

WHERE TO FROM ZACHMAN

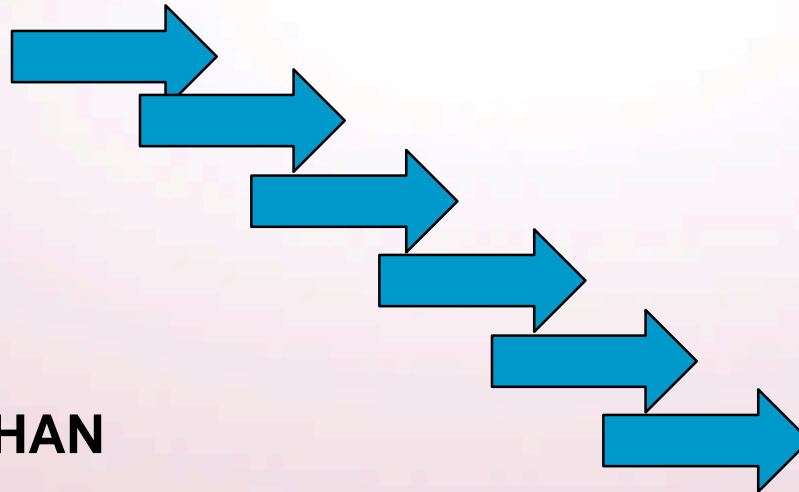
Architecture Practitioners' conference

April 2004

ENTERPRISE ARCHITECTURE FRAMEWORK

	DATA	SYSTEMS	NETWORK	SECURITY	BE	SCENARIO	TIME
DATA	DATA	DATA	DATA	DATA	DATA	DATA	DATA
SYSTEMS	SYSTEMS	SYSTEMS	SYSTEMS	SYSTEMS	SYSTEMS	SYSTEMS	SYSTEMS
NETWORK	NETWORK	NETWORK	NETWORK	NETWORK	NETWORK	NETWORK	NETWORK
SECURITY	SECURITY	SECURITY	SECURITY	SECURITY	SECURITY	SECURITY	SECURITY
BE	BE	BE	BE	BE	BE	BE	BE
SCENARIO	SCENARIO	SCENARIO	SCENARIO	SCENARIO	SCENARIO	SCENARIO	SCENARIO
TIME	TIME	TIME	TIME	TIME	TIME	TIME	TIME

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VISH VISWANATHAN

Managing Consultant- CCANDC Solutions

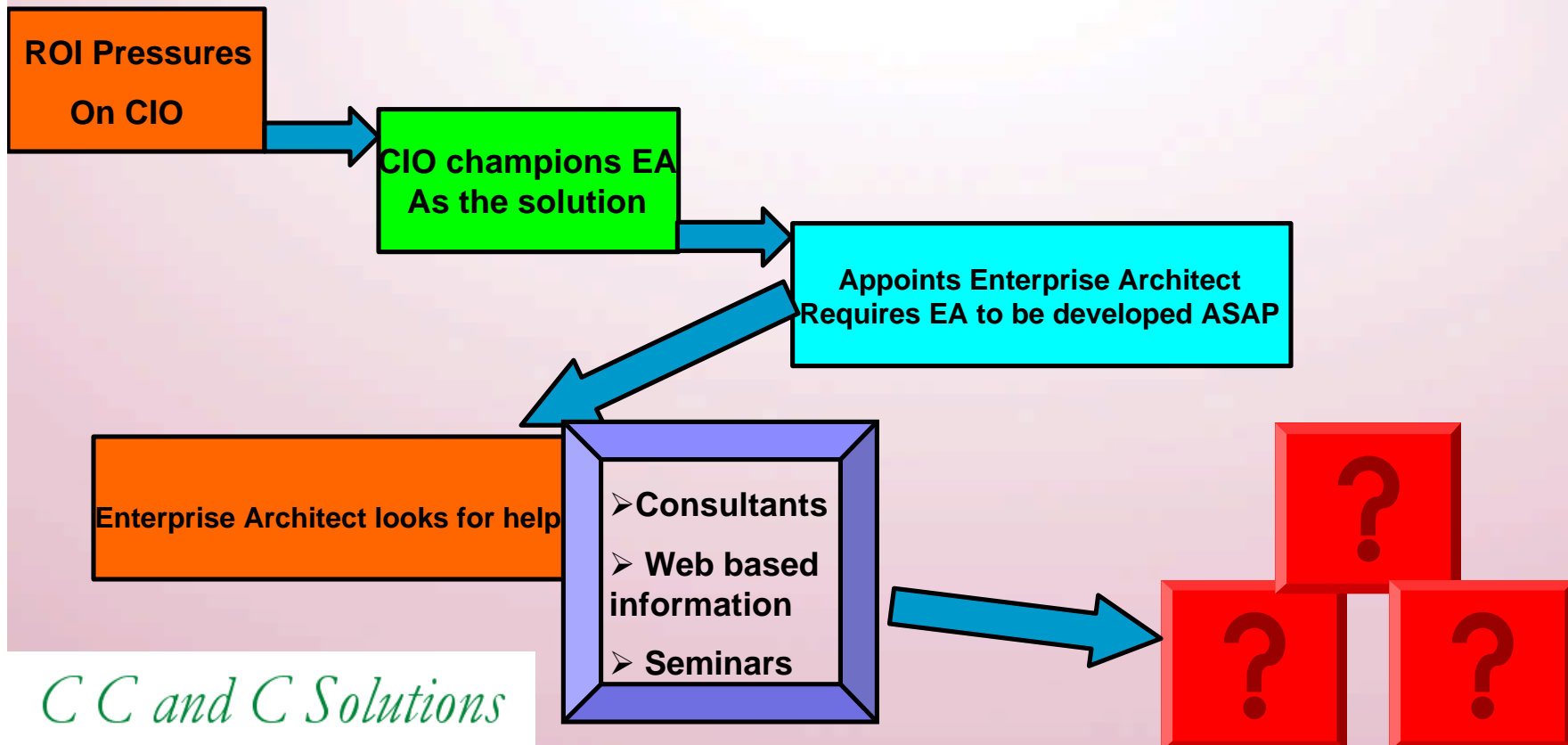
Regional Partner- The Open Group (Australia/ New Zealand /ASEAN)

