

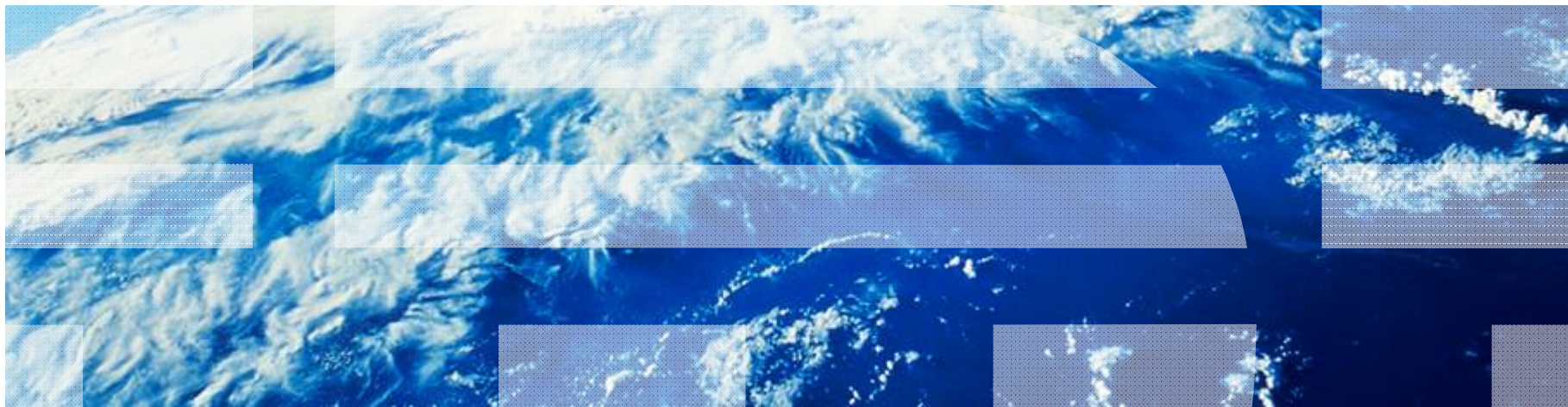
Dr. Hans-Peter Hoidn  
*Worldwide SOA Team Member for CEEMEA*  
*(Central Eastern Europe, Middle East & Africa)*

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# Enterprise IT Architectures

## EA (Enterprise Architecture)



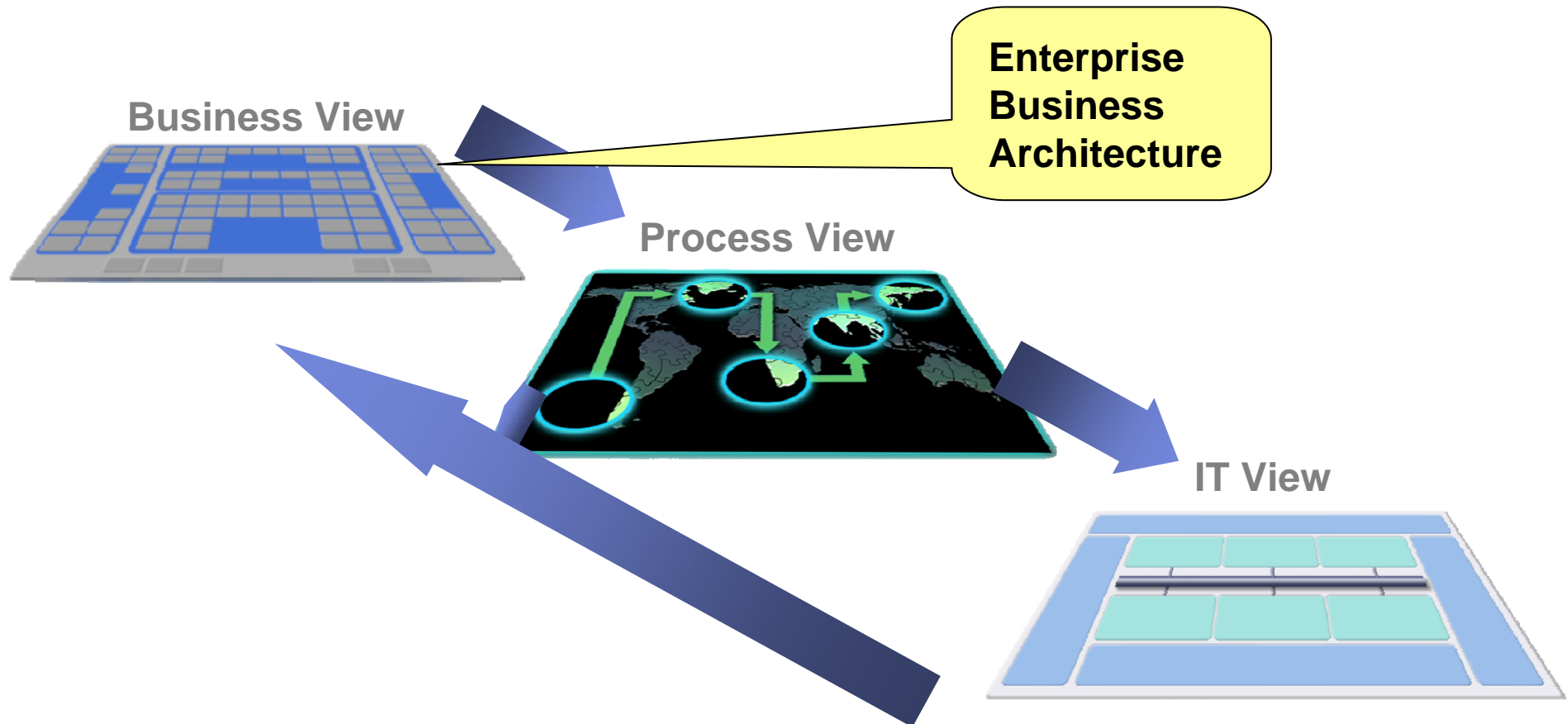


## Agenda

- I. Positioning Enterprise Architecture (EA)**
- II. Enterprise Architecture – Main Aspects**
- III. Enterprise Architecture Methods**



## Recap: Aligning Strategy with Business and IT Execution





## **Positioning Enterprise Architecture (EA)**



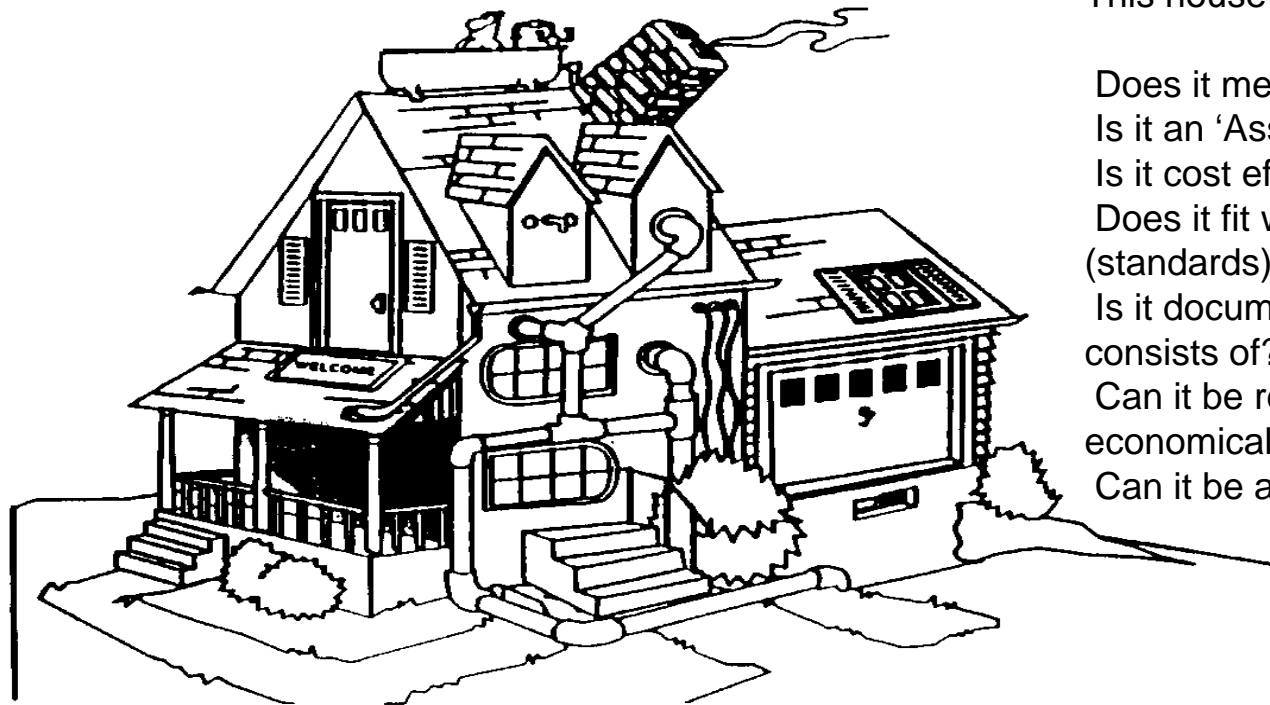
## Why “Enterprise Architecture”

- *EA is helping enterprises do the right things right*
- **EA is a holistic approach to the control and co-ordination of IT based business projects**
- **Two viewpoints:**
  - Solution Architects **are focused on creating an IT based solution to a business problem**
  - Enterprise Architects **with a sense of what the enterprise needs to be and do, and how IT should be used in a wider sense**



## Winchester House Syndrome

Yesterday's management approaches are not working in today's complex and fast-paced environment.



This house may function, but...

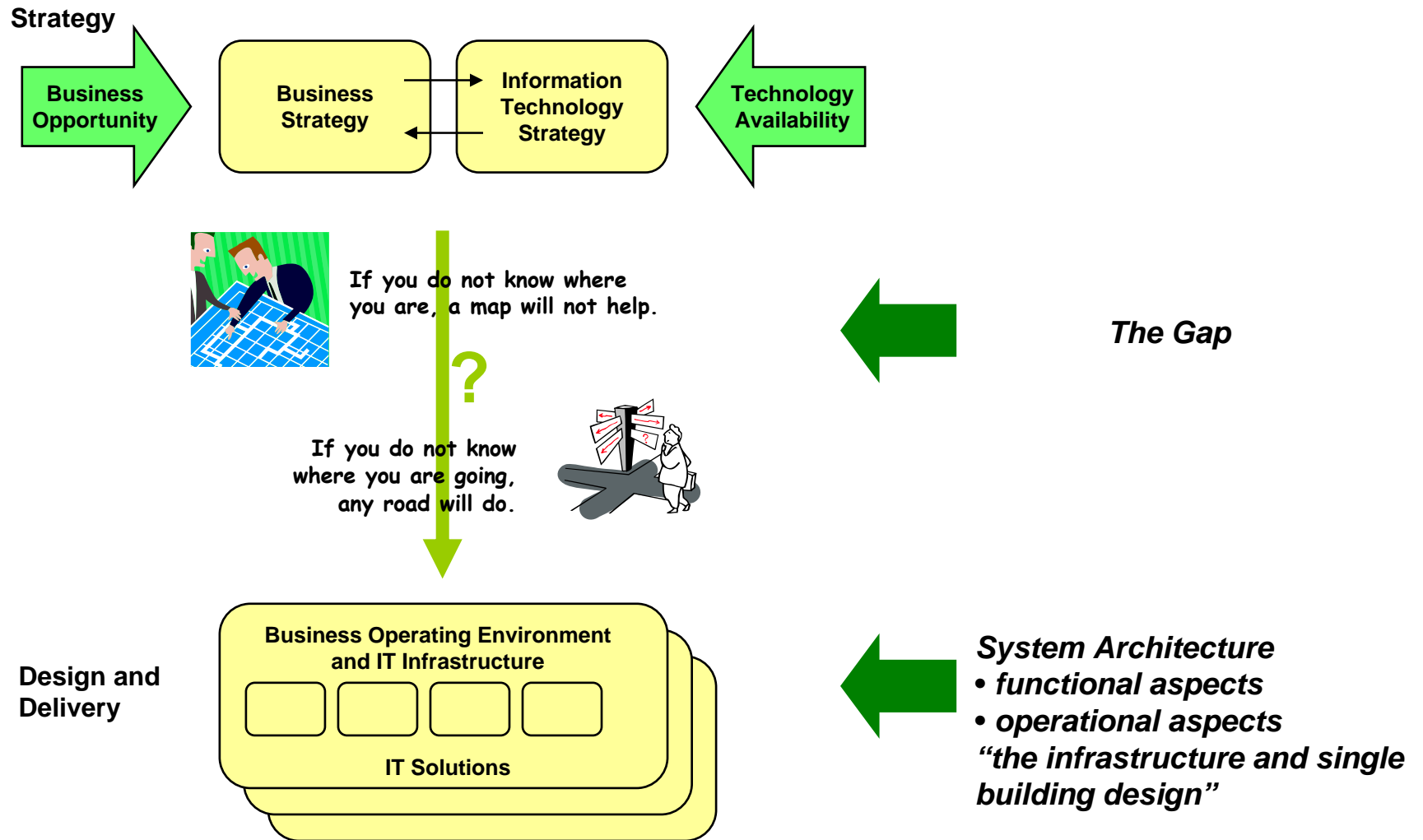
- Does it meet business objectives?
- Is it an 'Asset Junkyard'?
- Is it cost effective?
- Does it fit with the community (standards)?
- Is it documented - who knows what it consists of?
- Can it be repaired easily or economically?
- Can it be adapted to changing needs?

