BUILD THE VISION

The Open Group London 2009

Central Hall Westminster
Storey's Gate
London SW1H 9NH, UK

April 27-May 1, 2009

THE Open GROUP
Making standards work®

From Architecture to Execution with TOGAF 9

PRESENTED BY:

ROBERT WEISMAN

CEO, BUILD THE VISION INCORPORATED

OTTAWA, CANADA

(613)841-5118

ROBERT.WEISMAN@BUILDTHEVISION.CA

The Open Group London 2009

Central Hall Westminster
Storey's Gate
London SW1H 9NH, UK

April 27-May 1, 2009

THE Open GROUP
Making standards work®

BUILD THE VISION

Introduction

- The acid test for an Enterprise Architecture is transforming the architecture definitions into reality.
- The real challenge is to align business planning, portfolio management, operations service management, system design and enterprise architecture frameworks together through corporate governance to ensure success.
- TOGAF 9 provides very useful guidance to ensure that this takes place in a coherent manner based upon global lessons learned.

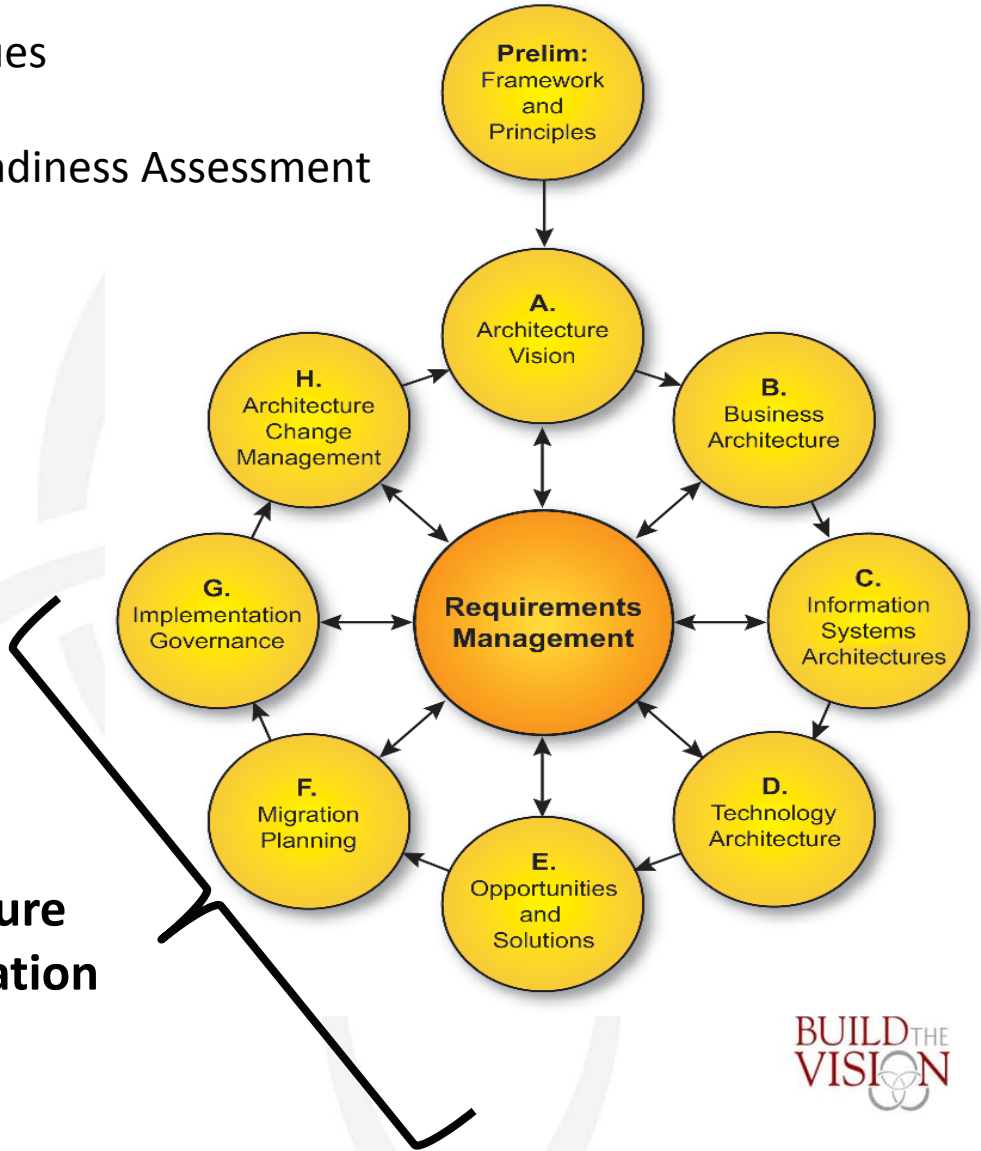
Agenda

- Architecture Transformation and Fit in the Organization
- Capability Based Planning
- Tiered Architecture
- Architecture Impact and Framework Integration
- Applying the ADM at different Enterprise Levels
- Business Transformation Support
- Interoperability
- Risk Management & Governance
- Migration Planning Techniques
- Concluding Comments

