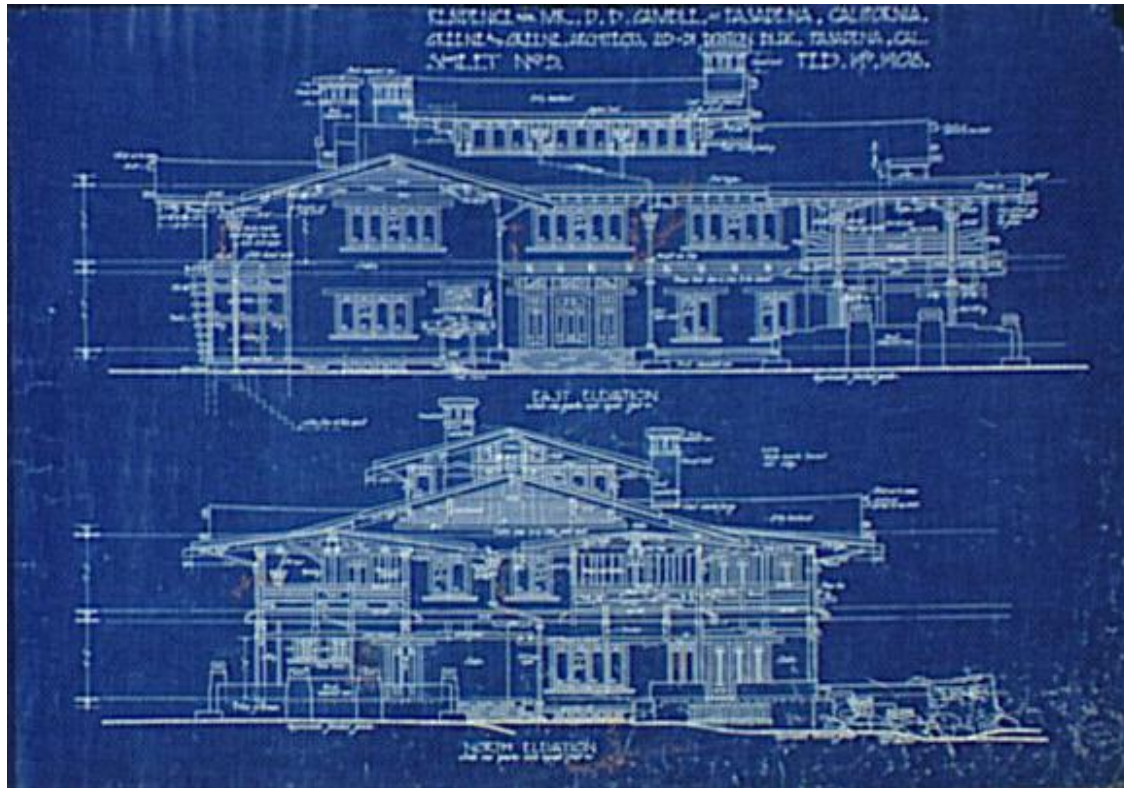


Enterprise Architecture Practitioners Conference, London

# The Governance of Enterprise Architecture during the Crisis

30 April 2009



# Overview

- What is IT governance?
- Why is it important to govern EA?
- What are some of the typical EA governance mechanisms?
- Why is this important during the crisis?
- What are specific focus areas during the crisis?
- Questions and discussion (10 mins)



# Overview

- **What is IT governance?**
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- Questions and discussion



# Definitions: (IT) governance

From Latin *gubernare*: To direct or to steer

IT governance is part of the enterprise governance and consists of the leadership, organisational structures and processes that ensure that the organisation's IT sustains and extends the organisation's strategies and objectives. IT governance is a responsibility of the board of directors and executive management

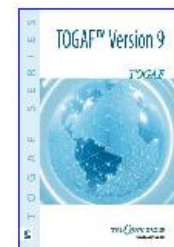
- IT Governance Institute

“...specifying the decision rights and accountability framework to encourage desirable behaviour in using IT”

- Peter Weill and Jeanne Ross – IT Governance: How Top Performers Manage IT Decision Rights for Superior Results

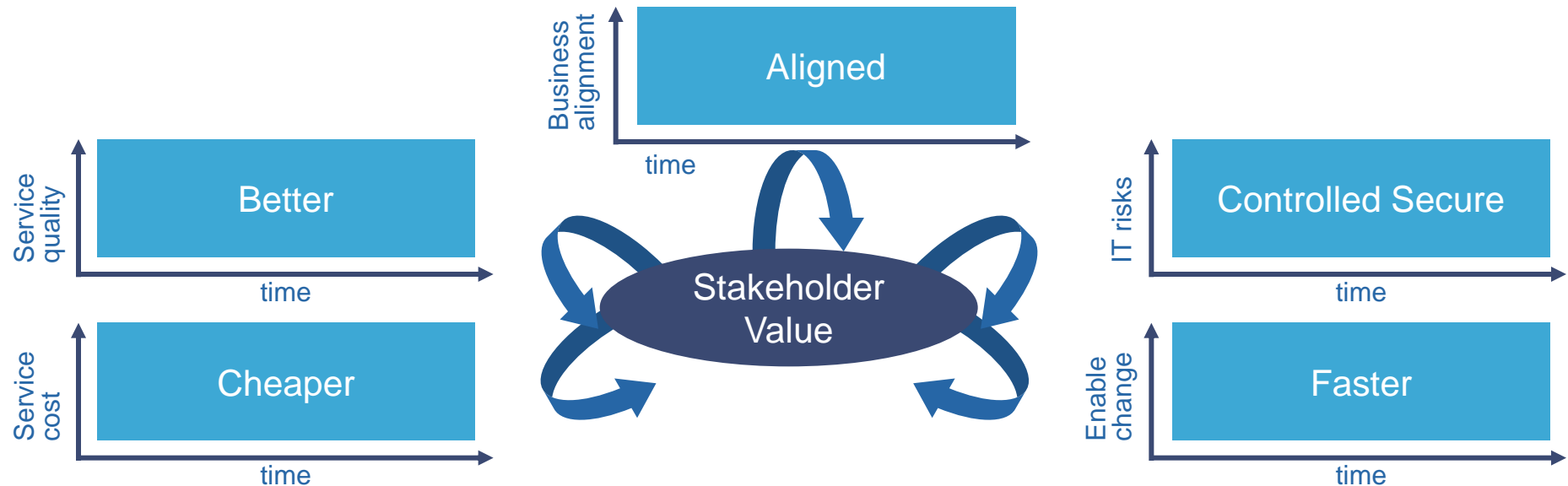
The discipline of monitoring, managing, and steering a business (or IS/IT landscape) to deliver the business outcome required

- TOGAF



# PwC definition of IT governance

- IT governance provides the framework and capacity for making and implementing decisions required to manage, control and monitor IT within the business
- A framework is required that defines these decisions, the involvement by various stakeholders, and the structures, processes, responsibilities and other mechanisms required to increase stakeholder value in a number of ways:

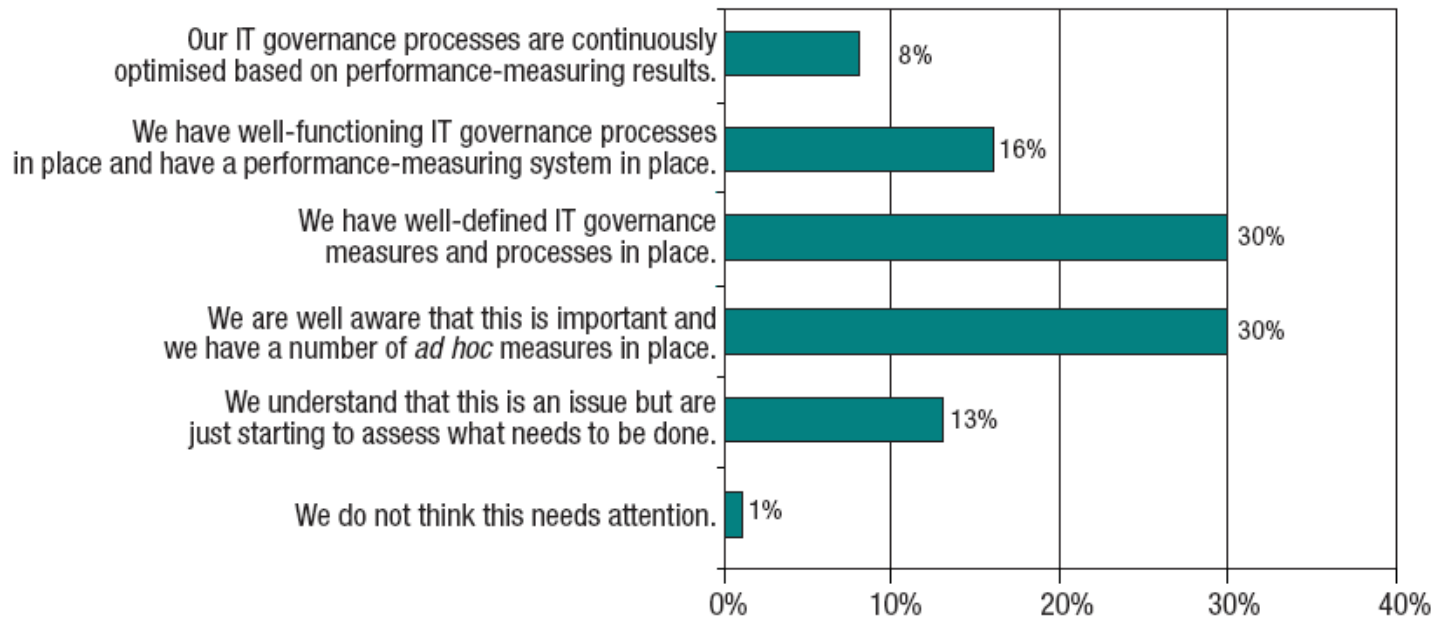




# From the IT Governance Global status report 2008



### Figure 19—IT Governance Maturity Level (749 Respondents)



## How does this compare?

How would you describe the IT governance maturity level in your organisation?

