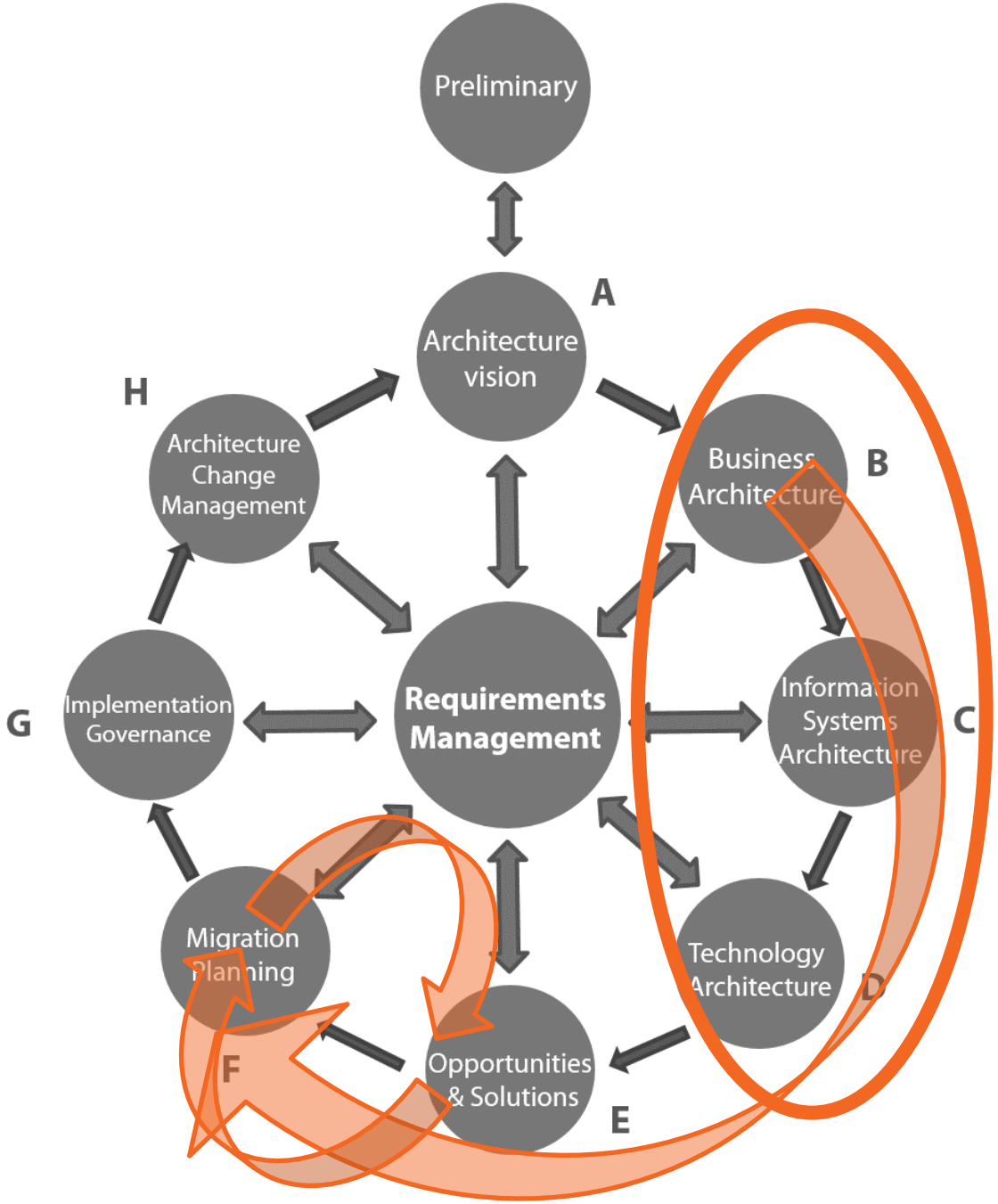
ADM – Architecture Development Iteration

Joseph Anthony

@ansolabs | www.ansolabs.net



Architecture Development Iteration

Technically it includes phases B to F, focussing on:

- Business Architecture
- Information Systems Architecture
- Technology Architecture
- Opportunities and Solutions
- Migration Planning

Phases E and F form part of "transition planning" iteration and will be covered in the next module

Objectives of Architecture Development Iteration

Objectives of Architecture Development Iteration

To emerge out of this iteration with a reasonably complete version of the architecture which can then be taken to implementation

Arriving at a pragmatic candidate roadmap to achieve identified target state architecture

Generic Approach – Architecture Development Iteration

Target and Baseline Architectures

Baseline Architecture– refers to the current / as-is state of architecture

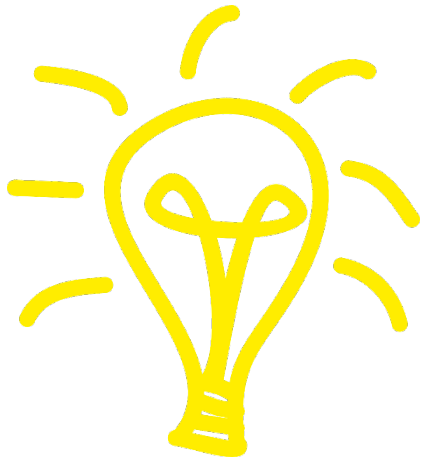
Target Architecture – refers to the future state that is aspired for

Baseline First Approach– An assessment of the baseline landscape is used to identify problem areas and improvements required

Use baseline first for incremental changes to existing architecture landscape

Target First Approach – Target solution is elaborated first and mapped back to the baseline

Use target first style to support transformational initiatives



Which approach to be used is a judgement call in the end

Both styles require baseline and target state architecture

Strategy Is a Key Input

Business strategy is typically formulated using business scenario techniques and identified business vision, drivers and stakeholder concerns