Vice Chair-Asia/Pacific, Architecture Forum

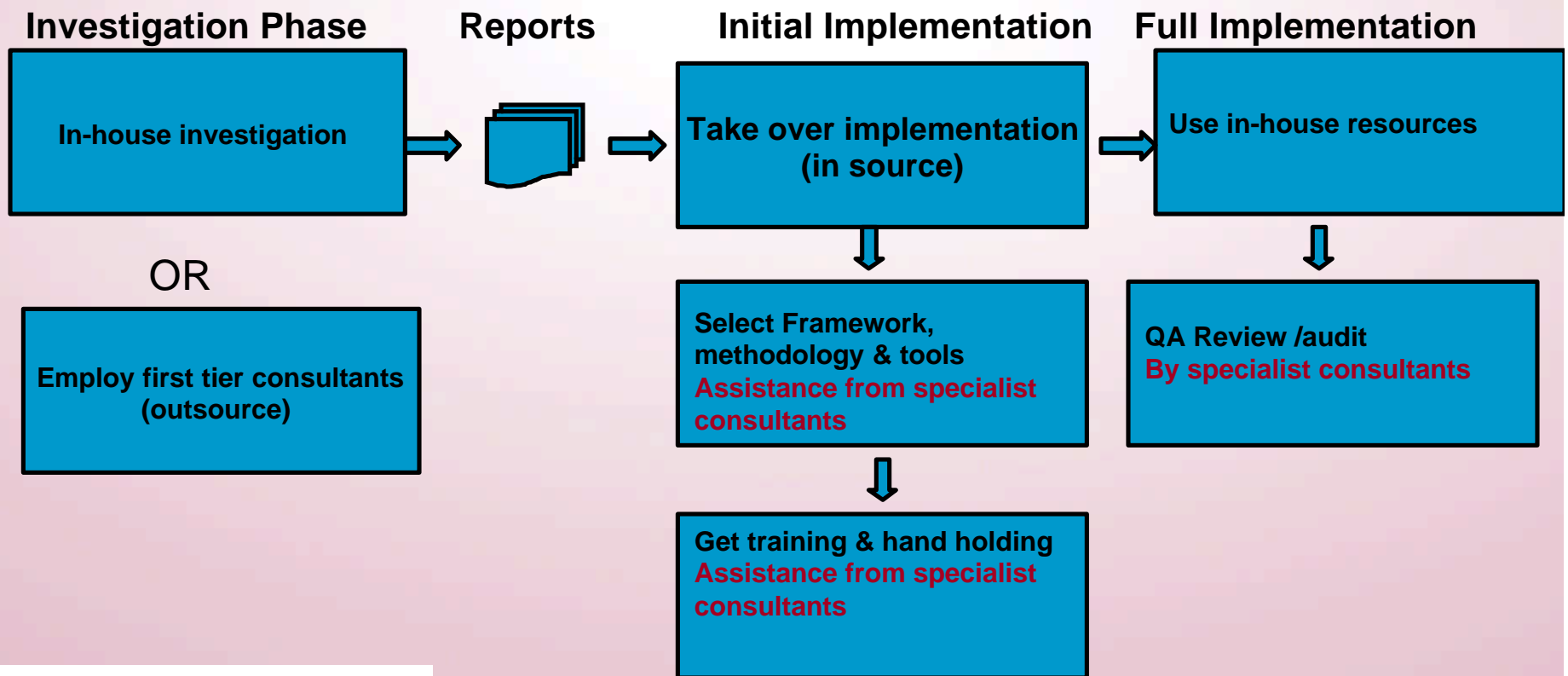
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CURRENT STATE OF PLAY OF EA IN AUSTRALASIA



TYPICAL EA PROJECT START UP PROCESS



A WELL KNOWN HIGH LEVEL FRAMEWORK.....

➤ ZACHMAN FRAMEWORK

- De-facto standard for classifying the Enterprise architectural artifacts
- Logical structure for analysing and presenting artifacts from a management perspective
- Draws parallels from the well understood Engineering or Construction paradigm
- Widely recognised as a management tool for checking architectural completeness and maturity
- **No processes for implementation**
- **Difficult to implement in total**
- **No ready examples or checklists**
- **Extent of coverage of the cells unclear**

A DISCIPLINED PROCESS.....

