



The Open Group Conference Toronto

23rd Enterprise Architecture Practitioners Conference

Toronto Marriott Downtown Eaton Centre
525 Bay Street, Toronto
Ontario, Canada
July 20-22, 2009

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TOGAF 9 ENTERPRISE ARCHITECTURE (EA) SUPPORT TO BUSINESS TRANSFORMATION

Presented By:

Mr. Robert (Bob) Weisman MSc, PEng, PMP, CD
CEO/Principal Consultant, Build The Vision Inc.

Robert.weisman@buildthevision.ca

www.buildthevision.ca

Agenda

- Business Transformation – The Issues
- Where Does Enterprise Architecture (EA) fit in
 - The Value Chain
- TOGAF 9 features to help Business Transformation
- Concluding Material



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Business Transformation

- Transformation is hard
 - Not to be embarked upon lightly
- Transformation is needed
 - Often quickly
- Transformation can be expensive
 - Cost Control and Business Value
- Transformation often fails
 - Companies stagger, and often collapse



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Whither EA and TOGAF 9.0

- Often a Vision
 - Integrated Service Delivery to Citizens
 - Comprehensive satisfaction of clients' energy needs

A Vision without resources is a hallucination

- Resources require justification in terms of a plan and business value
 - To shareholders
 - To Employees – your transformation maybe their raise, their pension or their job !!!



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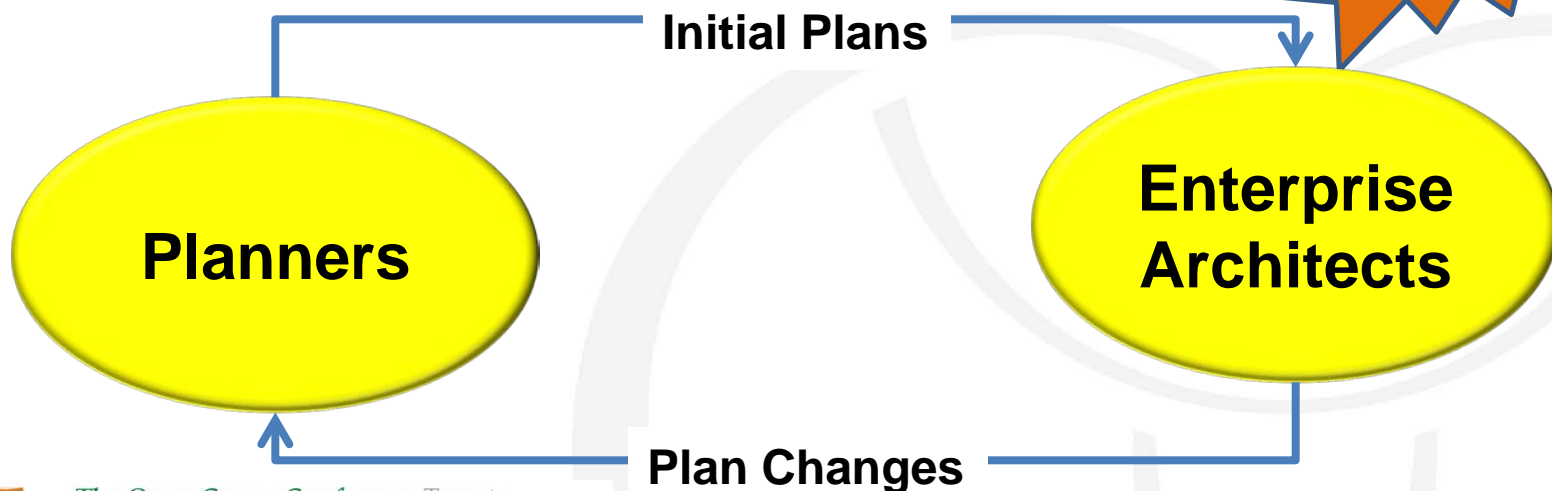
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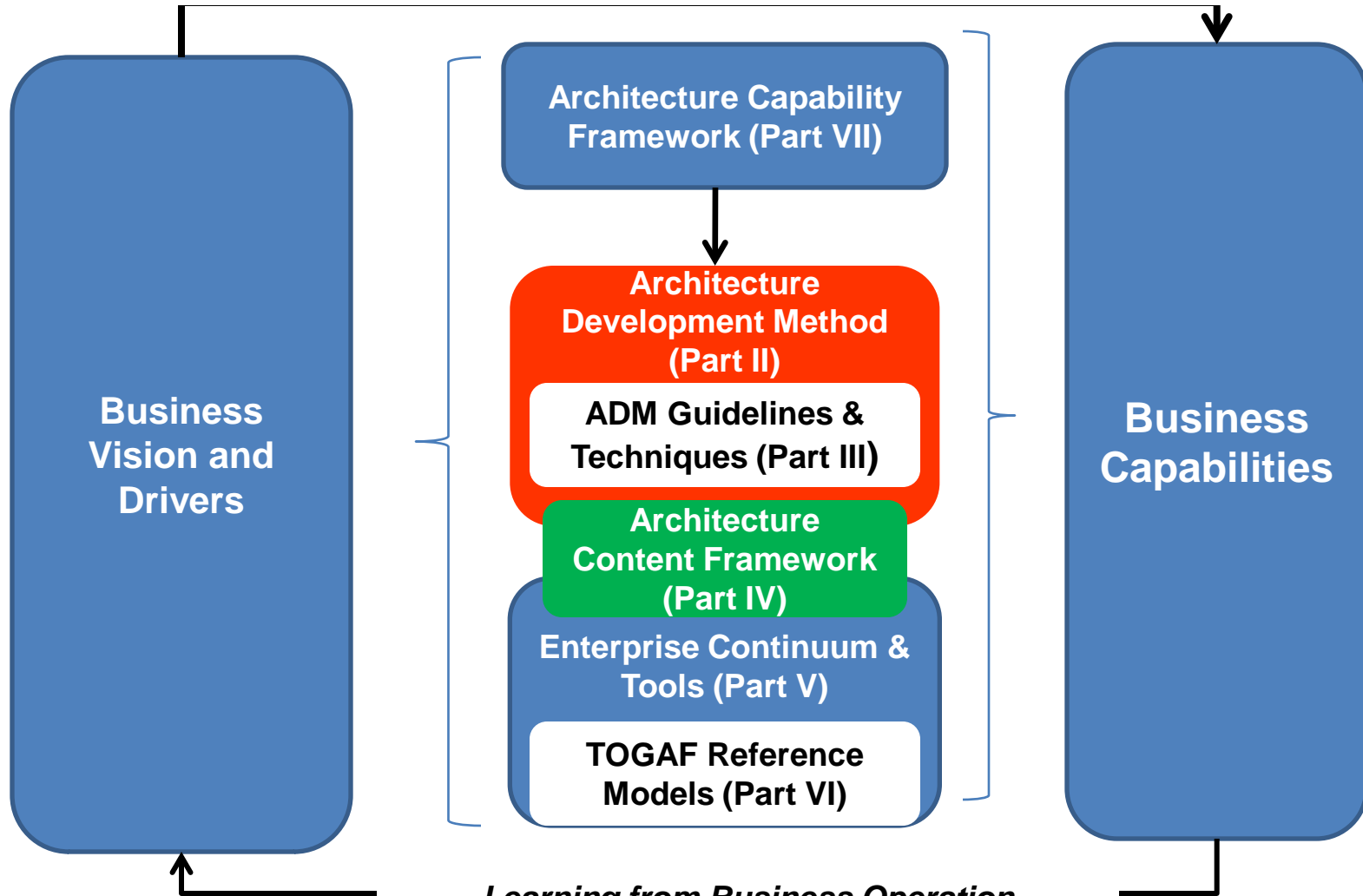
EA Provides Structure