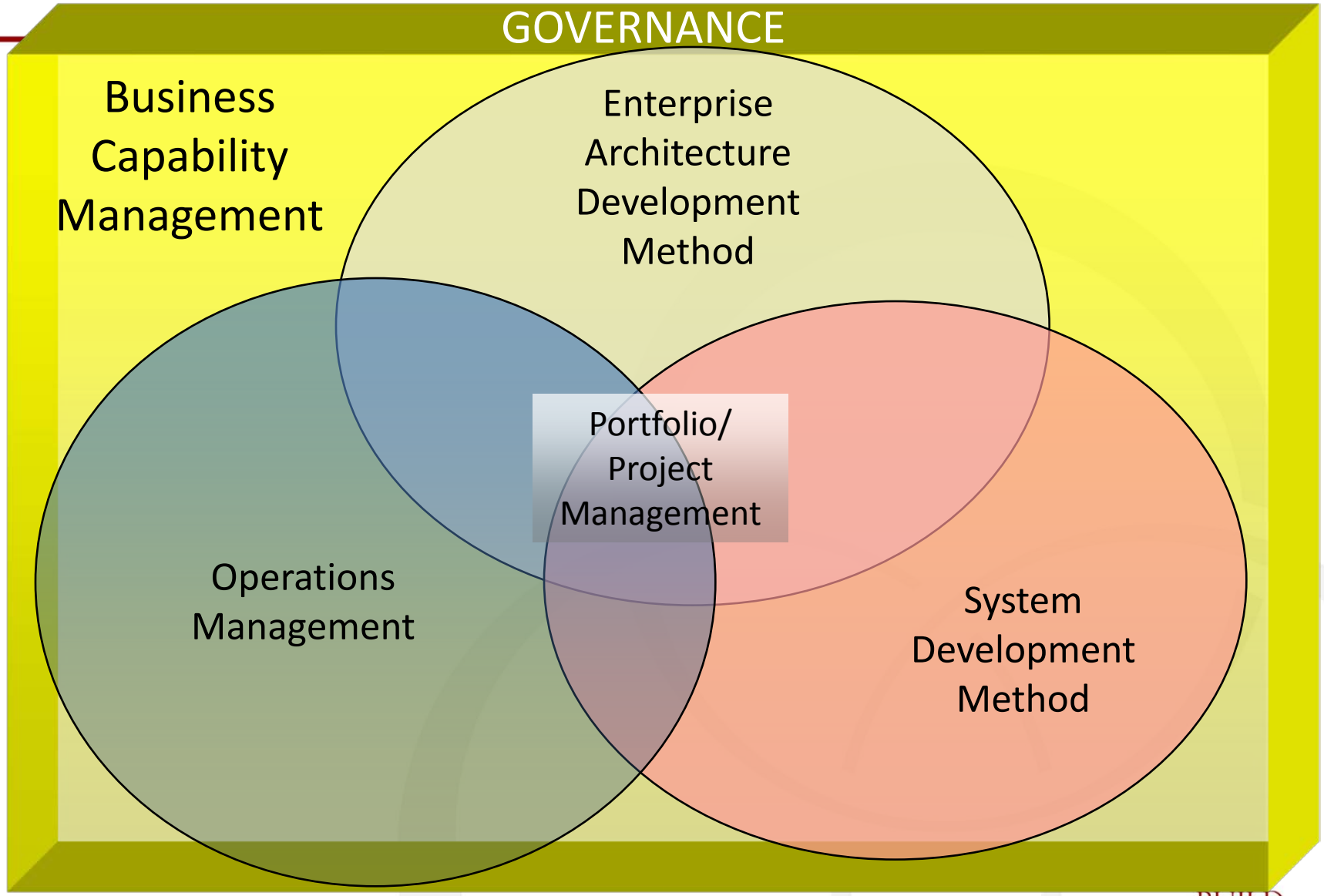
Where Architecture Transformation Fits

Supporting Material

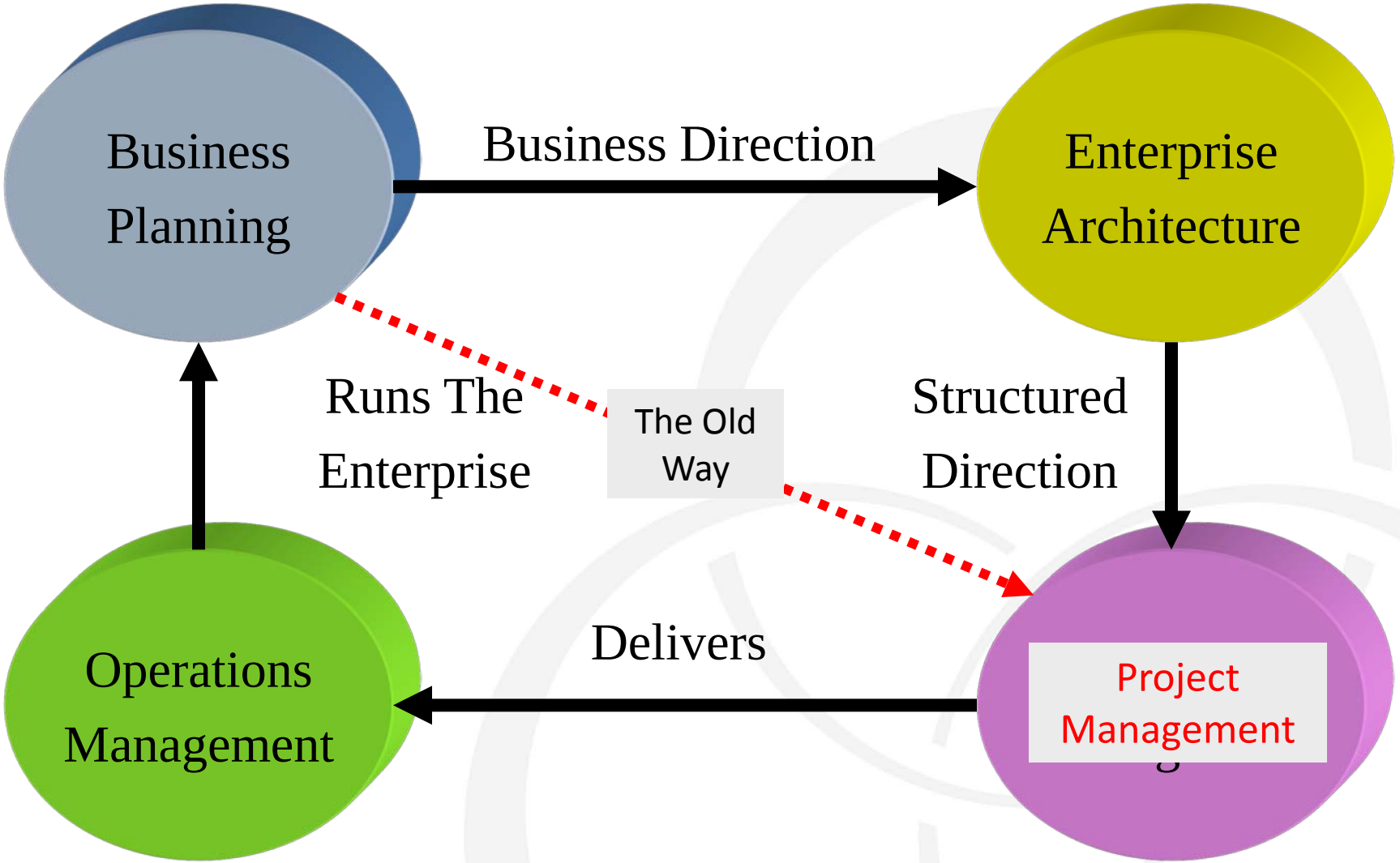
- Chapter 28 - Migration Planning Techniques
- Chapter 29 - Interoperability
- Chapter 30 - Business Transformation Readiness Assessment
- Chapter 31 - Capability Based Planning
- Chapter 32 - Risk Management



Stakeholders - The Management Frameworks

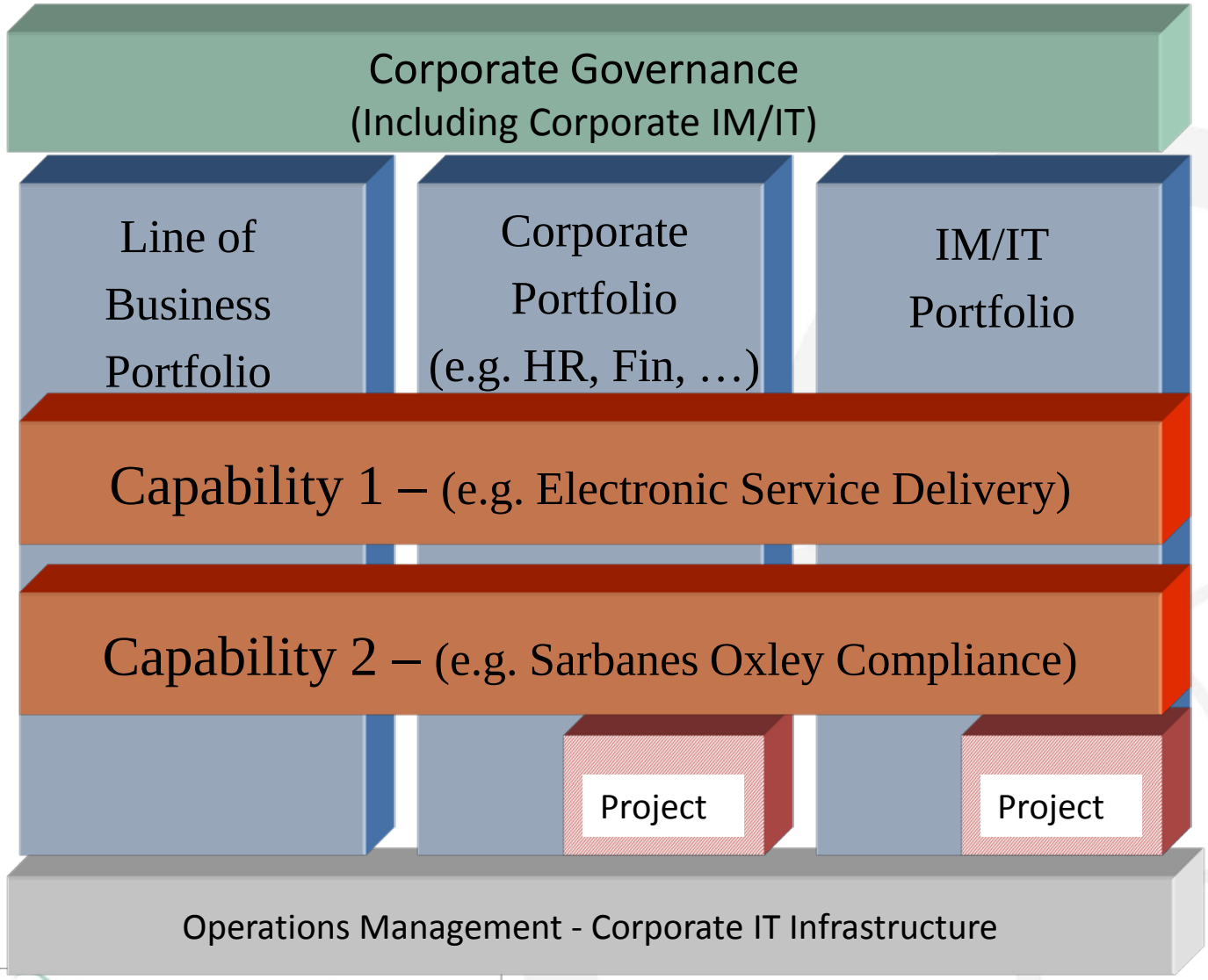


Coordinating the Management Frameworks



BUILD THE VISION

Capability Based Business Planning

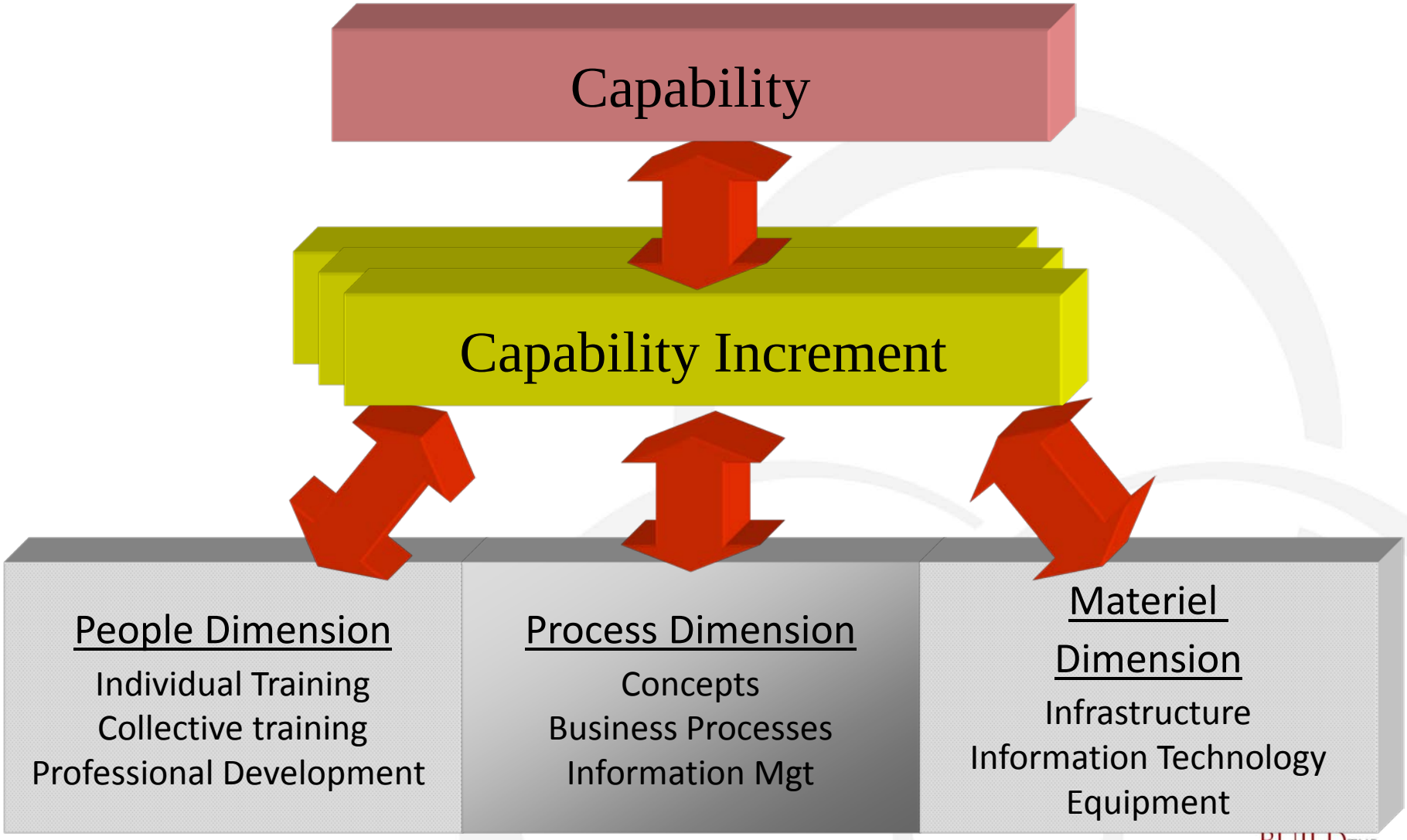


Functional Management (Vertical)