➤ TOGAF

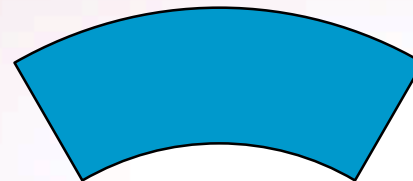
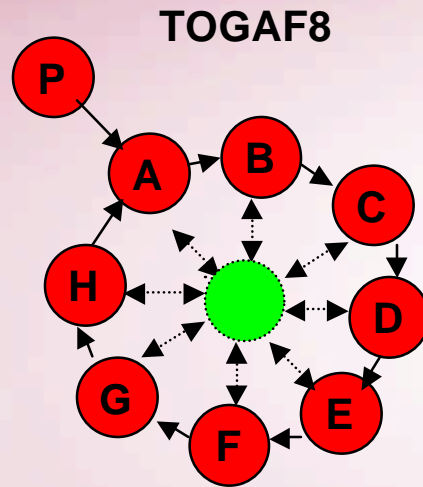
- Focuses on implementation cycle (ADM) and processes
- Has a foundation architecture as a part of “Enterprise continuum”
- Rich in the technical architecture area
- Resource base provides a lot of reference materials
- Supported by a set of certification processes
- Being positioned as the benchmark for EA best practice

and AN EASY-TO-USE TOOL

➤ **SYSTEM ARCHITECT**

- **Certified formally as TOGAF support tool / Ongoing commitment for future versions**
- **Comprehensive support for Zachman Framework**
- **Can be customised and extended to facilitate a hybrid approach**
- **Has a variety of built-in EA related models and artifacts**
- **Easy to learn**

Practical Enterprise Architecture implementation using a hybrid approach



VALUE ADDS

- Step by Step process
- Templates / checklists
- Customised features
- Training & professional services



ZACHMAN FRAMEWORK





ENTERPRISE ARCHITECTURE - A FRAMEWORK™

	DATA	LOGIC	FUNCTION	NETWORK	PEOPLE	TIME	MOTIVATION	SCOPES
SCOPE CONCEPTUAL	Icon: Document with data	Icon: Document with logic	Icon: Document with function	Icon: Document with network	Icon: Document with people	Icon: Document with time	Icon: Document with motivation	Icon: Document with scopes
ENTERPRISE MODEL CONCEPTUAL	Icon: Document with data	Icon: Document with logic	Icon: Document with function	Icon: Document with network	Icon: Document with people	Icon: Document with time	Icon: Document with motivation	Icon: Document with scopes
SYSTEM MODEL LOGICAL	Icon: Document with data	Icon: Document with logic	Icon: Document with function	Icon: Document with network	Icon: Document with people	Icon: Document with time	Icon: Document with motivation	Icon: Document with scopes
TECHNOLOGY MODEL PHYSICAL	Icon: Document with data	Icon: Document with logic	Icon: Document with function	Icon: Document with network	Icon: Document with people	Icon: Document with time	Icon: Document with motivation	Icon: Document with scopes
DETAILED BUSINESS MODEL CONTEXT	Icon: Document with data	Icon: Document with logic	Icon: Document with function	Icon: Document with network	Icon: Document with people	Icon: Document with time	Icon: Document with motivation	Icon: Document with scopes
ZACHMAN ARCHITECTURE	Icon: Document with data	Icon: Document with logic	Icon: Document with function	Icon: Document with network	Icon: Document with people	Icon: Document with time	Icon: Document with motivation	Icon: Document with scopes

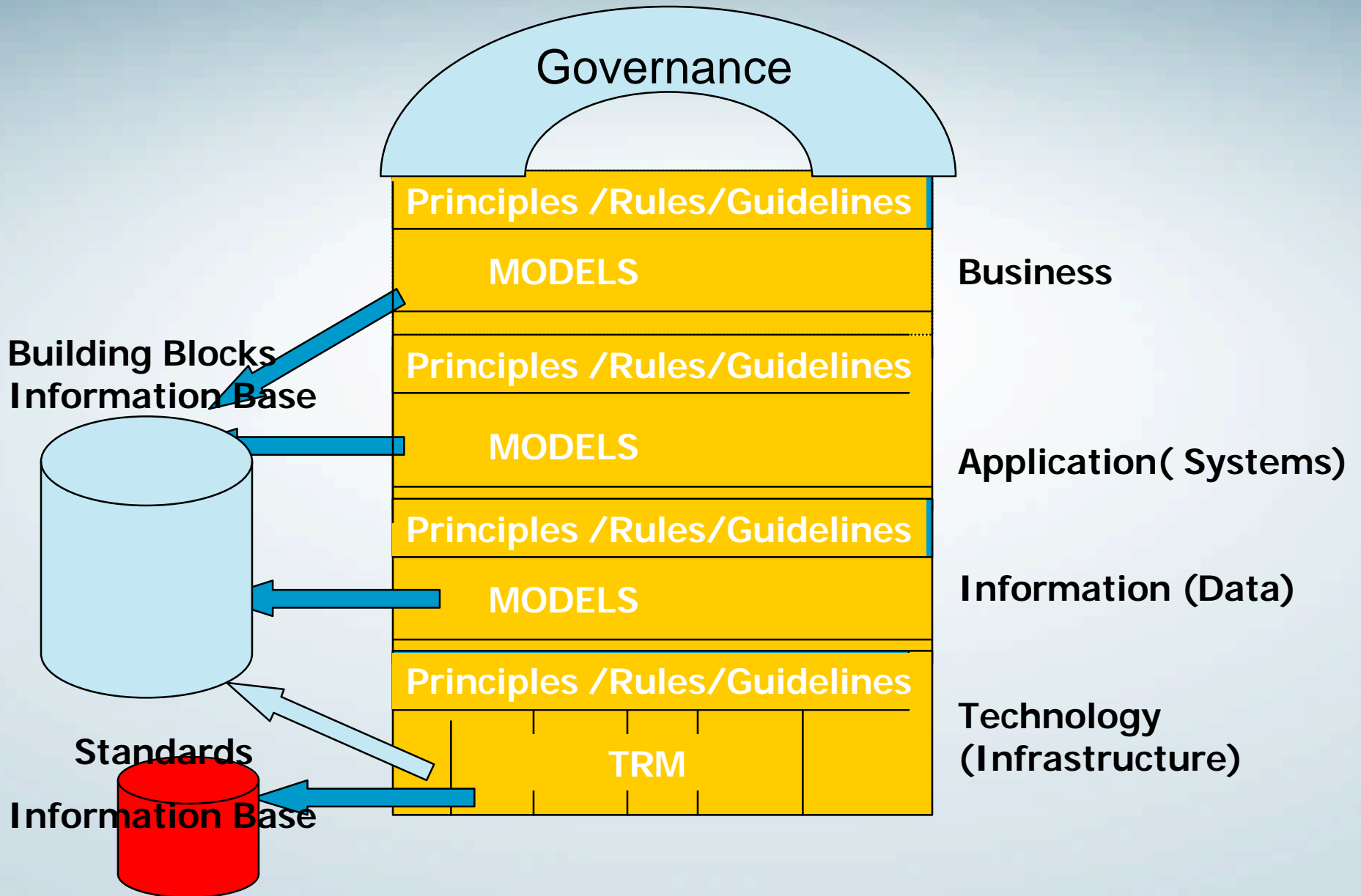
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Architectural Development Planning