**'If you don't know where you're going, any road will get you there.'**

**Lewis Carroll**

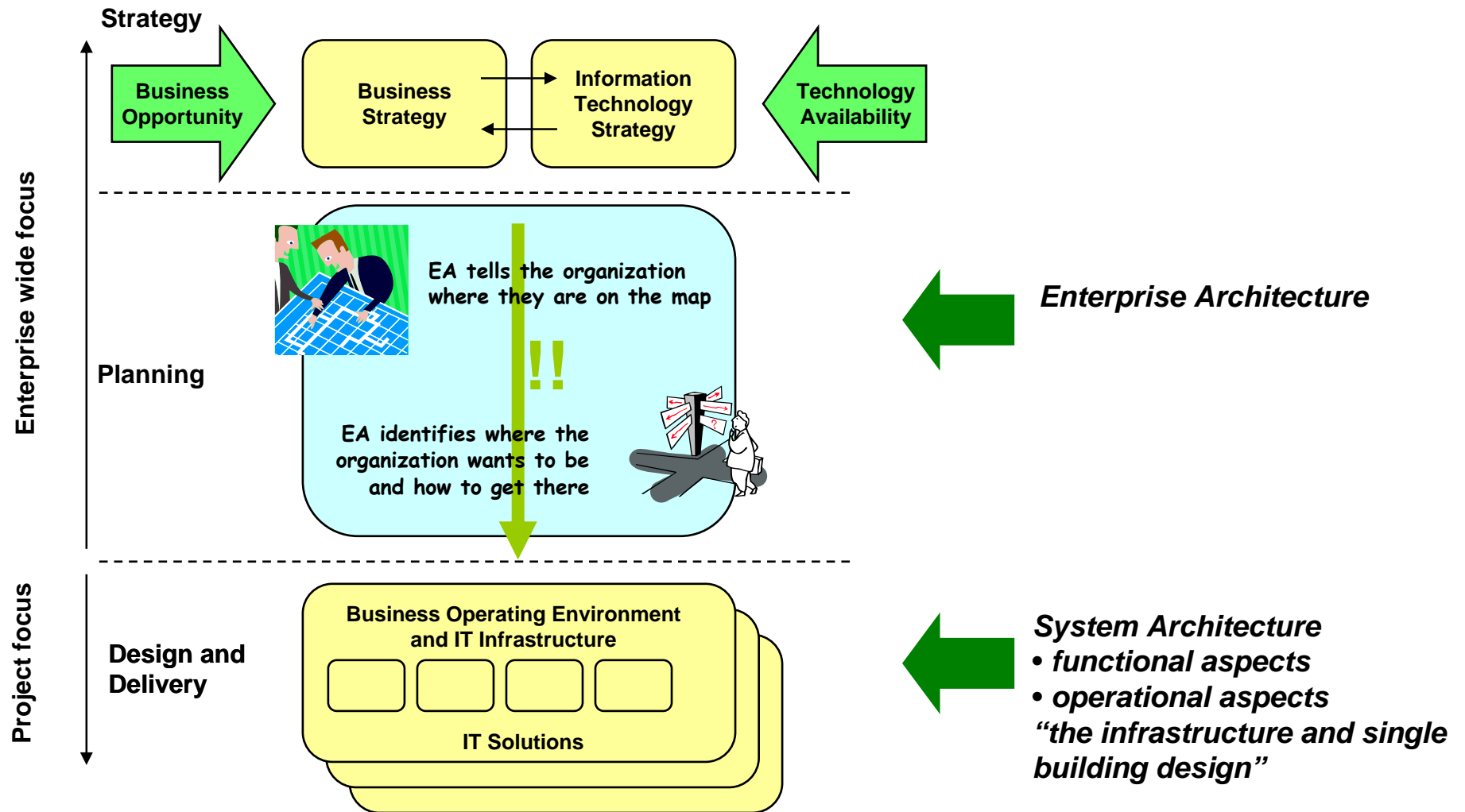


# It can be a challenge to ensure IT based business solutions implement the business strategy...





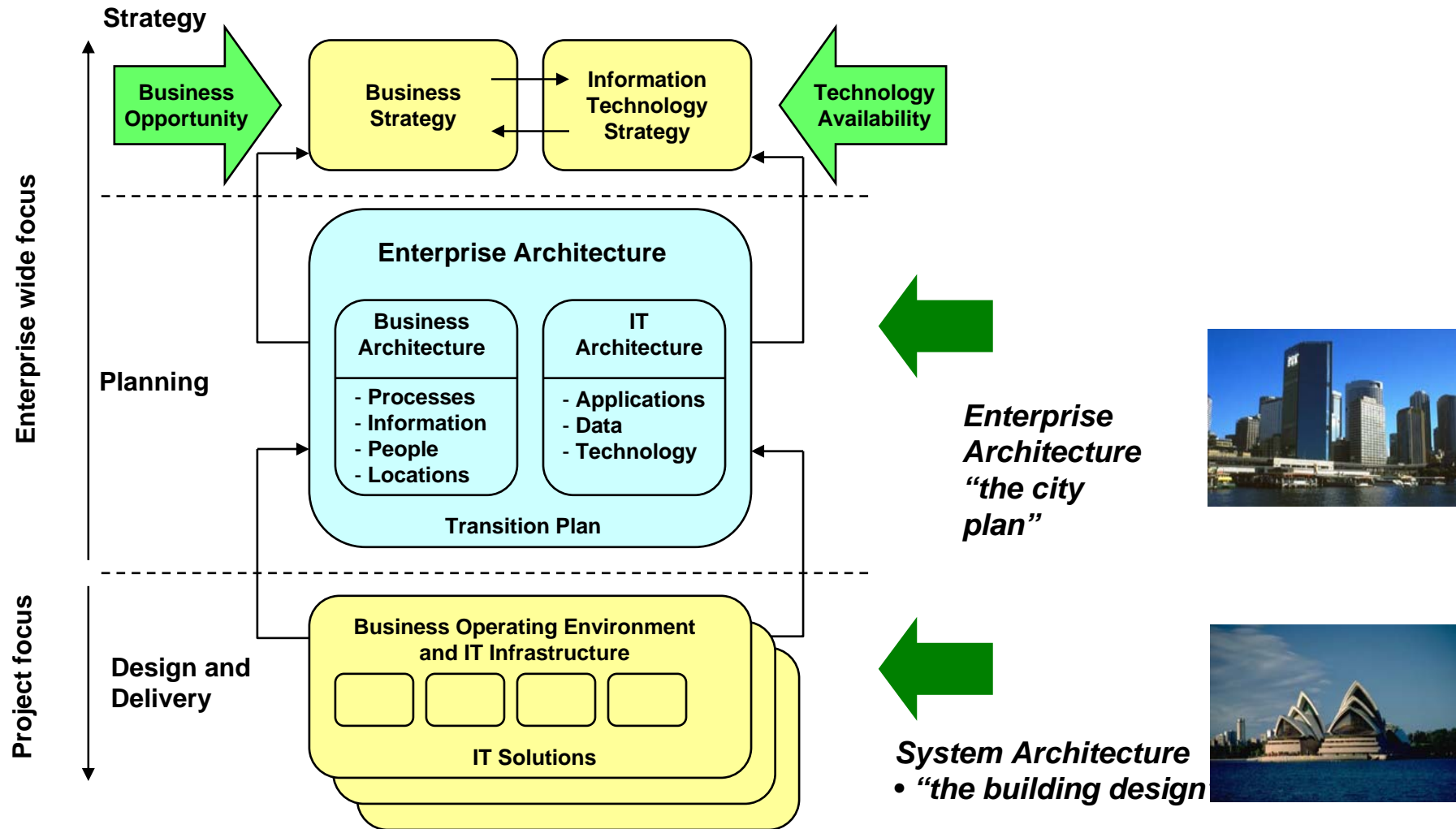
# Enterprise Architecture provides the vital linkages between “strategy” and “implementation”





