
- Federal Enterprise Architectural Framework (FEAF)
- Leveraging FEA
- Technique: Classified Technology Portfolio
- DoDAF / MODAF
- TRAK
- Leveraging DoDAF, MoDAF, & TRAK
- All Frameworks Have Strengths & Weaknesses
- Which Framework Should I Use?
- Summary

Chapter 4 - EA Value Proposition

- Without Architecture You Can't
- Factors Driving EA Adoption
- Accelerated Rate of Change
- EA Facilitates Change Across Units
- Greater Information Density
- Customers Expect Personalized Goods
- Traditional Industry Barriers are Disintegrating
- Impact of Diversification & Acquisitions
- Shared Resources Across Business Units
- Business Demand for Technology Continues to Grow
- Tight IT Budgets Will Persist

- Primary Drivers for EA Programs
- Summary of EA Benefits
- Digitized Platform: The Key to Agility
- Group Discussion: Benefits
- Value of EA Activities: Baseline Architecture
- Value of EA Activities: Target Architecture
- Value of EA Activities: Architecture Review
- Value of EA Activities: Governance
- Group Discussion: Obstacles
- Summary

Chapter 5 - Reference Architecture

- Reference Architecture
- Reference Architecture Components
- Reference Architecture Summarized
- Reference Architecture Context
- Architecture Principles
- Components of Principles
- Qualities of a Good Set of Principles
- EA Principles: Creation Process
- Templates: Principle & Principle Catalog
- Example: Architecture Principles
- Group Discussion: Principles
- Applying Architecture Principles
- Policies
- Template: Policy
- Example: Governance Policies
- Example: SOA Policy
- Example: Policies
- Reference Models
- Example: IBM Business Analytics & Optimization Reference Architecture
- Example: IBM Insurance Application Architecture
- Example: SOA Reference Architecture
- Example:Customer Experience Reference Architecture

- Business Scenarios
- Business Scenario Summary
- Business Scenario Outline
- Template & Example: Business Scenario
- Practices: Standards & Guidelines
- Example: Interoperability Standards
- Example: Insurance Reporting Reference Architecture
- Example: Electronic Product Code™ (EPC) Standards
- Example: Health Care Reference Architecture
- Resource: Financial Industry Organizations
- Resource: Health Industry Organizations
- Resource: Retail Industry Organizations
- Resource: Technical Organizations
- Industry Organizations
- Insurance Industry Standards ROI
- Requirements
- Example: Mobile Security Reference Architecture
- Example: MSRA Requirements
- Architecture Building Blocks: Reusable Requirement Sets
- Resource: NIST Security Requirements
- Example: COTS Standard Requirements Set
- Summary

Chapter 6 - Defining an Architecture Vision

- Architecture Vision
- Context Diagram
- Define The System Boundaries
- Stakeholder Matrix
- Stakeholder Map
- Example: Stakeholder Map
- Template: TOGAF Stakeholder Map Matrix
- Value Chain Diagram
- Example: Retail Vision Diagram
- Example: Customer Interaction Concept Diagram

- Example: Solution Concept Diagram
- Examples: TOGAF Vision Diagrams
- Template: Architecture Vision Deliverable
- Summary

Chapter 7 - Enterprise Architecture Baseline

- Importance of an Architecture Baseline
- Architecture Baseline Process Overview
- What are Your EA Baseline Objectives?
- Group Discussion: EA Baseline Goals & Objectives
- A Typical Place to Start
- Core Catalogs
- Core Matrices
- Templates: Baseline Collection Templates
- Creating Building Blocks from a Baseline
- What Can You Learn From Your Baseline
- Customized Taxonomy
- Baseline More Than Software
- Baseline Classified by Lifecycle
- Baseline Relationships
- Relationship Types
- Baseline Reporting
- EA Baseline Best Practices
- Summary

Chapter 8 - Architecture Requirements

- Architecture Quality Attributes
- Quality of Service Requirement Categories
- Checklist: Quality Attribute (QA) Categories
- Trade-off Analysis
- Group Discussion: Trade-offs
- Technique: Requirement Patterns
- Tool: Non-Functional Requirement Patterns
- Checklist: Requirement Statement Best Practices

- Technique: Architecture Change Cases
- Template: Elements of a Change Case
- Example: Change Case
- Eliciting Change Cases
- Group Discussion: Change Case
- Summary

