

Zachman framework for enterprise architecture

LECTURE 13

COURSE INSTRUCTOR : MAHAM KHAN

Outline

- Zachman framework for enterprise architecture
- Primitives & Composites
- High Level View of Framework
- Identifying reusable priority areas

Zachman Framework for Enterprise Architecture

	DATA What	FUNCTION How	NETWORK Where	PEOPLE Who	TIME When	MOTIVATION Why	
<p>We Need Strategic Focus</p> <p>↑</p> <p>Using Today's Design Focus</p> <p>↑</p> <p>To Build These ...</p> <p>↑</p>	<p>OBJECTIVES/ SCOPE (CONTEXTUAL)</p> <p>Planner</p> <p>Entity = Class of Business Thing</p> <p>e.g. Semantic Model</p> <p>Ent. = Business Entity Rein. = Business Relationship</p> <p>e.g. Logical Data Model</p> <p>Ent. = Data Entity Rein. = Data Relationship</p> <p>e.g. Physical Data Model</p> <p>Ent. = Table/Segment, etc. Rein. = Key/Pointer, etc.</p> <p>e.g. Data Definition</p> <p>Ent. = Field Rein. = Address</p> <p>e.g. DATA</p>	<p>List of Processes the Business Performs</p> <p>Function = Class of Business Process</p> <p>e.g. Business Process Model</p> <p>Proc. = Business Process I/O = Business Resources</p> <p>e.g. Application Architecture</p> <p>Proc. = Application Function I/O = User Views</p> <p>e.g. System Design</p> <p>Proc. = Computer Function I/O = Data Elements/Sets</p> <p>e.g. Program</p> <p>Proc. = Language Stmt I/O = Control Block</p> <p>e.g. FUNCTION</p>	<p>List of Locations in Which the Business Operates</p> <p>Node = Major Business Location</p> <p>e.g. Logistics Network</p> <p>Node = Business Location Link = Business Linkage</p> <p>e.g. Distributed System Architecture</p> <p>Node = I/S Function (Processor, Storage, etc.) Link = Line Characteristics</p> <p>e.g. Technology Architecture</p> <p>Node = Hardware/System Software Link = Line Specifications</p> <p>e.g. Network Architecture</p> <p>Node = Addresses Link = Protocols</p> <p>e.g. NETWORK</p>	<p>List of Organizations Important to the Business</p> <p>People = Class of Agent</p> <p>e.g. Work Flow Model</p> <p>People = Organization Unit Work = Work Product</p> <p>e.g. Human Interface Architecture</p> <p>People = Role Work = Deliverable</p> <p>e.g. Presentation Architecture</p> <p>People = User Work = Screen Format</p> <p>e.g. Security Architecture</p> <p>People = Identity Work = Job</p> <p>e.g. ORGANIZATION</p>	<p>List of Events Significant to the Business</p> <p>Time = Major Business Event</p> <p>e.g. Master Schedule</p> <p>Time = Business Event Cycle = Business Cycle</p> <p>e.g. Processing Structure</p> <p>Time = System Event Cycle = Processing Cycle</p> <p>e.g. Control Structure</p> <p>Time = Execute Cycle = Component Cycle</p> <p>e.g. Timing Definition</p> <p>Time = Interrupt Cycle = Machine Cycle</p> <p>e.g. SCHEDULE</p>	<p>List of Business Goals/Strat. Critical Success Factor</p> <p>e.g. Business Plan</p> <p>End = Business Objective Means = Business Strategy</p> <p>e.g. Business Rule Model</p> <p>End = Structural Assertion Means = Action Assertion</p> <p>e.g. Rule Design</p> <p>End = Condition Means = Action</p> <p>e.g. Rule Specification</p> <p>End = Sub-condition Means = Step</p> <p>e.g. STRATEGY</p>	<p>OBJECTIVES/ SCOPE (CONTEXTUAL)</p> <p>Planner</p> <p>ENTERPRISE MODEL (CONCEPTUAL)</p> <p>Owner</p> <p>SYSTEM MODEL (LOGICAL)</p> <p>Designer</p> <p>TECHNOLOGY CONSTRAINED MODEL (PHYSICAL)</p> <p>Builder</p> <p>DETAILED REPRESENTATIONS (OUT-OF-CONTEXT)</p> <p>Sub-Contractor</p> <p>FUNCTIONING ENTERPRISE</p>

Primitives & Composites



John Zachman addressing the six primitives

- What – How - Where
- Who – When -Why

And very complex composites such as

- Buildings
- Planes
- Enterprise systems

Usability Principle

“The IT industry has tried to build reusable code or components by using object-oriented methods. But we have not been particularly successful to date. We do use O-O to build reusable components for screen design and other systems components. But we have not been very successful using O-O methods to identify many reusable activities and processes within an enterprise. Enterprise reusability is only achieved effectively by taking an enterprise-wide approach: not in detail across the enterprise, but broadly to encompass the whole enterprise.”

Horizontal Slice

	What Data	How Function	Where Location	Who People	When Time	Why Future
PLANNER Objectives/Scope	List of Things	List of Processes	List of Locations	Org Structure	List of Events	List of Goals/Obj
OWNER Conceptual	Enterprise Model	Activity Model	Business Logistics	Work Flow	Master Schedule	Business Plan
DESIGNER Logical	Logical Data Model	Process Model	Distrib. Architect.	Human Interface	Process Structure	Business Rules
BUILDER Physical	Physical Data Model	System Model	Technol. Architect.	Presn Interface	Control Structure	Rule Design
SUBCONTRACTOR Out-of-Context	Data Definition	Program	Network Architect.	Security Interface	Timing Definition	Rule Specs
FUNCTIONING ENTERPRISE	Data	Function	Network	Organization	Schedule	Strategy

Readings & References

1. Read and Prepare given Handouts
2. Chapter-1, Topic 1.2 : Enterprise Architecture for Integration: Rapid Delivery Methods and Technologies by Clive Finkelstein

Good Luck 😊