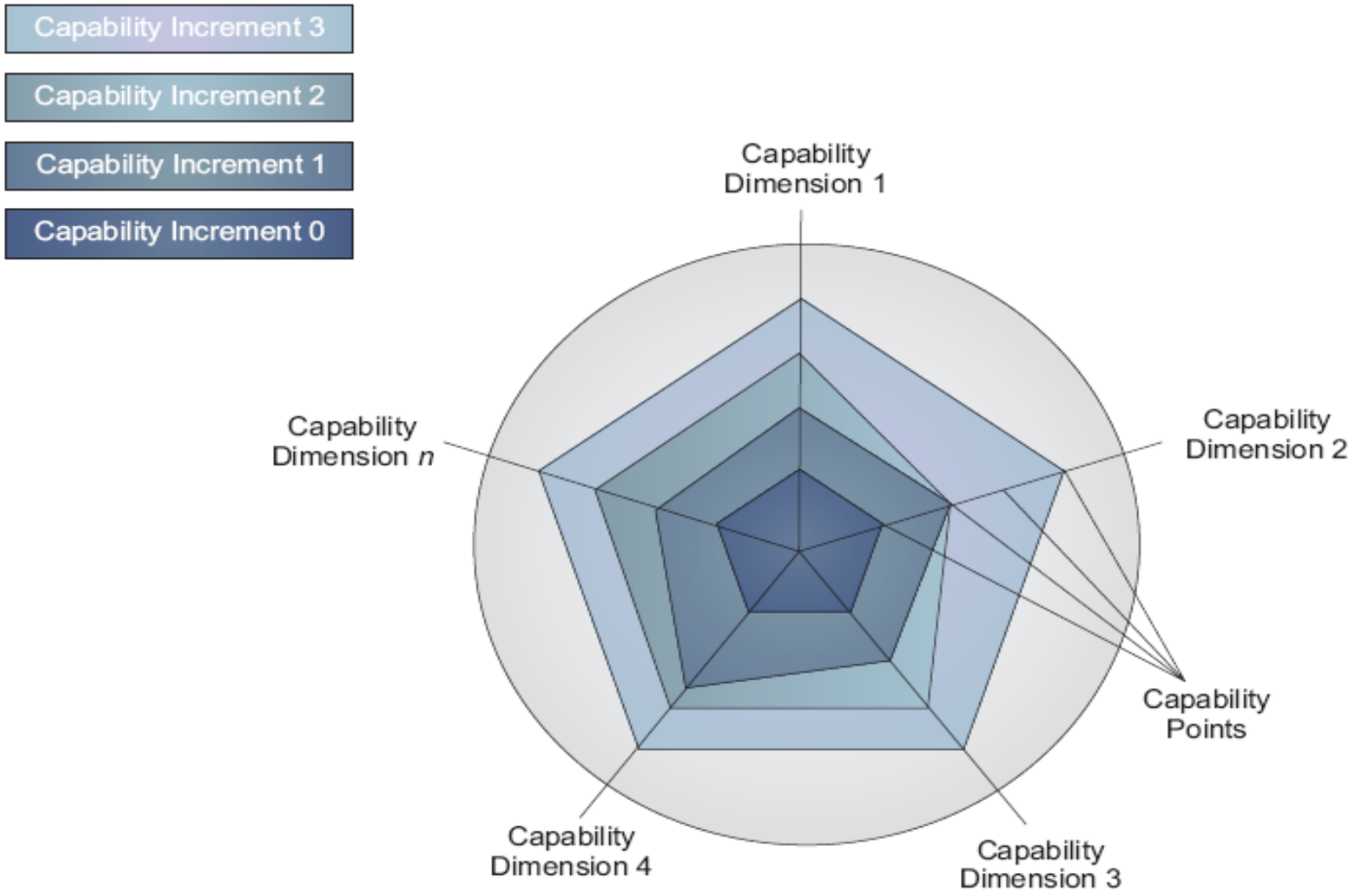
Capability Management (Horizontal)

BUILD THE VISION

Capability Concept



Capability "Radar" Diagram



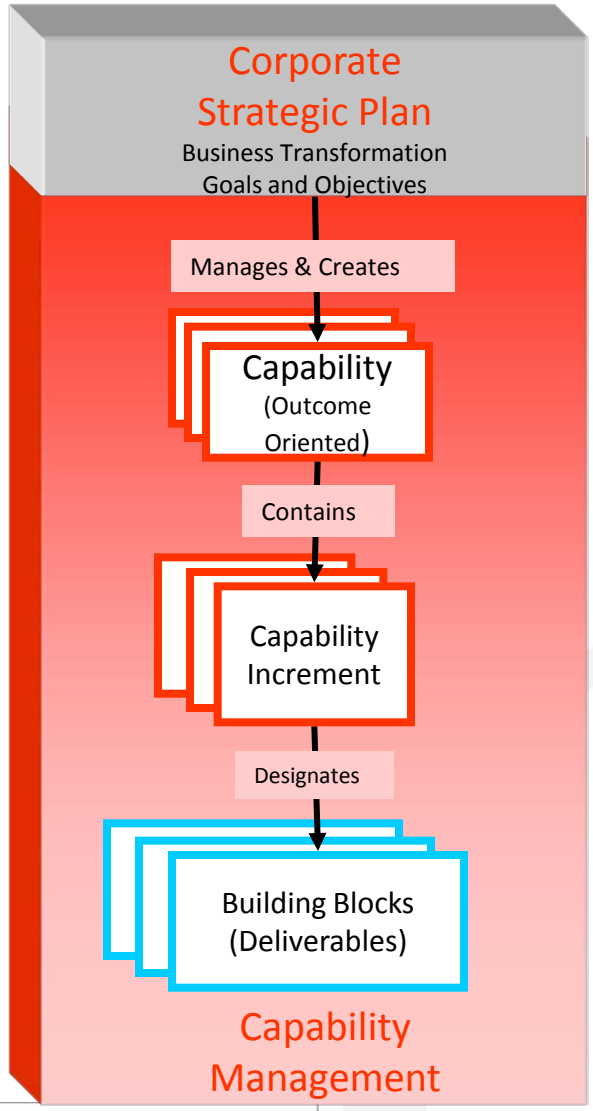
BUILD THE VISION

Outline Capability Management

5 – 10 years

3 – 5 years

.25 – 1.5 years



Horizontal Management Across Portfolios

- Strategic Business Leadership

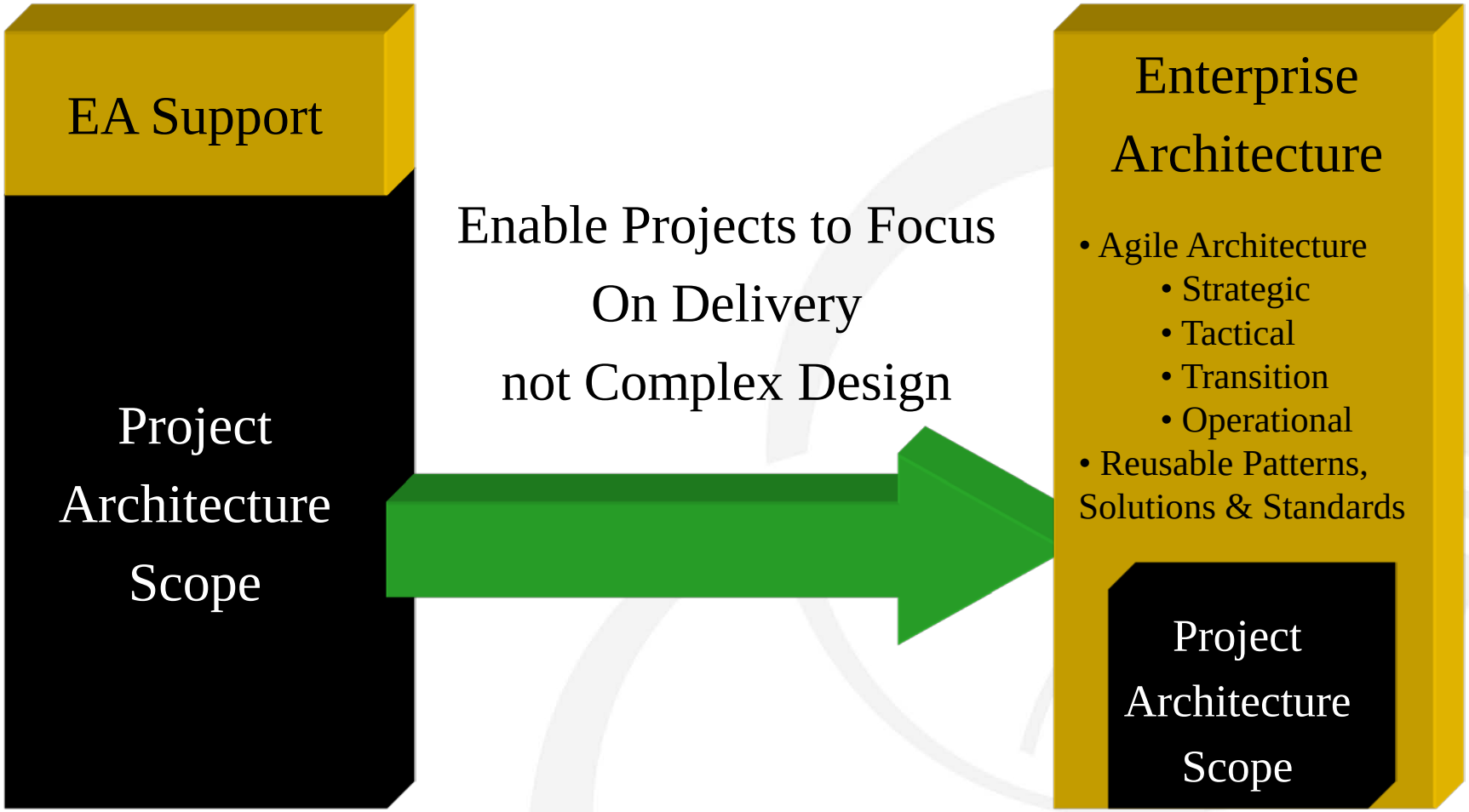
Possible Capability Dimensions

- Personnel
- R&D
- Infrastructure/facilities
- Concepts/Processes
- Information Management
- Materiel