	Principles	Rules	Guidelines	Models	Building Blocks	Standards
Business	EA Version 1.0	EA Version 1.0	EA Version 1.0	EA Version 3.0	EA Version 3.0	EA Version 4.0
Application	EA Version 1.0	EA Version 4.0	EA Version 1.0	EA Version 3.0	EA Version 3.0	EA Version 4.0
Data	EA Version 1.0	EA Version 4.0	EA Version 4.0	EA Version 3.0	EA Version 3.0	EA Version 4.0
Technology	EA Version 1.0	EA Version 1.0	EA Version 1.0	EA Version 2.0	EA Version 2.0	EA Version 2.0







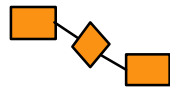
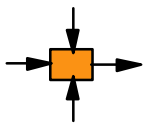
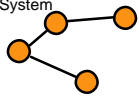
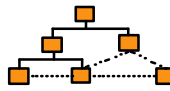
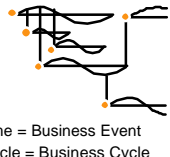
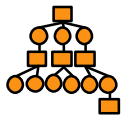
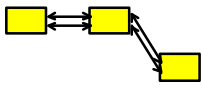
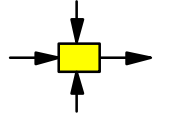
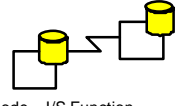
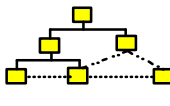
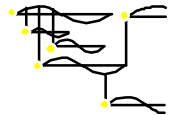
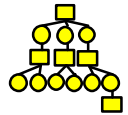
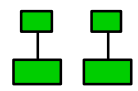
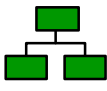
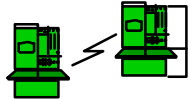
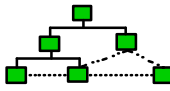
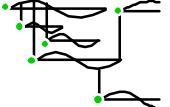
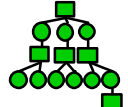






-  EA Version 1.0
-  EA Version 2.0
-  EA Version 3.0
-  EA Version 4.0

The Enterprise Architecture "Shell"



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SIMPLIFIED COVERAGE OF ALL FOUR EA LAYERS