- EA is rigorous
 - Vision and Goals are driven down into high level implementation details
- EA verifies that the plan is actionable
 - Provides useful recommendations
 - A useful adjunct to planning



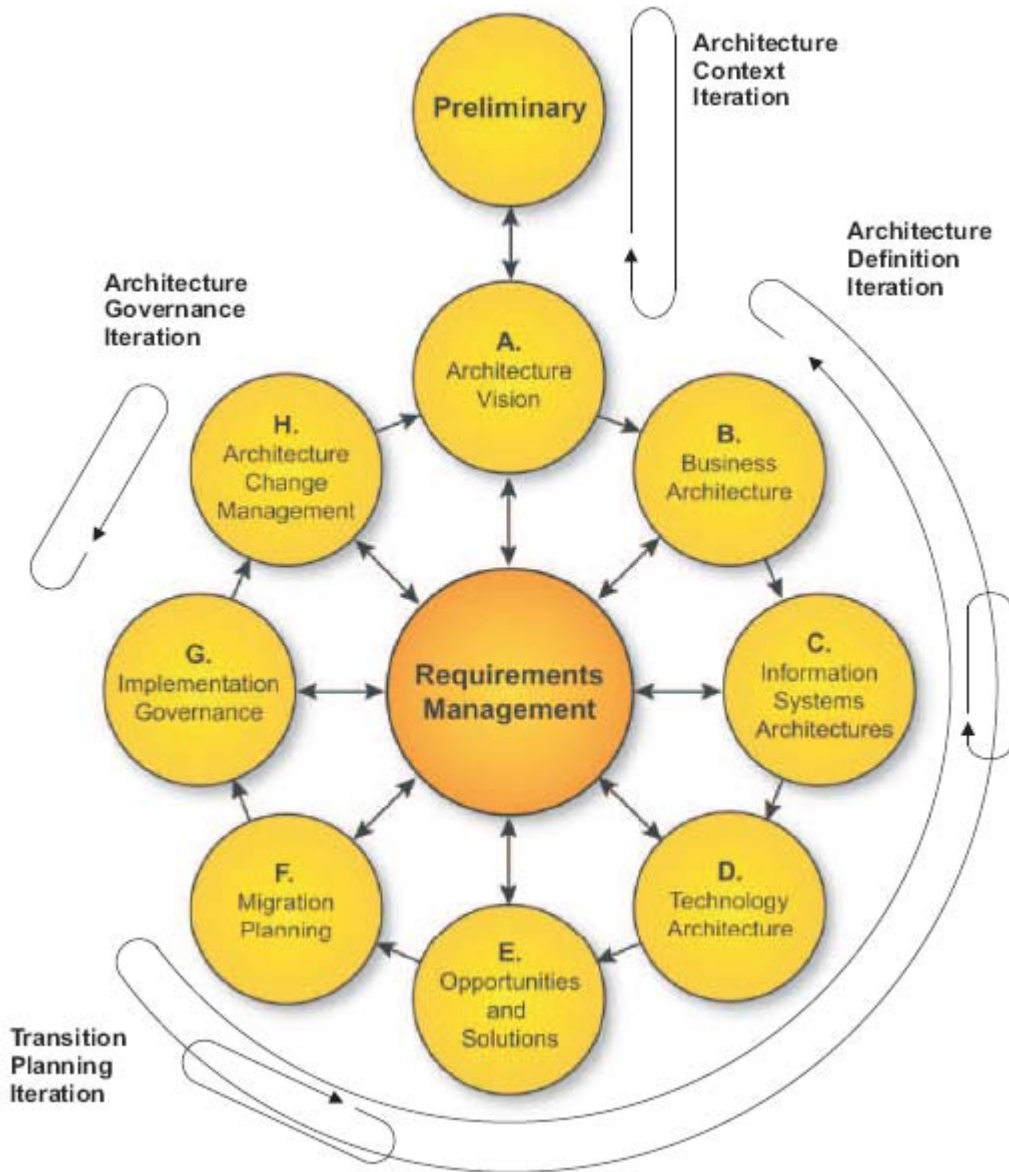
TOGAF Version 9 – Enterprise Edition

Needs of the business shape non-architectural aspects of business operations



Learning from Business Operation creates new business need

Iteration Cycles

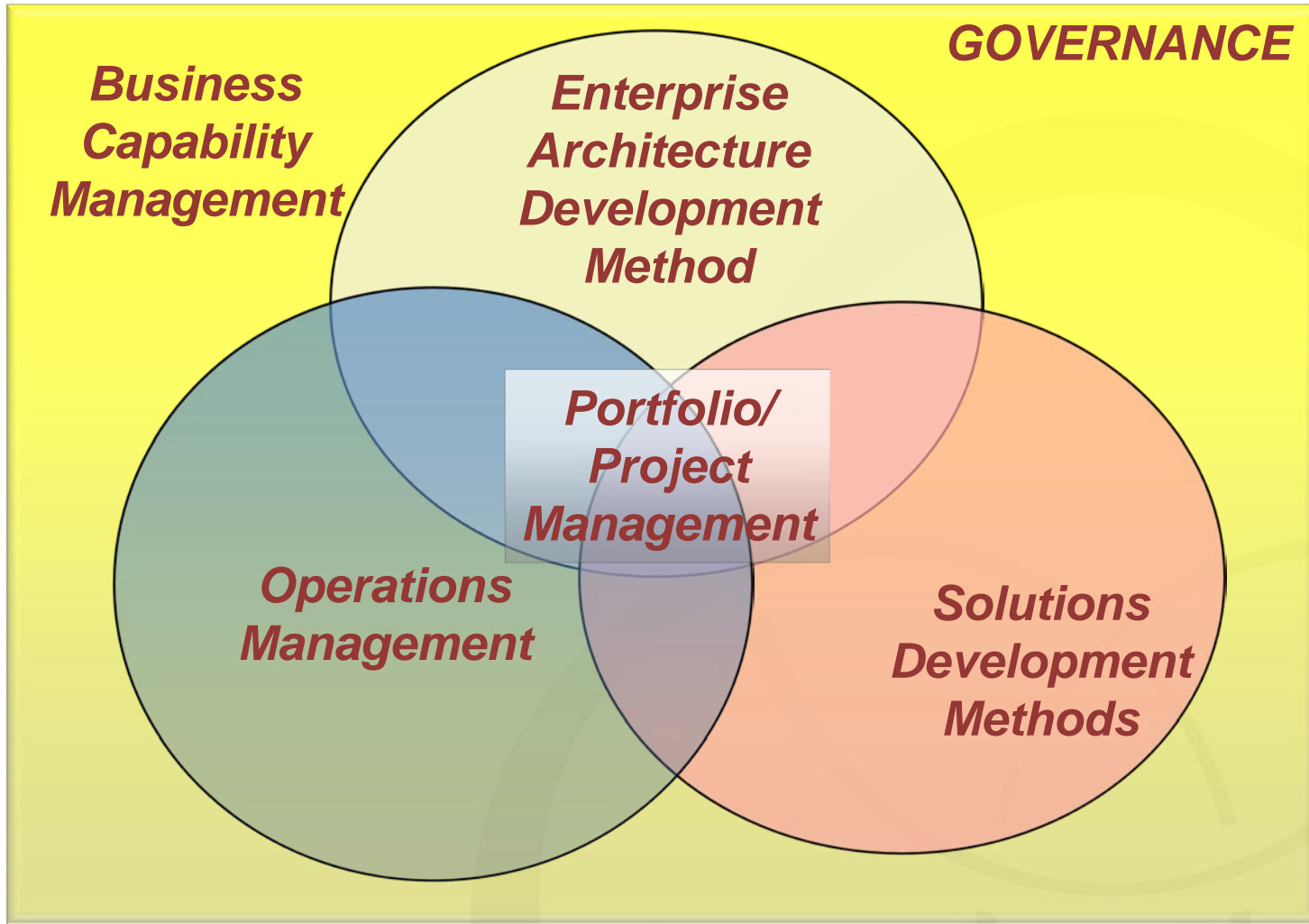