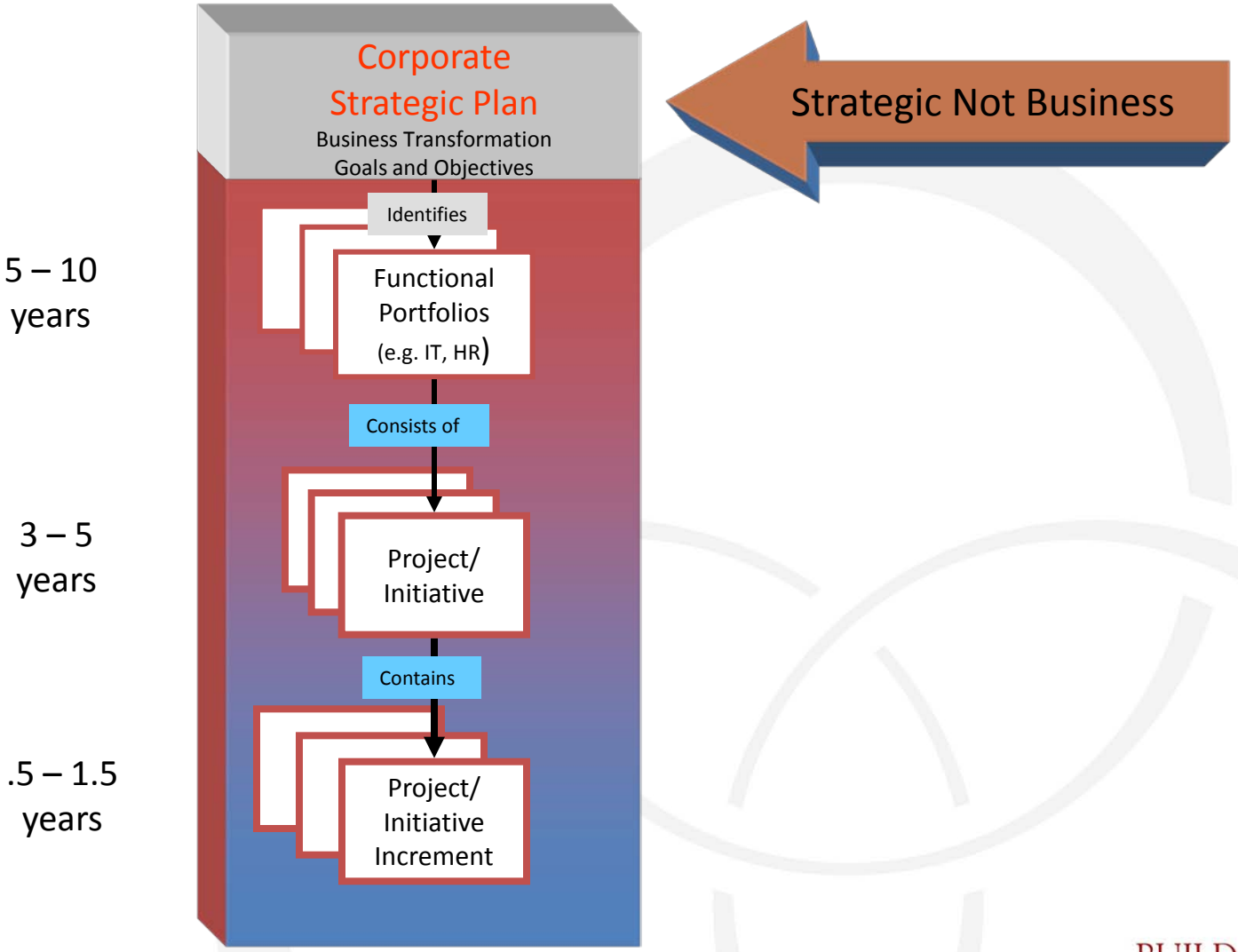
BUILD THE VISION

TOGAF 9 - TIERED ARCHITECTURE

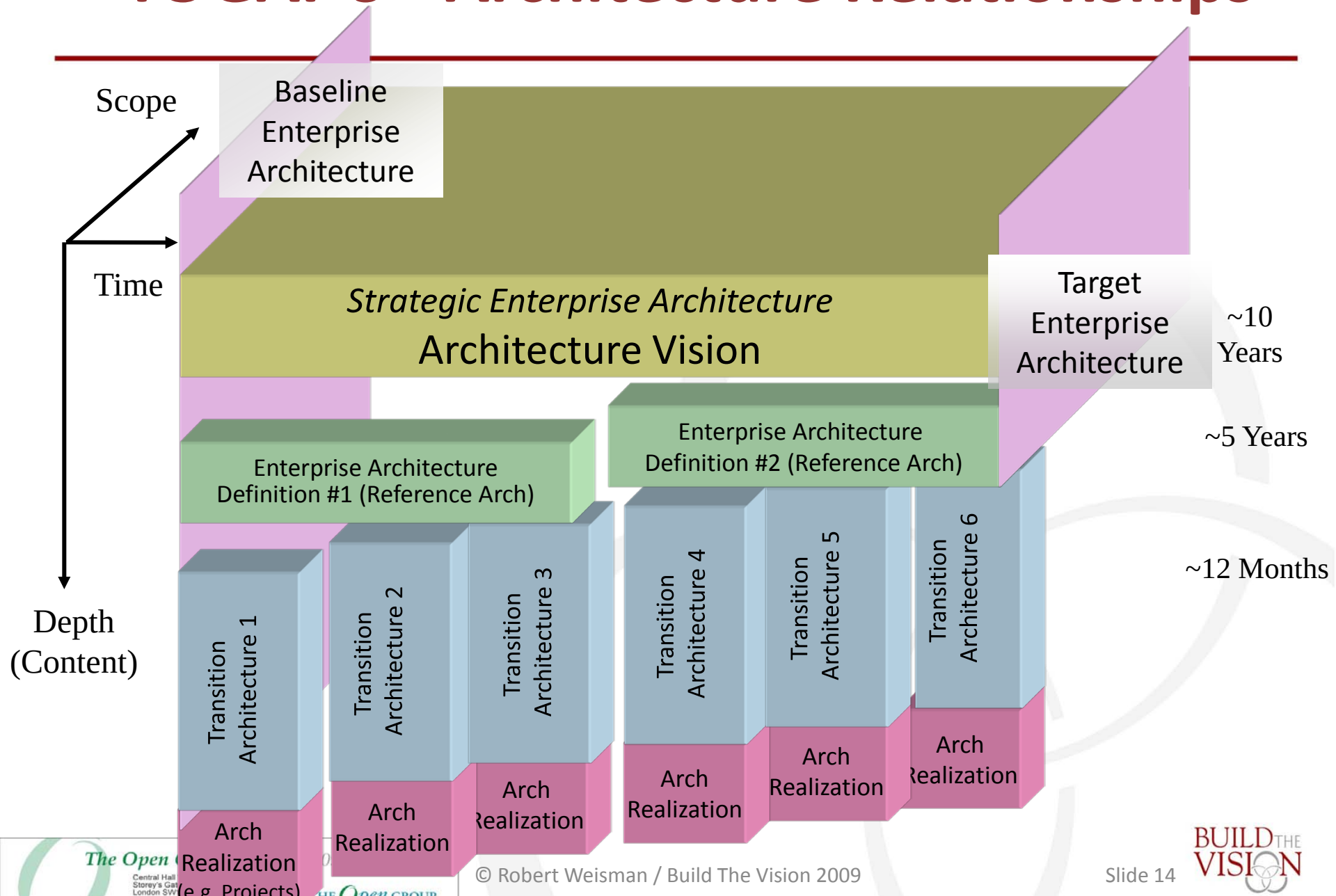
Architecture Intent – Lessen Burden on Projects



Portfolio/Project Management



TOGAF 9 - Architecture Relationships



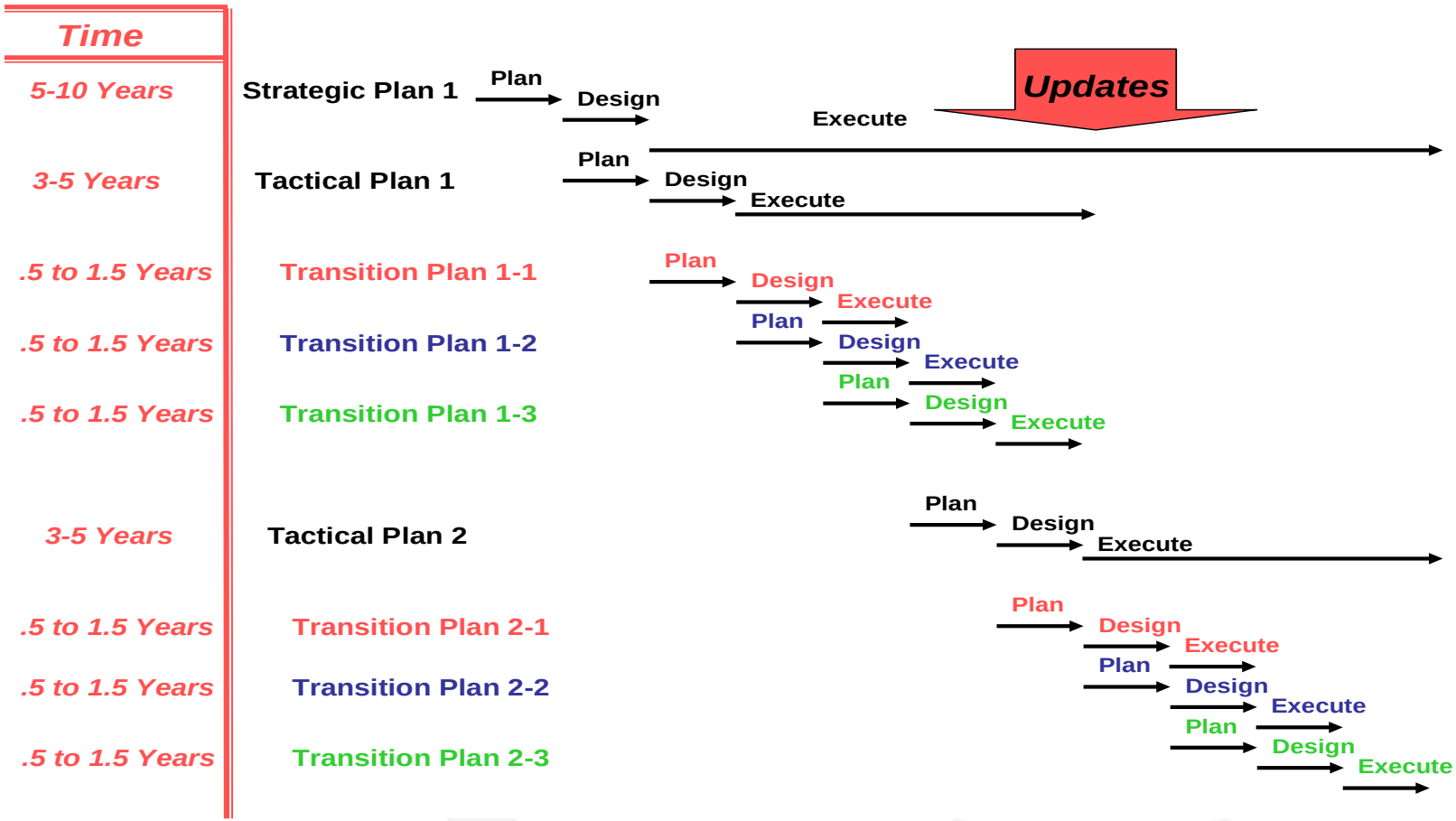
Business Planning Relationships

Zachman & TOGAF – Architecture Depth

	What Data	How Process	Where Network	Who People	When Time	Why Motivation
Scope/Objectives (ADM)	Architecture Vision (Strategic)					
Model of Business (DG/Dir)	**Architecture Definition (a.k.a. Reference)**					
Description of IS (Designer/Section Head)						
Technology Model (Builder/Arch)	**Transition Architecture**					
Detailed Description (Programmers/IT)	**Architecture Realization**					
Implemented System (System Maintainers)	**Operational Architecture**					

Architecture Evolution/Transformation Plan Cycle

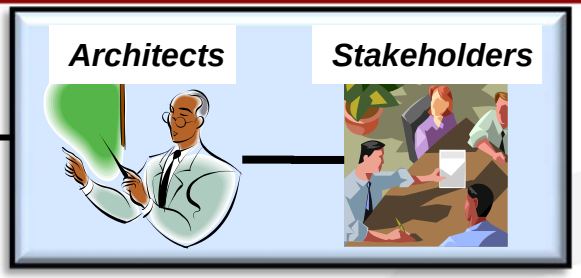
Transformation Plan Cycle



BUILD THE VISION

ARCHITECTURE IMPLICATIONS & FRAMEWORK INTEGRATION

Architecture Definition & Service Reference Model
The Implications are not Trivial !!!