1. Our IT governance processes are continuously optimised
2. We have well-functioning IT governance processes incl. performance measurement
3. We have well-defined IT gov processes in place
4. We are aware that this is important and have a number of ad-hoc measures in place
5. We understand that this is an issue but are just starting to assess what needs to be done
6. We do not think this needs attention

# Overview

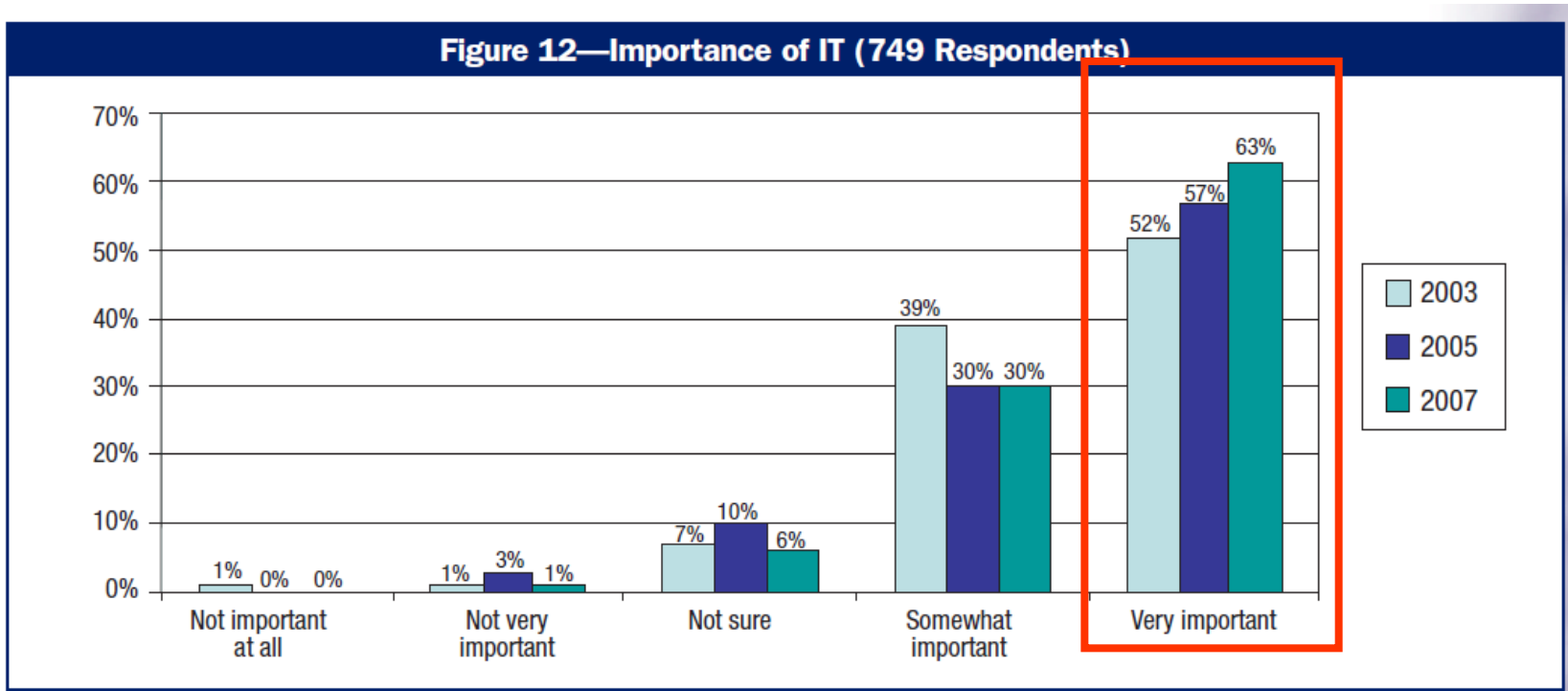
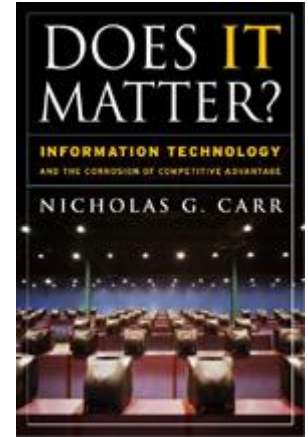
- What is IT governance?
- **Why is it important to govern EA?**
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- Why is this important during the crisis?
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- Questions and discussion





# Why is IT governance important?

- IT does matter, sorry Nick
- IT Governance Global Status Report, 2008:



# Why is IT governance important?

- As a critical asset, IT needs to be governed properly
  - Core driver of cost savings for large transactions, e.g. M&A, divestitures
  - Can enable automation of key processes
  - Cornerstone of new business strategies such digital delivery
  - Can enable greater customer intimacy and profitability. e.g. data consolidation and mining
- At the same time, IT represents a significant investment
  - Typically between 1 and 8% of gross revenue
  - Business often questions the ROI of these investments
- Networked economy presents new IT-related risks
  - Non-availability of customer-facing business systems, loss of customer data, missed business opportunities due to inflexible architecture
- Complex regulatory environments
  - Banking Regulatory and Supervision Agency of Turkey

# Why is EA governance important?

- Study by Enterprise Architecture Executive Council



- Architecture governance and communication of enterprise architecture's value to the business ranked as the two most important challenges for enterprise architects

- Benefits include:

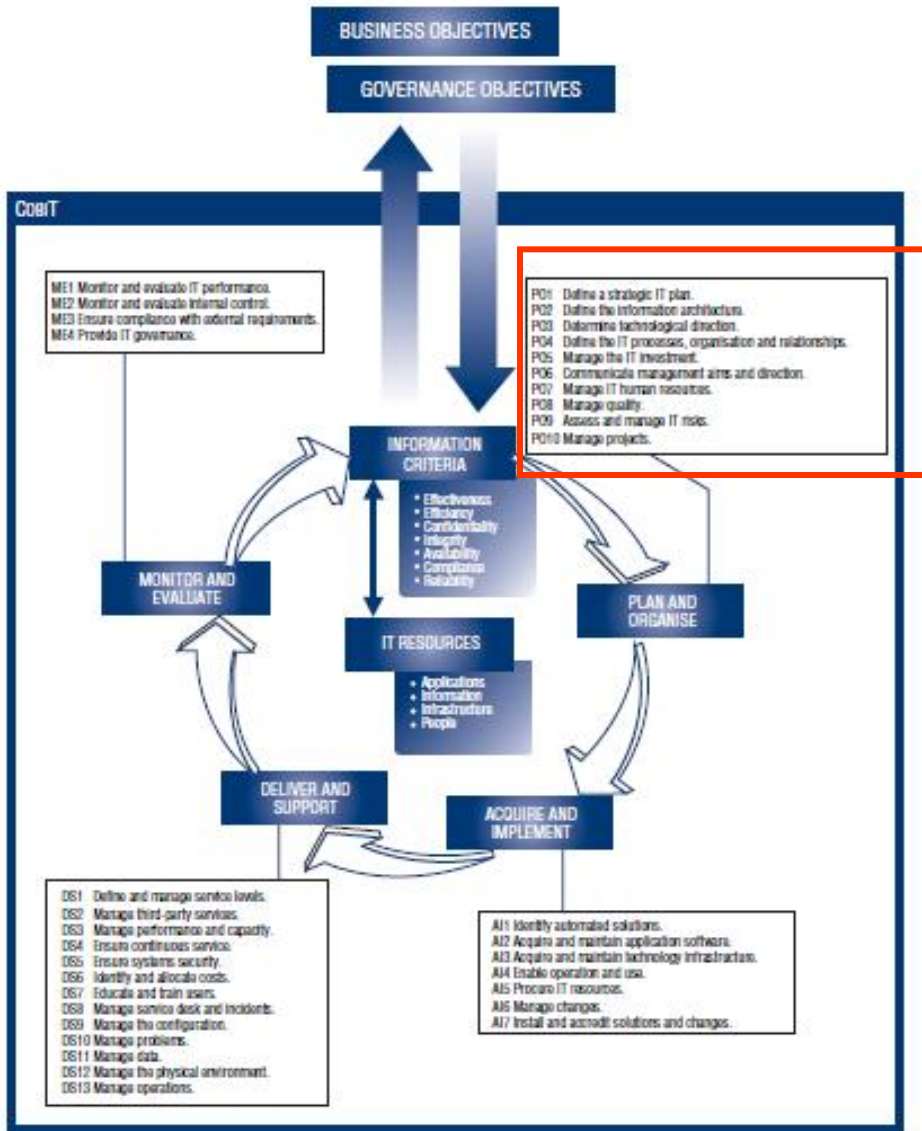
- Better alignment with business requirements and objectives through involvement of all the right role players in architecture decision-making
- Improved management of risks related to architecture evolution
- Better resource utilisation, for example by driving and enforcing re-use
- Improved monitoring of architecture metrics and performance, ensuring that benefits are realised
- Enablement of synergies across territories, business units and functions
- Increased value delivery of IT investments