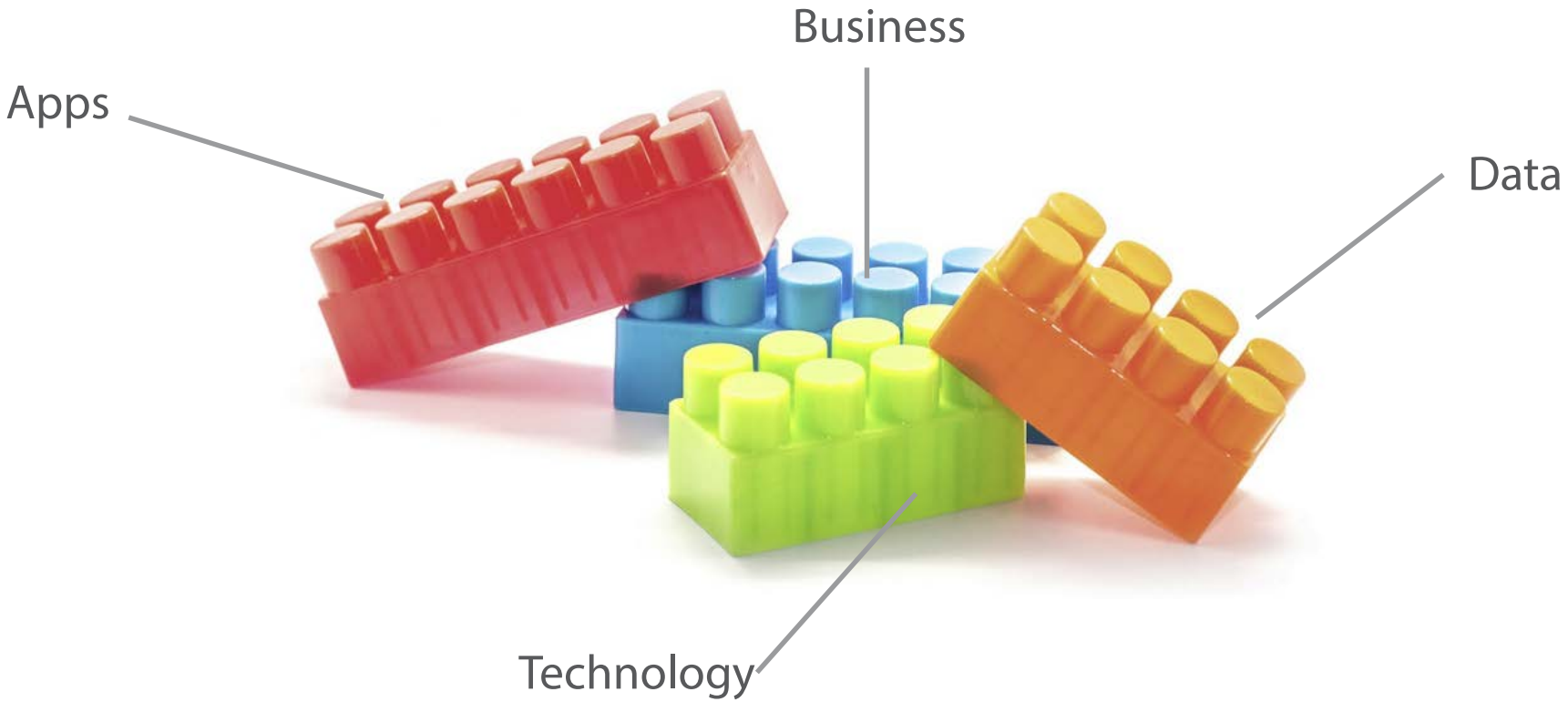
Along with strategy constraints imposed by existing architecture investments, viability, readiness and desirability aspects are key influencers as well

Architecture Building Blocks (ABB)

Both baseline and target state architectures are articulated using building blocks

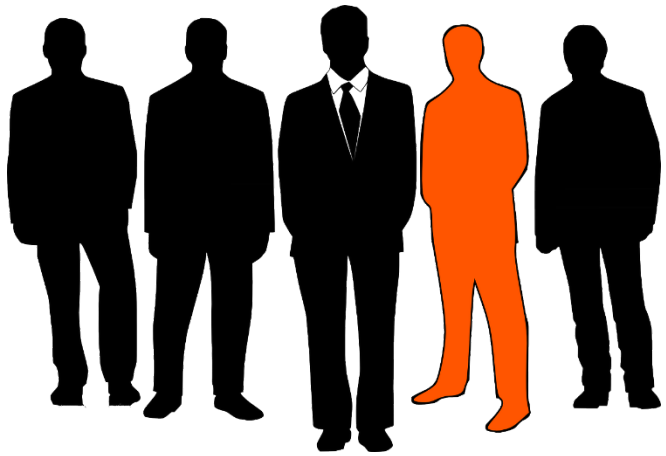
Building blocks are catalogued and are used in architecture models

Architecture Building Blocks (ABB)



An architecture building block is the term used to refer to a business or IT architecture component that is potentially reusable

Characteristics of ABBs



They can potentially have multiple implementations

There are potentially reusable

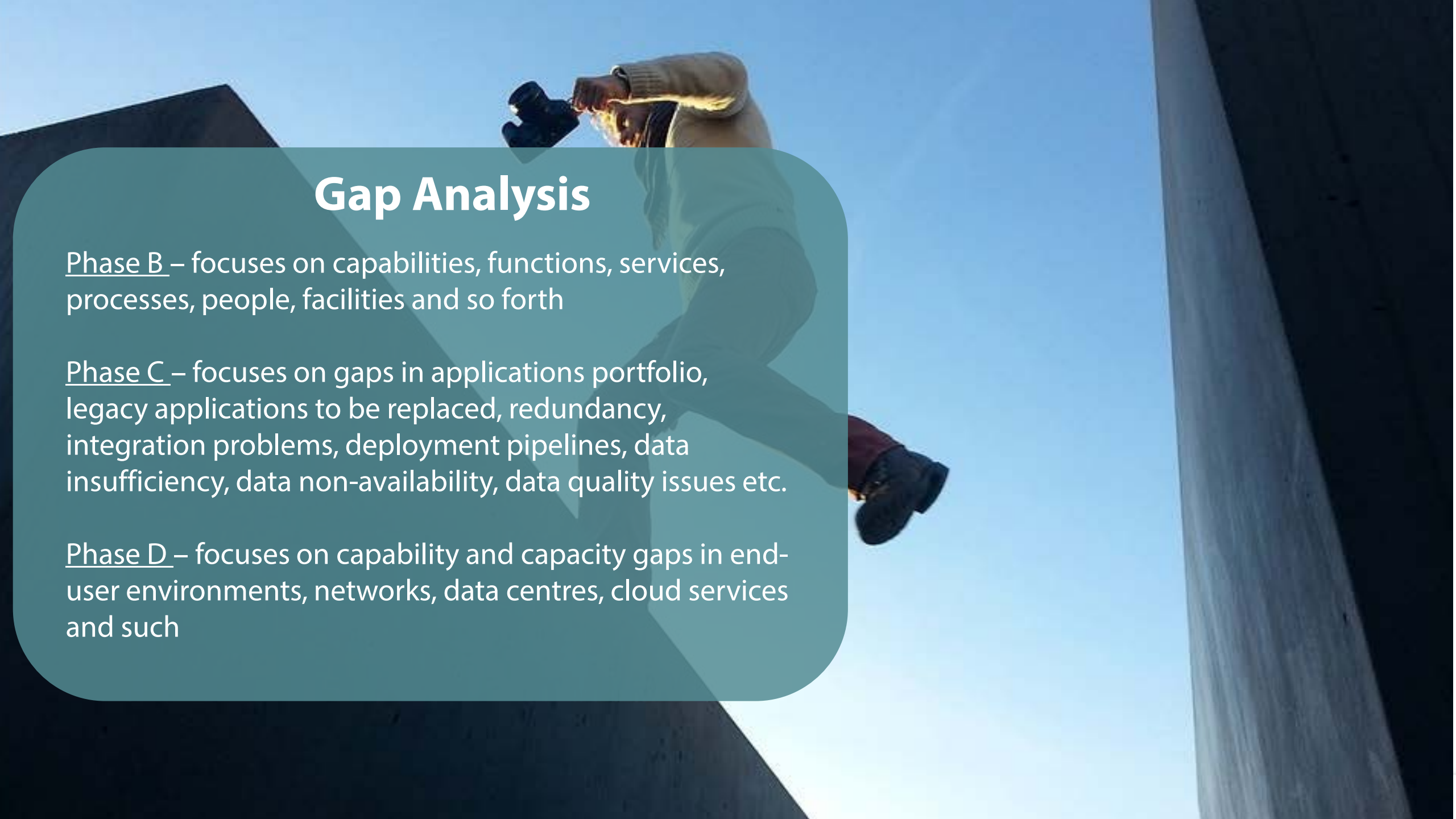
They can be assembled from other building blocks

They can form the sub-assemblies of larger building blocks

They can evolve over time

Order Management System

Business Building Blocks	Information Systems Building Blocks	Technology Building Blocks
Order Tracking	Master Data Services	Virtual Machines
Inventory View	Transactional Data Services	Storage Needs
Delivery Management	Analytical Data Services	Networking Segments
Auto Replenishment	Integration Brokers	Networking Components
. . .	. . .	. . .