1. Architecture Context iterations
2. Architecture Definition iterations
3. Transition Planning iterations.
4. Architecture Governance iterations

Architecture Definition Styles

1. Baseline First
2. Target First

Enterprise Architecture Works in Concert with the Management Frameworks



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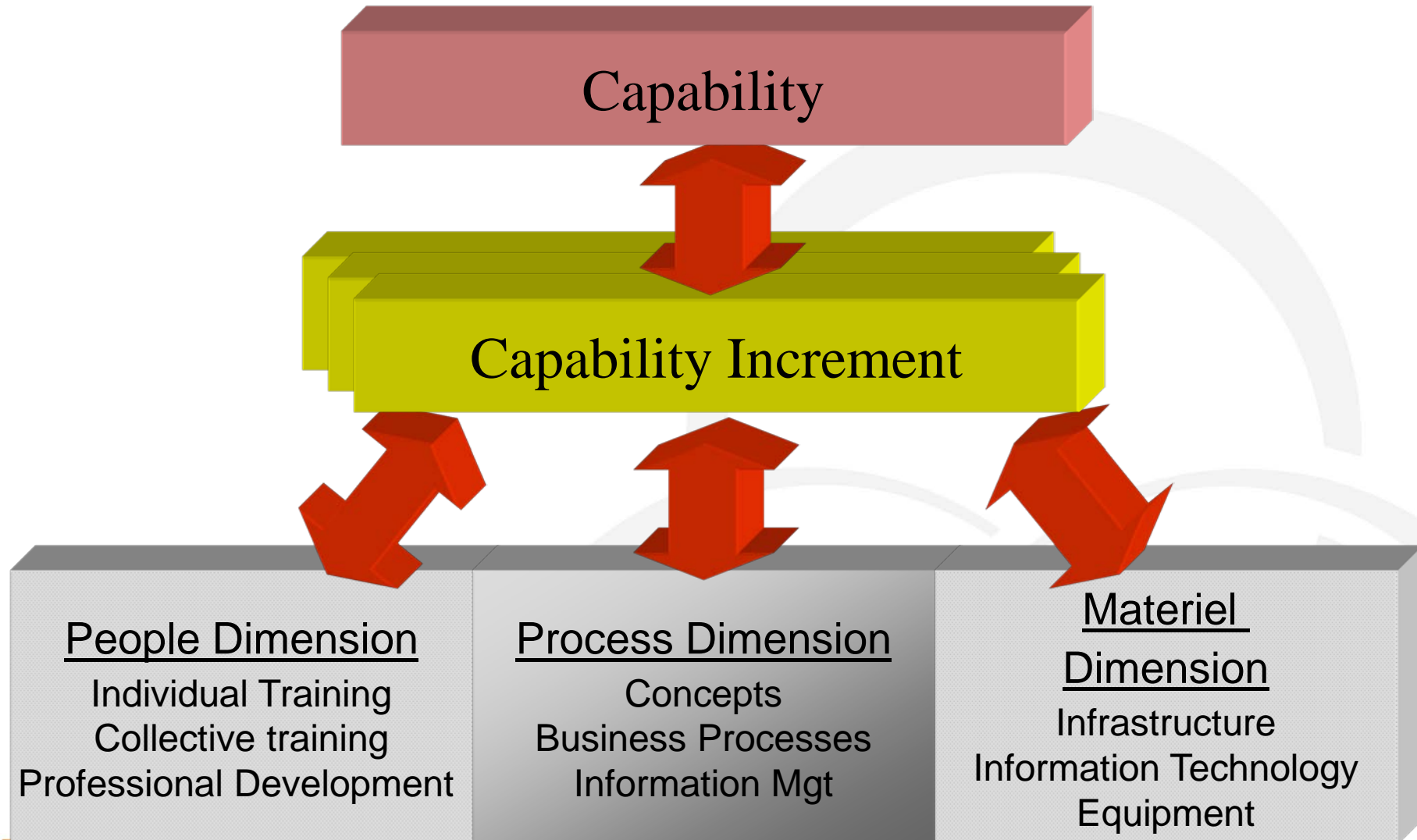
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Slide 10