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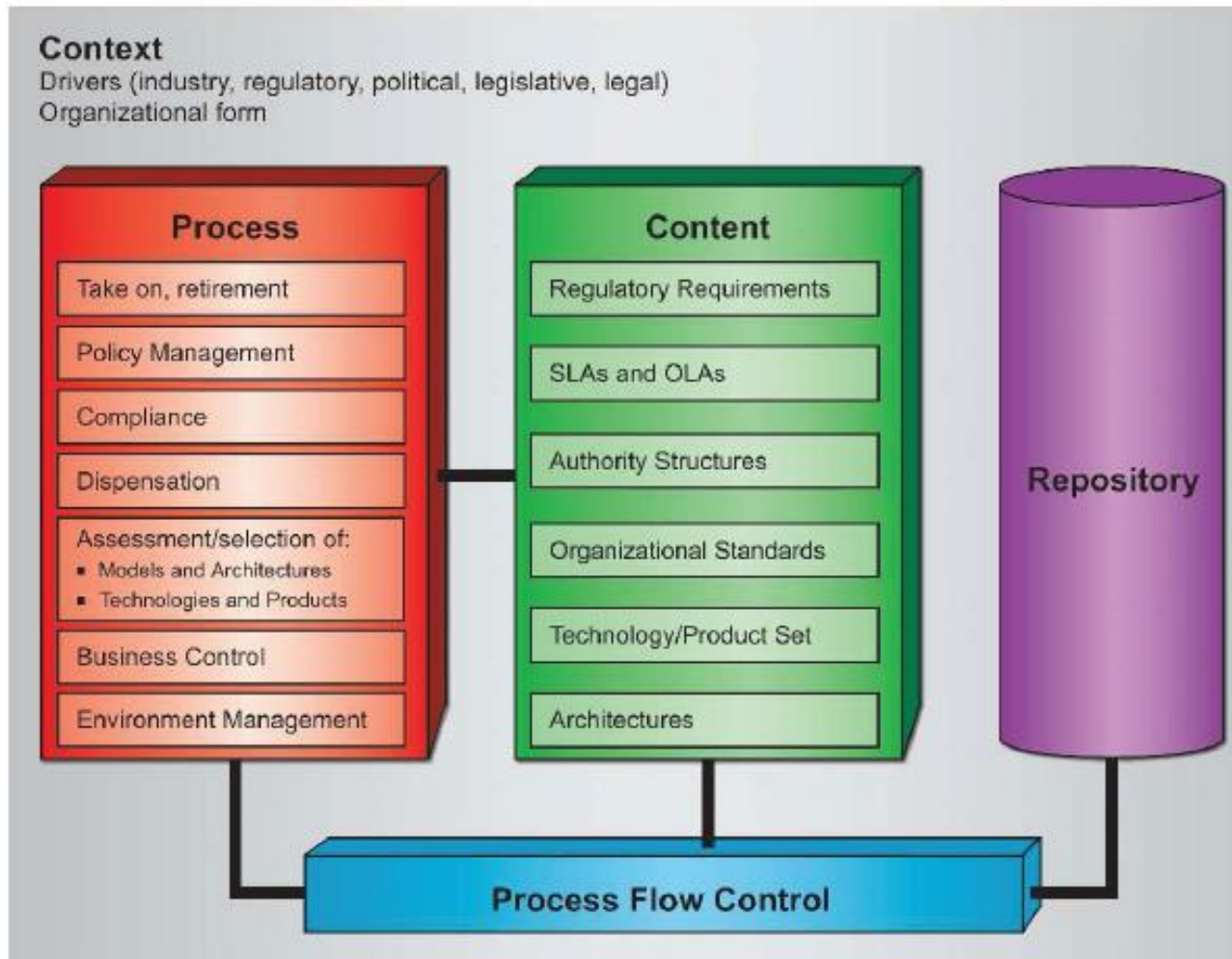
# Who you gonna call?



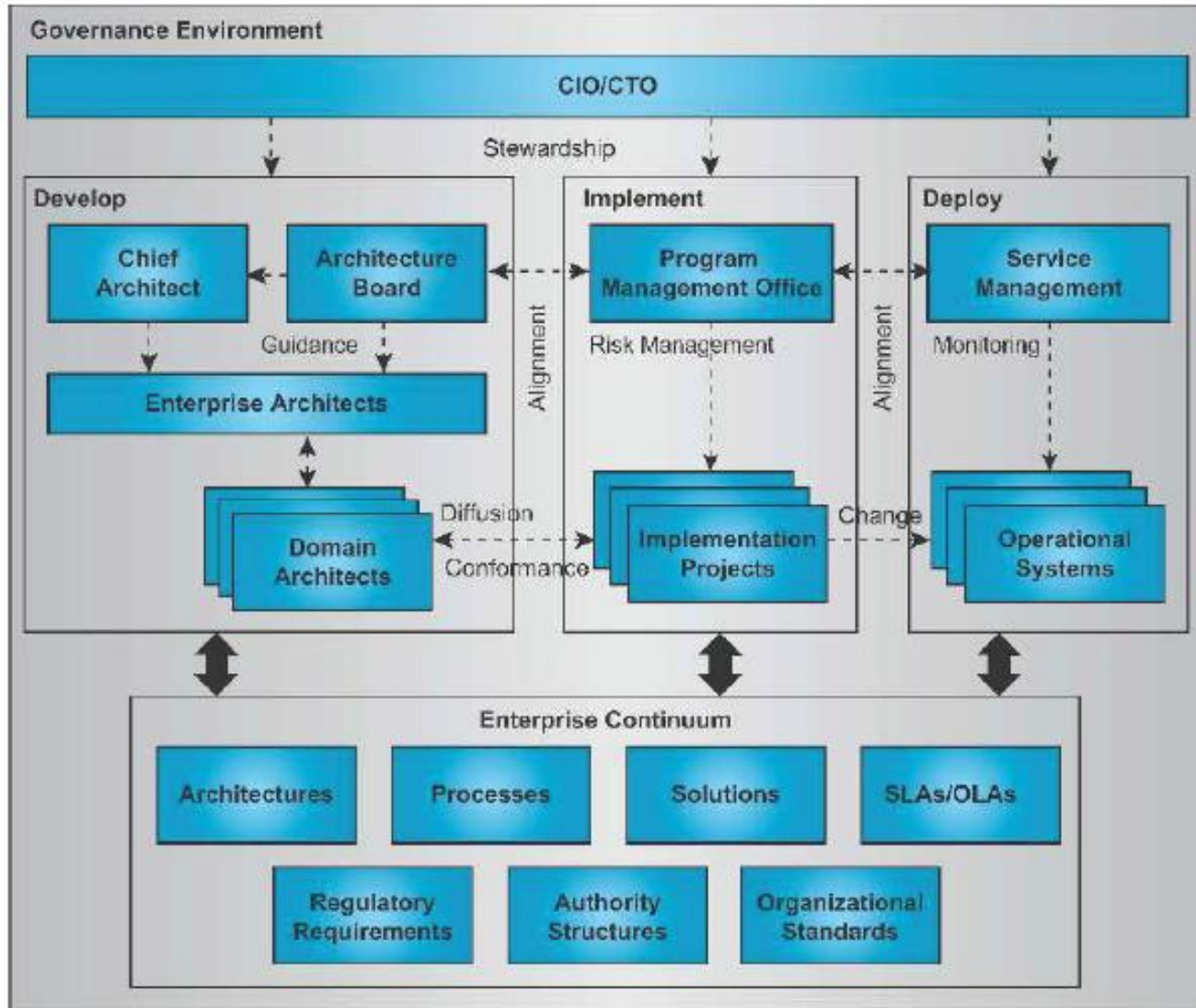
- PO1 Define a strategic IT plan.
- PO2 Define the information architecture.
- PO3 Determine technological direction.
- PO4 Define the IT processes, organisation and relationships.
- PO5 Manage the IT investment.
- PO6 Communicate management aims and direction.
- PO7 Manage IT human resources.
- PO8 Manage quality.
- PO9 Assess and manage IT risks.
- PO10 Manage projects.