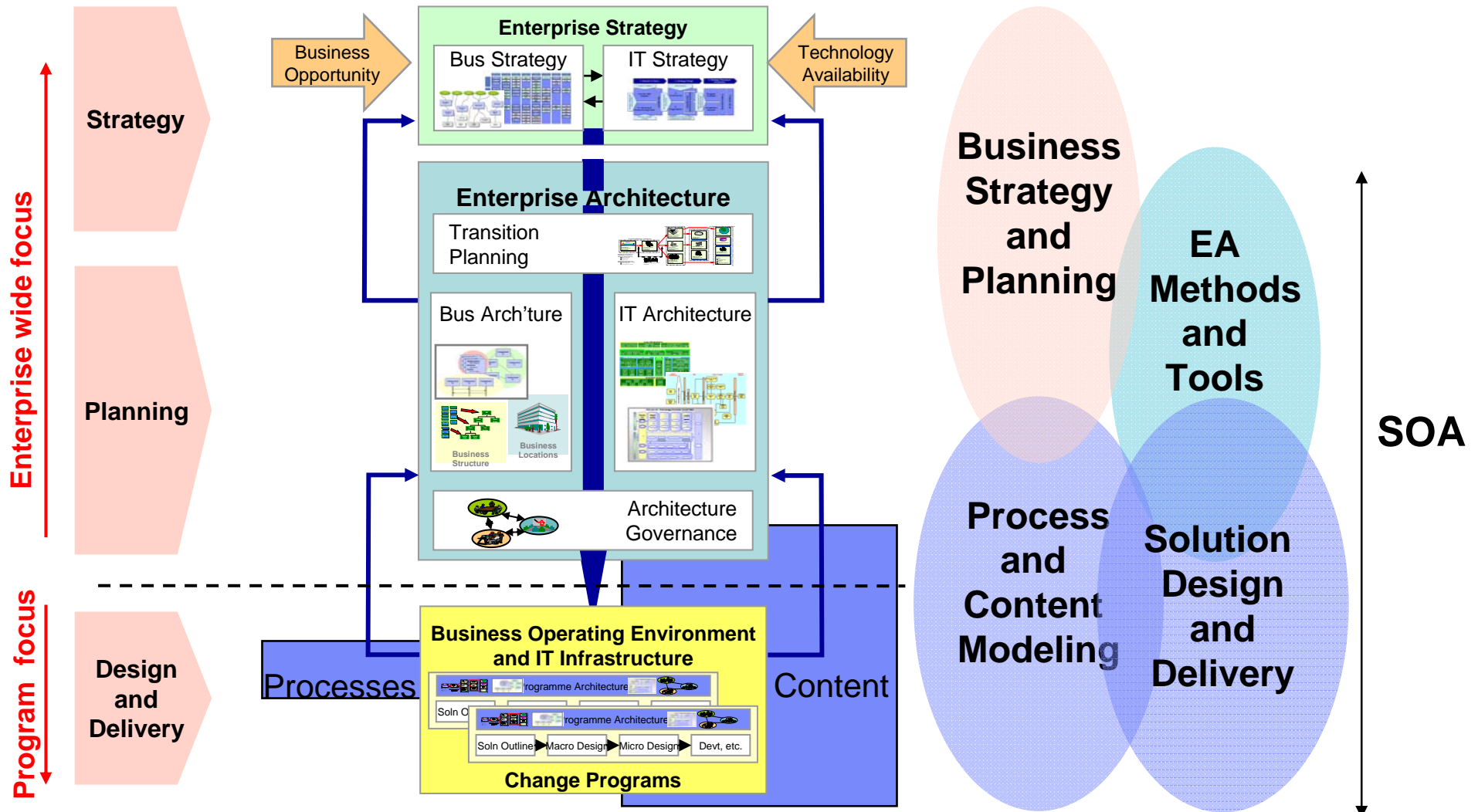


# Enterprise Architecture embraces both Business and IT Architectures, providing the “city plan” for “building projects”



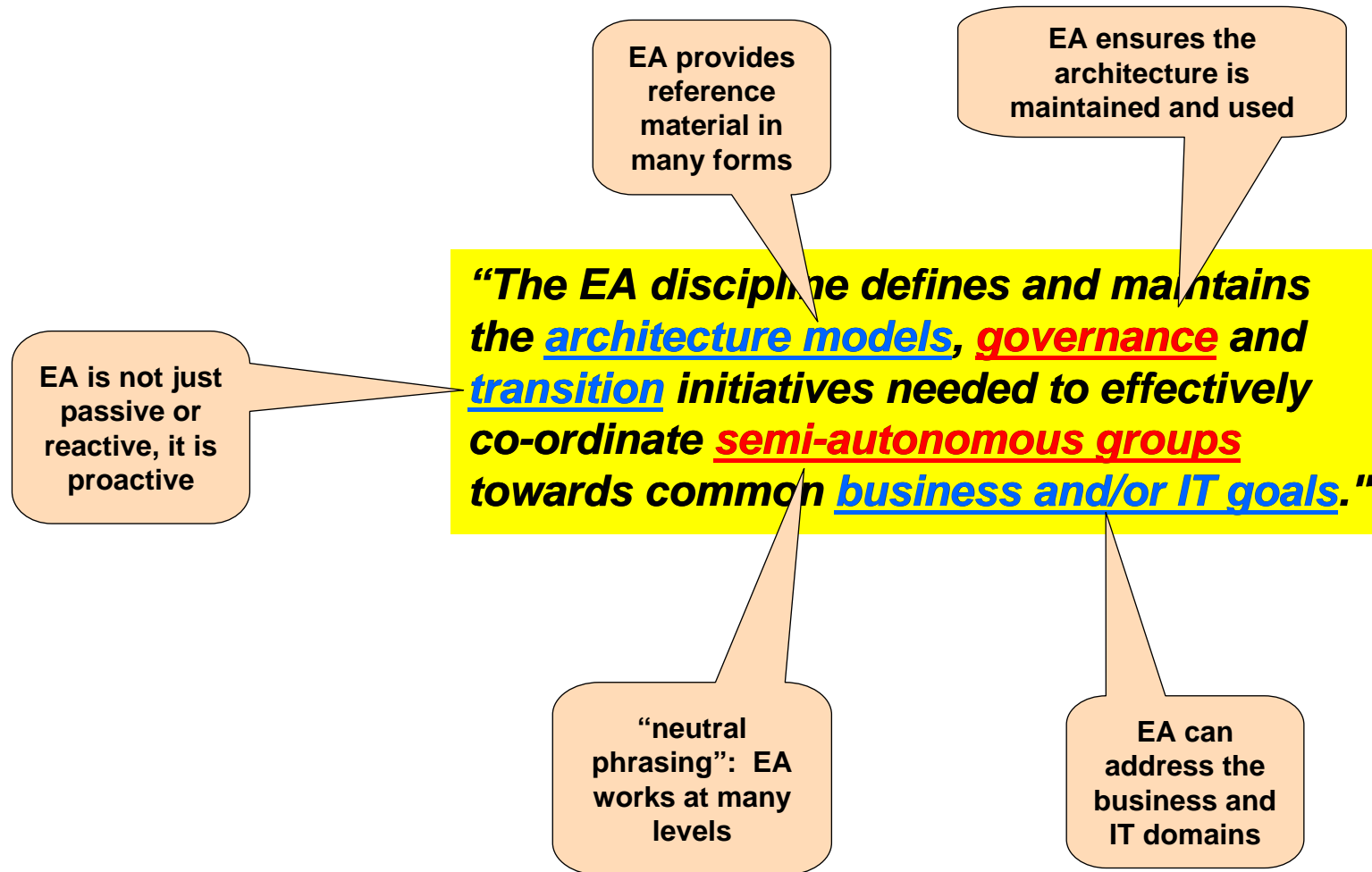


# Bridging the Gap Between Strategy and Delivery





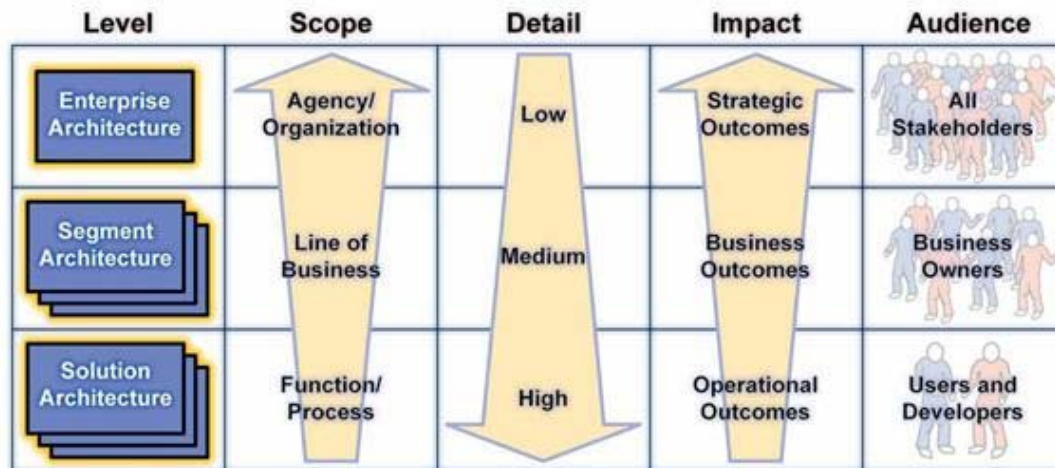
# Definition





## Enterprise Architecture vs. Solution Architecture

**Enterprise Architecture is the formal organization (design or layout) of the components, structures and processes required or relevant to the attainment of the goals and visions invested or envisioned in an enterprise.**



From US OMB 2006 FEA Practice Guidance

**Solution architecture aims to address specific problems and requirements, usually through the design of specific information systems or applications.**



## So we recognise two different types of IT Architect...

- ...Are responsible for ensuring the design of IT based business solutions meet the functional and non-functional requirements, within the constraints of budget, time, skills and other givens (such as IT Standards)

**“Solution Architects”**

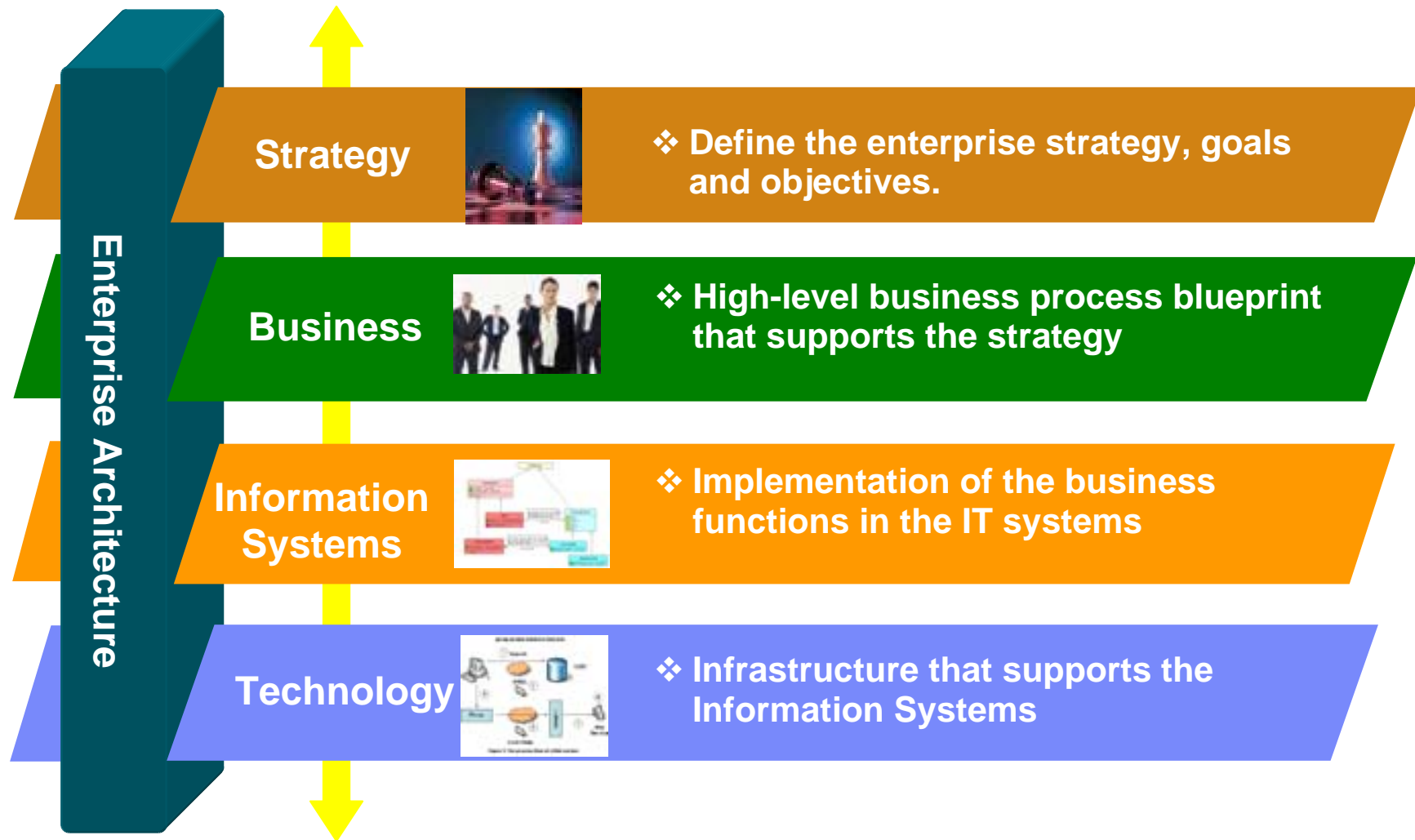
- ...Are responsible for ensuring an IT Organisation approaches the identification, specification and implementation of these IT based business solutions in a co-ordinated and standardised manner, aligned to the Enterprise’s Business and IT Strategies.

**“Enterprise Architects”**

- ...Are generally *not* product specialists, although they must be able to work at a sufficient level of technological detail to be sure their architectures can be implemented.

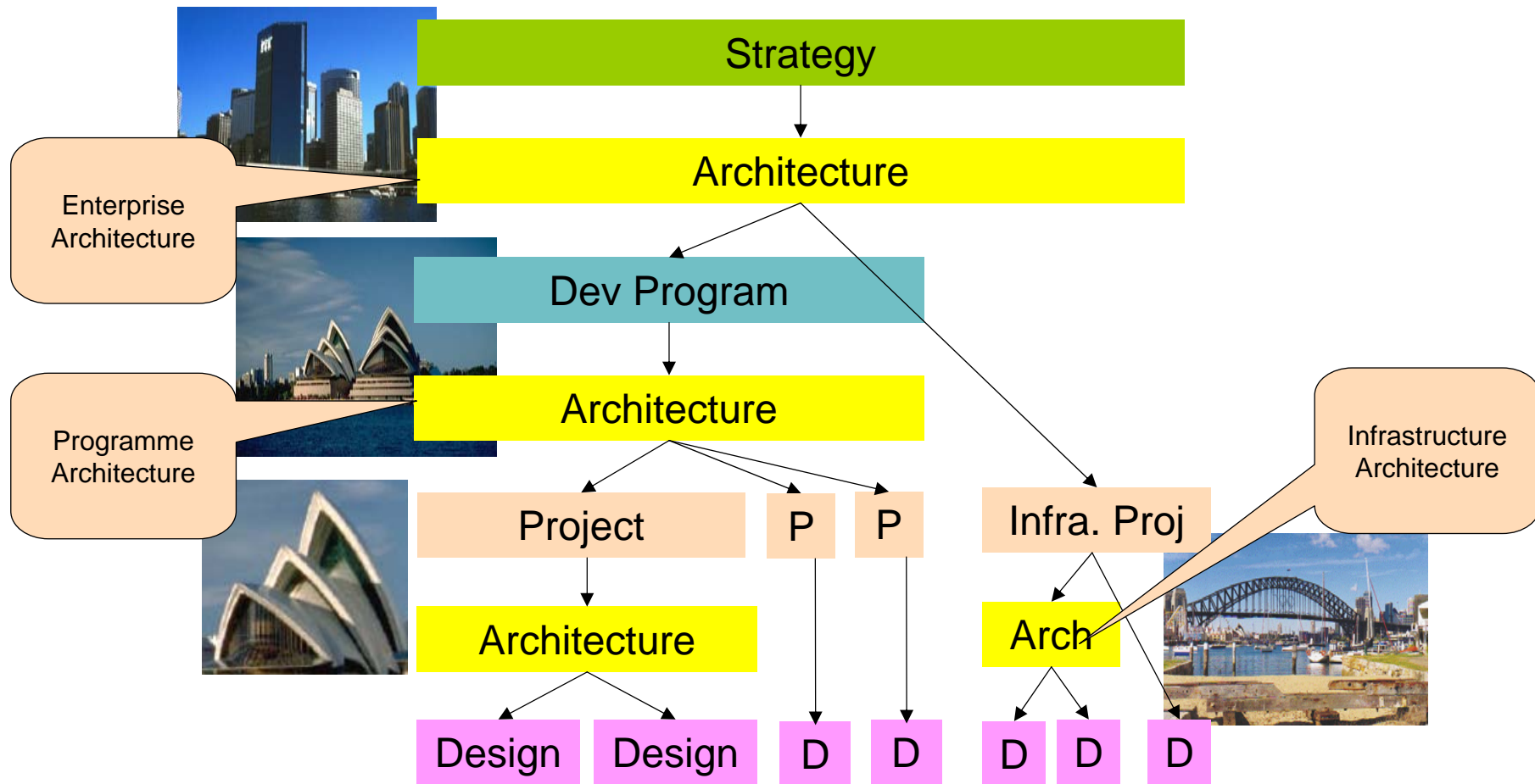


# Enterprise Architecture Defined





# EA provides a context and guidance, keeping everyone “on the same road”

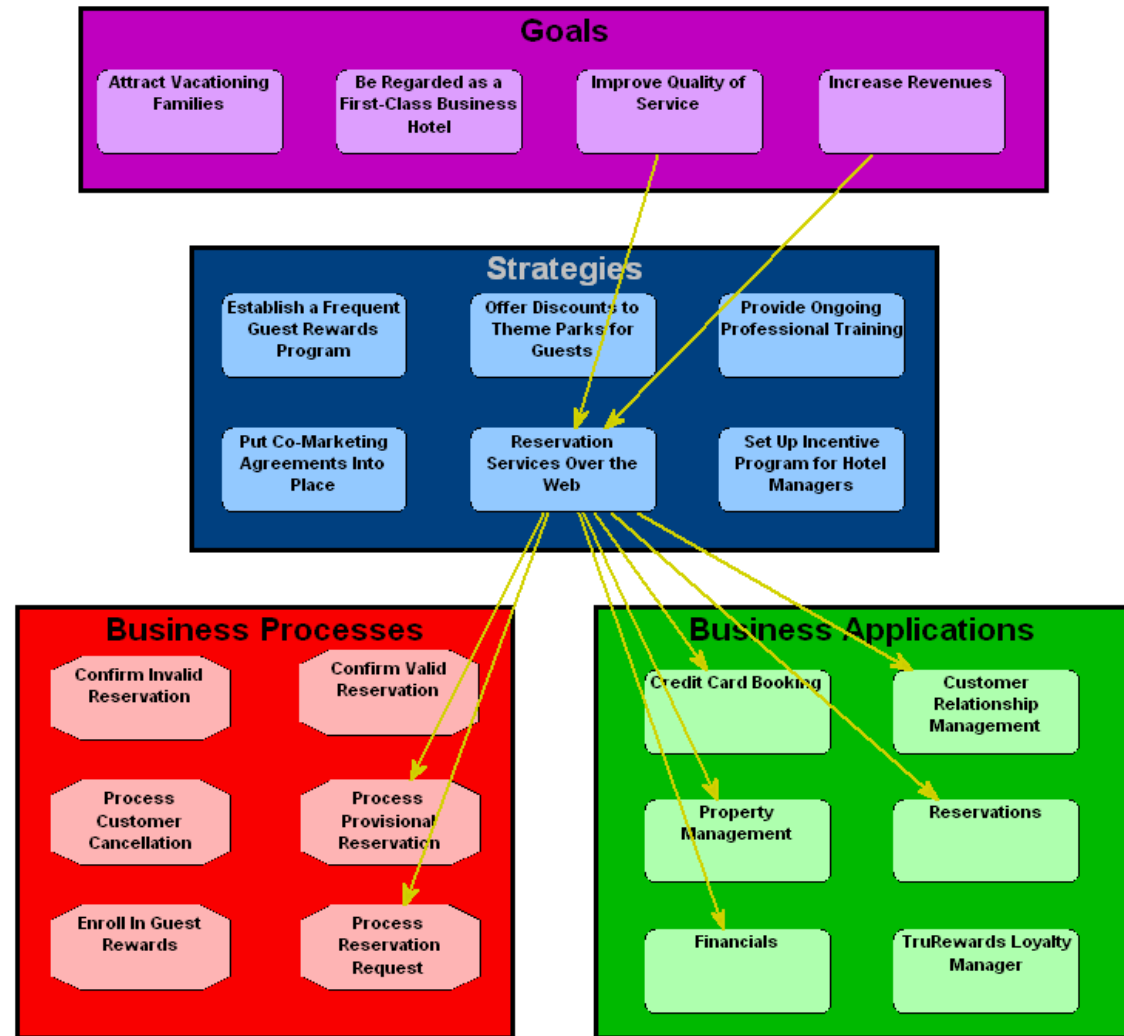




## Benefits (1): Analyze the Linkage Between Technology and Business, Communicate Actionable Information

*“How have we aligned technology investment with our business objectives?”*

*“If we change our technology stack, what applications and organizations will be effected?”*