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Capability Concept



Illustrating Vision – The Business Scenario

- TOGAF 9 Business Scenario focus is on how to innovate
 - Demonstrates visionary potential
 - Often uses smoke and mirrors but is effective in instilling enthusiasm
 - “Show me”
 - Stakeholders have a chance to contribute
 - More than just a high-level system-oriented use case
 - Do things more effectively as an organization
 - Examine evolutionary and revolutionary change



EA is End-To-End

- Strategic Plans often
 - Do not stand-up to scrutiny
 - Often bottom-up “Staple Management”
- TOGAF 9 EA drives the vision from concept to reality
 - Deep with many reality checks
 - Effective ones incorporate both top-down (Capital) and bottom-up (O&M) planning
 - Delivered in tiers to accommodate
 - Environment and Technology changes and innovations
 - Just enough detail (and volume) to allow directed initiative
- TOGAF 9 EA closely (intricately) coupled with business planning



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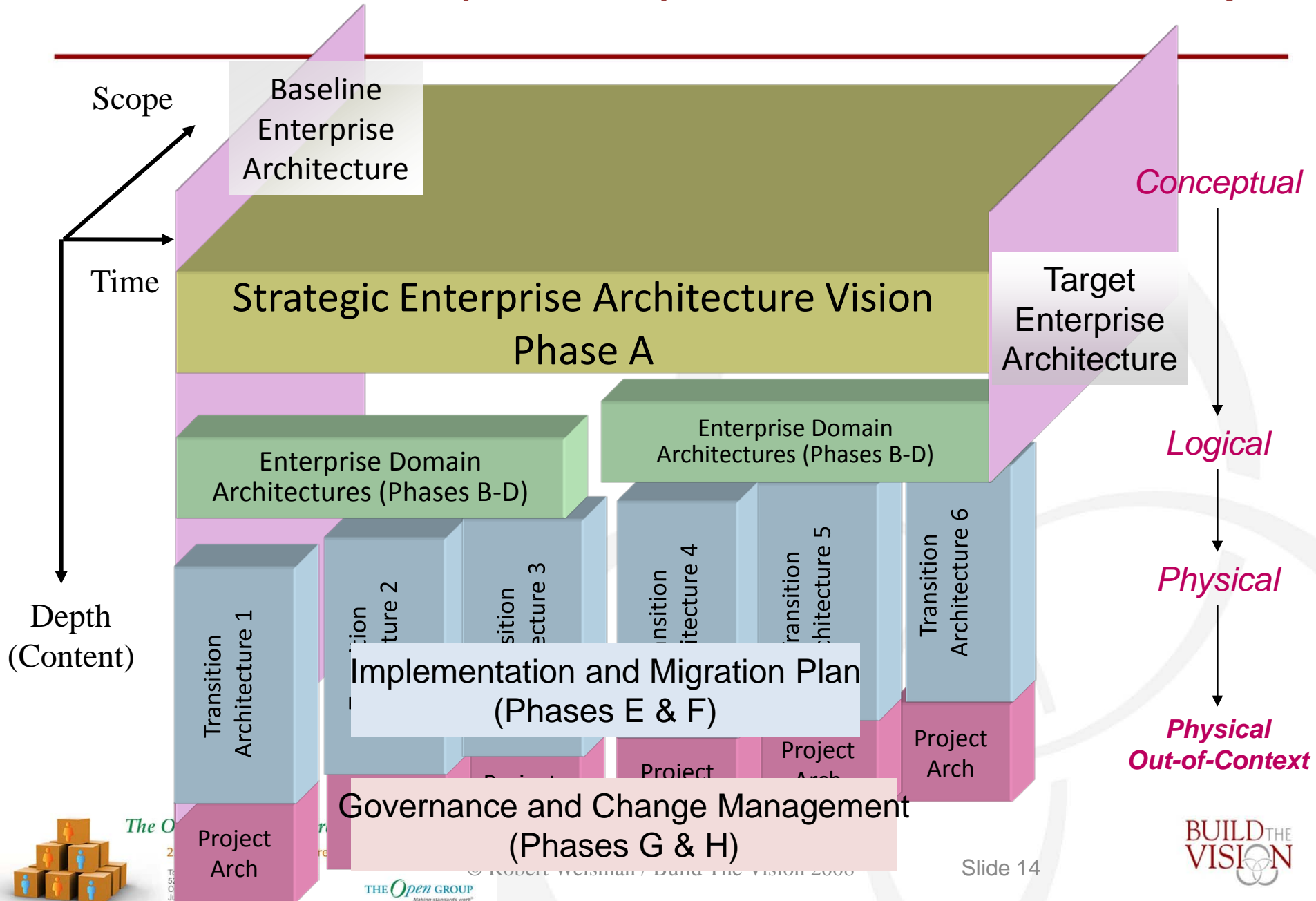
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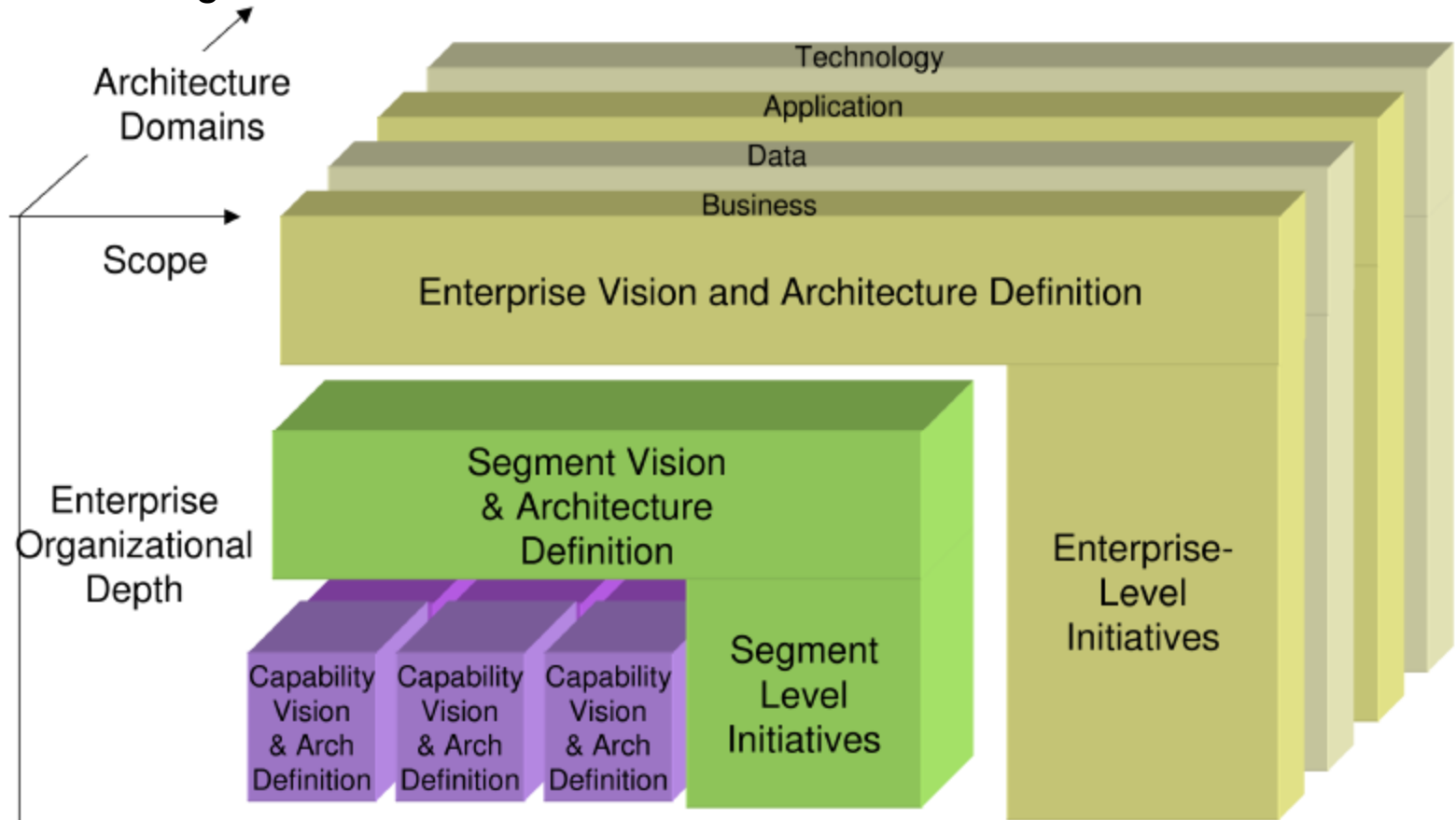
BUILD THE VISION