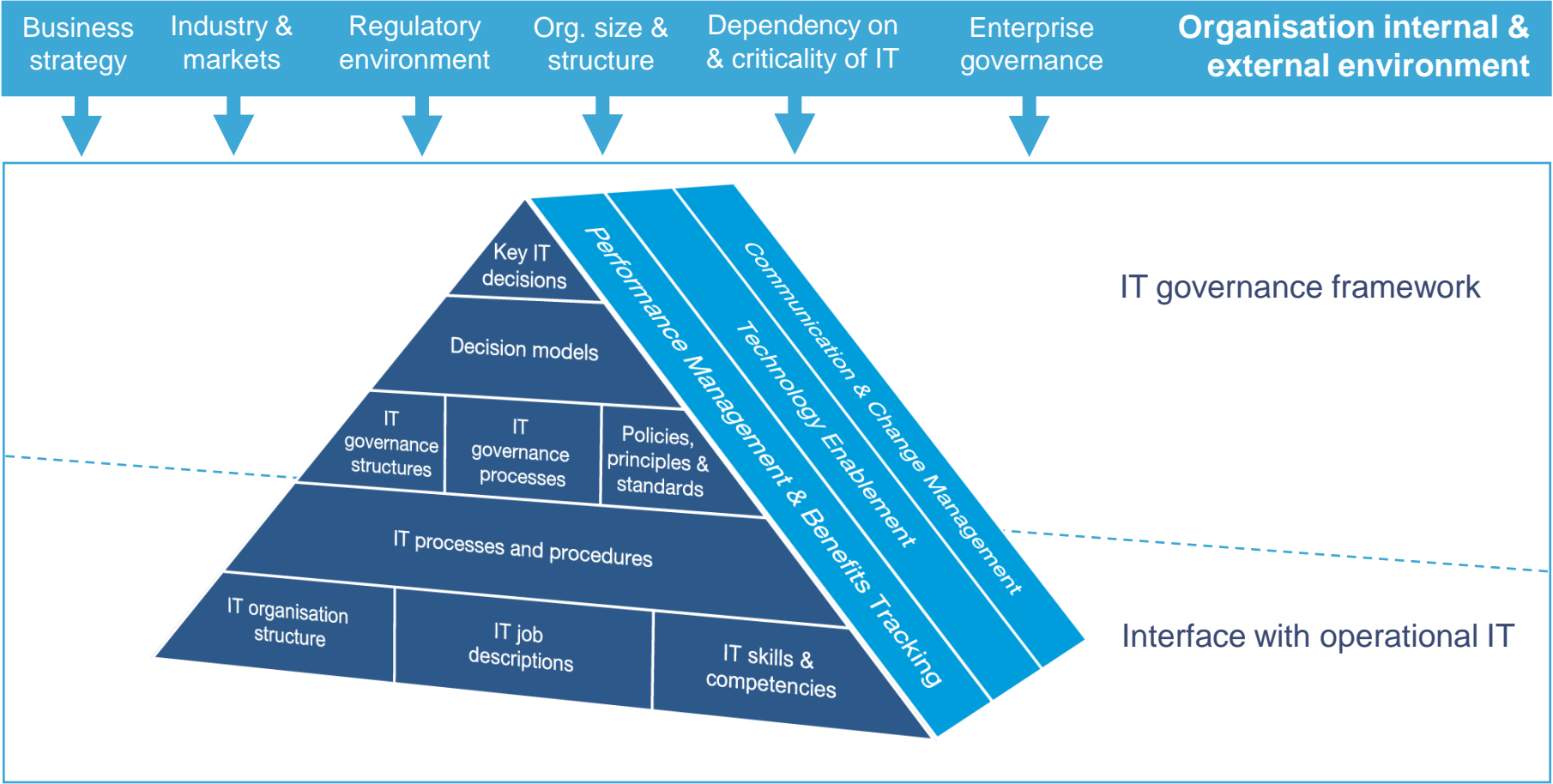
# TOGAF: Architecture Governance Framework – Conceptual Structure



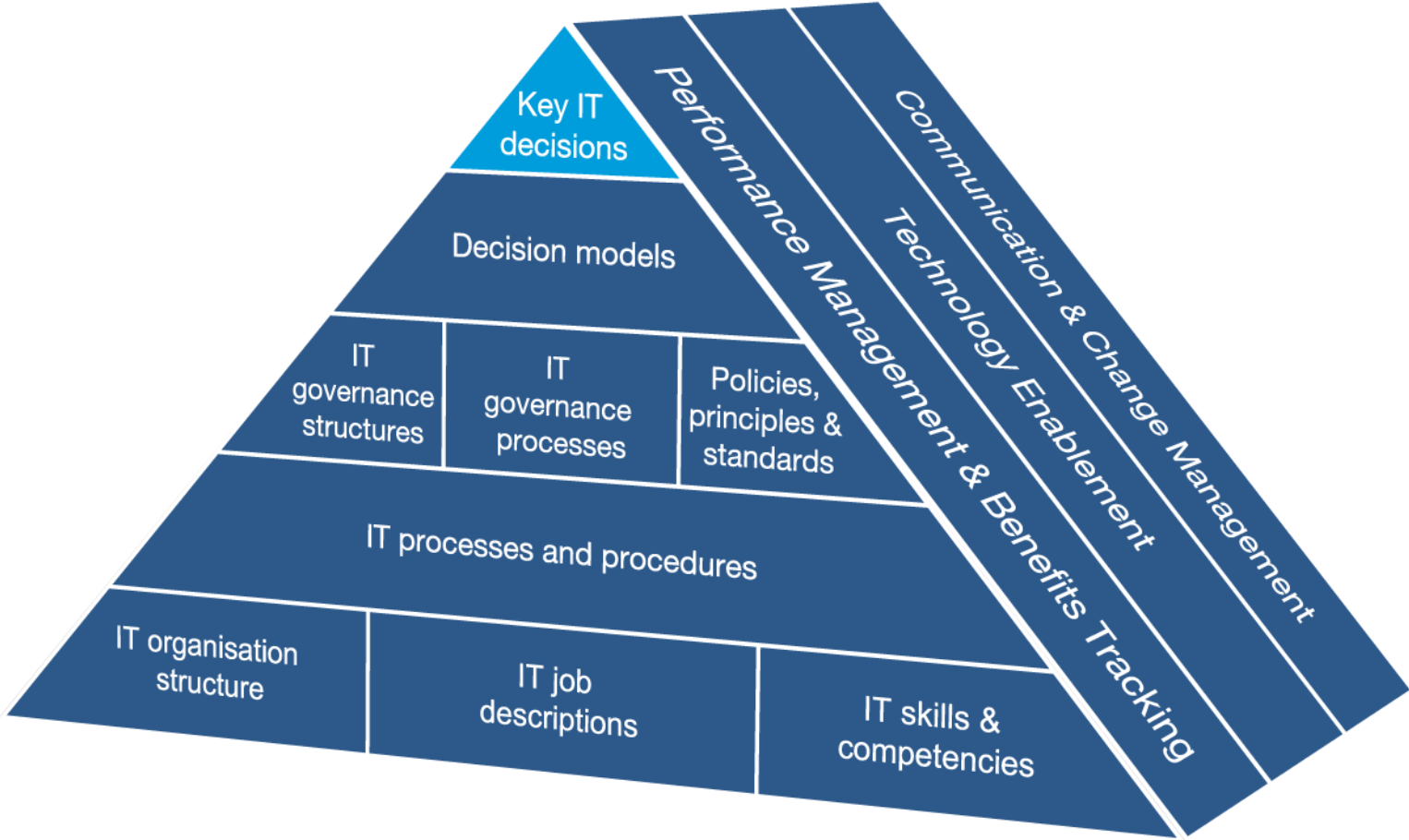
# TOGAF: Architecture Governance Framework – Organisational Structure



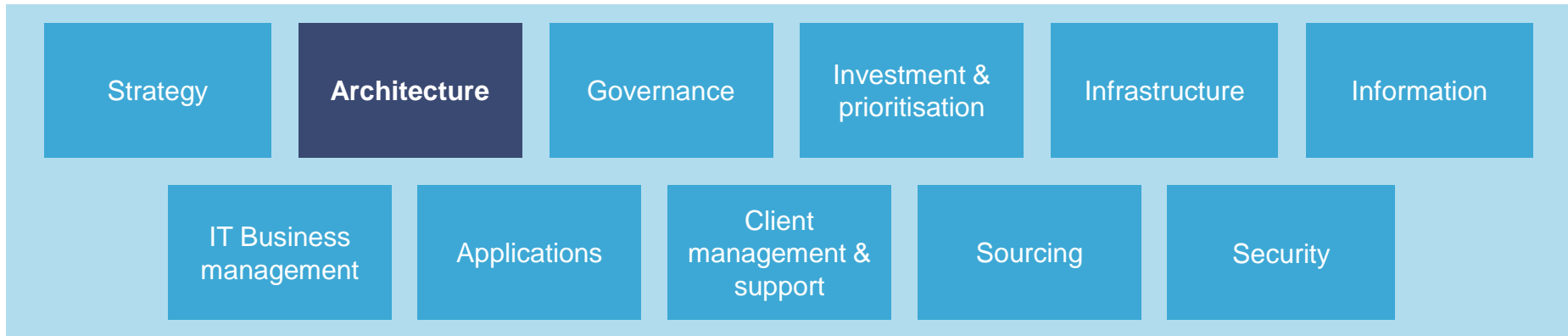
# PwC framework for embedding IT governance in the organisation