Gap Analysis

Phase B – focuses on capabilities, functions, services, processes, people, facilities and so forth

Phase C – focuses on gaps in applications portfolio, legacy applications to be replaced, redundancy, integration problems, deployment pipelines, data insufficiency, data non-availability, data quality issues etc.

Phase D – focuses on capability and capacity gaps in end-user environments, networks, data centres, cloud services and such

Gap Analysis

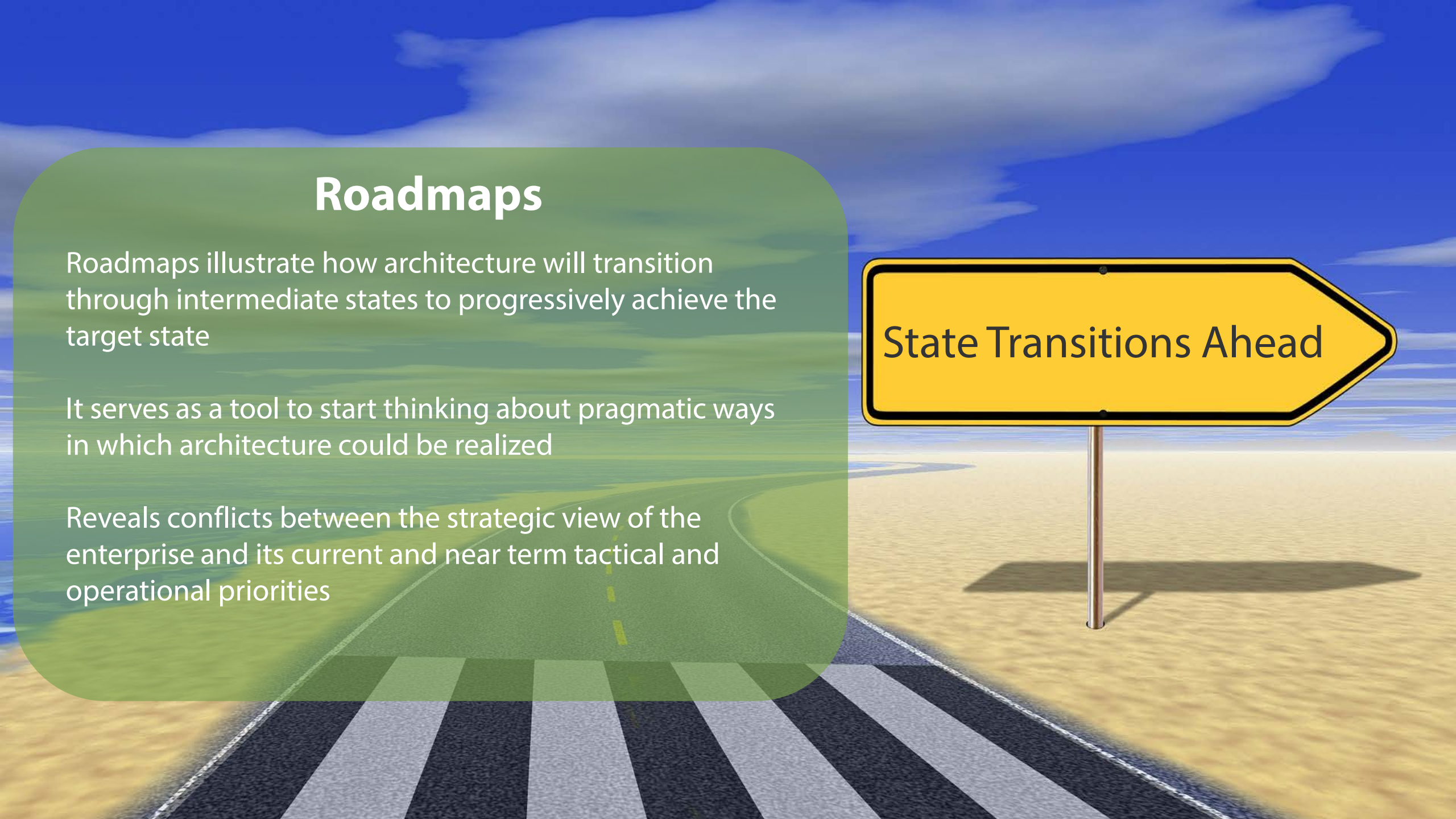
Target ➡ / Baseline ⬇	External Gateway	Payments Processing	Fast Payments Gateway	ESB	Eliminated ⬇
External Gateway	To be modified				
Payments Processing		To be enhanced			
Legacy Payments Gateway					Deprecated (Standby only)
ESB				Matched	
New ➡	Modified to support fast payments	Support real-time payment processing	To be procured		

Roadmaps

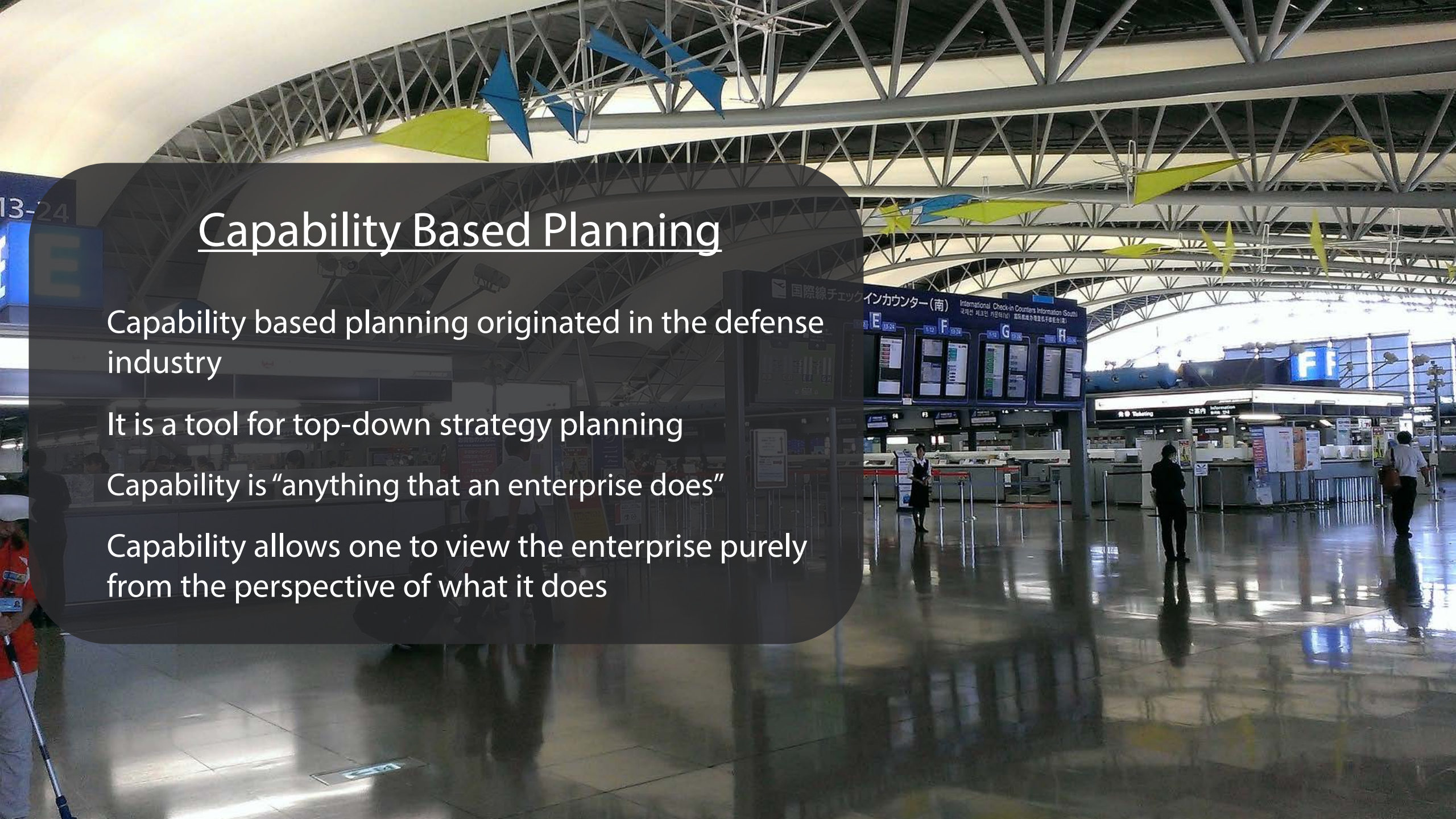
Roadmaps illustrate how architecture will transition through intermediate states to progressively achieve the target state