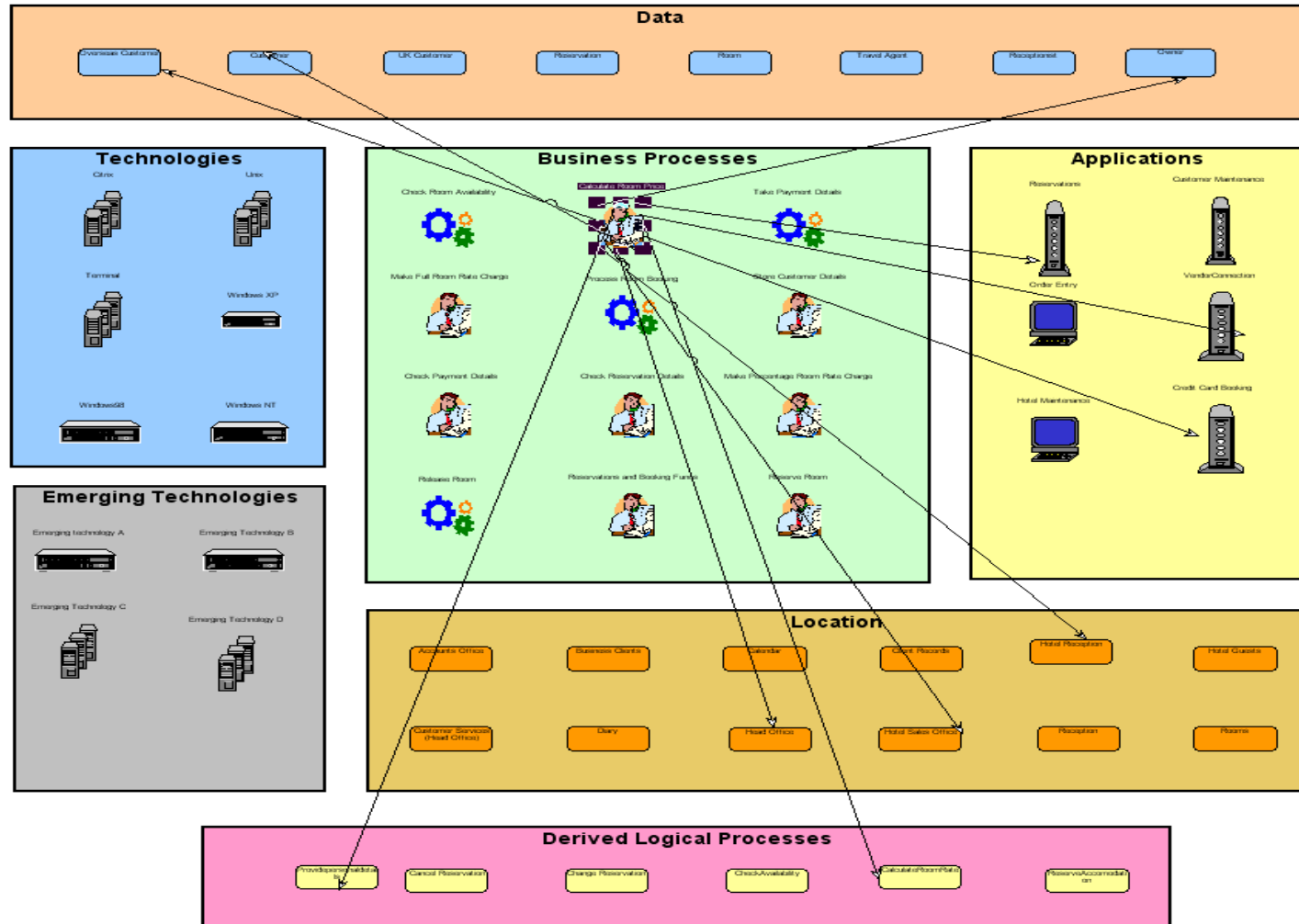




# Benefits (2): Analyze Change to Processes...

## What Happens If....?

Focus on Information needed to make a decision





## **Enterprise Architecture – Main Aspects**

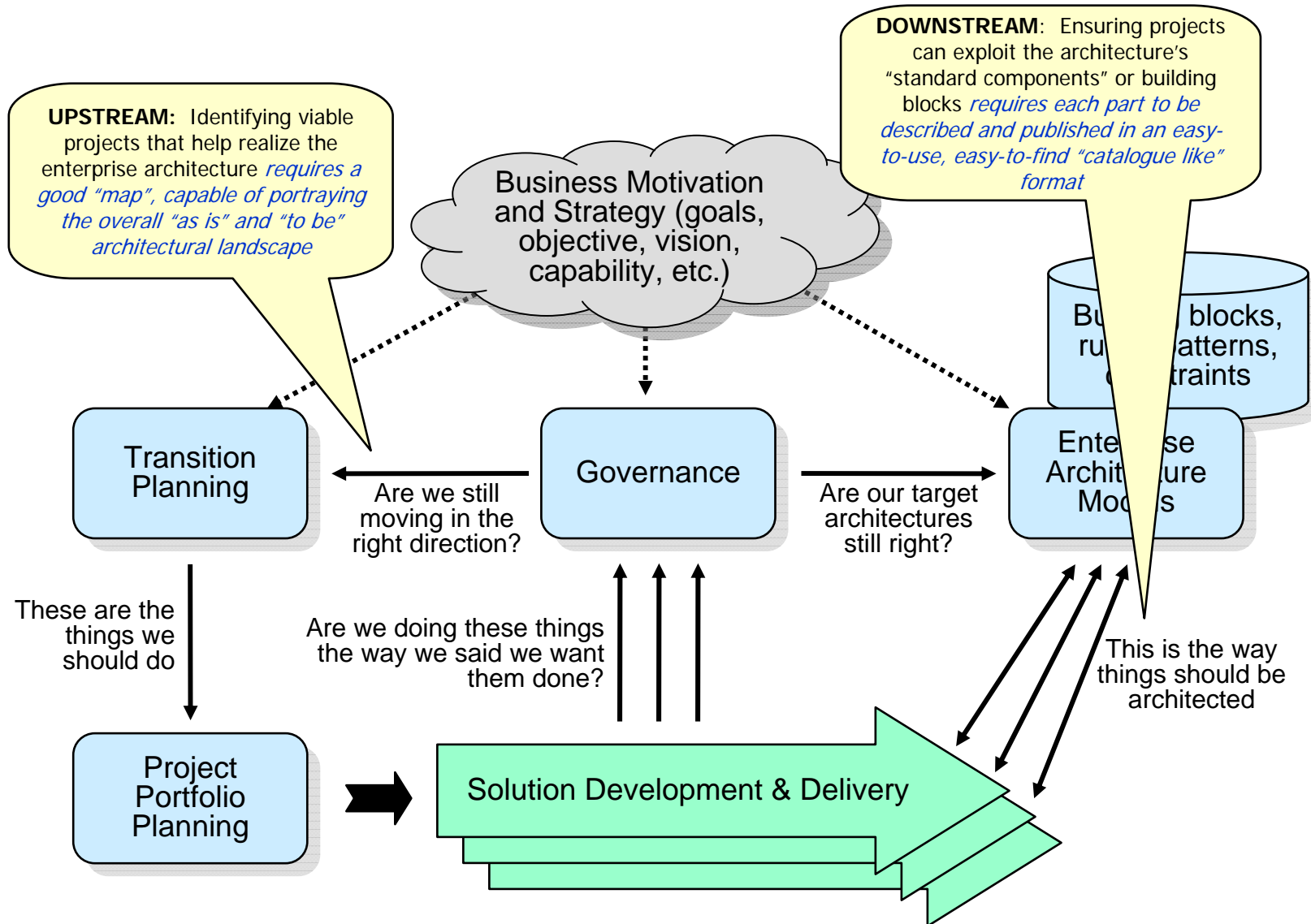


## Main aspects of an Enterprise Architecture

- Enterprise Architecture is **between the Business and IT Strategy and the programs and projects to be carried out**
- **Enterprise Architecture includes Business Architecture as well as IT Architecture (which is IS Architecture – Information System – and Technology Architecture)**
- **Enterprise Architecture guides the programs and projects**