# Key IT decisions



## Key IT decisions – the Architecture domain

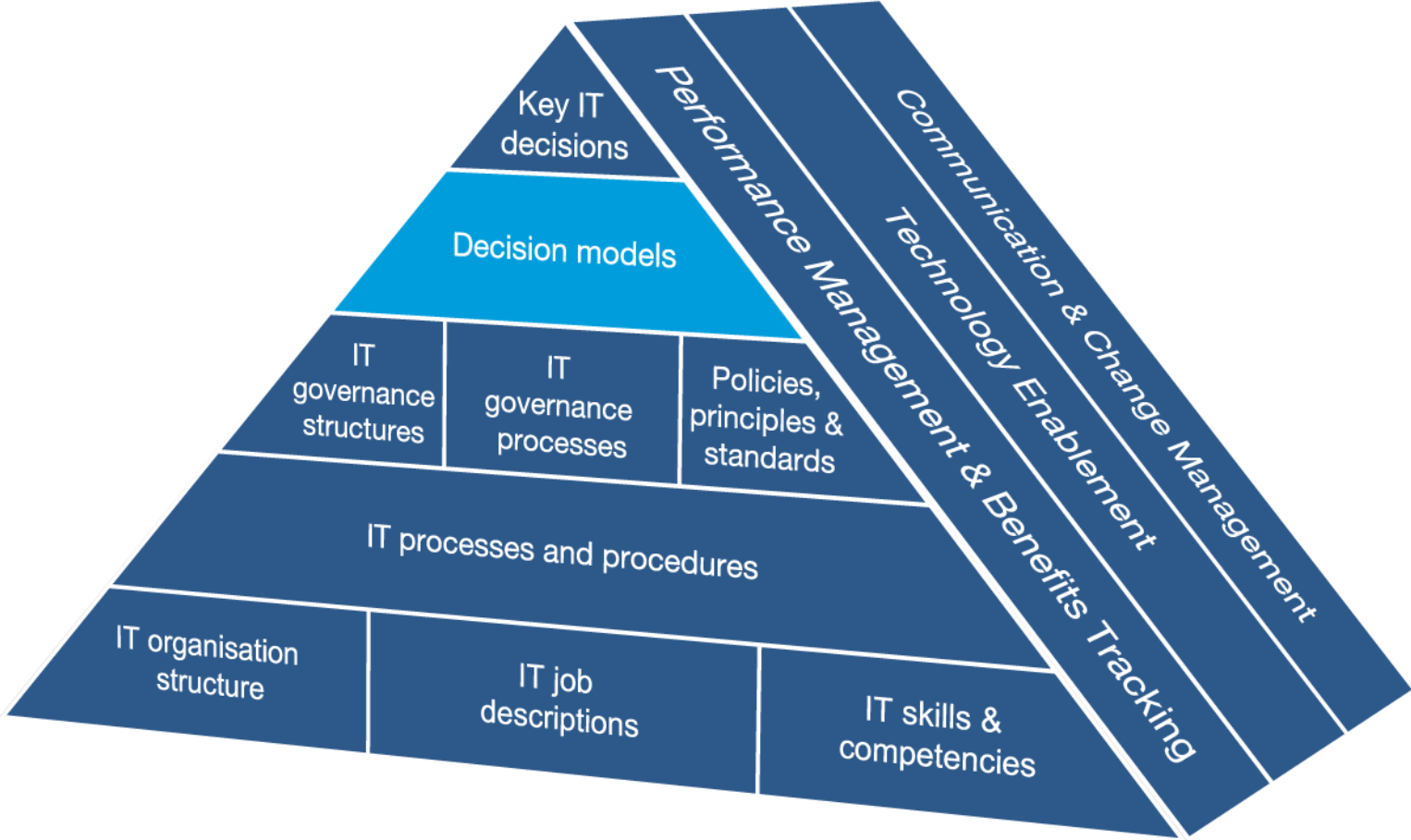


Architecture decisions include those related to:

- Setting and maintaining architecture standards and principles
- The overall architecture vision (e.g. migrating to a Service Oriented Architecture)
- Exceptions to the architecture principles and standards
- Approving various architecture domains that have been developed, e.g. a Business Intelligence domain architecture
- Approving solution architectures per project initiatives, vendor assessments, service level agreements and RFI/RFP documentation from an architecture point-of-view
- Architecture migration planning and change management
- Monitoring of compliance to standards and principles in various product or solution architectures



# Decision models



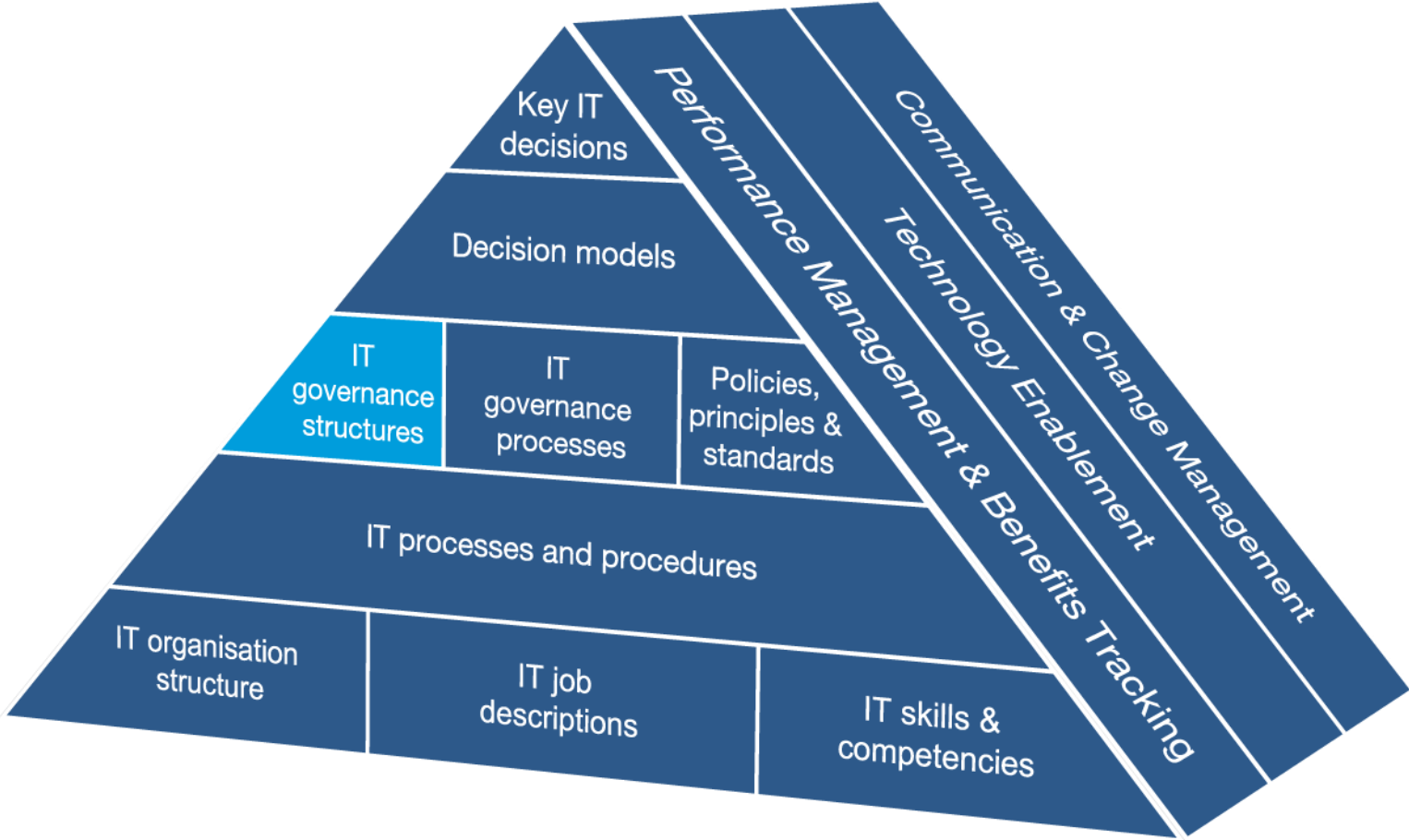
# Decision models – Architecture

# Examples

r	Joint responsibility for recommending a decision
R	Sole responsibility for recommending a decision
A	Accountable for a decision (Approval)
c	May be consulted for a decision (2-way communication)
C	Must be consulted for a decision (2-way communication)
i	May be informed for a decision (1-way communication)
I	Must be informed for a decision (1-way communication)
S	Available to support/assist or advise for a decision

	Strategy	Architecture & Infrastructure	Architecture standards and principles	Solution architecture decisions	Exception decisions	Infrastructure decisions	Governance	Investment & Prioritisation	Applications	Client Management	Sourcing	Risk & Security
<b>Existing structures</b>												
Company Steering Committee			i	i	c	i						
<b>New structures</b>												
IT Steering Committee			A	A	A	c/I						
<b>Business stakeholders</b>												
CEO / General Manager			i	c/i	c/i	i						
CFO			i	c/i	c/i	i						
Other Business Executives (business domains)			c/I	r/C	C	c/i						
Process Owners (process domains)			c/I	r/C	C	c/i						
<b>IT stakeholders</b>												
CIO			r	r	R	A						
IS Manager SW			r	C	c/I	c/I						
IS Manager Infrastructure			r	C	c/I	R						
Information Security Chief			r	C	C	c/I						
Project Manager			c/I	c/I	c/I	c/I						
<b>Other structures</b>												
Group-level IT Steering Committee			S	S	S	S						

# IT governance structures



# Decision mechanisms: IT governance bodies

**Examples**

Scope and Function
The Architecture Review Board (ARB) is responsible for the governance of Enterprise Architecture and facilitates the involvement of relevant business and IT stakeholders in enterprise architecture decision-making. The scope of Enterprise Architecture includes Business, Information, Data, Application and Technical/Infrastructure Architecture
Composition (some membership may be rotated)
<ul style="list-style-type: none"><li>• Chief Architect</li><li>• Business Unit CIOs/IT Managers or Chief Architects (in federal or decentralised model)</li><li>• Business Relationship Managers (in centralised model)</li><li>• Business executives or Business Unit CEOs</li></ul>
Operating Principles
<ul style="list-style-type: none"><li>• The ARB operates within the parameters of the IT Governance framework as set and changed from time to time by the IT Steering Committee and the Executive Committee.</li><li>• No proxies are allowed for ARB meetings</li><li>• If and where issues can not be resolved by the ARB, they will be escalated to the IT Steering Committee or the Executive Committee</li><li>• Disputes should be resolved according to the predetermined appeal process.</li></ul>

- Board
- Capital Approval Committee
- IT Steering Committee
- IT Alignment Forum
- Architecture Review Board**
- IT Risk Control & Compliance Committee
- Business Relationship Managers
- External Service Mgmt Committee
- Programme Office

# Decision mechanisms: IT governance bodies

**Examples**

## Objectives

- Approving architectural designs and blueprints that are congruent with the approved IT strategy and architecture strategy and standards. Where required, this also involves assessing requests for exceptions to the defined standards and principles.
- Ensuring that proposals for investment in information resources submitted to the IT Steering Committee are architecturally sound.
- Approving the introduction of new and revised architectural principles and standards as well as authorise the implementation of technology innovations.
- Resolving issues that have been escalated or referred from other governance bodies or organisational units
- Mandating task teams to projects, which are of common benefits
- Ensuring that the enterprise architecture reflects all important requirements, including legal and regulatory compliance, ethics and business continuity.
- Validating benefits delivered through initiatives