Chapter 9 - Architecture Deliverables

- Documentation Best Practices
- Architecture Requirements Document
- Template: Requirements Specification
- IEEE Architectural Description Document
- Template: Architectural Description Document
- TOGAF Architecture Definition Document
- Templates: Architectural Definition Document
- Group Discussion: Architecture Definition Documents
- Interface Specifications
- Interface Specification Best Practices
- Interface Design Document
- Template: Interface Design Document
- Database Design Document
- Template: Database Design Document
- Platform Design Document
- Template: Platform Design Document
- Architecture Decision Document
- Template: Architecture Decision Document
- ATAM: Scenario-based Architecture Review
- Example: Utility Tree
- Presentation Best Practices: ICEPAC
- Verbal Supports: CREST
- Group Discussion: Presentations
- Summary

Chapter 10 - Architecture Gap Analysis, Roadmap & Migration Planning

- Putting the Pieces Together
- Gap Analysis
- Gap Analysis Matrix
- Example: DOE Gap Analysis
- Consolidated Gaps, Solutions, and Dependencies Matrix
- Architecture Roadmap Table
- Transition Architectures in Context
- Architecture Roadmap
- General Roadmap Methodology
- Defining Work Packages
- Roadmap Development Strategies
- Example: High-Level Architecture Roadmap
- Example: Pharmacy Standards Roadmap
- Example: SOA Roadmap
- Example: Business Intelligence Roadmap
- Template: Architecture Roadmap
- Migration Planning
- Business Value Assessment Technique
- Example:Transition Milestone Table
- Example: EPA Transition Plan
- Template: TOGAF Implementation & Migration Plan Template
- Process Summary
- Summary

Chapter 11 - Patterns

- What are Patterns?
- Elements of a Pattern
- Pattern Levels
- Pattern Types
- How to Start Using Patterns?
- Common Architectural Patterns
- Layers Pattern
- Example: Retail Layered Architecture
- Object-Oriented Design Patterns

- OO Design Patterns
- Structural Design Pattern: Facade Pattern Example
- Enterprise Integration Patterns
- Messaging Systems: Overview
- Example Pattern: Pipes and Filters
- Example: Monitoring Credit Bureau
- EAA Patterns
- Model-View-Controller (MVC) Pattern
- SOA Patterns
- Example: Saga Pattern
- Business Process Patterns
- Example: Synchronizing Merge Pattern
- Configuration Management Patterns
- New Patterns Continue to Emerge
- Group Discussion: Patterns
- Summary

Chapter 12 - Architecture Tactics

- Tactics
- Availability Tactics
- Modifiability Tactics
- Performance Tactics
- Security Tactics
- Testability Tactics
- Usability Tactics
- Approach for Describing Tactics
- Group Discussion: Tactics
- Pipes & Filters: Tactics
- Service-Oriented Architecture (SOA): Tactics
- Architectural Patterns and Corresponding Tactics for Modifiability
- Summary

Chapter 13 - Architecture Techniques

- Progressive Filtering

- Rubric
- Example: Service Design Rubric
- Example: Architecture Rubric
- Refactoring
- Think About the Future, But Wait to Act
- Feature Tree
- Decision Tables
- Decision Table Example
- Flowcharts
- Strength, Weakness, Opportunity, Threat (SWOT) Analysis
- Example: SWOT Layout
- SWOT Steps
- Summary

Chapter 14 - The EA Toolbox

- The Architecture Toolbox
- The EA Toolbox
- TOGAF Toolbox Items
- Supplementing TOGAF Toolbox Items
- Practitioner Toolbox Items
- Summary

Handout 1 - Sample Principles

- Business Principles
- Data Principles
- Application Principles
- Technology Principles
- Governance Principles
- SOA Governance Principles

Handout 2 - System Profile Template

Handout 3 - Subsystem Profile Template

Handout 4 - Interface Profile Template

Handout 5 - Quality Attribute (QA)/Quality of Service (QoS) Categories

- Introduction
- Quality Attributes

Handout 6 - Requirement Patterns

Handout 7 - Requirement Statement Checklist

- Introduction
- Requirement Statement Review Checklist

Handout 8 - Rubric Worksheet

Appendix A - Reference Library

- Overview
- Industry Organizations
- References & Further Reading

Appendix B - Architecture Glossary

- ABC
- DEF
- GHI
- MNO
- PQR
- STU
- VWXYZ

Appendix B - TOGAF Glossary

- ABC
- DEF
- GHI
- MNO
- PQR
- STU
- VWXYZ

Appendix C - EA Catalogs, Matrices, & Diagrams

- Catalogs

- Matrices
- Diagrams

Appendix D - Pattern List

Lab Exercises

- Lab 1. Principles
- Lab 2. Define Tactics for a Quality Attribute
- Lab 3. Architecture Techniques
- Lab 4. Extra: Identifying Tactics for a Pattern