It serves as a tool to start thinking about pragmatic ways in which architecture could be realized

Reveals conflicts between the strategic view of the enterprise and its current and near term tactical and operational priorities



Guidelines & Techniques



Capability Based Planning

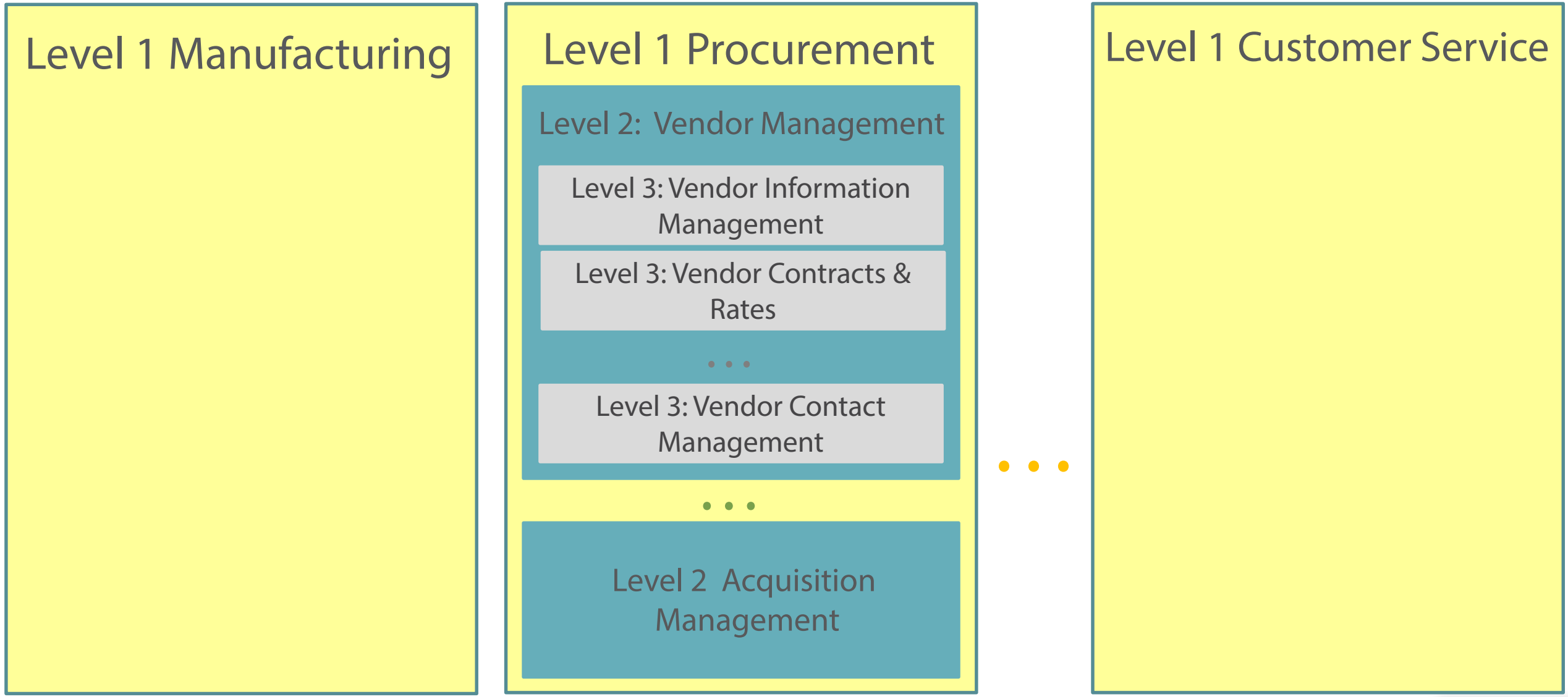
Capability based planning originated in the defense industry

It is a tool for top-down strategy planning

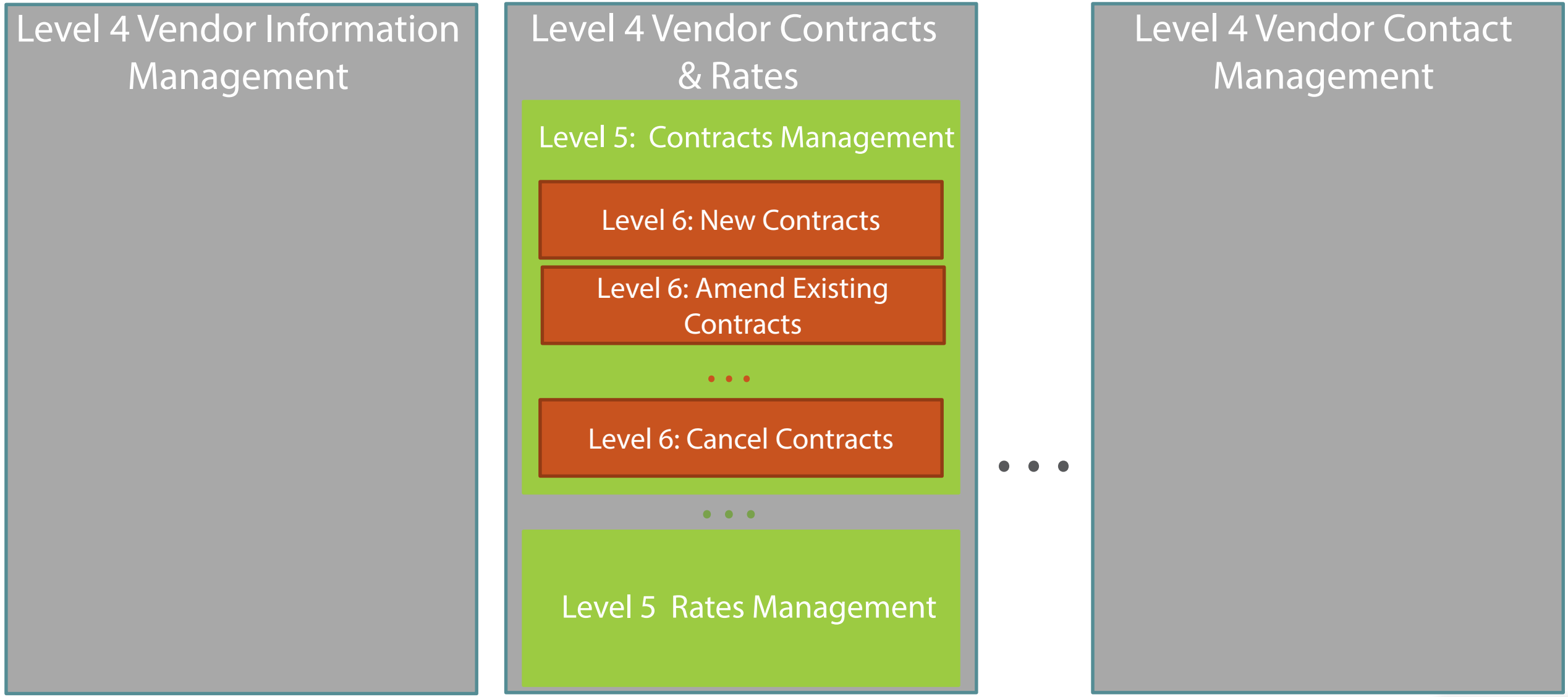
Capability is “anything that an enterprise does”