Board

Capital Approval Committee

IT Steering Committee

IT Alignment Forum

**Architecture Review Board**

IT Risk Control & Compliance Committee

Business Relationship Managers

External Service Mgmt Committee

Programme Office



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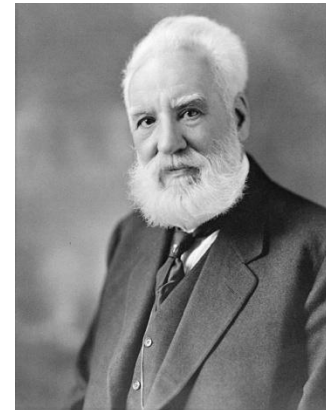




## But...(I)



- 65% of the 1,124 CEOs interviewed for the PwC Annual Global CEO survey cited technological innovation as an important or critical driver for long-term success
- “Technological change is one of the principal drivers of competition”
  - Michael E Porter
- Many organisations have underestimated the impacts of technological change
  - “What use would this company make of an electrical toy?” – Carl Orton, president of Western Union, when Alexander Graham Bell offered him all rights to the telephone for \$100,000
  - 4 years later: 50,000 telephones in the USA
  - 20 years later: 5 million



## But....(II)

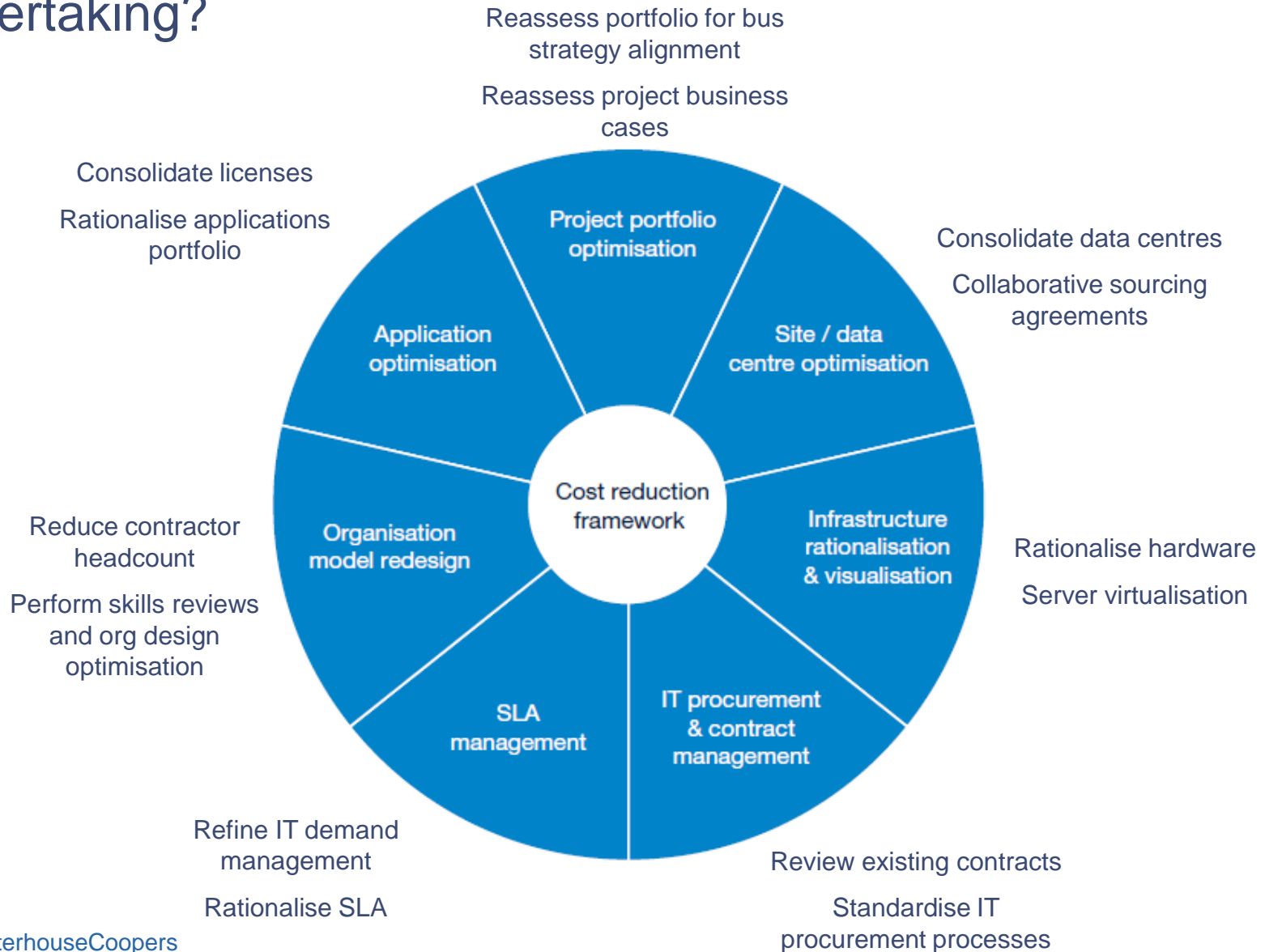
- Cost reduction measures can have many negative impacts over the longer term
  - Technology resilience
  - Flexibility of the IT environment
  - Ultimate business agility
  - Long-term sustainability and effectiveness
  - Increased risk
  - Critical capabilities may be missing as an upturn is entered
  - Costs could grow back in future
- Governance becomes key to ensure the most optimal decisions are taken
  - Ensuring that the cost base and IT performance is transparent and well understood
  - Ensuring that there is clarity on what activities can add or destroy value
  - Understanding the desired business outcomes and right IT activities and inputs to achieve them
  - Ensuring that all the relevant choices and trade-offs are considered and the best choices made

# Overview

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# What are some of the typical measures companies are undertaking?



## What are specific focus areas?

- Consider the entire EA “value chain” and ensure that the right stakeholders are involved in each IT governance structure
- The EA is shaped and impacted by decisions taken by a number of IT governance structures higher up and further down the value chain
- Not just the Architecture Review Board
- Example: A key step in a cost reduction programme should be gaining full transparency of current IT costs and performing relevant benchmarking
  - The right stakeholders need to be involved in the IT Steering Committee to ensure that costs identified are accurate and comprehensive, and that benchmarks are applied and interpreted in an appropriate manner



# What are specific focus areas?

- Increase business insight and become a true partner to the business

- It's not just about IT cost cutting but making the right IT investments that can generate business savings or increase business revenue
- Example: Develop insights into customer using technologies such as data mining which could lead to optimised pricing that can increase revenue
- EA is the ideal interface between the business and IT worlds....through IT-enabling many business activities over the years, the EA organisation has significant insight into how different areas of the business works, how processes interrelate across silos and how they can be optimised to increase revenue, lower cost or achieve goals such as improved customer intimacy
- Ensure the right IT governance mechanisms are in place for this partnership to develop

# What are specific focus areas?

- Increase business insight and become a true partner to the business

## Which of the following best characterises the role that IT plays in your company today?

(% respondents)

Along with technical support, it is influential in helping us to improve operating efficiency and reduce costs

41

It is mainly a technical support function, to keep our systems up and running

32

It is a full partner in our business, helping us to meet strategic objectives in most areas of operation

27

## And in five years' time?

(% respondents)

It will be a full partner in our business, helping us to meet strategic objectives in most areas of operation

57

Along with technical support, it will be influential in helping us to improve operating efficiency and reduce costs

34

It will mainly be a technical support function, to keep our systems up and running

9

## How does this compare in your organisation?...(I)

Which of the following best characterises the role that IT plays in your company **today**?

1. Mainly a technical support function, to keep systems up and running
2. Technical support + influential in helping us improve operating efficiency and reduce costs
3. Full partner in our business, helping us to meet strategic objectives in most areas of operation

## How does this compare in your organisation?... (II)

**POLL**

### And in **five years time**?

1. Mainly a technical support function, to keep systems up and running
2. Technical support + influential in helping us improve operating efficiency and reduce costs
3. Full partner in our business, helping us to meet strategic objectives in most areas of operation

# What are specific focus areas?



- Work with users and IT staff and ensure an adequate focus on communication and change management
- Users: Key risk is that cost reduction measures can lead to an increase in shadow spending and bypassing of governance measures
- Need to convince users to do with less and buy-in to reduced service levels or other cost reduction mechanisms that will impact them
- IT staff: Need to retain good people for the future
- Cost savings from headcount reduction or restructuring need to be underpinned by process change
- On a major recent IT transformation initiative, the US Department of Veterans Affairs notes “The primary challenge the VA will face in achieving this transformation will be gaining the acceptance and support of all VA personnel, including leadership, middle managers and field staff.”