EA (TOGAF 9) - Architecture Relationships

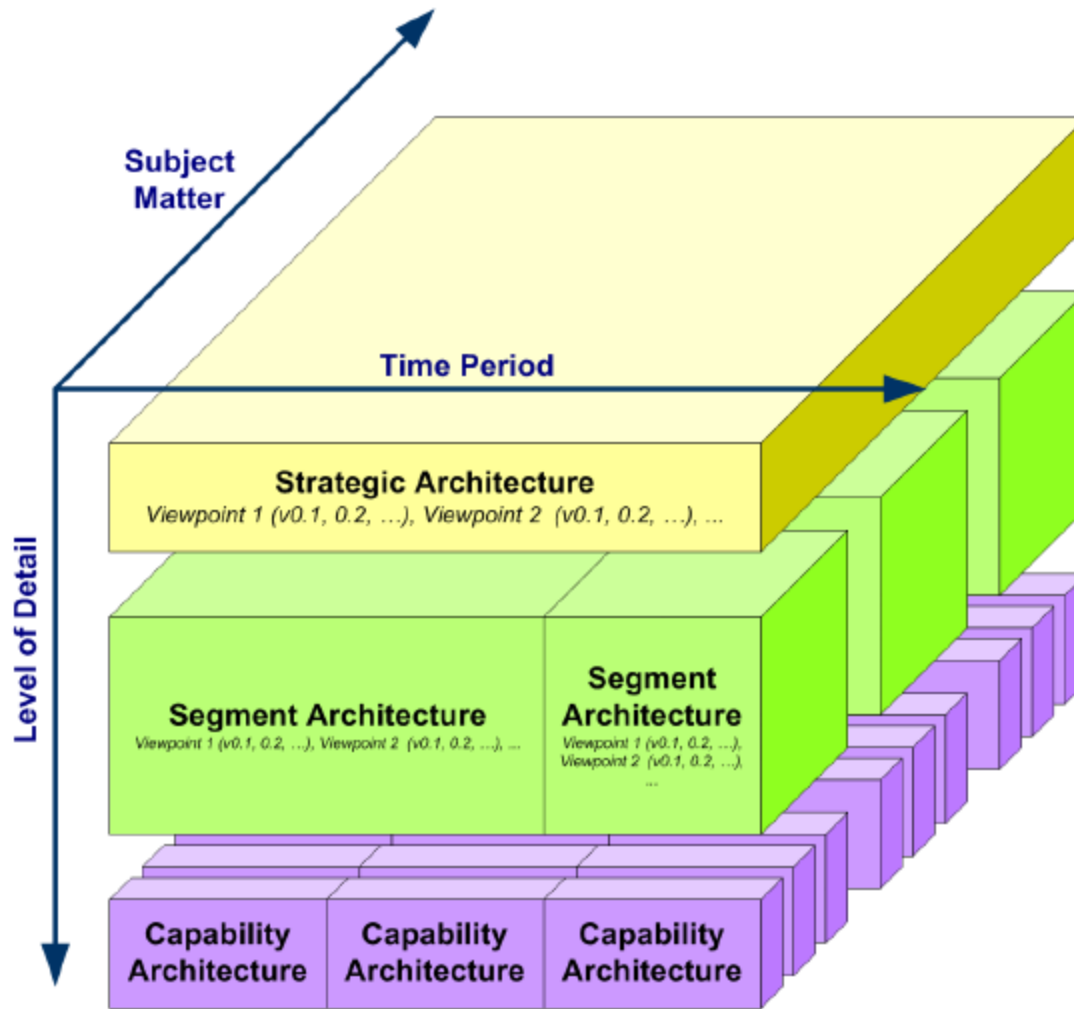


Enterprise Architectures Integration and Co-Existence

- Allow the architect to understand how components fit into the framework
- Derive the architectural models that focus on enterprise-level capabilities
- Define the conformance standards that enable the integration of components for maximum leverage and re-use