Capability allows one to view the enterprise purely from the perspective of what it does

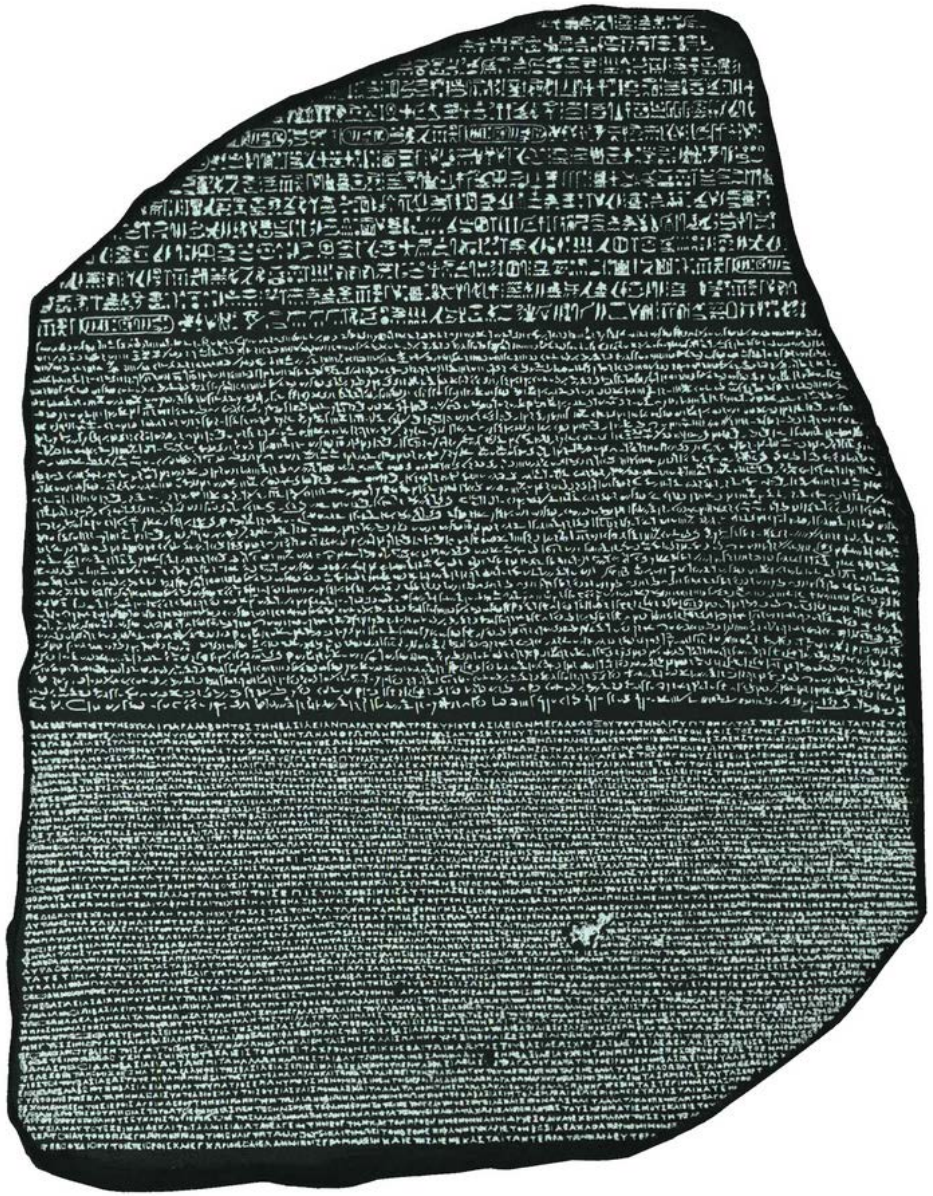
Capability Models - Example



Capability Model Level 4 to 6



Rosetta Stone of Business IT Alignment

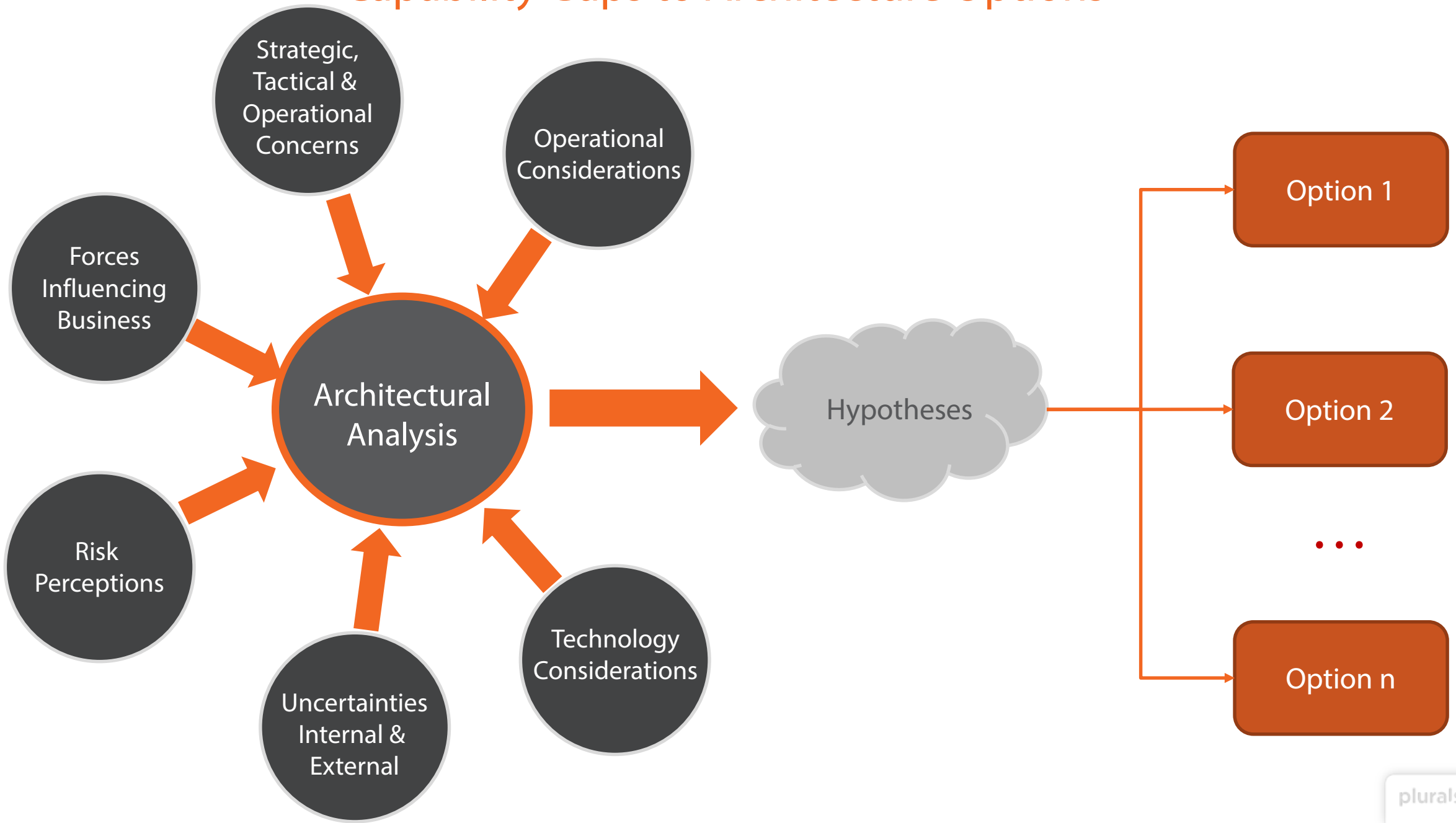


Business Strategy

Capability Map

IT Portfolio & Initiatives

Capability Gaps to Architecture Options

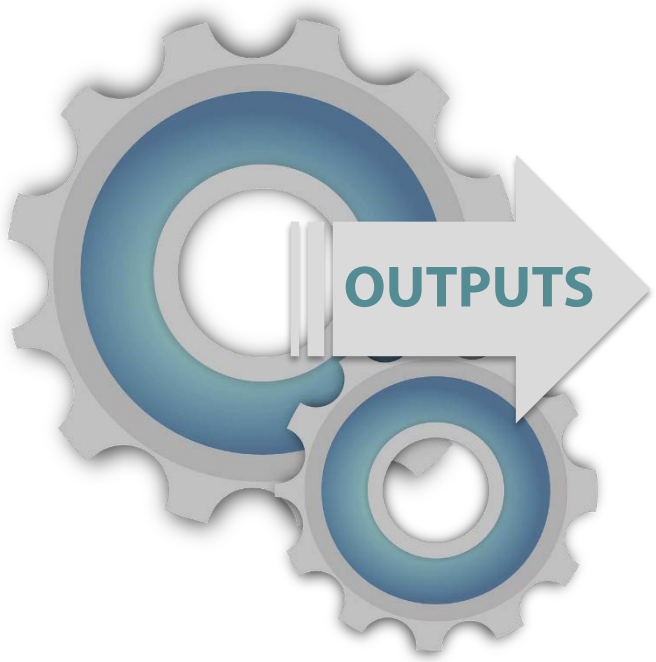


Inputs and Outputs

Phase B - Inputs

- Approved "Statement of Architecture Work"
- "Architecture Vision" document
- All outcomes of phase A