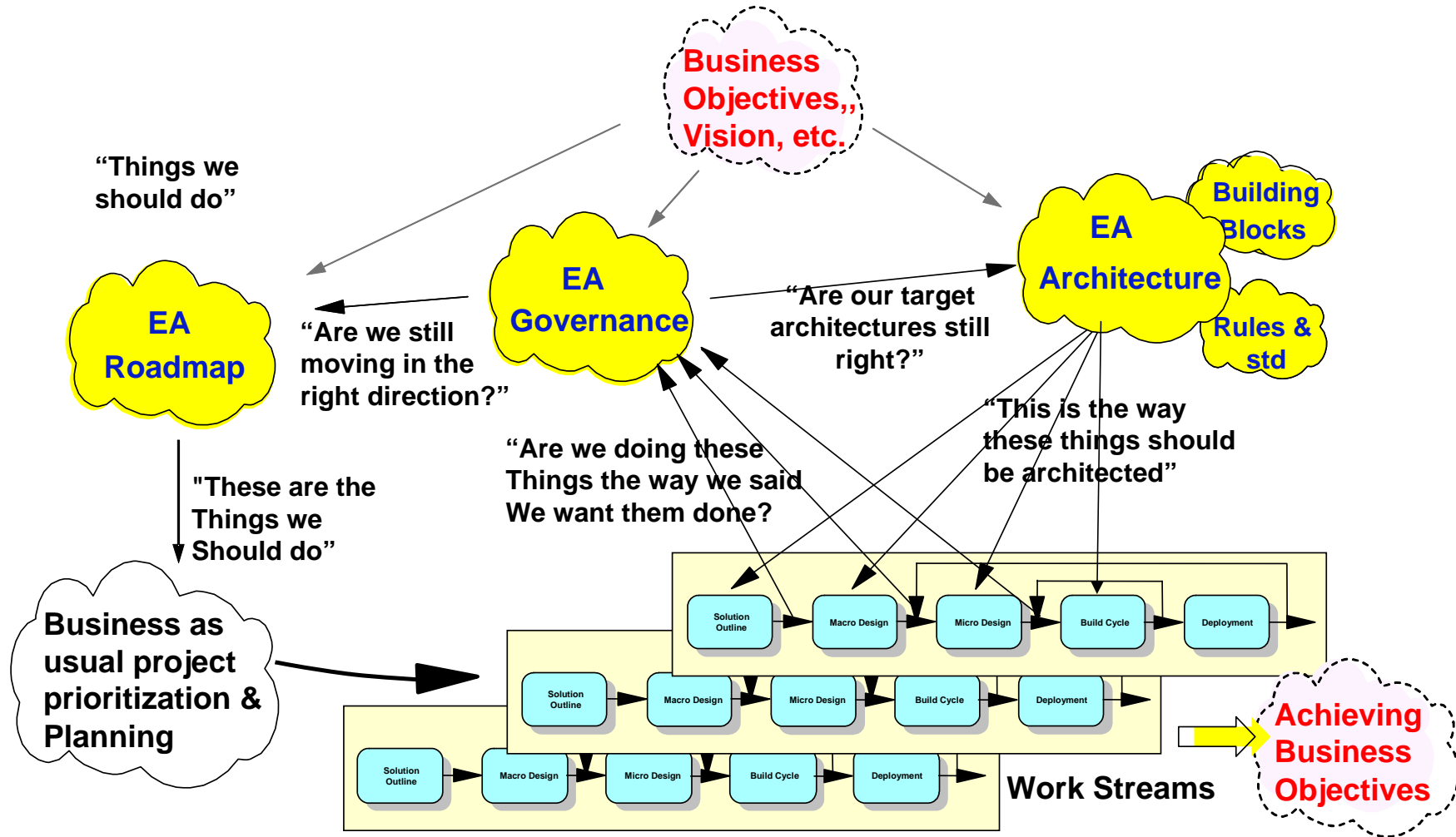


# “Do the right things right”



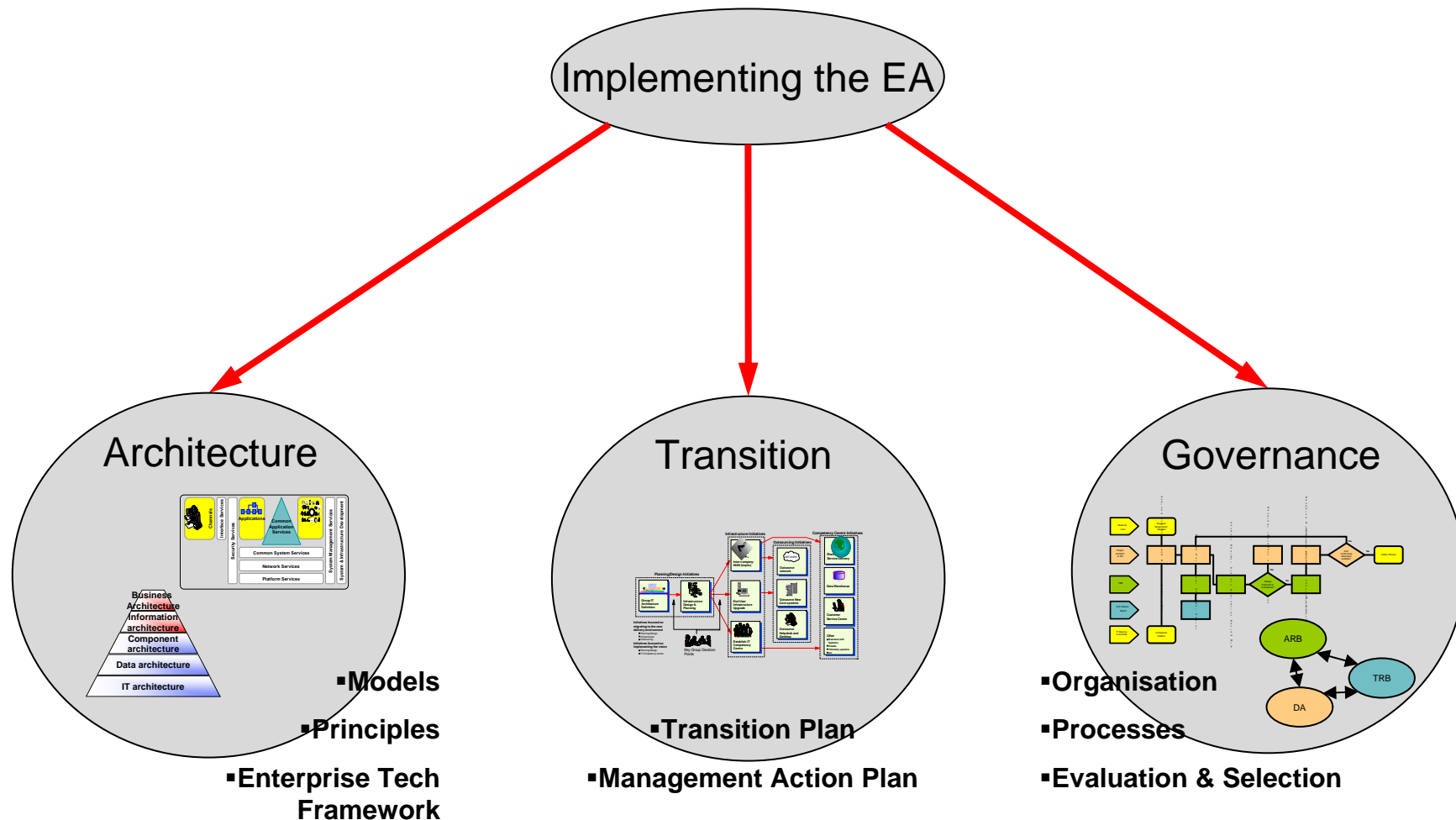


# EA is More than Architecture





# Therefore there are three aspects to implementing an Enterprise Architecture



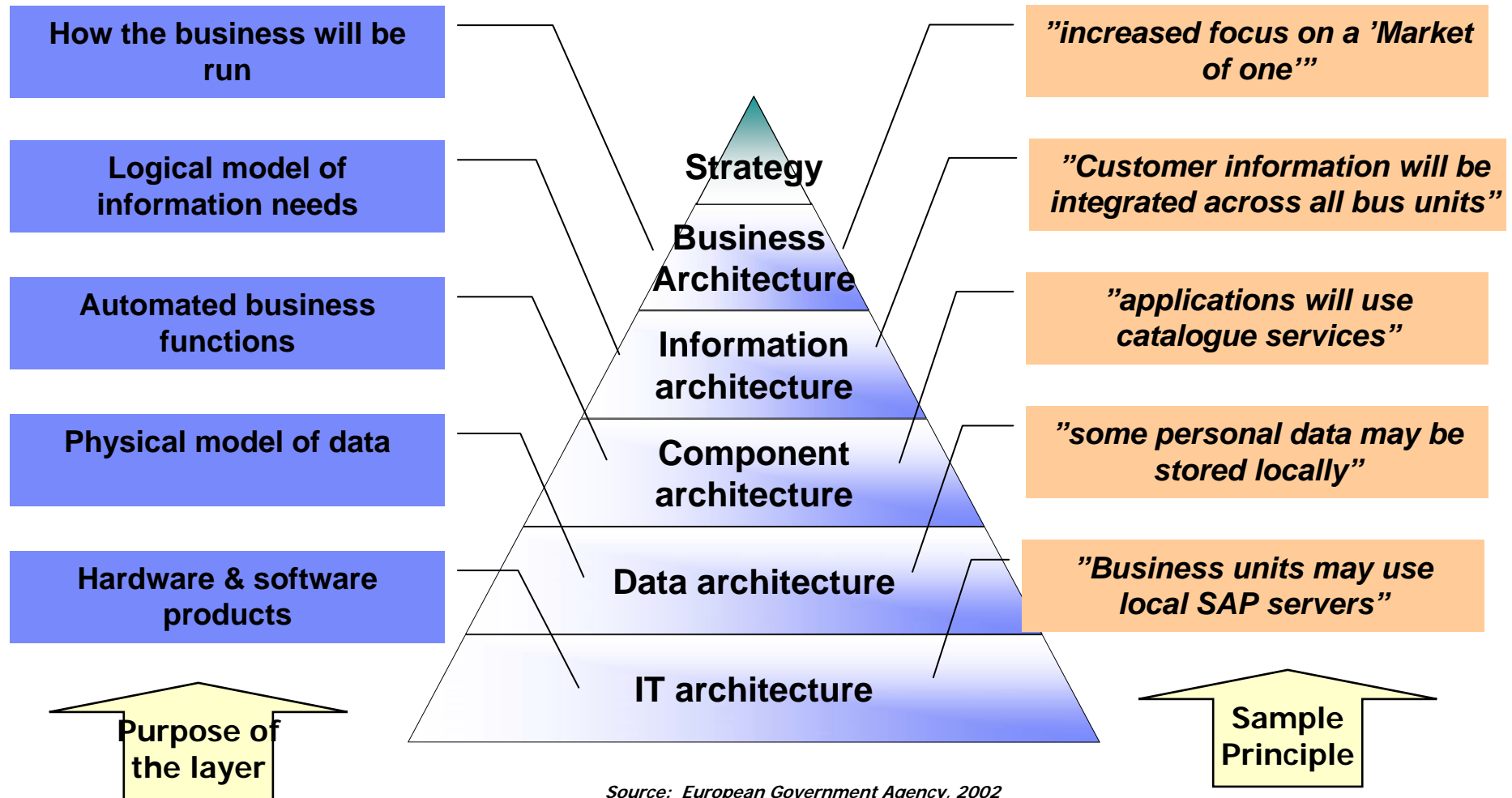


## Enterprise Architecture Methods

- **Enterprise Architecture methods provide** guidelines and templates for the definition of an Enterprise Architecture
- **Templates are available for** Work Products / Artifacts – most of them as described in Architecture Methods
- **Most popular Enterprise Architecture Methods**
  - IBM
  - Zachman ([www.zifa.com](http://www.zifa.com))
  - TOGAF ([www.opengroup.org](http://www.opengroup.org))



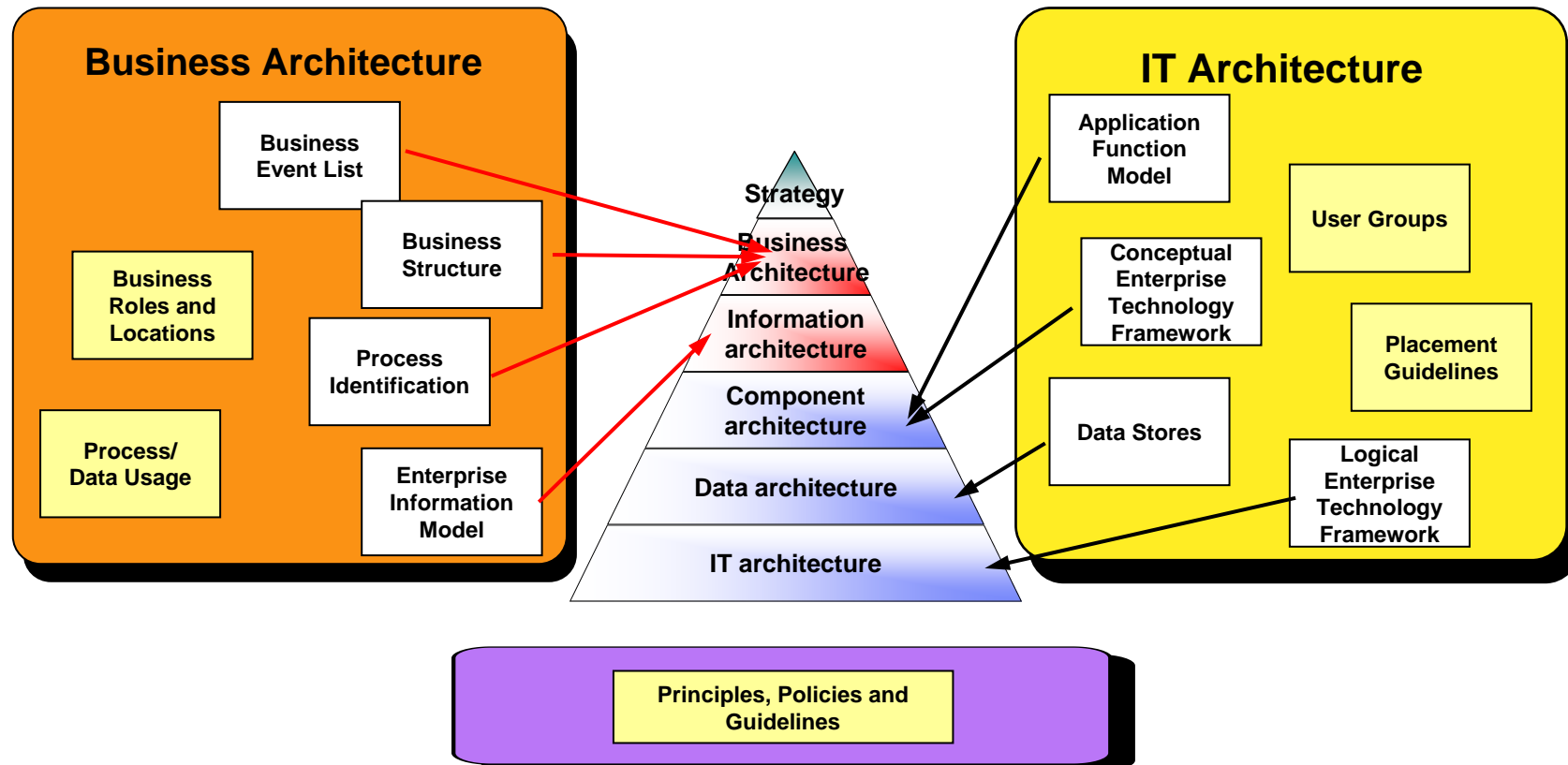
# A popular way of structuring an EA's architecture framework: is to adopt a simple layered approach





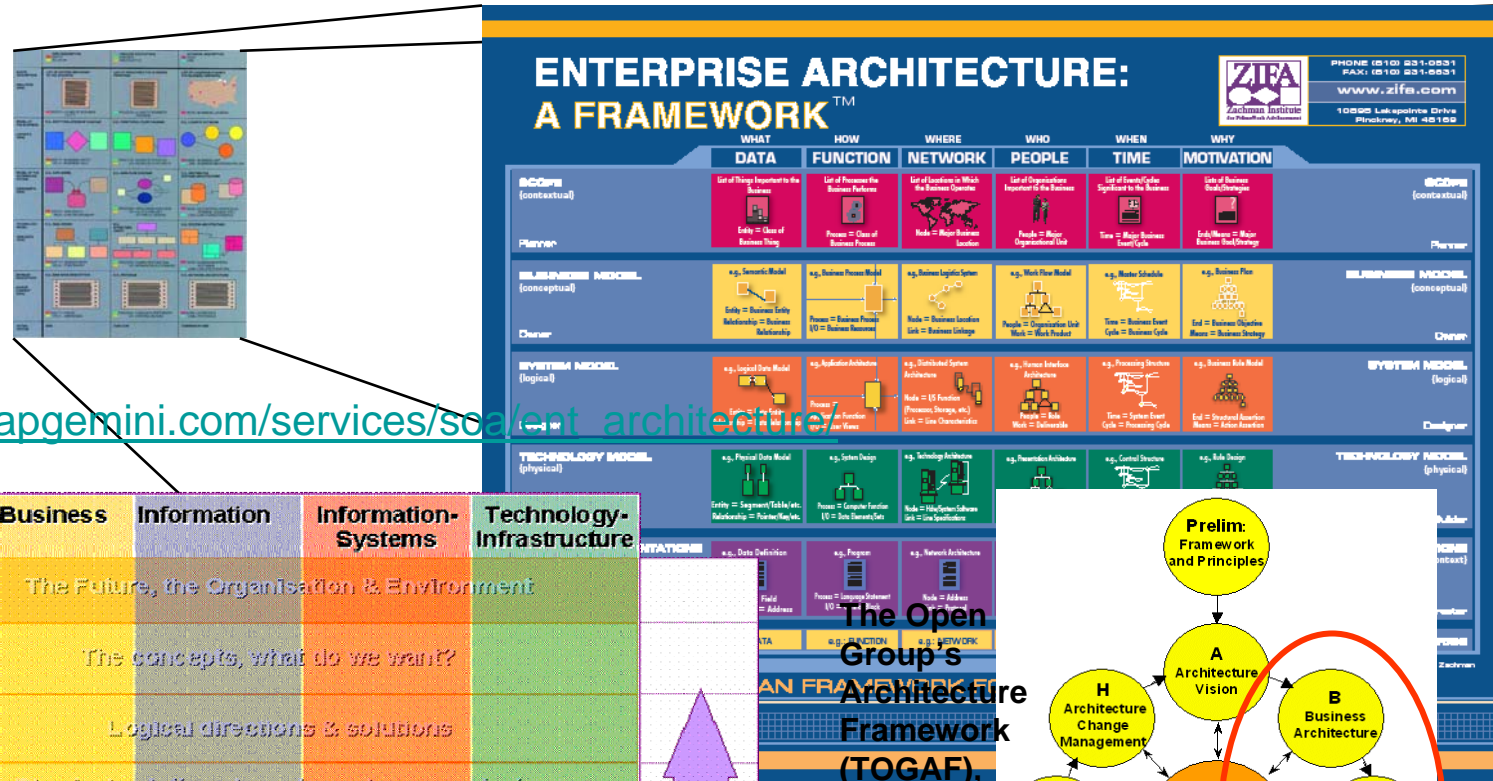


# And this structuring is closely followed in IBM's EA Method through "architecture neighbourhoods"





# All EAs have a “framework” – a means of organizing, managing and communicating the architecture



[http://www.capgemini.com/services/solutions/enterprise\\_architecture/](http://www.capgemini.com/services/solutions/enterprise_architecture/)