Specify Innovative Intent Using

Enterprise Architecture Definition (Logical)

Models

To Identify

Requirements & Capabilities

Satisfied Through

Service Reference Model

Services

Organized In

Domains *(Service Taxonomy)*

Supported By

Service Standards

Basis For

Basis For

IM/IT Planning Structure

Management Accountability Framework

CIO Organization

Resources & Funding

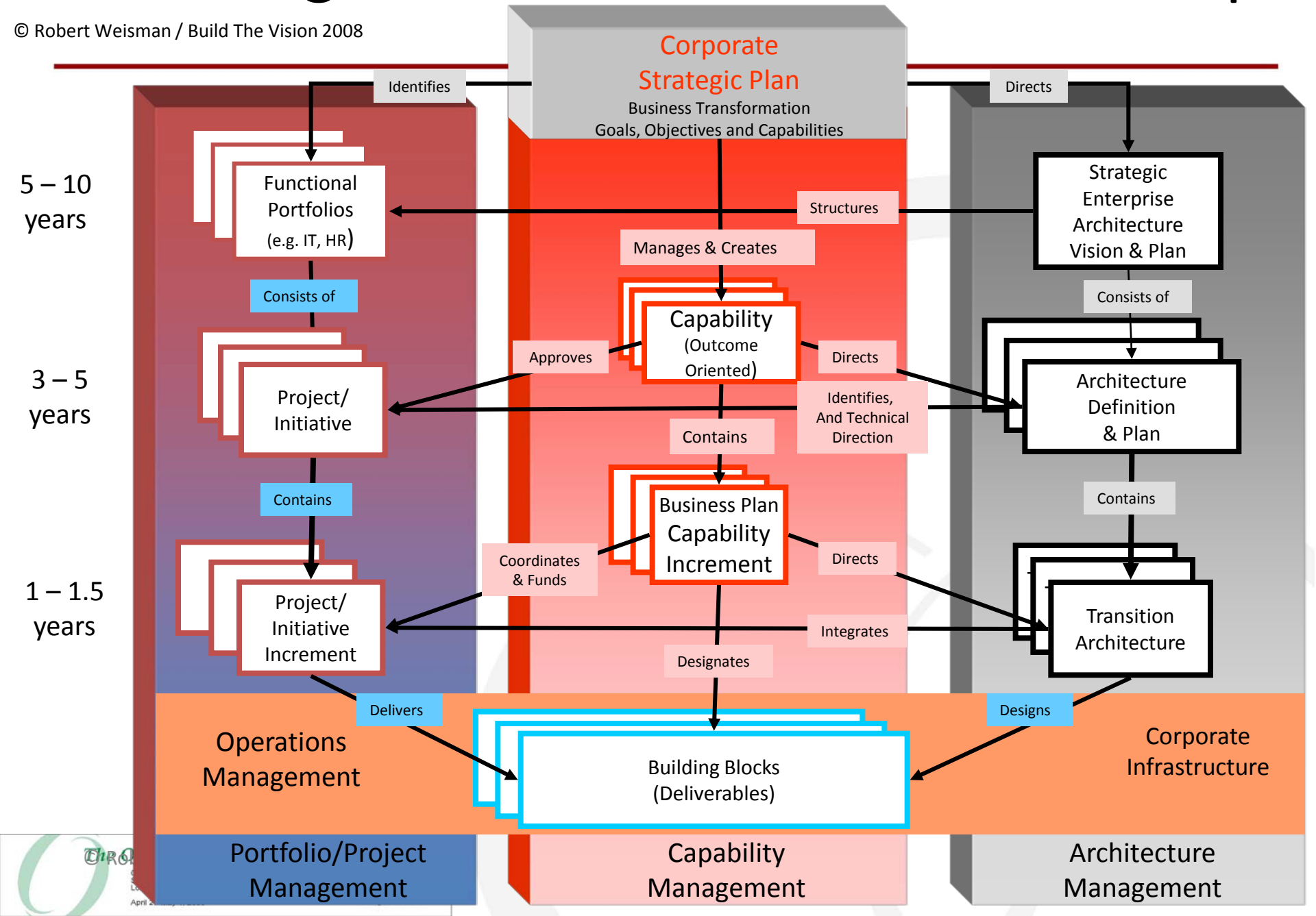
Repository Structure

IM/IT Skills / ASD (Outsourcing)