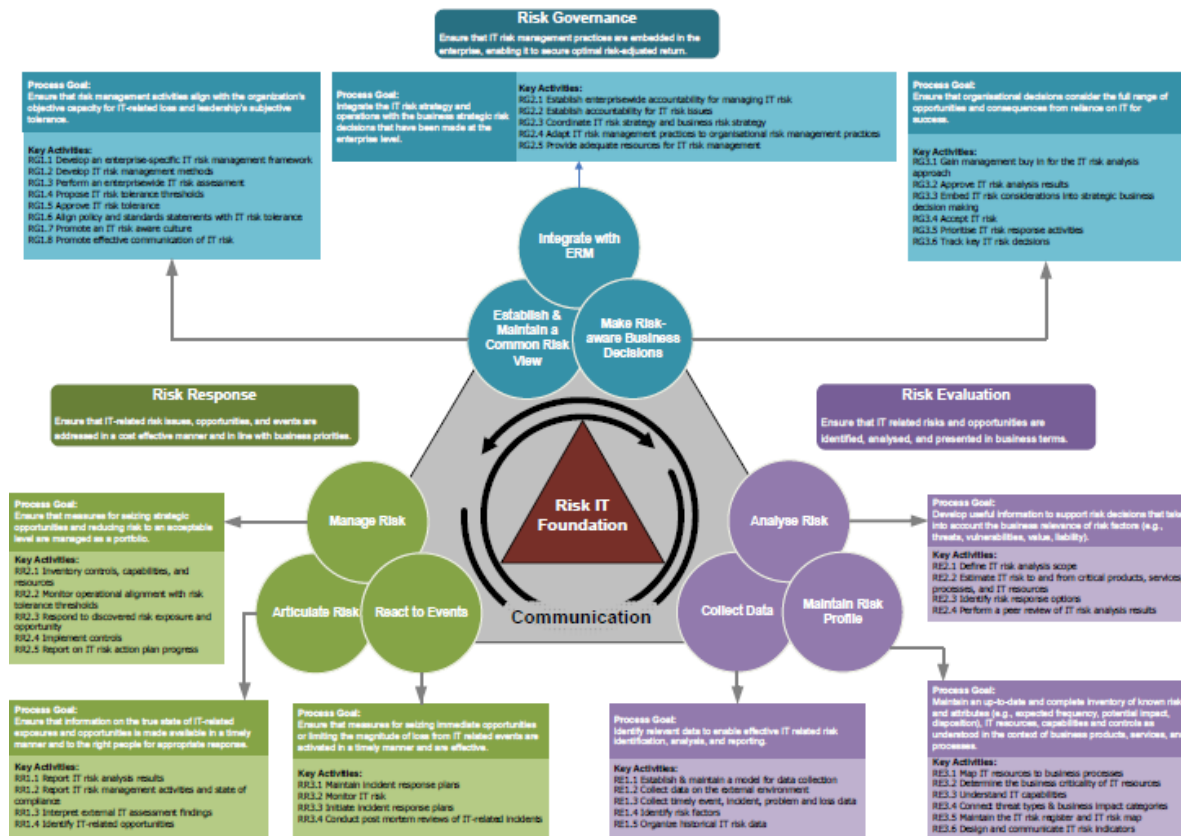
# What are specific focus areas?

- **Ensure balanced EA governance and decision-making**
  - The focus needs to be on the root cause and not on symptoms
  - Look across product silos, business units and territories
  - Track progress and benefits realisation – are promised savings actually arriving at the bottom line
  - Assess how cost reductions could increase the risk for the business
  - Create a clear understanding of reductions that are “off-limit”
  - Ensure the mitigation of risk

# What are specific focus areas?



- Ensure balanced EA decision-making
- New framework for managing IT-related risk





## Critical success factors

- Change management and communication
- Quick-wins
- Visible and demonstrated senior management drive, commitment and support
- “Perfection is achieved, not when there is nothing more to add, but when there is nothing left to take away”
  - Keep governance arrangements as simple, realistic and practical as possible



# Questions and discussion

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# Appendix – additional slides



# Definitions: Enterprise architecture

A formal description of a system, or a detailed plan of the system at component level to guide its implementation

- Source: ISO/IEC 42010: 2007

The structure of components, their inter-relationships, and the principles and guidelines governing their design and evolution over time

- TOGAF definition of “architecture”

“An effective enterprise architecture is critical to business survival and success and is the indispensable means to achieving competitive advantage through IT.”

- The Open Group Business Executive’s Guide to IT Architecture

# The objectives for IT governance:

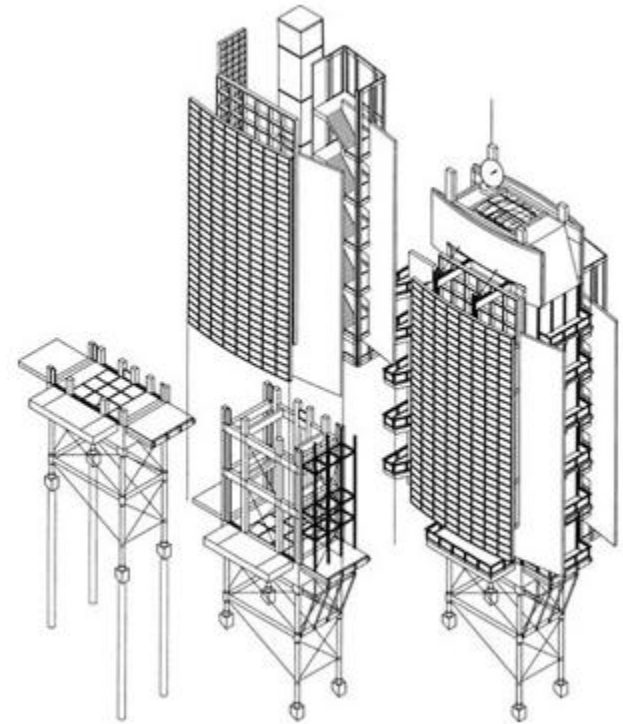
- Strategic alignment
- Value delivery
- Resource management
- Risk management
- Performance measurement
- Synergy enablement
- Shared understanding



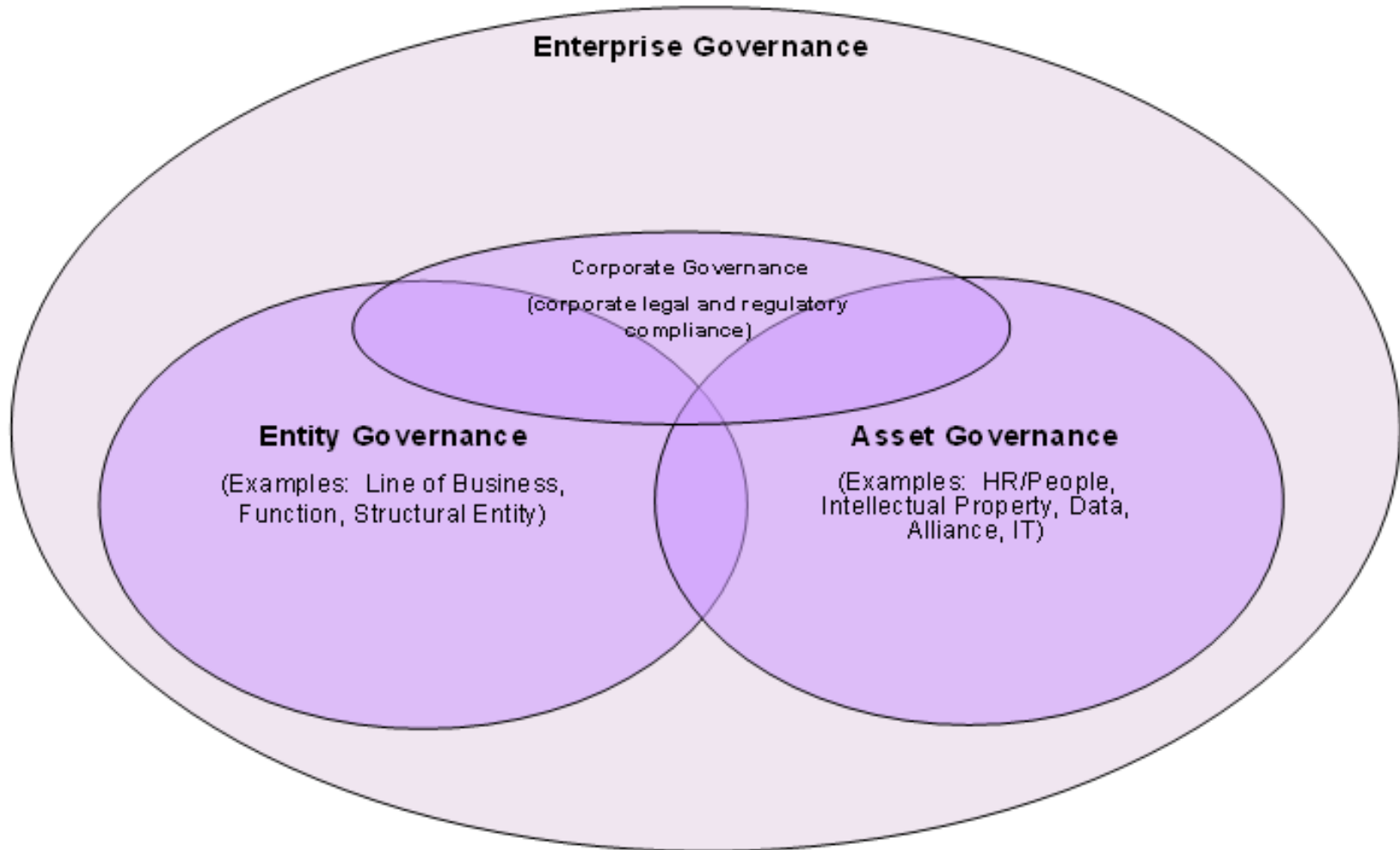
# Definitions: Architecture governance

The practice and orientation by which enterprise architectures and other architectures are managed and controlled at an enterprise-wide level. It is concerned with change processes (design governance) and operation of product systems (operational governance)

- TOGAF definition of “architecture governance”