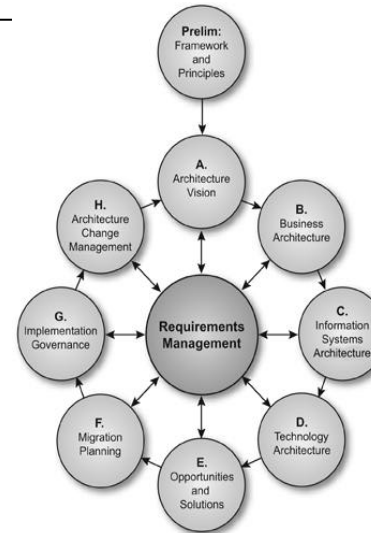
	Business	Information	Information-Systems	Technology-Infrastructure
<b>Why?</b> Contextual	The Future, the Organisation & Environment			
<b>What?</b> Conceptual	The concepts, what do we want?			
<b>How?</b> Logical	Logical directions & solutions			
<b>With What</b> Physical	Physical solutions based on change, redesign, products or techniques			
<b>When</b> Transformational	Change from the existing to a future situation			
<b>Optional 5<sup>th</sup> layer</b>	Security & Governance		Viewpoints	

© CapGemini, 2005



## What is TOGAF v8.1.1

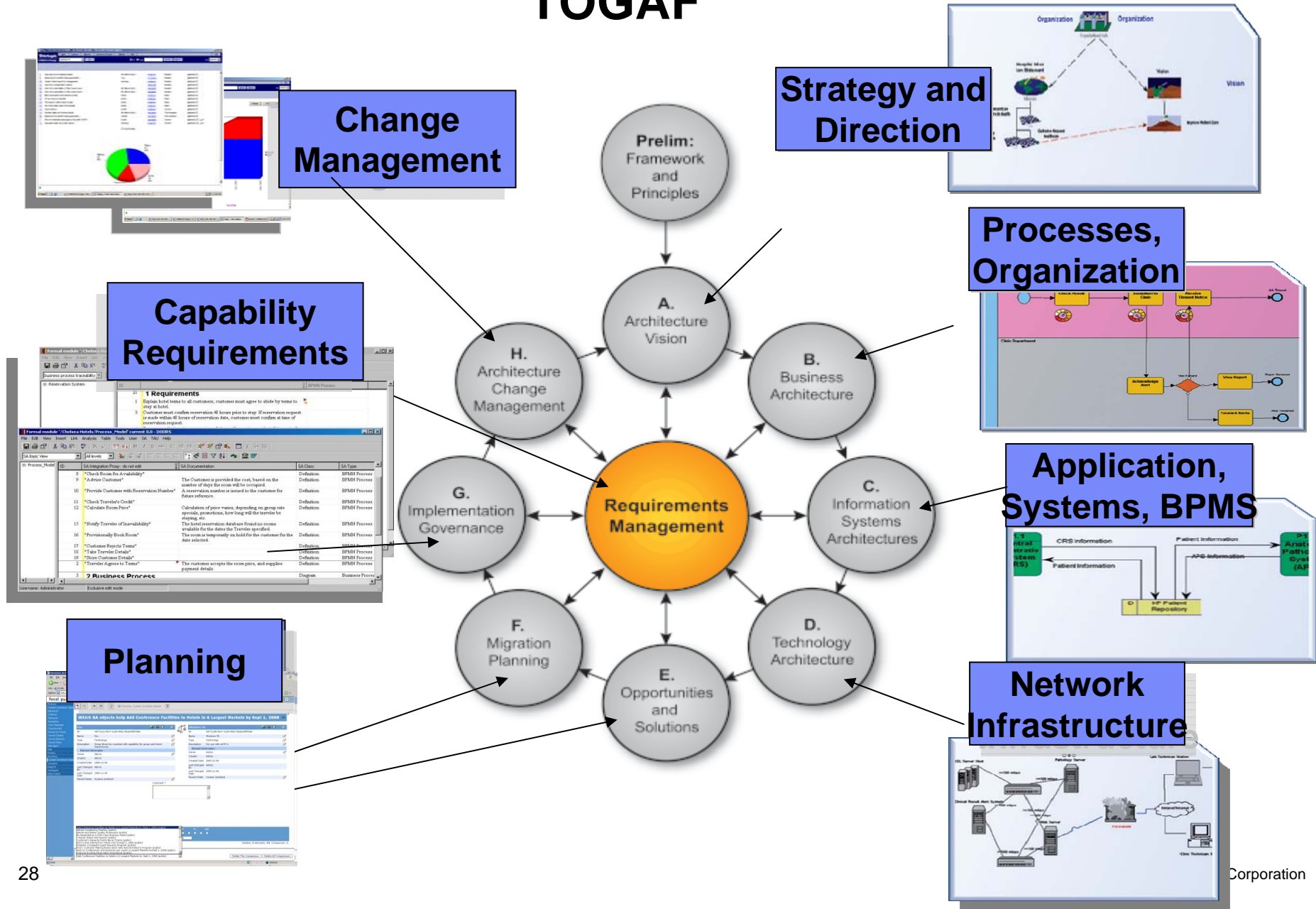
- **TOGAF v8.1.1 consists of the following :**
  - **Architecture Development Method (ADM)**
  - **Enterprise Continuum**
  - **Resource Base**



- **The ADM is depicted as the ‘crop-circle’ and represents the core of the TOGAF specification. It is a method for deriving a specific enterprise architecture.**
- **The Enterprise Continuum is a model for structuring a ‘virtual repository’ of architectural assets such as patterns, models, & architecture descriptions.**
- **The Resource Base is a set of ‘good practice’ resources such as guidelines, checklists and templates provided to assist the architect when using TOGAF ADM.**



# TOGAF



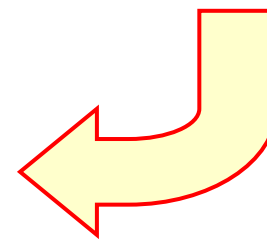
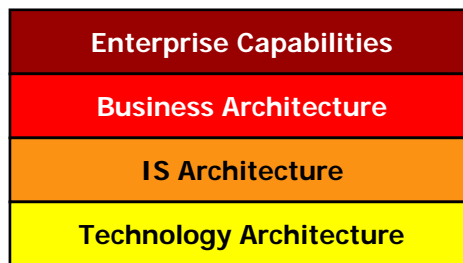
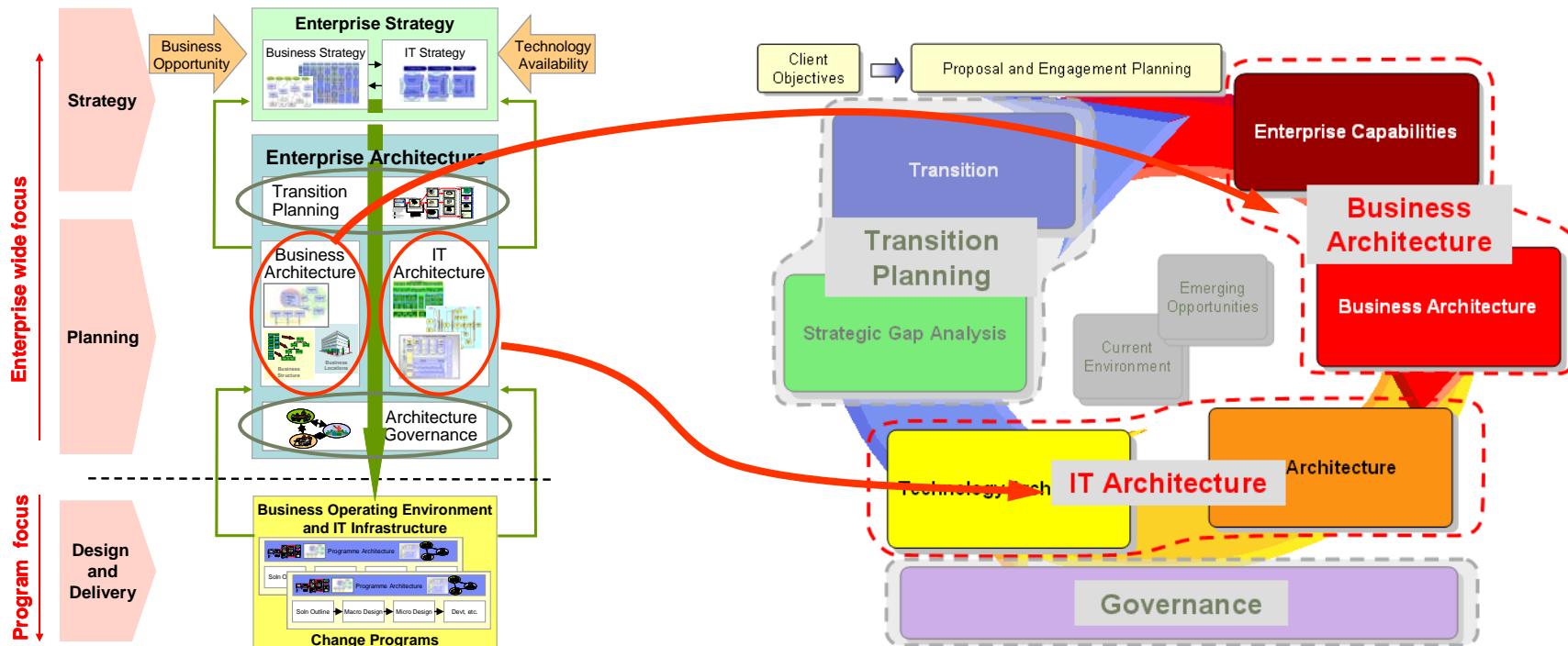


# EA Method Overview





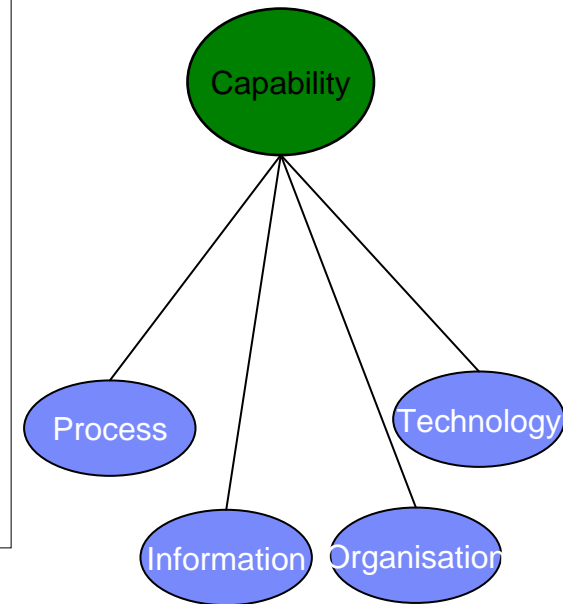
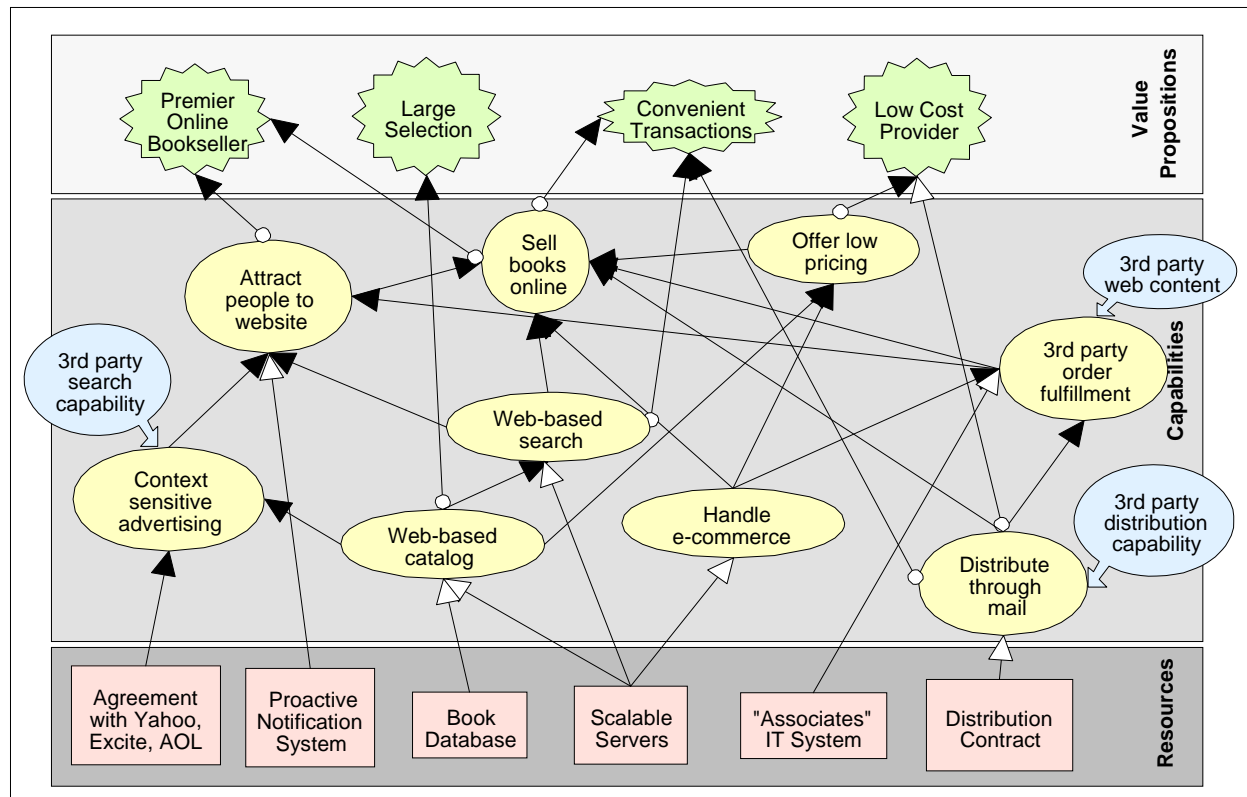
# All EAs have a “framework” – a means of organizing, managing and communicating the architecture