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

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Business



Application

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Planning/Vision

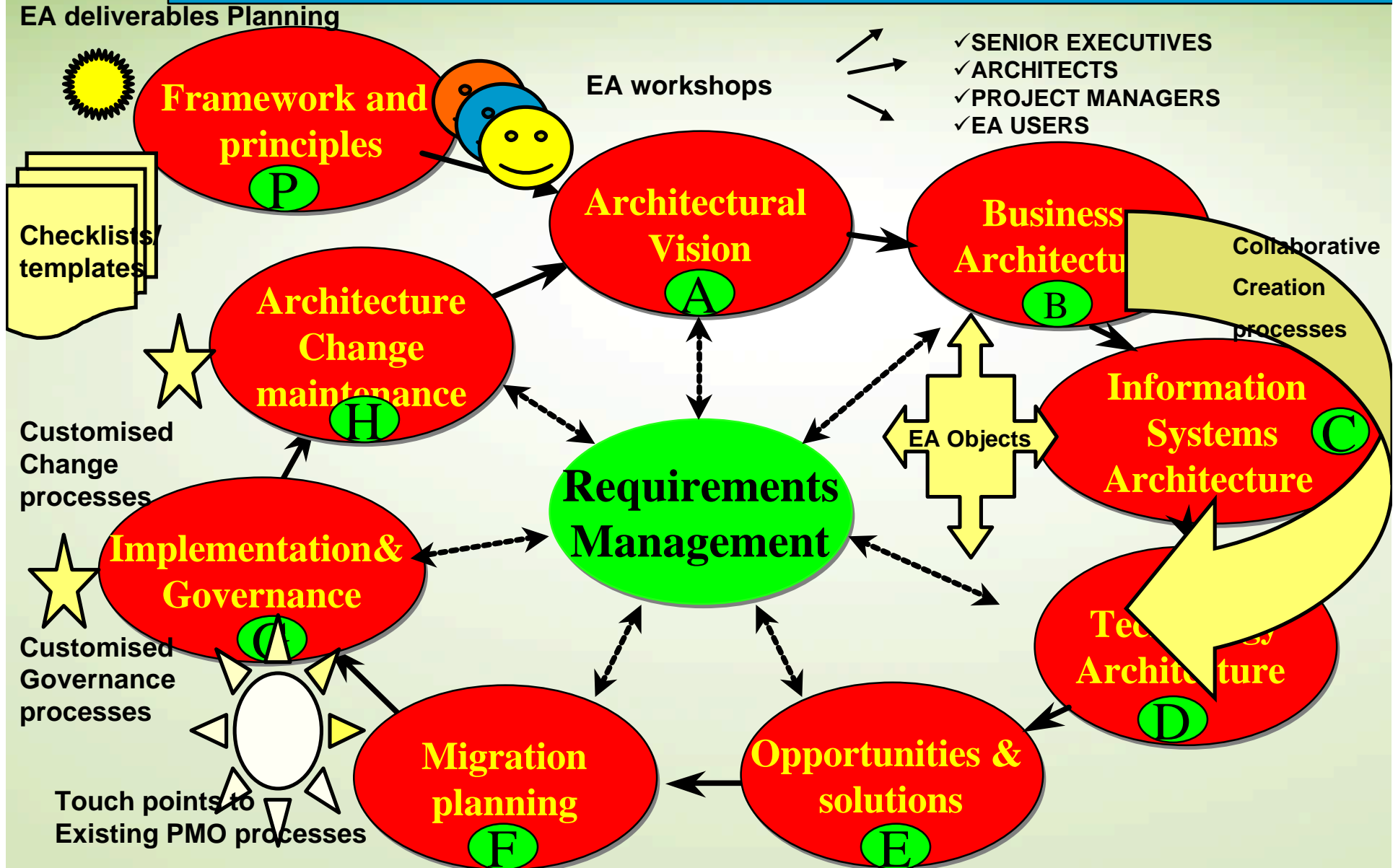


Data



Technology

EA services (ADM plus)

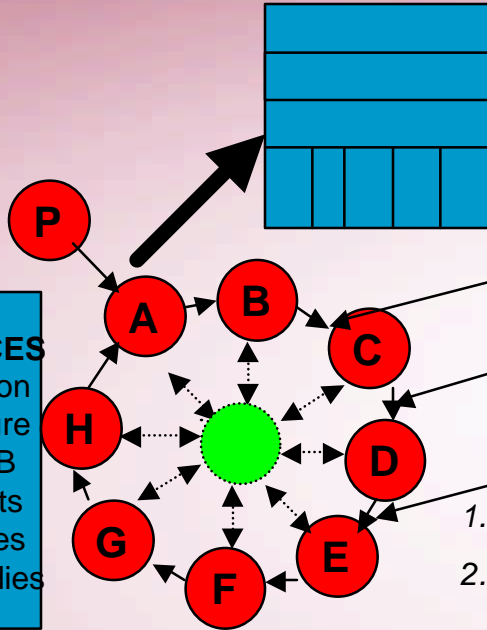


PRACTICAL EA DEVELOPMENT PROCESS

ENTERPRISE SPECIFIC ARCHITECTURE

ZACHMAN FRAMEWORK

TOGAF RESOURCES
 -Foundation Architecture
 -TRM /SIB
 -Checklists
 -Templates
 -Case studies
 Etc.,



ENTERPRISE ARCHITECTURE - A FRAMEWORK™

	DATA	FUNCTION	NETWORK	PERFORMANCE	TIME	MOTIVATION	ROLE
SCOPE CONCEPTUAL	1.1 Data Model	1.2 Functional Model	1.3 Network Model	1.4 Performance Model	1.5 Time Model	1.6 Motivation Model	1.7 Role Model
SCOPE LOGICAL	2.1 Data Model	2.2 Functional Model	2.3 Network Model	2.4 Performance Model	2.5 Time Model	2.6 Motivation Model	2.7 Role Model
SCOPE PHYSICAL	3.1 Data Model	3.2 Functional Model	3.3 Network Model	3.4 Performance Model	3.5 Time Model	3.6 Motivation Model	3.7 Role Model
TECHNOLOGY MODEL CONCEPTUAL	4.1 Data Model	4.2 Functional Model	4.3 Network Model	4.4 Performance Model	4.5 Time Model	4.6 Motivation Model	4.7 Role Model
TECHNOLOGY MODEL LOGICAL	5.1 Data Model	5.2 Functional Model	5.3 Network Model	5.4 Performance Model	5.5 Time Model	5.6 Motivation Model	5.7 Role Model
TECHNOLOGY MODEL PHYSICAL	6.1 Data Model	6.2 Functional Model	6.3 Network Model	6.4 Performance Model	6.5 Time Model	6.6 Motivation Model	6.7 Role Model
DETAILED NETWORK ARCHITECTURE CONCEPTUAL	7.1 Data Model	7.2 Functional Model	7.3 Network Model	7.4 Performance Model	7.5 Time Model	7.6 Motivation Model	7.7 Role Model
DETAILED NETWORK ARCHITECTURE LOGICAL	8.1 Data Model	8.2 Functional Model	8.3 Network Model	8.4 Performance Model	8.5 Time Model	8.6 Motivation Model	8.7 Role Model
DETAILED NETWORK ARCHITECTURE PHYSICAL	9.1 Data Model	9.2 Functional Model	9.3 Network Model	9.4 Performance Model	9.5 Time Model	9.6 Motivation Model	9.7 Role Model