- Architecture repository and any existing artefacts

Phase B - Outputs

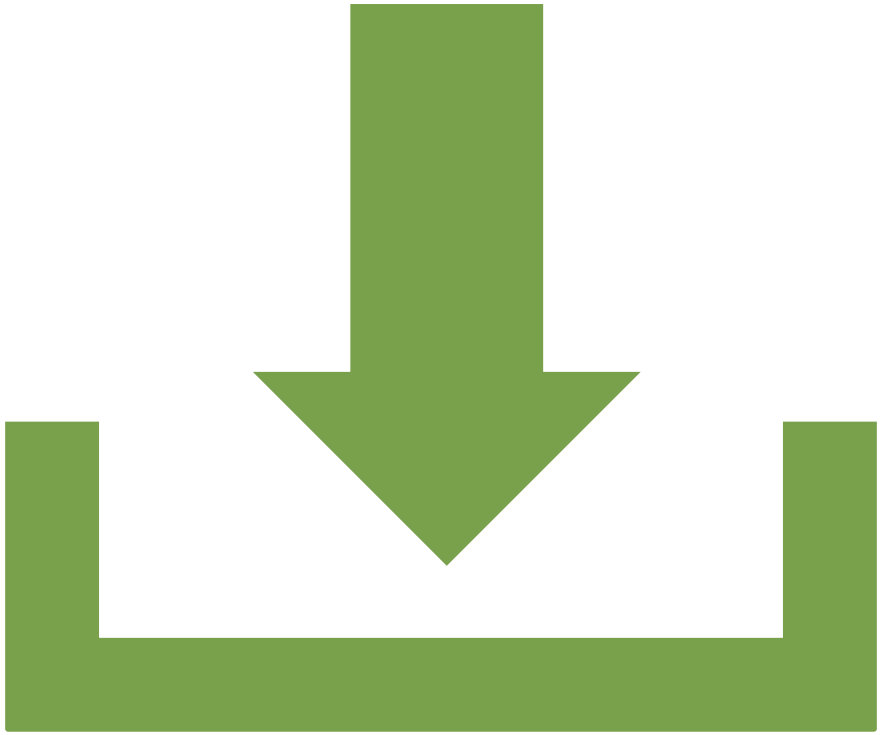


Early version of “Architecture Definition Document”

- Business architecture building blocks
- Architecture models (Business Architecture)
- Gaps and proposed architecture solution options
- Any early recommendations
- Constraints that may apply to other architecture domains

Candidate architecture roadmap

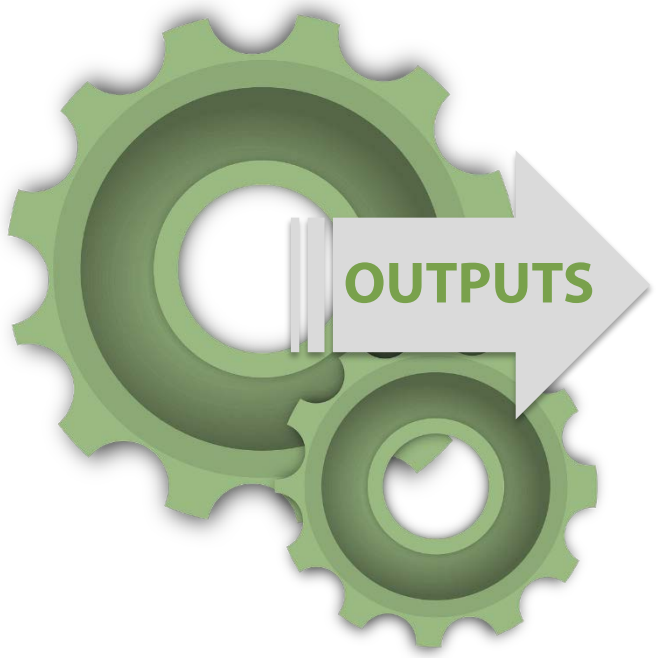
Phase C - Inputs



The inputs used for phase B and the outputs from it form the input for Information Systems Architecture (i.e. Phase C)