*The EA Consulting Method's architectural layers*

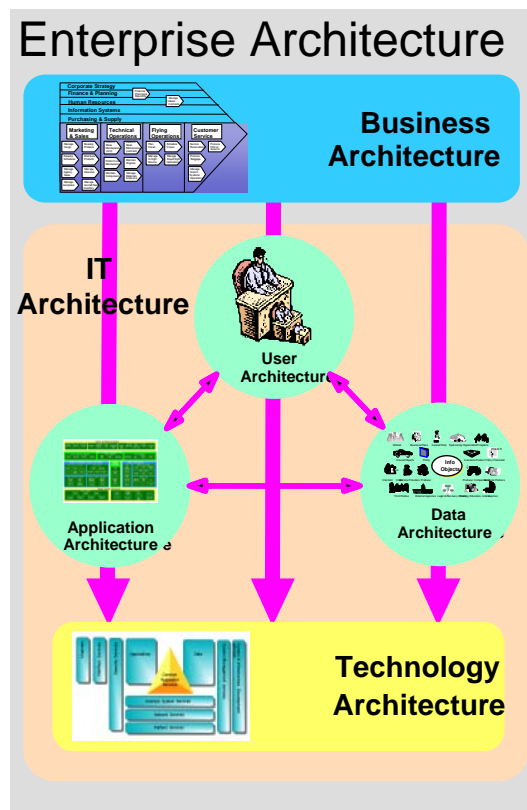


# Enterprise Capabilities: Linking Strategy to Architecture (Example Amazon)

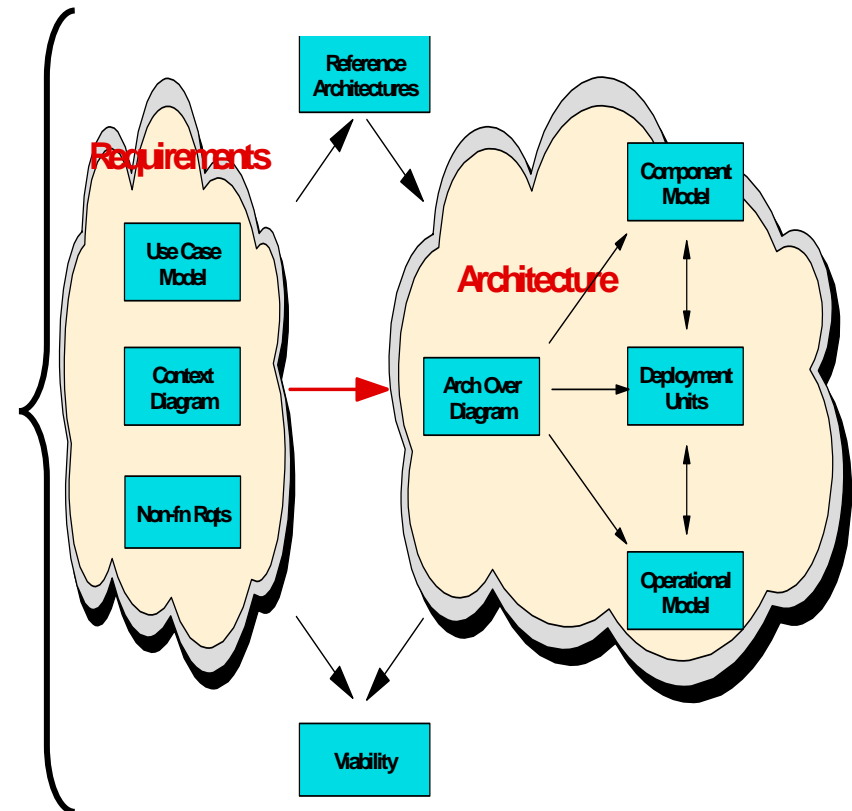




# EA Work Products guide and govern how Solution Work Products are constructed (Same Types of Work Products)



“EA  
constrains and  
co-  
ordinates  
the  
construction  
of IT based  
business  
systems”



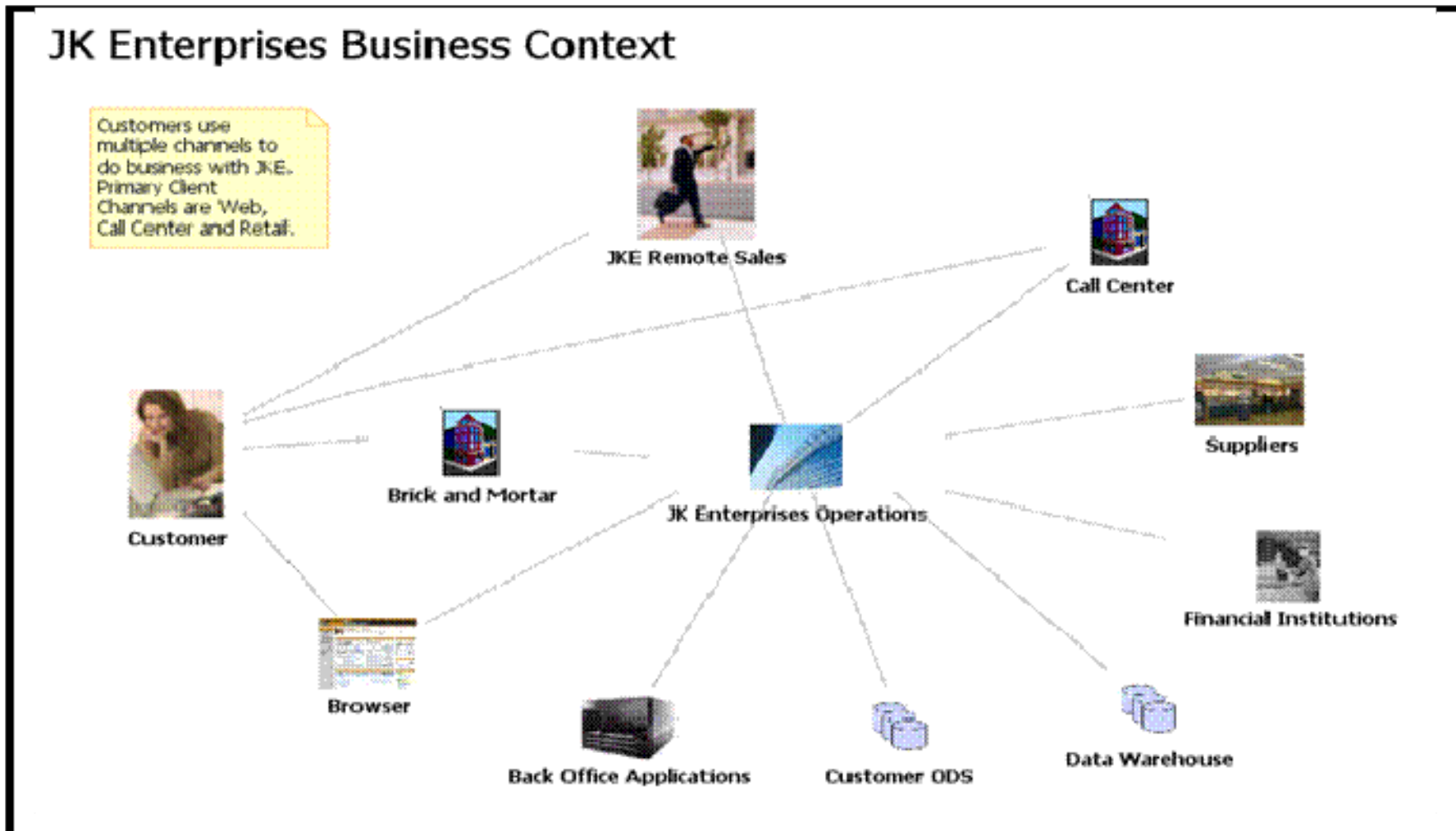




## **Enterprise Architecture – Business View**

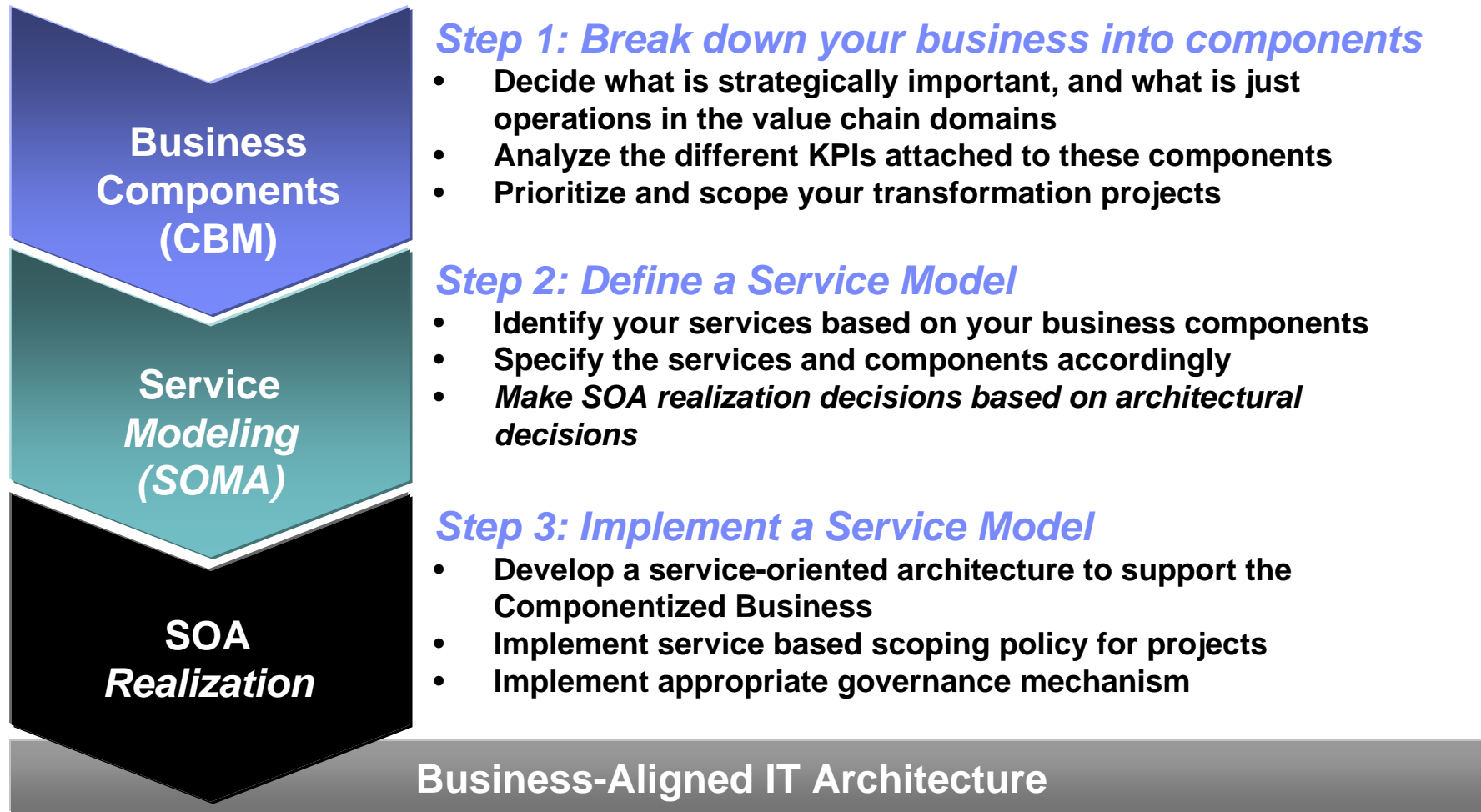


# Example Business Context





## Recap: Approach for SOA





# Component Business Model (CBM) – Definitions (1)

A **Business Component** is a part of an enterprise that has the potential to operate autonomously, for example, as a separate company, or as part of another company.

**Columns** are Business Competencies, defined as large business areas with characteristic skills and capabilities, for example, product development or supply chain.

An **Operational Level** characterizes the scope of decision making. The three levels used in CBM are direct, control and execute.