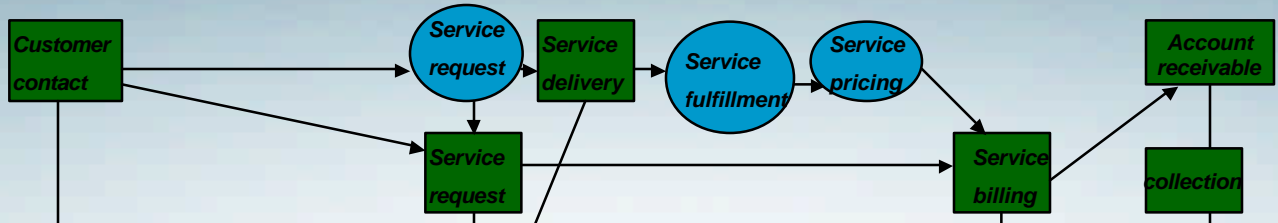
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Steps towards Enterprise Architecture

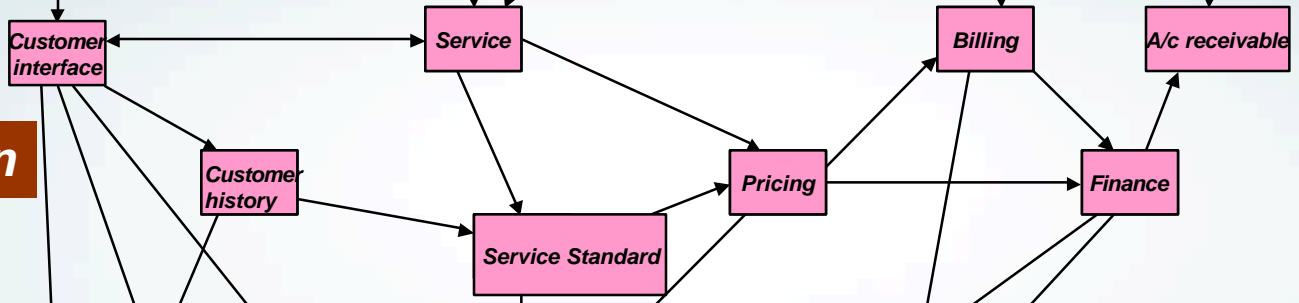
1. TOGAF Phase P plus: Creation of the "EA shell" & initial management agreement
2. Snapshot study of current "architecture" & Concerns analysis to highlight the need for EA
3. Customise ADM / Customise Zachman cell checklists
4. Training of Architects and other key stake holders
5. TOGAF Phase A
6. TOGAF phases B/C/D: Complete Version 1 of Reference Models
7. Identify ,Create and store Building Blocks (ABB/SBB)
8. Refer to relevant Zachman cells for completeness at the end of each phase
9. TOGAF ADM Phases E/F: Provide touch points to existing processes
10. Complete processes for phases G/H