Any reference models and existing artefacts from architecture repository that can potentially be reused

Phase C - Outputs

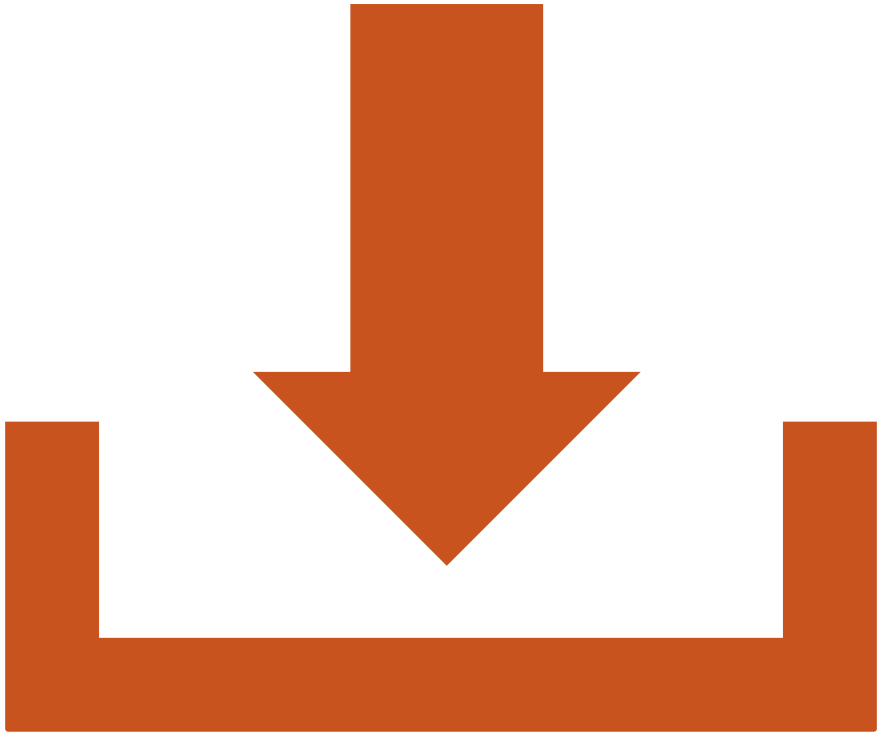


Further elaborates the “Architecture Definition Document” focusing on information systems architecture

This typically incorporates
- Enterprise’s data inventory
- Logical data models
- Applications portfolio catalog
- Interoperability requirements
- Integration requirements
- Changes required for business architecture
- Constraints on technology architecture

Architecture roadmap specific to information systems architecture

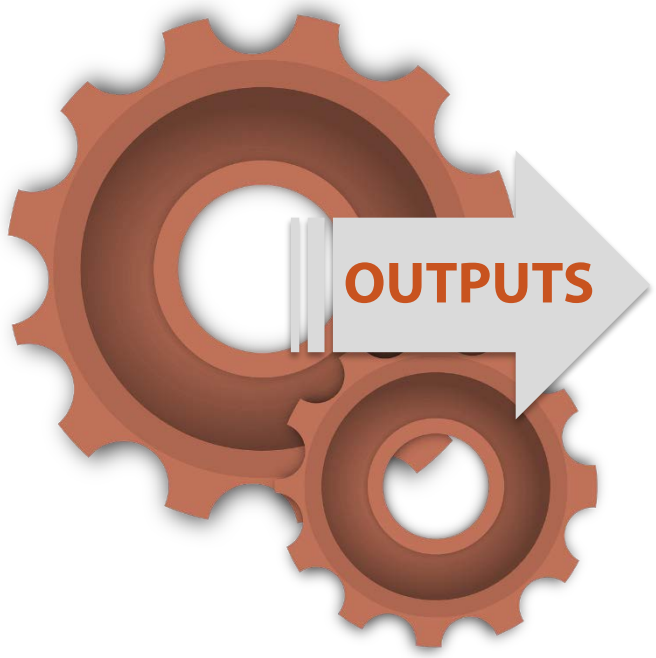
Phase D - Inputs



Much of the inputs into phases B and C are also applicable to phase D

It also takes in any relevant reference models and reusable architecture artefacts from the architecture repository as inputs

Phase D - Outputs



This once again elaborates the "Architecture Definition Document" focussing specifically on technology architecture domain

The architecture definition in this case captures

The technology stack
Hosting environments
Deployment pipelines/ considerations
Expected load
Capacity and performance requirements
Specifications for servers, storage, network and other infrastructure components

And the technology architecture roadmap

First Two Weeks

He notices several strategic initiatives being executed by the enterprise

He observes lack of coordination among these initiatives and lack of rigor in translating strategy to real business outcomes

Tom puts together an approach to establishing EA capability

The approach is based on TOGAF Architecture Capability Framework

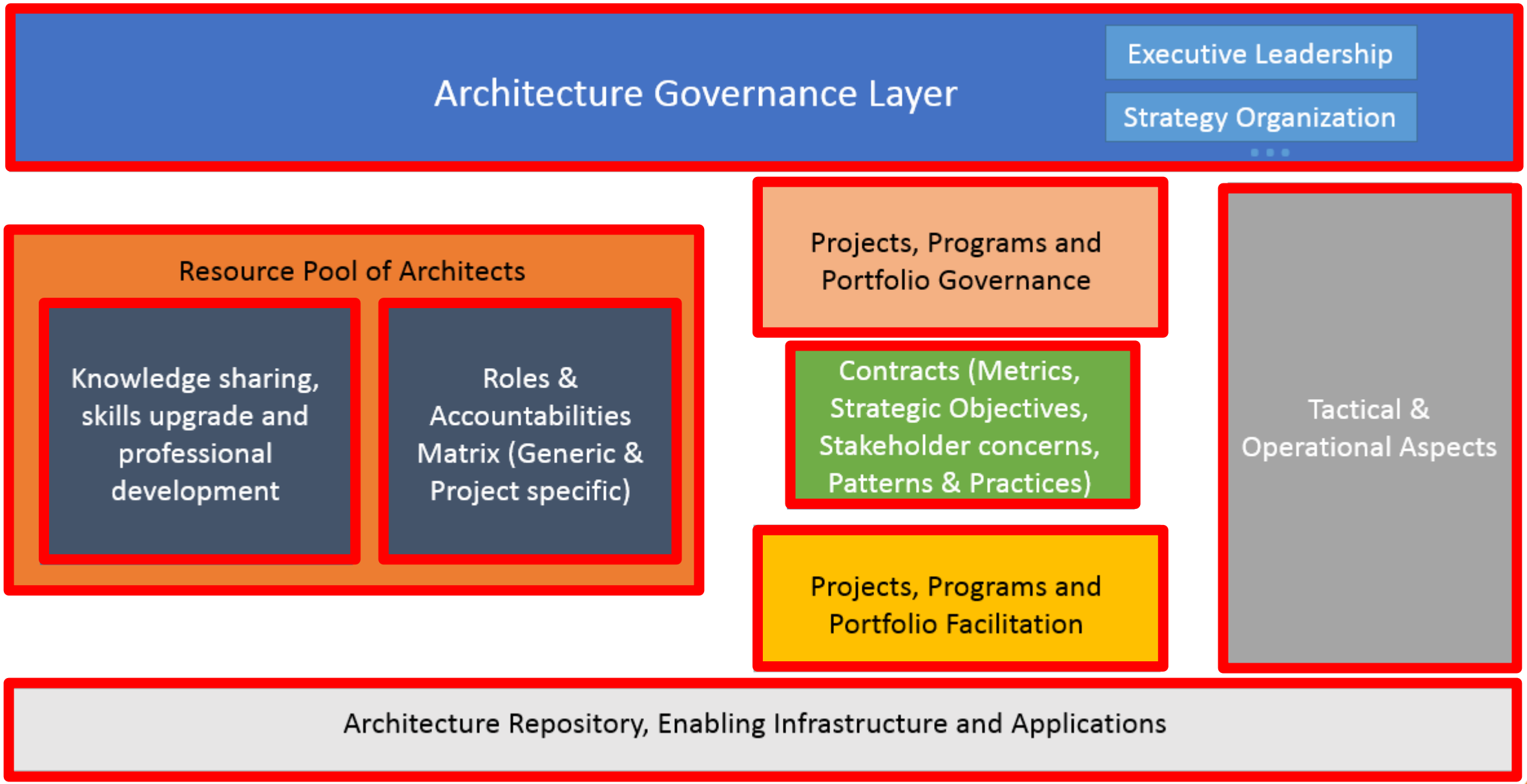
Establishes a biweekly catch-up meeting with Ned Skipper and Lisa Knowsovich (CEO & CSO)