- Direct is about strategy, overall direction and policy.
- Control is about monitoring, managing exceptions and tactical decision making
- Execute is about doing the work

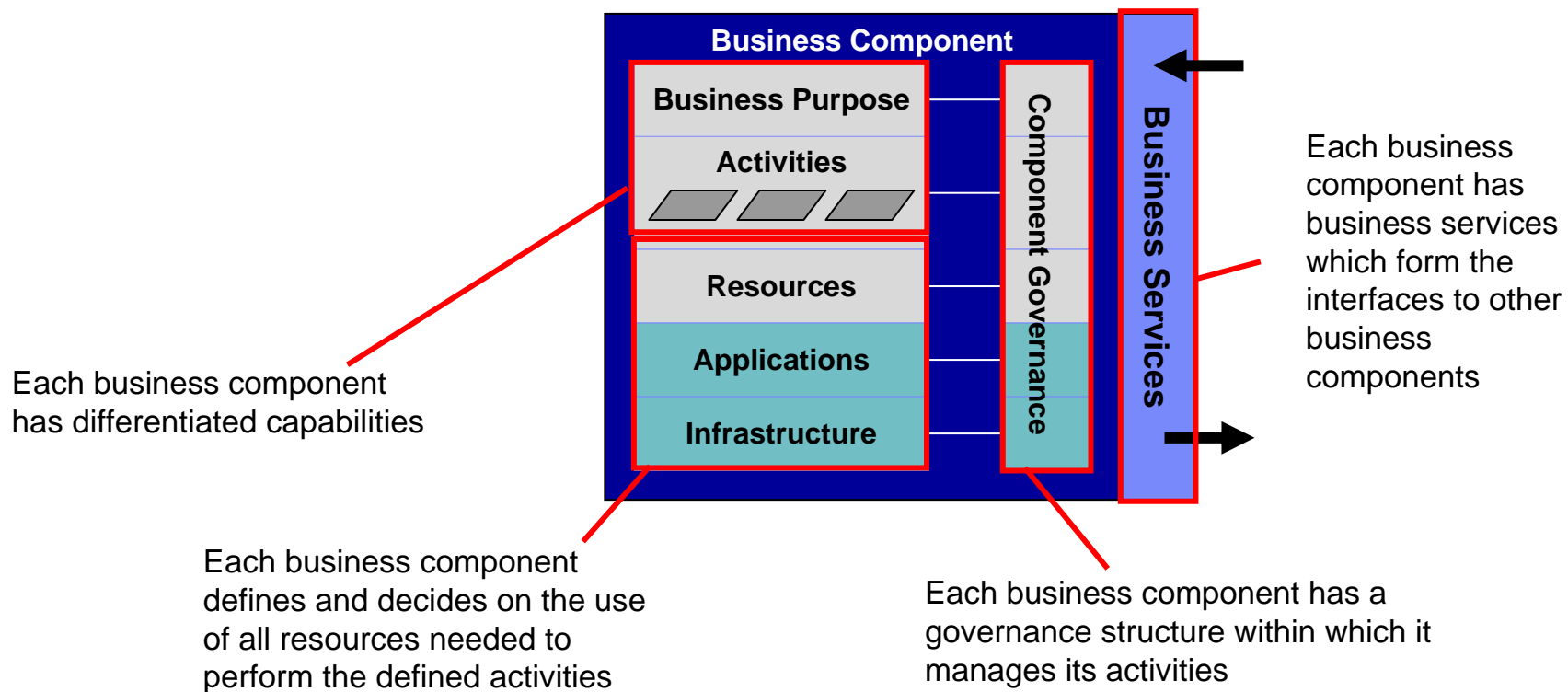
	Business Administration	New Business Development	Relationship Management	Servicing & Sales	Product Fulfillment	Financial Control and Accounting
Direct	Business Planning	Sector Planning	Account Planning	Sales Planning	Fulfillment Planning	Portfolio Planning
Control	Business Unit Tracking	Sector Management	Relationship Management	Sales Management	Fulfillment Planning	Compliance
	Staff Appraisals	Product Management	Credit Assessment			Reconciliation
Execute	Staff Administration	Product Directory	Credit Administration	Sales	Product Fulfillment	Customer Accounts
	Production Administration	Marketing Campaigns		Customer Dialogue	Document Management	General Ledger
				Contact Routing		



## CBM – Definition (2): The building block of a component business model is a ‘business component’

A component is a business in microcosm. It has activities, resources, applications, infrastructure. It has a governance model. It provides goods and services (business services)

### Business Component Elements





# Domain Decomposition– Component Business Modeling for JKE

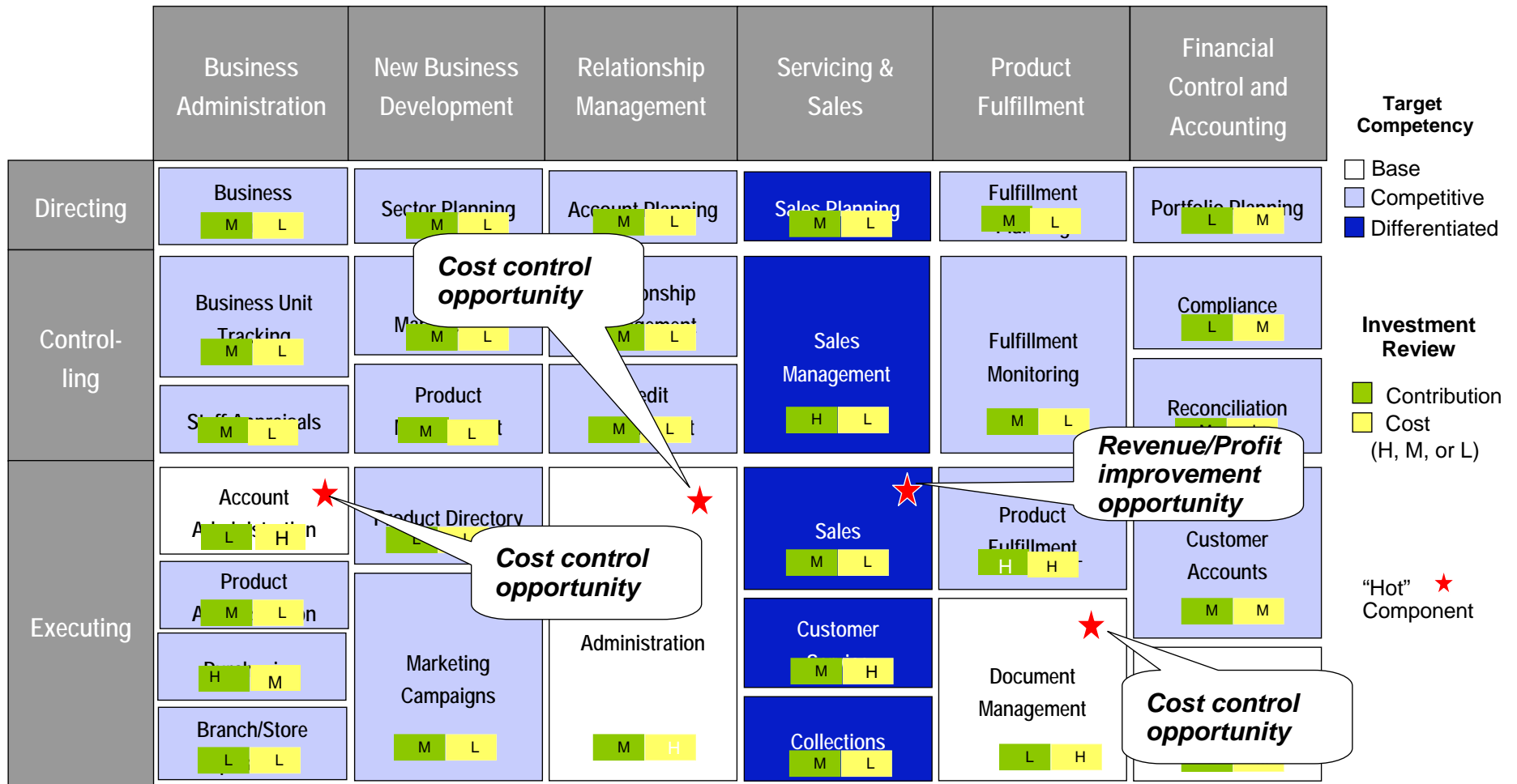
	Business Administration	New Business Development	Relationship Management	Servicing & Sales	Product Fulfillment	Financial Control and Accounting
Directing	Business Planning	Sector Planning	Account Planning	Sales Planning	Fulfillment Planning	Portfolio Planning
Controlling	Business Unit Tracking	Sector Management	Relationship Management	Sales Management	Fulfillment Monitoring	Compliance
	Staff Appraisals	Product Management	Credit Assessment			Reconciliation
Executing	Account Administration	Product Directory	Credit Administration	Sales	Product Fulfillment	Customer Accounts
	Product Administration	Marketing Campaigns		Customer Service	Document Management	
	Purchasing			Collections		General Ledger
	Branch/Store Operations					

**Target Competency**

- Base
- Competitive
- Differentiated

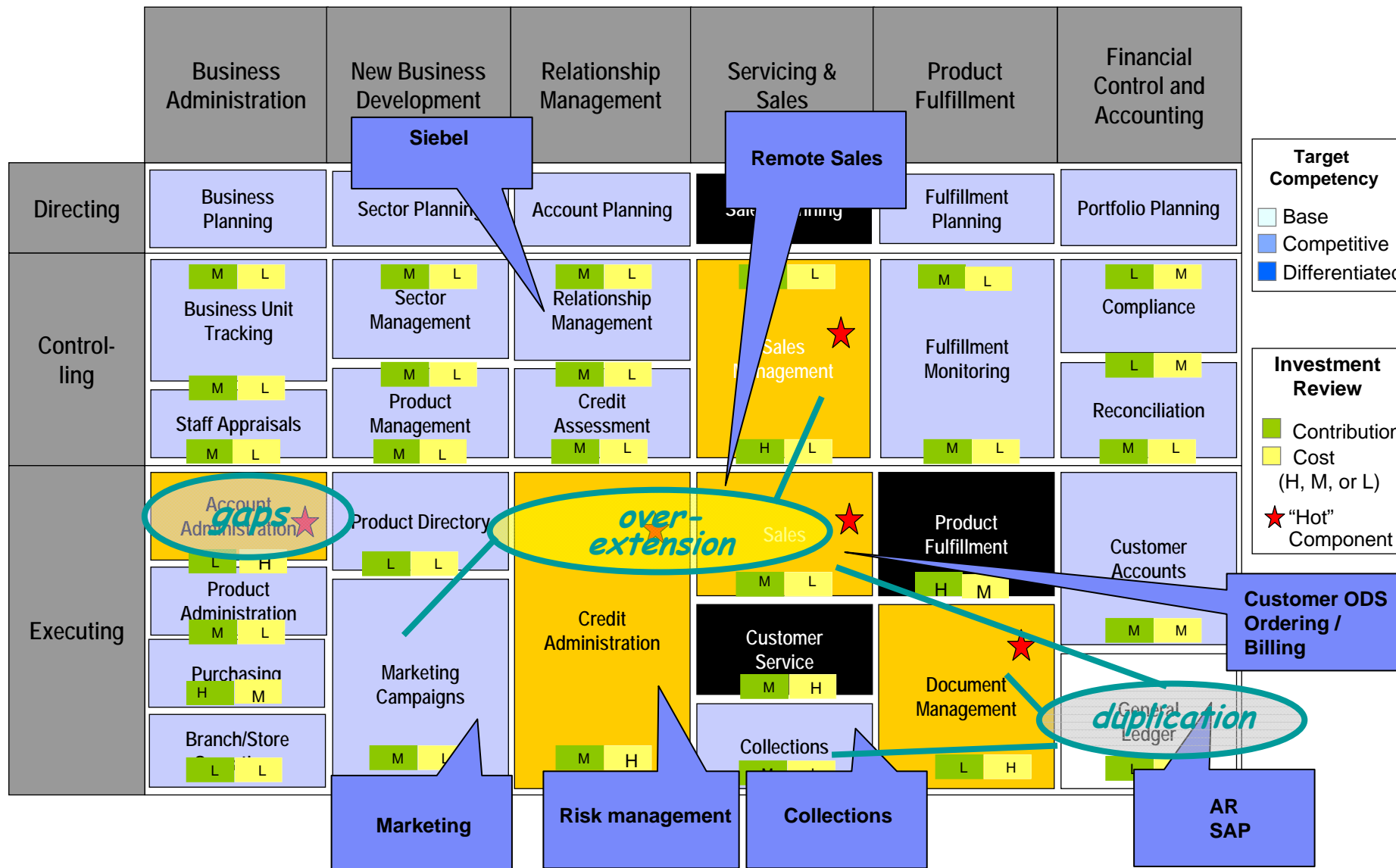


# Domain Decomposition– Component Business Modeling for JKE





# CBM and IT Systems Coverage for JKE







## Key Performance Indicators for JKE

- Account Administration

**Automate the manual tasks for creating and administering accounts**

**Decrease cost of account activation by 50%**

- Credit Administration

**Design and build optimized services to support converged organization**

**Negotiate better prices with our vendors taking advantage of our combined size**

**Decrease negotiated cost (Vendor volume discounts) of credit report retrieval by 20%**

**Automate 75% of all credit report retrievals**

**Implement consistent business rules to manage risk**

**Decrease number of credit report retrievals by 10%**

- ...



# Business Goals and Key Performance Indicators

## Business Goals

Requirements:	ROI	Cost	Benefit	Priority
<b>GOAL1: Cost Reduction</b> Cost Reduction of 10% by 2007	1000000	20000	1020000	High
<b>GOAL2: Increase Products Per Customer</b> Increase Products Per Customer by 10% by 2007	250000	50000	300000	Medium
<b>GOAL3: Increase Availability</b> Increase Availability of On-Line Presence to 99.999%	25000	15000	40000	
<b>GOAL4: Reduce Risk of Regulatory Non-Compliance</b> Reduce Risk of Regulatory Non-Compliance	100000	20000	120000	
<b>GOAL5: Increase Customer Self-Service</b> Increase Customer Self-Service via Internet to 85% by 2006	50000	5000	55000	
<b>GOAL6: Decrease Time to Market</b> Decrease Time to Market for New Products by 10% by 2007	250000	30000	280000	

## Key Performance Indicators

Requirements:	Priority	Status
<b>KPI1: Decrease cost of account activation</b> Decrease cost of account activation by 50%	Medium	Proposed
<b>KPI2: Decrease negotiated cost of credit report retrieval</b> Decrease negotiated cost (Vendor volume discounts) of credit report..	Medium	Proposed
<b>KPI3: Automate credit report retrievals</b> Automate 75% of all credit report retrievals	Medium	Proposed
<b>KPI4: Decrease number of credit report retrievals</b> Decrease number of credit report retrievals by 10%	Medium	Proposed
<b>KPI5: Increase electronic applications</b> Increase electronic applications by 25%	Medium	Proposed
<b>KPI6: Reduce call center calls</b> Reduce number of call center calls by sales force and offices (stores).	Medium	Proposed

- **Key Performance Indicators (KPIs) are used to define a metric (simple or composed measurable unit) that measures of much the service implementation fulfills the initial requirements (business goal)**
- **Each Business Goal that is going to be realized with a specific service implementation should have an associated KPI.**



**Dynamic Infrastructure  
To be added later**



# Questions