SAMPLE EA MODEL

Business



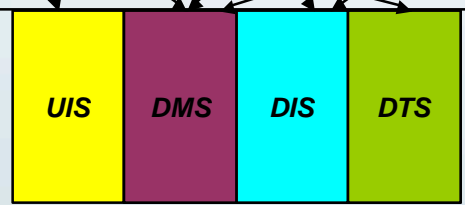
Application



Data



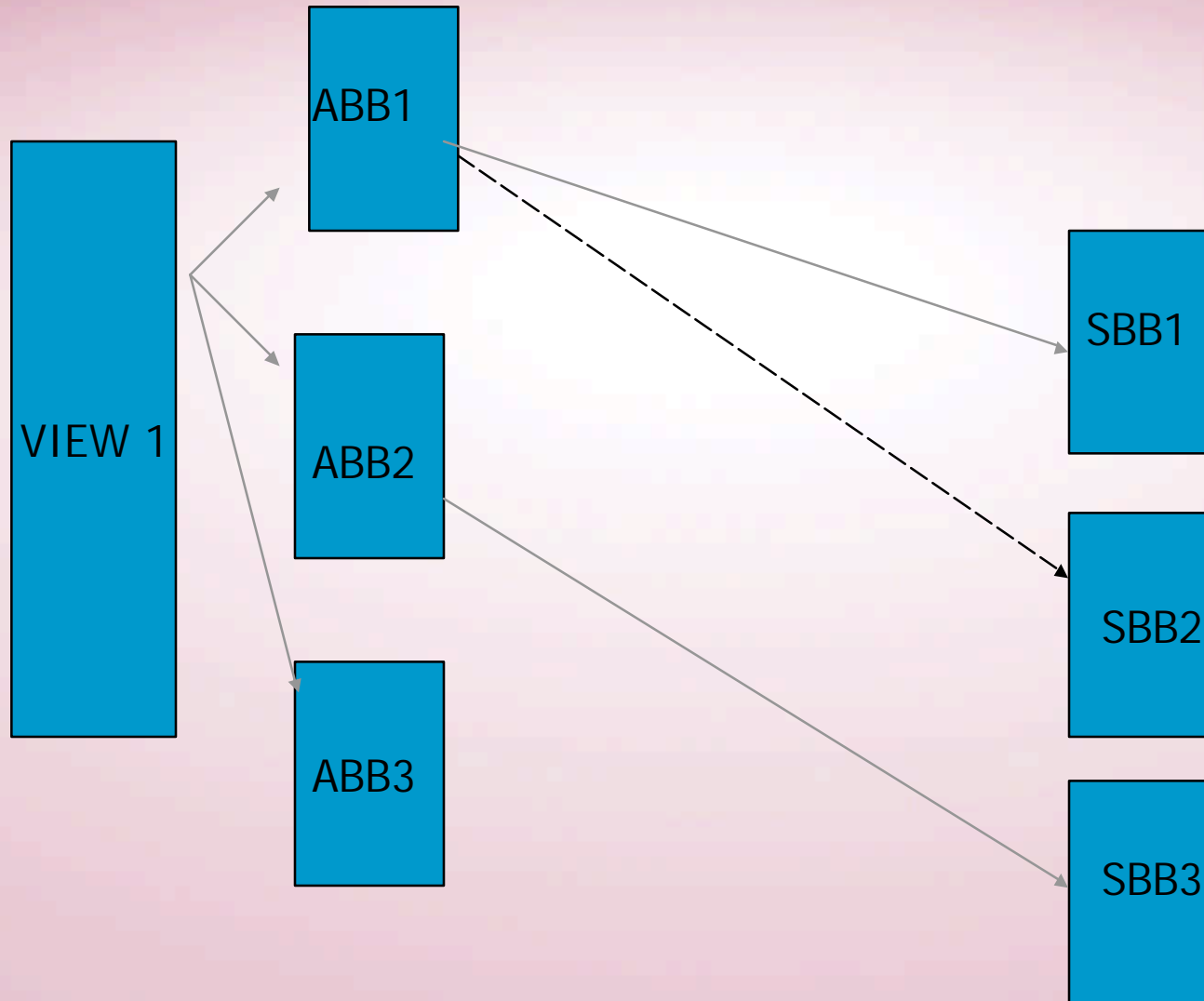
Technology



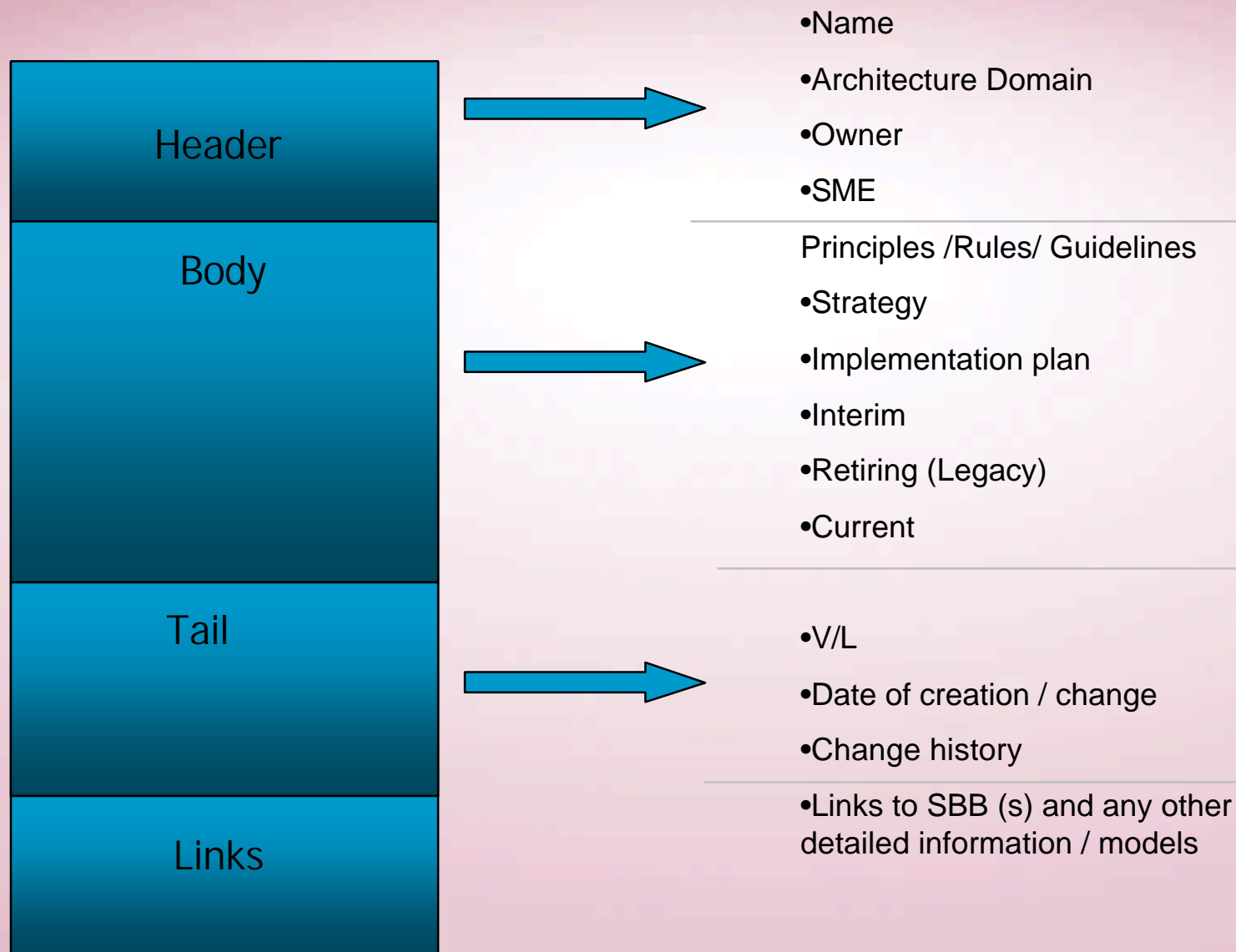
System process 

Manual process 

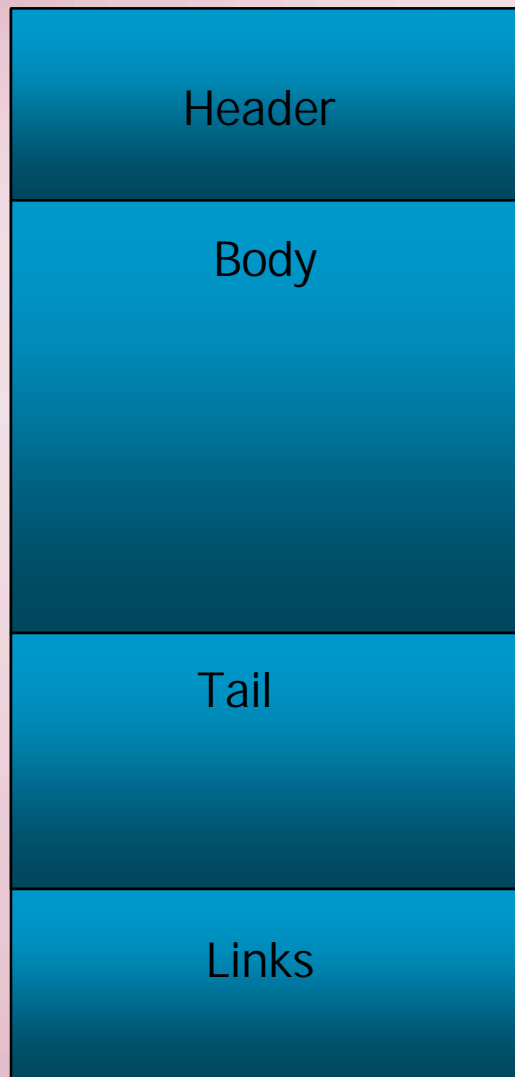
ARCHITECTURE BUILDING BLOCKS & SOLUTION BUILDING BLOCKS



SAMPLE ARCHITECTURE BUILDING BLOCK FORMAT (Technology Architecture domain)



SAMPLE SOLUTION BUILDING BLOCK FORMAT (Technology Architecture domain)



- Name
- Solution Domain
- Owner
- SME

- Rules/ Guidelines/standards
- Rationale for inclusion
- Implementation plan

- V/L
- Date of creation / change
- Change history

- Links to any other detailed information / technical data

VALUE ADDED SERVICES FROM CCAND C SOLUTIONS...

- **Training :**
 - One day TOGAF appreciation course (group / customised)
 - 4/5 days TOGAF practical implementation course (group/ customised)
 - Other Special training / personalised training services

- **Architecture (general):**