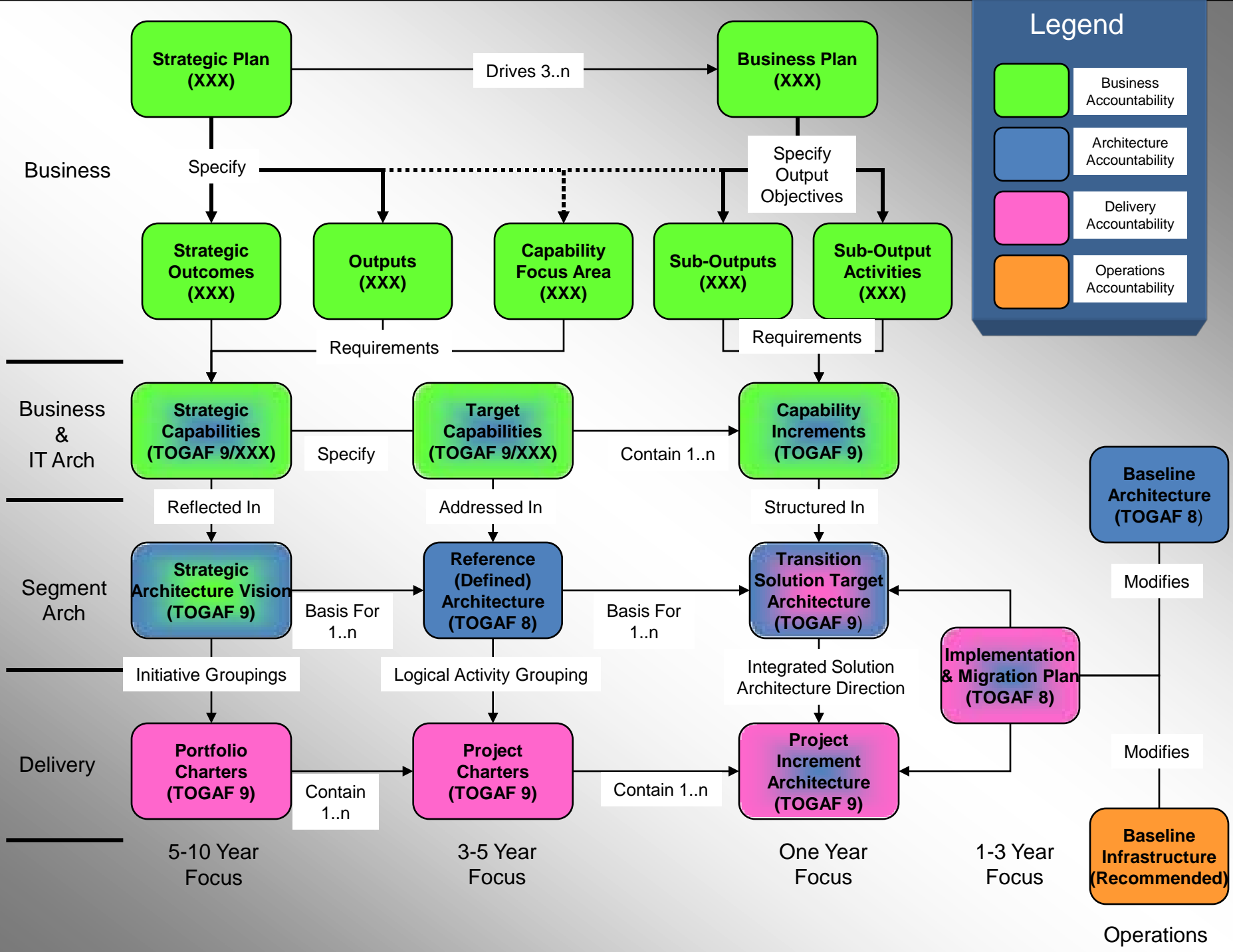
Partitioning



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

Figure 20-1 Summary Classification Model for Architecture Landscapes

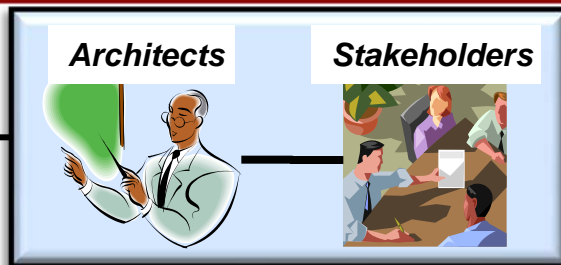




To-Be / As-Is	Monitor the Business Environment	Perform Unit Cost Model	Evaluate Conformance	Manage Non-Conformance	Develop & Maintain MOR Master Data	Perform Work Management	Process Payroll	Process Ad-hoc Payroll	Determine Bonus	Determine Production Bonus	Maintain Production Master Data	Plan Production	Adherence to Schedule	Reconcile Production Data	Eliminated
Monitor the Business Environment	No Change									Integration					
Perform Unit Cost Model		Execution Time								Integration					
Evaluate Conformance			No Change												
Manage Non-Conformance				Execution time						Integration					
Develop & Maintain MOR Master Data					No Change					Integration					
Perform Work Management						No Change				Integration					
Process Payroll							No Change			Integration					
Process Ad-hoc Payroll								More transactions		Integration					
Determine Bonus									Decrease in number of employees	Integration					
Maintain Production Master Data										New	No Change				
Plan Production										Integration		No Change			
Adherence to Schedule										Integration			No Change		
Reconcile Production Data										Integration				No Change	
New / Changed		Change cycle or decreases execution time		Change cycle or decreases execution time				Increased transaction volumes	Decreased transaction volumes	New Process & Significant Process Integration					

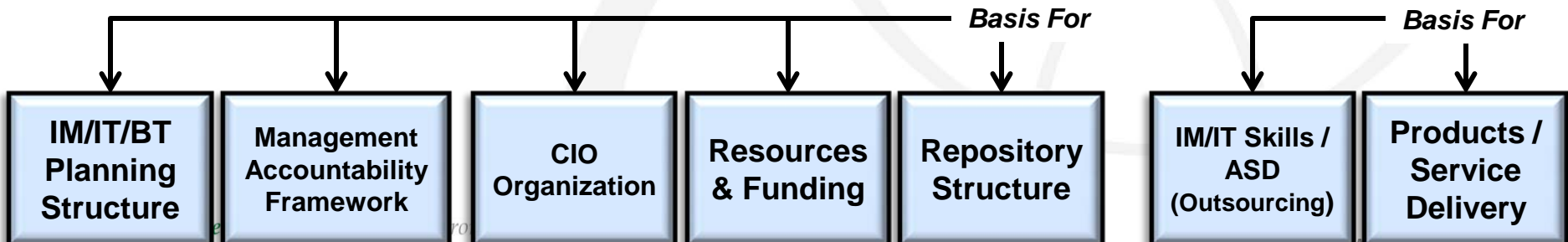
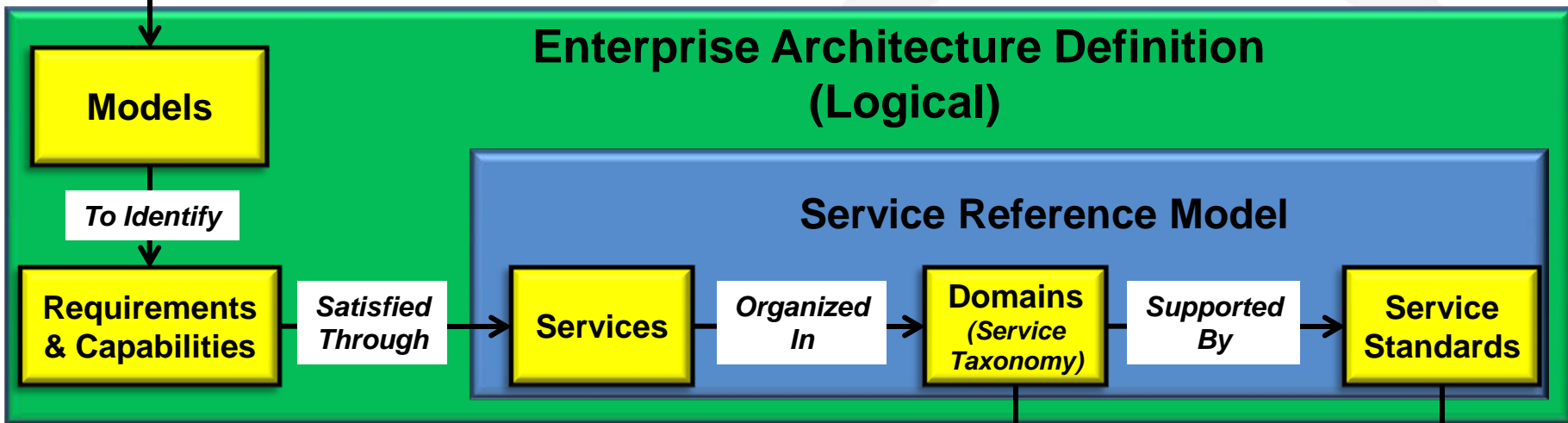
Architecture Definition & Service Reference Model