WebFirst needs an EA capability established as an ongoing practice

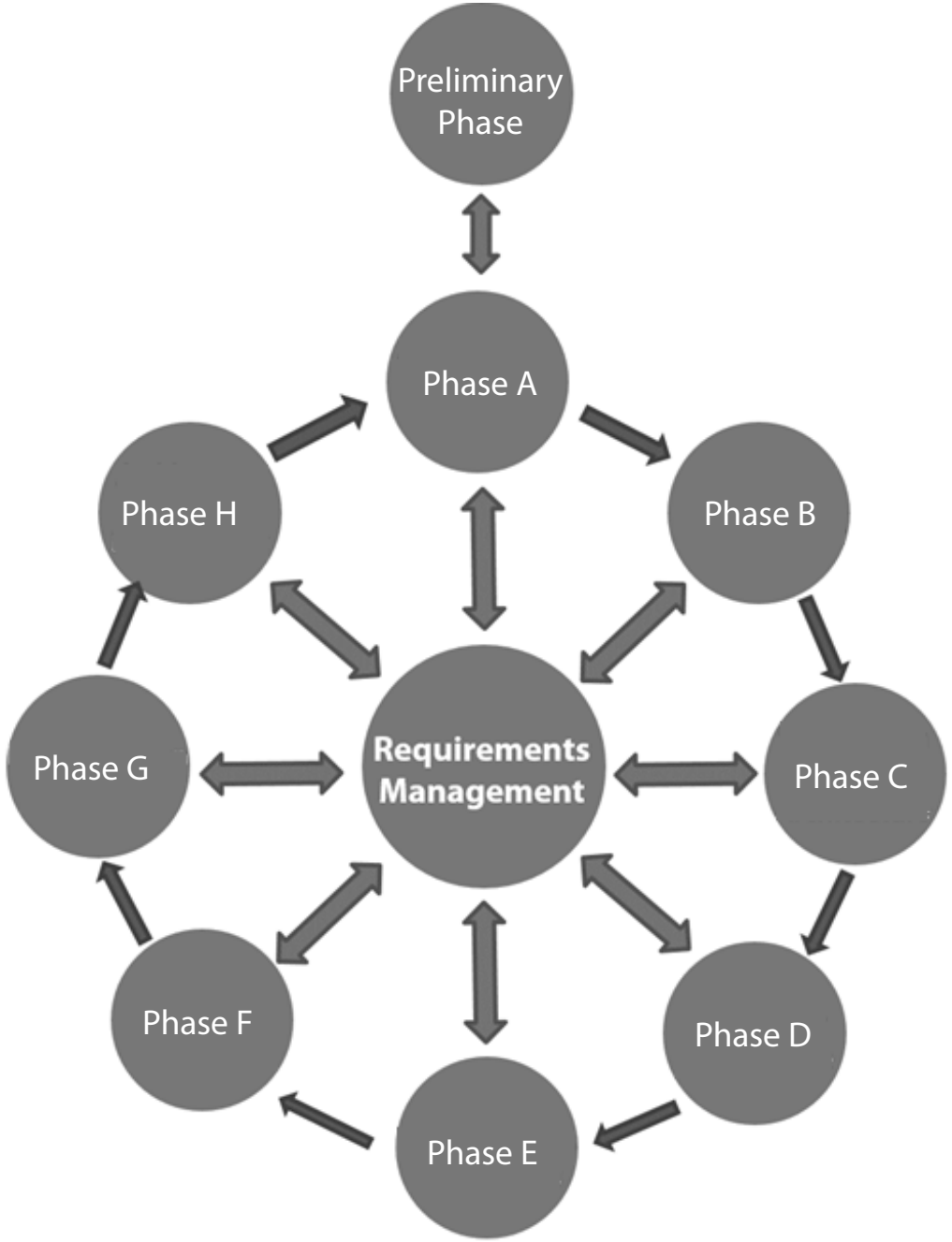
The architecture capability will integrate resources, structure, process, roles, responsibilities, tools and skills

The architecture capability will operate as a self-governing and continuously evolving function

WEBFIRST ENTERPRISE ARCHITECTURE CAPABILITY PROPOSED COMPONENTS



Architecting an Architecture Capability



Preliminary and Phase A – Motives and Expectations

Establishing business drivers and key objectives
Conduct an architecture maturity assessment
Identify constraints

Phase B –Protocols and Standards

Establish architecture ontology
Agree on standard/ minimal set of viewpoints, views and artefacts for each iteration
Accountability Matrix and governance structure

Phases C & D – Applications, Data and Infrastructure

Plan for Architecture repository, tools/ applications as well as resources required to operationalize the repository

Phases E & F – Plan the Transition

Plan for organizational change including recruitment and procurement activities

Phases G & H – Operate and Govern

Operationalize the governance structure to evolve the architecture practice and manage change


WEBFIRST ENTERPRISE ARCHITECTURE CAPABILITY PROPOSED COMPONENTS
Architecture Governance Layer
Executive Leadership
Strategy Organization
Resource Pool of Architects
Knowledge sharing, skills upgrade and professional development
Roles & Accountabilities Matrix (Generic & Project specific)
Projects, Programs and Portfolio Governance
Contracts (Metrics, Strategic Objectives, Stakeholder concerns, Patterns & Practices)
Projects, Programs and Portfolio Facilitation
Tactical & Operational Aspects
Architecture Repository, Enabling Infrastructure and Applications

Module Recap

Architecture Development Iteration i.e. Phases B, C and D of ADM

Guidelines on capabilities based planning

We looked at how Tom Wiseman is proposing to establish enterprise architecture capability within WebFirst