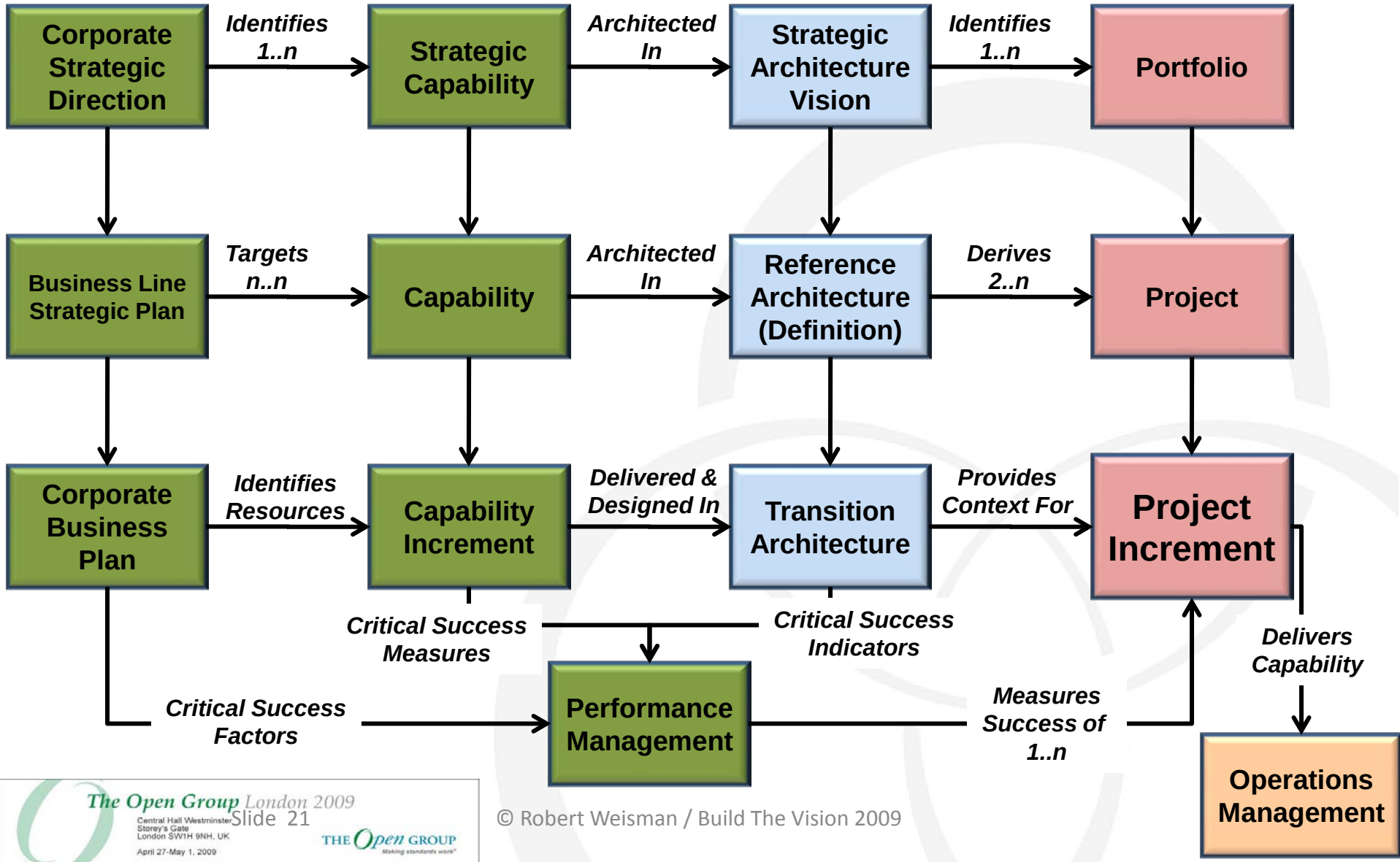
Products / Service Delivery

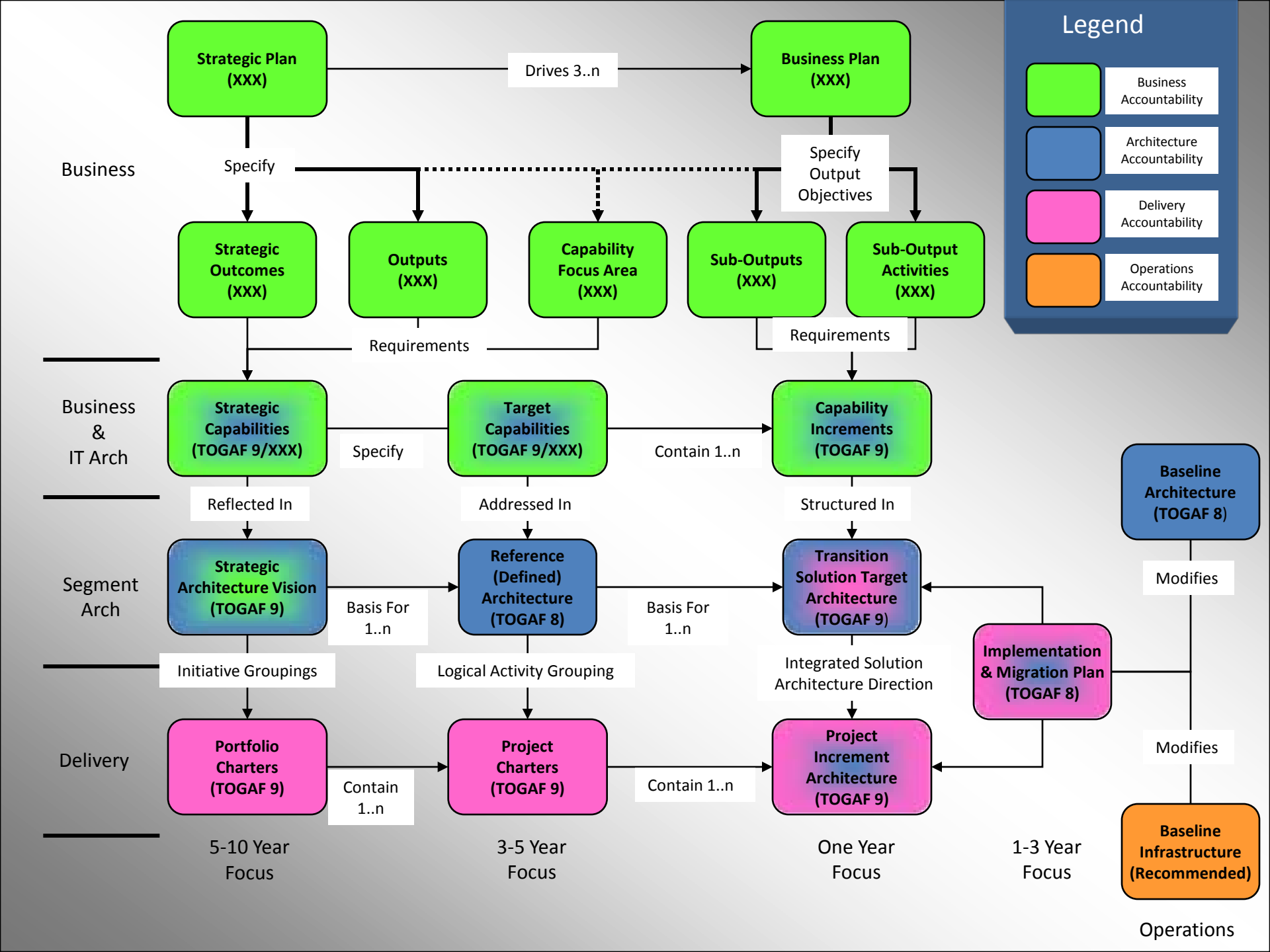
VISION

Management Framework Relationships



Another View of the Concepts




Legend
Business Accountability
Architecture Accountability
Delivery Accountability
Operations Accountability
Business
Business & IT Arch
Segment Arch
Delivery
Strategic Plan (XXX)
Drives 3..n
Business Plan (XXX)
Specify
Specify Output Objectives
Strategic Outcomes (XXX)
Outputs (XXX)
Capability Focus Area (XXX)
Sub-Outputs (XXX)
Sub-Output Activities (XXX)
Requirements
Requirements
Strategic Capabilities (TOGAF 9/XXX)
Specify
Target Capabilities (TOGAF 9/XXX)
Contain 1..n
Capability Increments (TOGAF 9)
Reflected In
Addressed In
Structured In
Strategic Architecture Vision (TOGAF 9)
Basis For 1..n
Reference (Defined) Architecture (TOGAF 8)
Basis For 1..n
Transition Solution Target Architecture (TOGAF 9)
Initiative Groupings
Logical Activity Grouping
Integrated Solution Architecture Direction
Portfolio Charters (TOGAF 9)
Contain 1..n
Project Charters (TOGAF 9)
Contain 1..n
Project Increment Architecture (TOGAF 9)
Baseline Architecture (TOGAF 8)
Modifies
Implementation & Migration Plan (TOGAF 8)
Modifies
Baseline Infrastructure (Recommended)
5-10 Year Focus
3-5 Year Focus
One Year Focus
1-3 Year Focus
Operations

APPLYING THE ADM AT DIFFERENT ENTERPRISE LEVELS

Partitioning

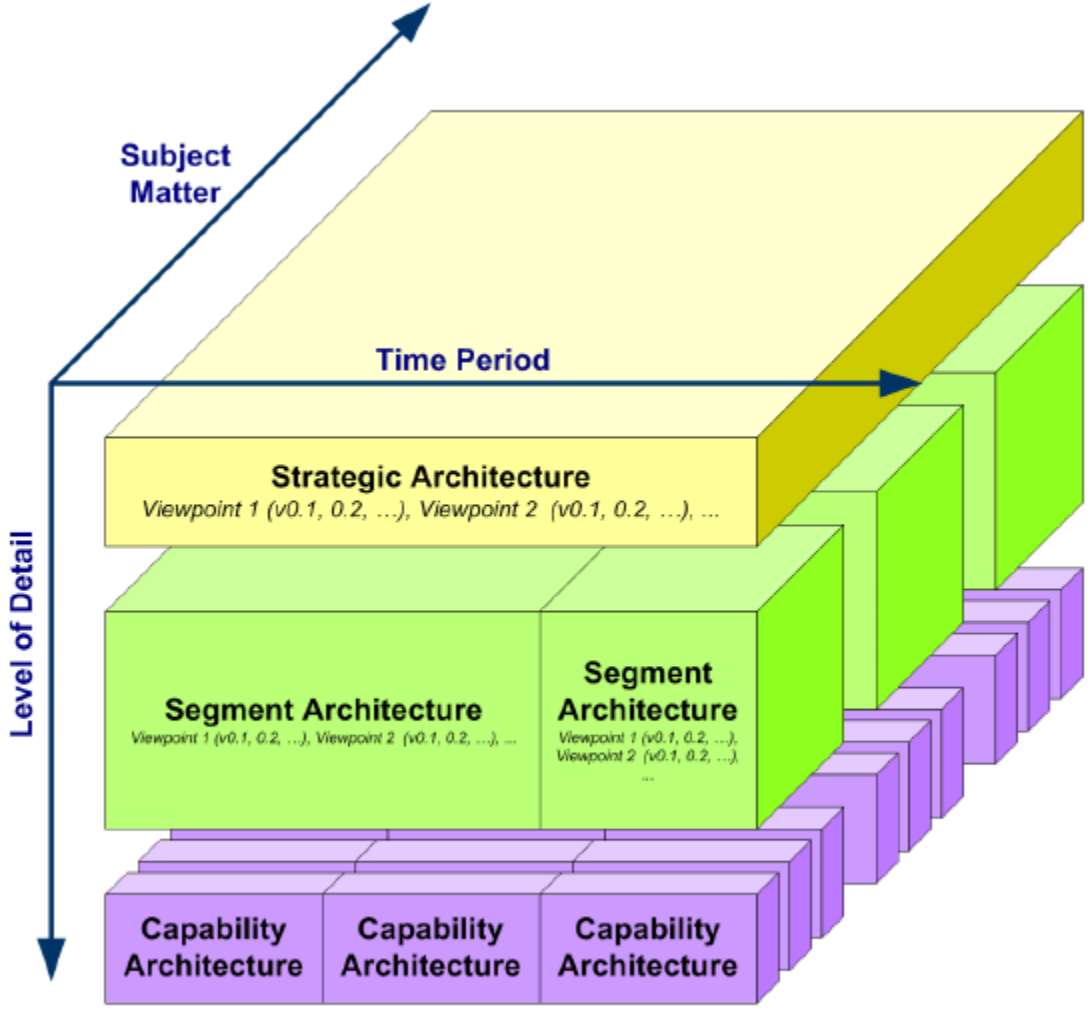
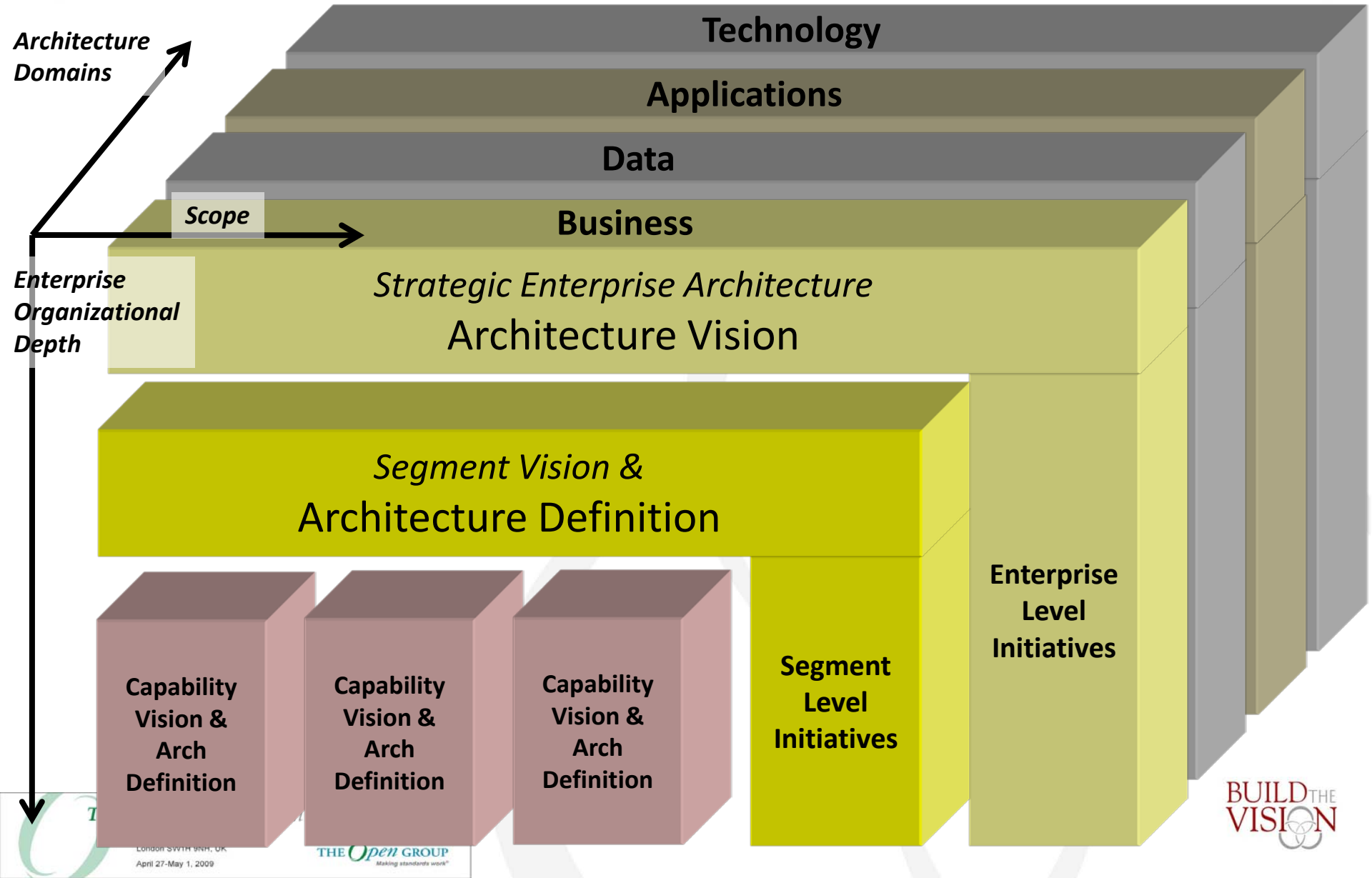