The Implications are not Trivial !!!

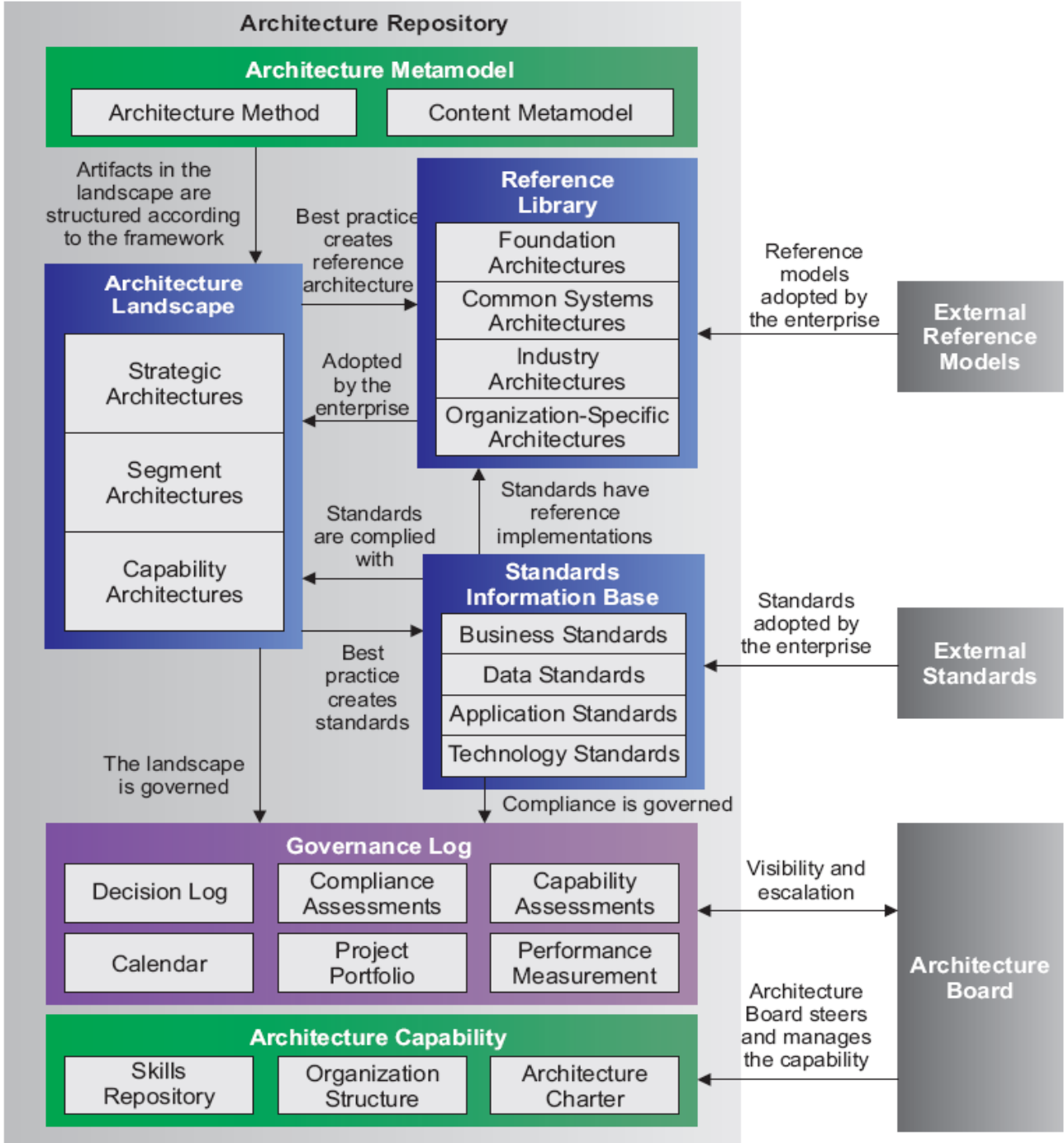


**Business is an
Architecture Domain !!**

*Specify Innovative
Intent Using*



Architecture Repository Overview





BUSINESS TRANSFORMATION READINESS AND CAPABILITY MATURITY

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 <i>ad hoc</i> 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			



Architecture Skills Framework

Categories of Skills

- **Generic Skills**
 - typically comprising leadership, teamwork, inter-personal skills, etc.
- **Business Skills and Methods**
 - business cases, business process, strategic planning, etc.
- **Enterprise Architecture Skills**
 - modeling, building block design, applications and role design, systems integration, etc.
- **Portfolio, Program or Project Management Skills**
 - managing business change, project management methods and tools, etc.
- **IT General Knowledge Skills**
 - brokering applications, asset management, migration planning, SLAs, etc.
- **Technical IT Skills**
 - software engineering, security, data interchange, data management, etc.
- **Legal Environment**
 - data protection laws, contract law, procurement law, fraud, etc.



Proficiency Levels

Level	Achievement	Description
1	Background	Not a required skill though should be able to define and manage skill if required.
2	Awareness	Understands the background issues, and implications sufficiently to be able to understand how to proceed further and advise clients accordingly.
3	Knowledge	Detailed knowledge of subject area and capable of providing professional advice and guidance. Ability to integrate capability into architecture design.
4	Expert	Extensive and substantial practical experience and applied knowledge on the subject.