 - Linking into vertical architectures
 - Linking into ITIL/OMG/Zachman / other architectures and processes
 - Linking into existing / strategic vendor architectures

- **Modeling / tools:**
 - Tool (s) selection / Tolls embedding
 - ABB / SBB structures & rules
 - Data modeling
 - BBIB repository systems

- **Processes:**
 - Process maps for creation/ governance/change management
 - Process maps to suit outsourcing contracts / SLA's
 - Processes & content of RFIs / RFPs for selecting tools, methodologies or service providers

- **Resourcing :**
 - **Short term / permanent resources for implementation**

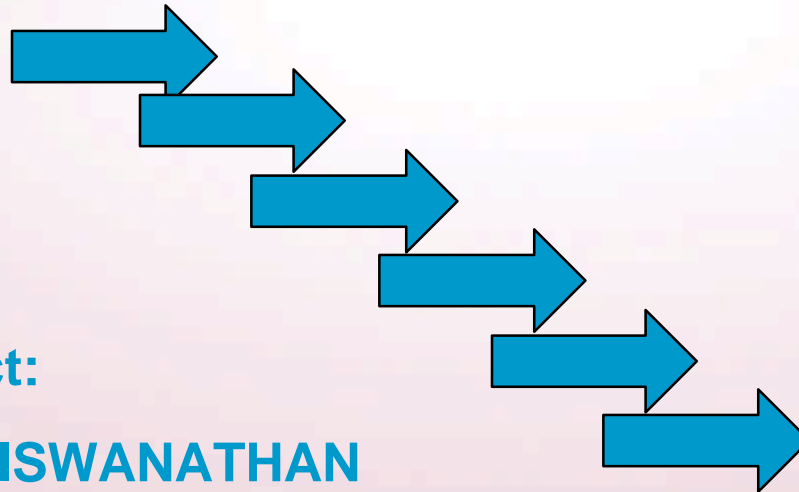
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ENTERPRISE ARCHITECTURE FRAMEWORK

CONCEPT	DATA	FUNCTION	NETWORK	DEVICE	BE	SYSTEM	COMPONENT
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CONCEPT	DATA	FUNCTION	NETWORK	DEVICE	BE	SYSTEM	COMPONENT
CONCEPT	DATA	FUNCTION	NETWORK	DEVICE	BE	SYSTEM	COMPONENT



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