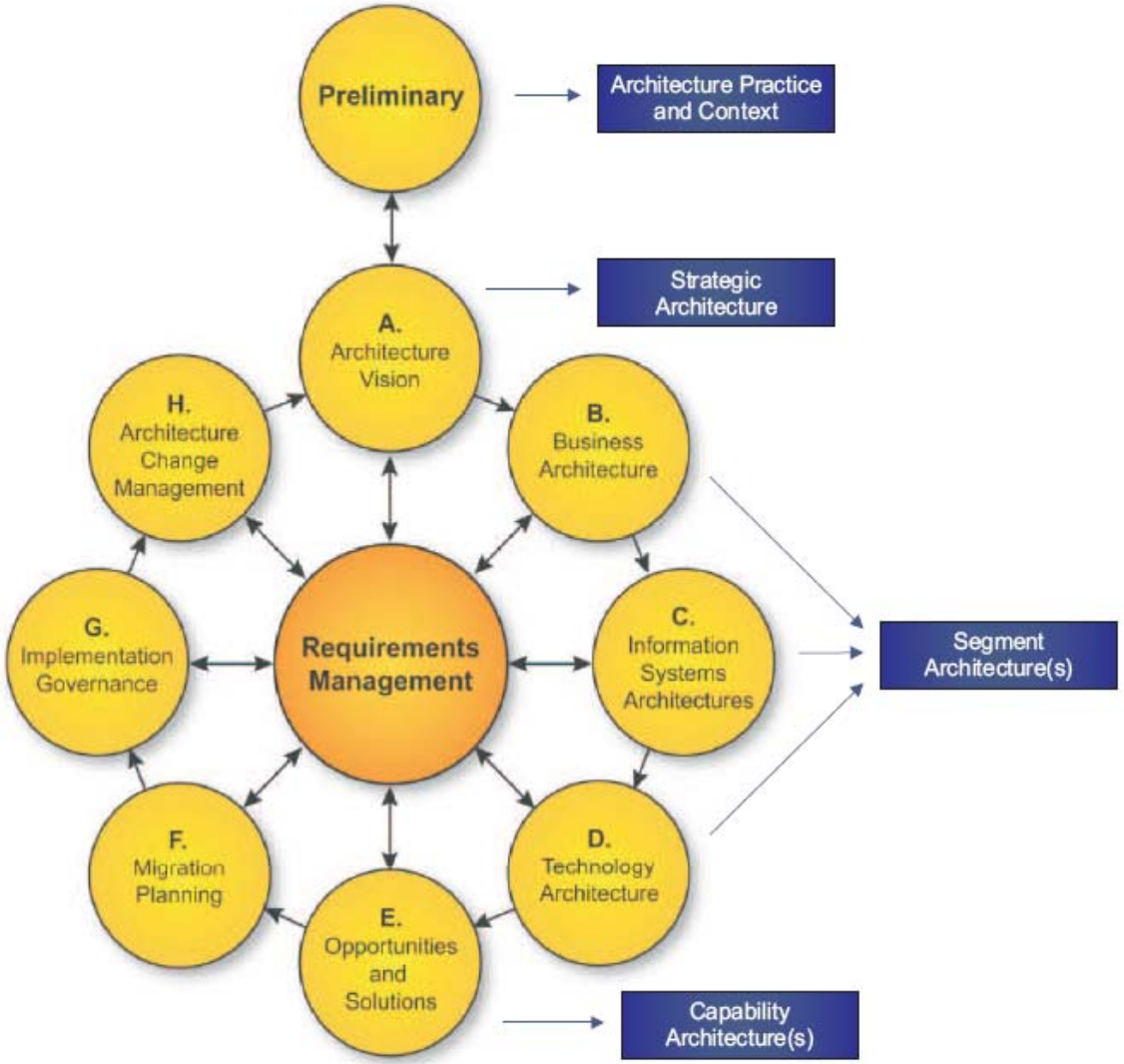
Figure 20-1 Summary Classification Model for Architecture Landscapes

- In most organizations one architecture will not work
- Need to partition and collaborate

Enterprise Architecture - Integration



Partitioning in a Single ADM Cycle



- good when a number of architectures are being developed within a similar time period by a single team.

BUILD THE VISION

BUSINESS TRANSFORMATION

BUILD THE VISION

Business Transformation Readiness Assessment

- Used for evaluating and quantifying an organization's readiness to undergo change
- A joint effort between corporate (especially human resources) staff, lines of business, and IT planners.
- Recommended activities (Canadian Government Business Transformation Enablement Program) are:
  1. Determine the readiness factors that will impact the organization
  2. Present the readiness factors using maturity models
  3. Assess the readiness factors, including determination of readiness factor ratings
  4. Assess the risks for each readiness factor and identify improvement actions to mitigate the risk
  5. Work these actions into Phase E and F Implementation and Migration Plan

Determine Readiness Factors

- Determine factors that will impact on the business transformation associated with the migration from the Baseline to Target Architectures.
- Use a facilitated workshop with all stakeholders
- Sample Factors (From Canadian Government) include:
  - **Vision**
  - **Desire , Willingness, and Resolve**
  - **Need**
  - **Business Case**
  - **Funding**
  - **Sponsorship and Leadership**
  - **Governance**
  - **Accountability**
  - **Workable Approach and Execution Model**
  - **IT Capacity to Execute**
  - **Enterprise Capacity to Execute**
  - **Enterprise Ability to Implement and Operate**

Present Readiness Factors

Business Transformation Readiness Assessment - Maturity Model					
Factor 2: Need for Enterprise Information Architecture			**Class**	Organizational Context	
			BTEP Readiness Factor	YES	
Definition	There is recognition by the organization that information is a strategic corporate asset requiring stewardship. There is also recognition that the data is not universally understandable, of requisite quality, and accessible.				
Maturity Model Levels					
0 Not defined	**1 Ad Hoc**	**2 Repeatable**	**3 Defined**	**4 Managed**	**5 Optimized**
Information is not recognized as an asset. There is no clear stewardship of data.	Data Management (DM) concepts are intuitively understood and practiced on an *ad hoc* basis. Stewardship of the data is informal. Data is recognized by certain internal experts and senior management as being of strategic importance to the organization. Focus is primarily on technically managing redundant data at the applications level.	Many parts of the organization value information/data as a strategic asset. Internal DM experts maintain clear lines of responsibility and stewardship of the data, organized along lines of business and at all senior levels. Staff put into practice DM principles and standards in their daily activities.	Data is recognized as a strategic asset in most parts of the organization, and throughout most levels from operations to senior management. Resources are committed to ensuring strong stewardship of data at the lower management and information expert levels.	Data is recognized as a strategic asset in all parts of the organization, and throughout most levels from operations to senior management. Resources are committed to ensuring strong stewardship of data at the senior management and information expert levels.	Data is treated in all levels throughout the organization as a strategic asset to be exploited and re-used. Data products and services are strongly integrated with the management practice of the organization. All staff are empowered and equipped to take stewardship of information, and are seen as "knowledge workers".
				Recommended Target State	

Assess Readiness Factors 2

Business Factor Assessment Summary				
Ser	**Readiness Factor**	**Urgency**	**Readiness Status**	**Degree of Difficulty to Fix**
1	Vision			
2	Desire/willingness/resolve			
3	Need			
4	Business case			
5	Funding			
6	Sponsorship and leadership			
7	Governance			
8	Accountability			
9	Workable approach and execution model			
10	IT capacity to execute			
11	Departmental capacity to execute			
12	Ability to implement and operate			

Readiness and Migration Planning

- Assessment provides a realistic assessment of the organization
- Key input into the strategic migration planning that will be initiated in Phase E and completed in Phase F.
- If business transformation actions are on architecture vision's critical path and, if so, determine how they will impact implementation.
  - No point deploying new capability without employees trained to use it and support staff ready to sustain it.
- Readiness factors will have to be continuously monitored (Phase G)
- Readiness factors assessment will be a living document and during the migration planning and execution of the Transition Architectures

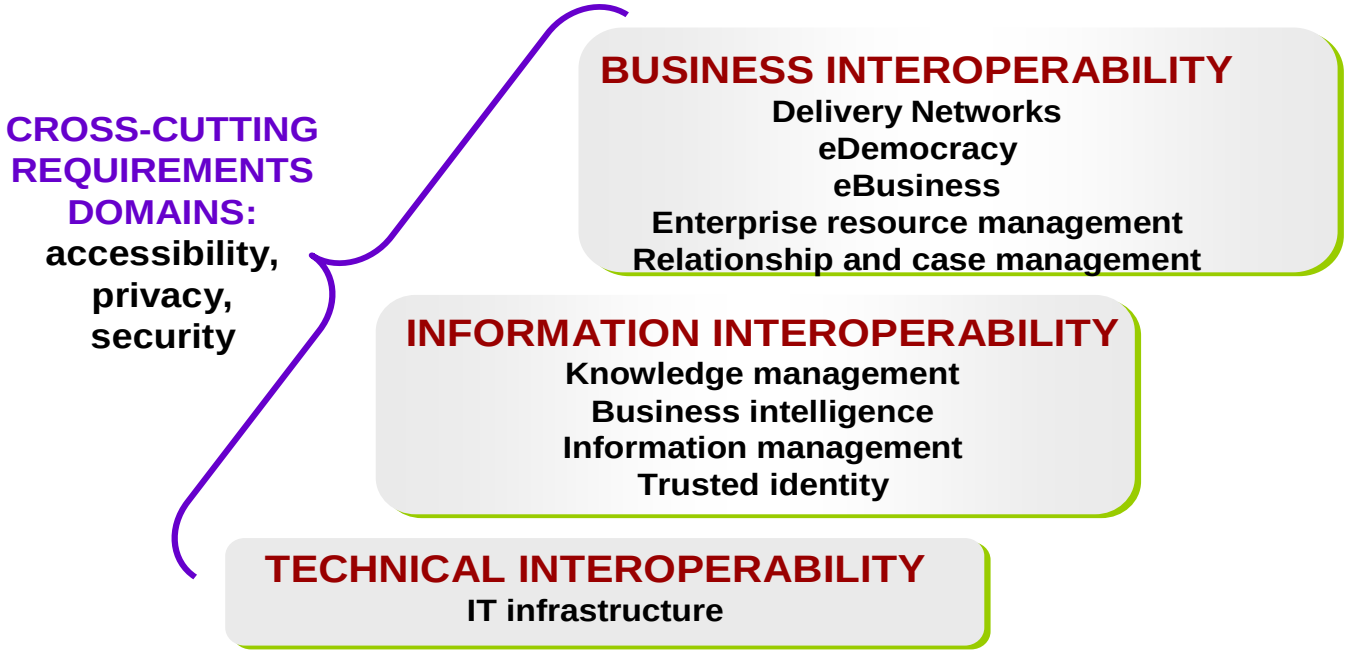
BUILD THE VISION

INTEROPERABILITY

BUILD THE VISION

Definitions of Interoperability

Core Enablers and Key Requirements Domains



Refining Interoperability - Example

Degrees of Interoperability

- **Degree 1: Unstructured Data Exchange**
- **Degree 2: Structured Data Exchange**
- **Degree 3: Seamless Sharing of Data**
- **Degree 4: Seamless Sharing of Information**