Define Skill Levels for Roles

Generic Skills

Roles	Architecture Board Member	Architecture Sponsor	Enterprise Architecture Manager	Enterprise Architecture Technology	Enterprise Architecture Data	Enterprise Architecture Applications	Enterprise Architecture Business	Program/Project Manager	IT Designer
Generic Skills									
Leadership	4	4	4	3	3	3	3	4	1
Teamwork	3	3	4	4	4	4	4	4	2
Inter-personal	4	4	4	4	4	4	4	4	2
Oral Communications	3	3	4	4	4	4	4	4	2
Written Communications	3	3	4	4	4	4	4	3	3
Logical Analysis	2	2	4	4	4	4	4	3	3
Stakeholder Management	4	3	4	3	3	3	3	4	2
Risk Management	3	3	4	3	3	3	3	4	1





INTEROPERABILITY

Definitions of Interoperability

Core Enablers and Key Requirements Domains

**CROSS-CUTTING
REQUIREMENTS
DOMAINS:**
accessibility,
privacy,
security

BUSINESS INTEROPERABILITY

Delivery Networks
eDemocracy
eBusiness
Enterprise resource management
Relationship and case management

INFORMATION INTEROPERABILITY

Knowledge management
Business intelligence
Information management
Trusted identity

TECHNICAL INTEROPERABILITY

IT infrastructure



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**



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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 Information Interoperability Matrix

Information Systems

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	

Figure 29-2 Information Systems Interoperability Matrix



RISK MANAGEMENT

Risk Classification Scheme

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



Migration Planning - Business Value Assessment Technique

Capability Based Planning Based on Capability Increments

i.e. Business Value

Value criteria such as

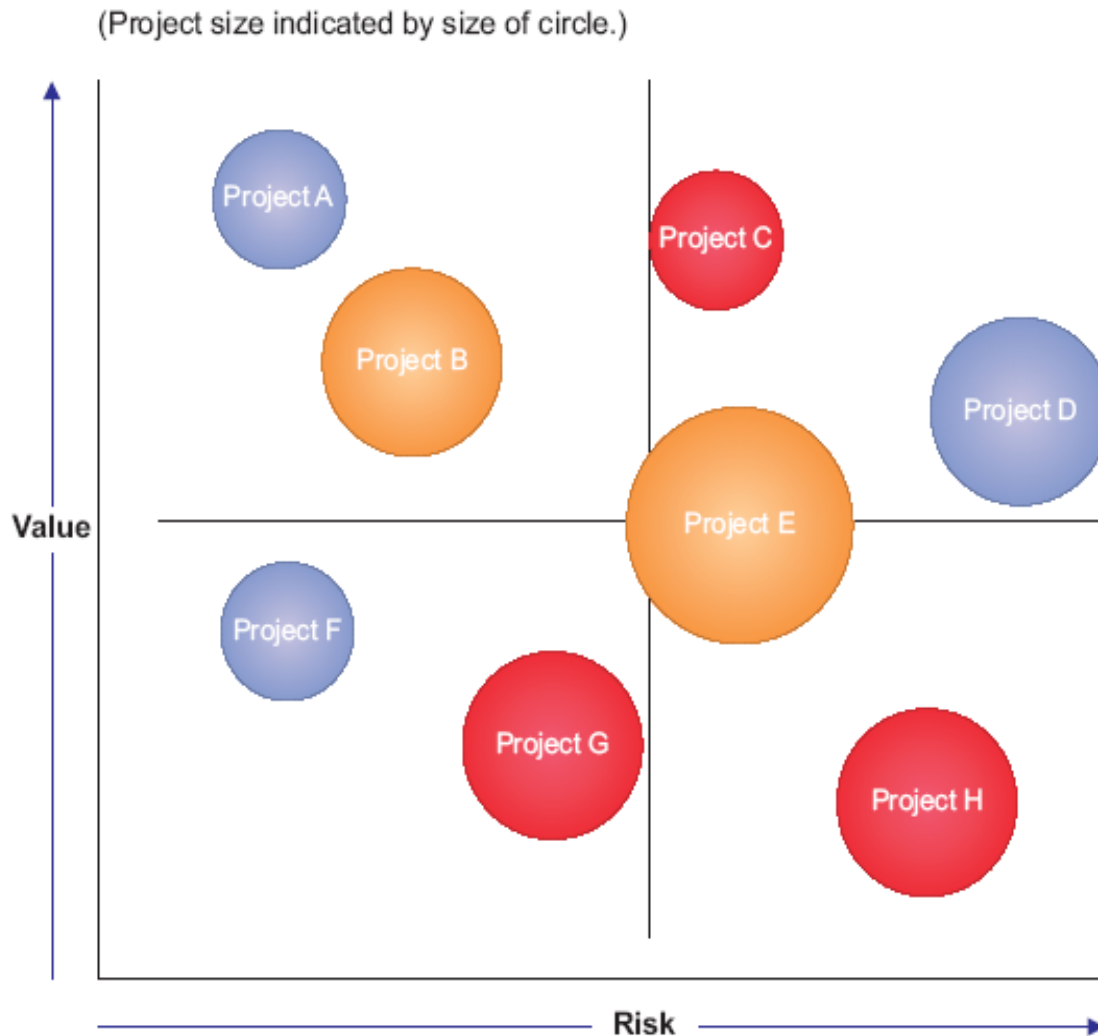
1. compliance to principles,
2. financial contribution,
3. strategic alignment, and
4. competitive position.

Risk criteria such as

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

Each criterion should be weighted.

- On target
- At risk
- In trouble





TOGAF 9 - MIGRATION PLANNING TECHNIQUES

Migration Planning - Architecture Definition Increments Table

Allows the architect to plan a series of Transition Architectures outlining the status of the project objectives

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				
<i>Sub-Domain</i>	<i>Service</i>	<i>Transition Arch 1</i>	<i>Transition Arch 2</i>	<i>Transition Arch 3</i>
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 AND CHALLENGES

Change Management – A Survey

- **Conference Board of Canada Survey** (70 Companies)
 - 82% Change Management as a Priority
 - 99% Increase in Change Management
 - HR Leaders – NO MENTION OF CIO at all
 - VP Strategy, Development, Planning second
 - **Key Competencies**
 - Effective communications
 - Building trust
 - Achieving collaboration
 - **Top Challenges**
 - People Issues
 - Organizational Resistance
 - Communication Weaknesses



Enterprise Architecture: The Strategic Tool for Innovation in Tough Times

QUESTIONS ?

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