These degrees should be further refined e.g. refinement of degree 3 follows:

- 3A: Formal Message Exchange
- 3B: Common Data Exchange
- 3C: Complete Data Exchange
- 3D: Real-time Data Exchange

Determining Interoperability Requirements

Phase B: Inter-stakeholder Information Interoperability Requirements (Using degrees of information interoperability)							
Stakeholders	A	B	C	D	E	F	G
A		2	3	2	3	3	3
B	2		3	2	3	2	2
C	3	3		2	2	2	3
D	2	2	2		3	3	3
E	4	4	2	3		3	3
F	4	4	2				
G	2	2	3				

Stakeholders

Figure 29-1 Business Informati

Phase C: Inter-system Interoperability Requirements							
	System A	System B	System C	System D	System E	System F	System G
System A		2A	3D	2B	3A	3A	3B
System B	2E		3F	2C	3A	2B	2C
System C	3E	3F		2B	2A	2A	3B
System D	2B	2B	2B		3A	3A	3B
System E	4A	4B	2B	3A		3B	3B
System F	4A	4A	2B	3B	3A		2D
System G	2B	2B	3A	3A	3B	3B	

Information Systems

Figure 29-2 Information Systems Interoperability Matrix

TOGAF 9
RISK MANAGEMENT

Risk – TOGAF 9 Support

- Always be risk
- Need to Identify, Address and track
- EA may identify the risks and mitigate certain ones
- There are two levels of risk that should be considered namely:
  - **Initial Level of Risk**
  - **Residual Level of Risk**
- The process for risk management is described in the following sections and consists of the following activities:
  - Risk Classification
  - Risk Identification
  - Initial Risk Assessment
  - Risk Mitigation and Residual Risk Assessment
  - Risk Monitoring

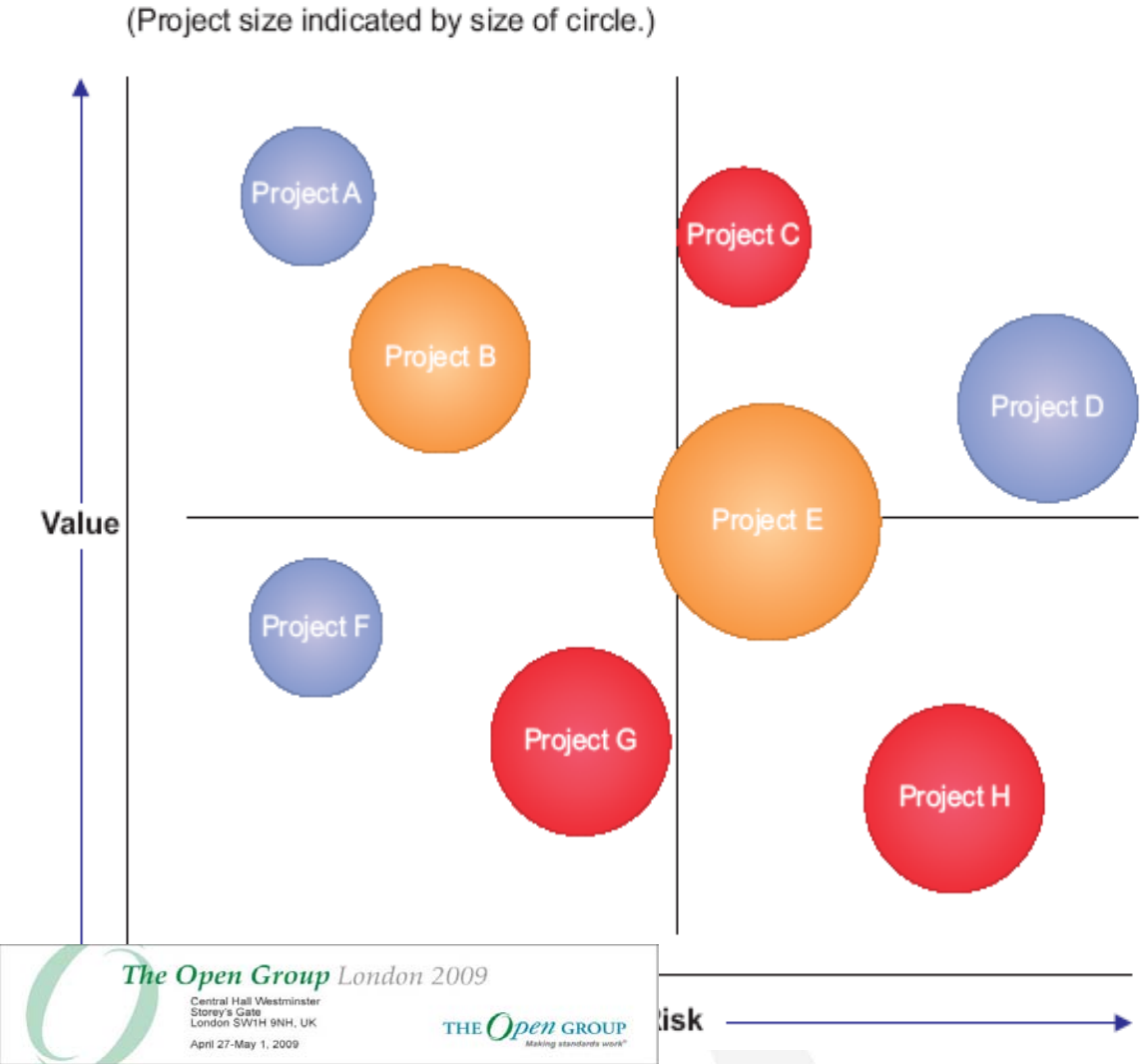
Risk Impact Assessment

Corporate Risk Impact Assessment					
Effect	Frequency				
	Frequent	Likely	Occasional	Seldom	Unlikely
Catastrophic	E	E	H	H	M
Critical	E	H	H	M	L
Marginal	H	M	M	L	L
Negligible	M	L	L	L	L

Risk Identification and Mitigation Assessment Worksheet

Risk ID	Risk	Preliminary Risk			Mitigation	Residual Risk		
		Effect	Freq	Impact		Effect	Freq	Impact

Migration Planning - Business Value Assessment Technique



Capability Based Planning Based on Capability Increments i.e. Business Value

Value criteria such as

1. compliance to principles,
2. financial contribution,
3. strategic alignment, and
4. competitive position.

Risk criteria such as

1. size and complexity,
2. technology,
3. organizational capacity, and
4. impact of a failure.

Each criterion should weighted.

BUILD THE VISION

Managing the Transformation Portfolio

Project A

Project B

Project C

Project D

Project E

Project F

Project G

Project H

Value

Risk

On target

At Risk

In Trouble

BUILD THE VISION

TOGAF 9 - MIGRATION PLANNING TECHNIQUES

Migration Planning - **Implementation Factor Assessment and Deduction Matrix**

The deductions are the basis for detailed design and planning requirements !!!

Implementation Factor Assessment and Deduction Matrix		
Factor	**Description**	**Deduction**
<Name of Factor>	<Description of Factor>	<Impact on Migration Plan>
Change in Technology	Shut down the message centers, saving 700 personnel, and have them replaced by email.	• Need for personnel training, re-assignment • Email has major personnel savings and should be given priority
Consolidation of Services		
Introduction of New Customer Service		

Figure 28-1 Implementation Factor Assessment and Deduction Matrix

Migration Planning - Consolidated Gaps, Solutions, and Dependencies Matrix

Integrates all of the Gap Analysis and Potential Solutions

Consolidated Gaps, Solutions, and Dependencies Matrix				
No.	**Architecture**	**Gap**	**Potential Solutions**	**Dependencies**
1	Business	New Order Processing Process	Use COTS software tool process Implement custom solution	Drives applications (2)
2	Application	New Order Processing Application	COTS software tool X Develop in-house	
3	Information	Consolidated Customer Information Base	Use COTS customer base Develop customer data mart	

Figure 28-2 Consolidated Gaps, Solutions, and Dependencies Matrix

Migration Planning - Architecture Definition Increments Table

Allows the architect to plan a series of Transition Architectures outlining the status of the project objectives at specified times.

Architecture Definition - Project Objectives by Increment (Example Only)				
Project	April 2007/2008	April 2008/2009	April 2009/2010	Comments
	Transition Architecture 1: Preparation	Transition Architecture 2: Initial Operational Capability	Transition Architecture 3: Benefits	
Enterprise e-Services Capability	Training and Business Process	e-Licensing Capability	e-Employment Benefits	
IT e-Forms	Design and Build			
IT e-Information Environment	Design and Build Information Environment	Client Common Data Web Content Design and Build	Enterprise Common Data Component Management Design and Build	
. . .	. . .	. . .	. . .	. . .

Figure 28-3 Architecture Definition Increments Table

Describing the Architectural State using the Technical/Service Reference Model

Architectural State Using the Service Reference Model				
Sub-Domain	***Service***	***Transition Arch 1***	***Transition Arch 2***	***Transition Arch 3***
Infrastructure Applications	Information Exchange Services	**Solution System A**	**Solution System B-1**	**Solution B-2 (Complete)**
	Data Management Services	**Solution System D**	**Solution System D**	**Solution System D**
…	…			

Summary

- Realizing Architecture is difficult BUT crucial for credibility
  - 10 years developing a Framework is not effective
- Enterprise Architects have to work in context
  - Implementation is a collaborative effort
- TOGAF 9 provides some solid advice and best practices to realize the architecture
  - Addresses small, medium and large companies
  - Pragmatic approach
  - Requirement of “soft” skills