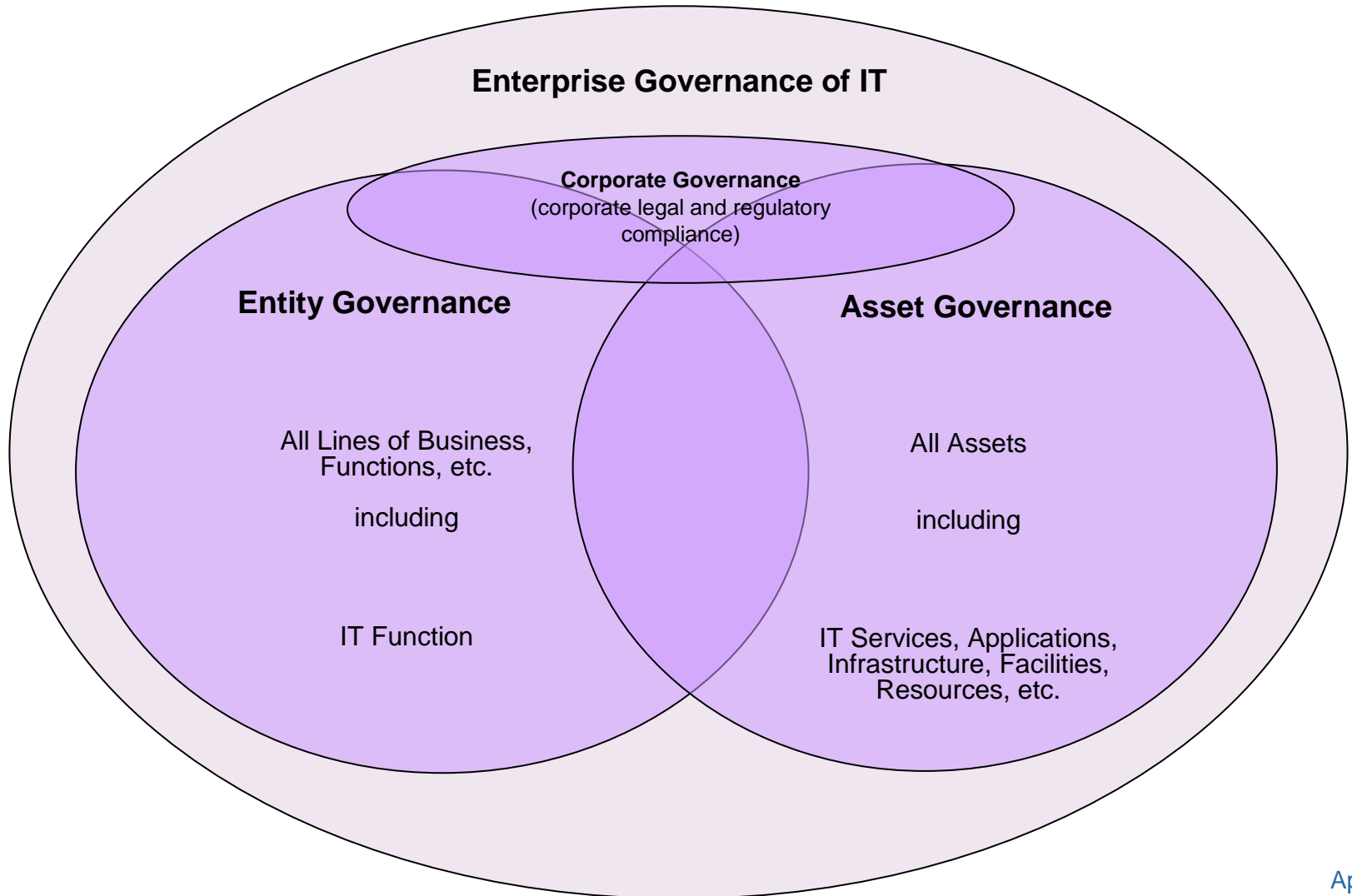


# Taking Governance Forward





# Taking Governance Forward



# COBIT 4.1

Define the information architecture

**that satisfies the business requirement for IT of**

being agile in responding to requirements, to provide reliable and consistent information and to seamlessly integrate applications into business processes

**by focusing on**

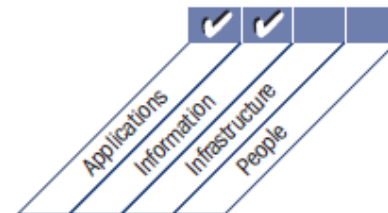
the establishment of an enterprise data model that incorporates a data classification scheme to ensure the integrity and consistency of all data

**is achieved by**

- Assuring the accuracy of the information architecture and data model
- Assigning data ownership
- Classifying information using an agreed-upon classification scheme

**and is measured by**

- Percent of redundant/duplicate data elements
- Percent of applications not complying with the information architecture methodology used by the enterprise
- Frequency of data validation activities



# COBIT 4.1

## P02 Define the Information Architecture

From	Inputs
PO1	Strategic and tactical IT plans
AI1	Business requirements feasibility study
AI7	Post-implementation review
DS3	Performance and capacity information
ME1	Performance input to IT planning

Outputs	To					
Data classification scheme	AI2					
Optimised business systems plan	PO3	AI2				
Data dictionary	AI2	DS11				
Information architecture	PO3	DS5				
Assigned data classifications	DS1	DS4	DS5	DS11	DS12	
Classification procedures and tools	*					

\* Outputs to outside CoBIT

### RACI Chart

### Functions

### Activities

	CEO	CFO	Business Executive	CIO	Business Process Owner	Head Operations	Chief Architect	Head Development	Head IT Administration	PMO	Compliance, Audit, Risk and Security
Create and maintain corporate/enterprise information model.		C	I	A	C		R	C	C		C
Create and maintain corporate data dictionary(ies).				I	C		A/R	R			C
Establish and maintain a data classification scheme.	I	C	A	C	C	I	C	C			R
Provide data owners with procedures and tools for classifying information systems.	I	C	A	C	C	I	C	C			R
Utilise the information model, data dictionary and classification scheme to plan optimised business systems.	C	C	I	A	C		R	C			I

A RACI chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

# COBIT 4.1

## **P02 Define the Information Architecture**

Management of the process of *Define the information architecture* that satisfies the business requirement for IT of *being agile in responding to requirements, to provide reliable and consistent information, and to seamlessly integrate applications into business processes* is:

### **0 Non-existent** when

There is no awareness of the importance of the information architecture for the organisation. The knowledge, expertise and responsibilities necessary to develop this architecture do not exist in the organisation.

### **1 Initial/Ad Hoc** when

Management recognises the need for an information architecture. Development of some components of an information architecture is occurring on an *ad hoc* basis. The definitions address data, rather than information, and are driven by application software vendor offerings. There is inconsistent and sporadic communication of the need for an information architecture.

### **2 Repeatable but Intuitive** when

An information architecture process emerges and similar, though informal and intuitive, procedures are followed by different individuals within the organisation. Staff obtain their skills in building the information architecture through hands-on experience and repeated application of techniques. Tactical requirements drive the development of information architecture components by individual staff members.

### **3 Defined** when

The importance of the information architecture is understood and accepted, and responsibility for its delivery is assigned and clearly communicated. Related procedures, tools and techniques, although not sophisticated, have been standardised and documented and are part of informal training activities. Basic information architecture policies have been developed, including some strategic requirements, but compliance with policies, standards and tools is not consistently enforced. A formally defined data administration function is in place, setting organisationwide standards, and is beginning to report on the delivery and use of the information architecture. Automated tools are beginning to be employed, but the processes and rules used are defined by database software vendor offerings. A formal training plan has been developed, but formalised training is still based on individual initiatives.

# Why is EA governance important?



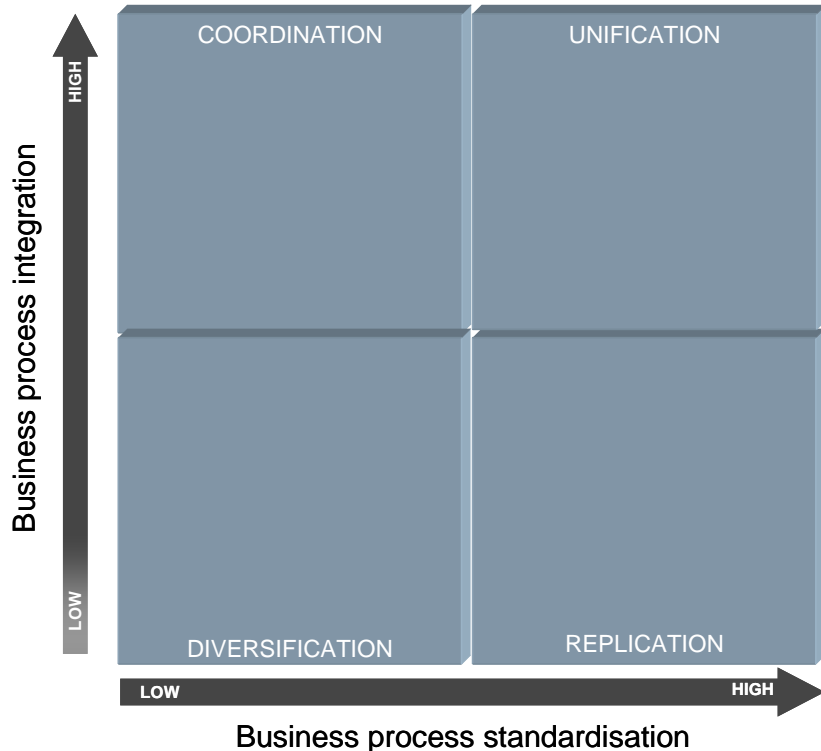
- Profitability: Centre for Information Systems Research at MIT studied 256 enterprise in 23 countries
- Firms with above-average IT governance performance had more than 20% higher profitability than firms with poor governance
- Conclusion: “Effective IT governance is single most important predictor of the value an organisation generates from IT”

# What are some of the benefits that can be realised?



# What are specific focus areas?

EA governance needs to ensure that adequate consideration is given to business operating model choices which will guide architecture decisions and could enable long-term benefits



- Benefits from business process standardisation:**
- Creating efficiencies across business units by eliminating non-value-added variations
  - Promoting continuous improvement by easing the overall understanding of the process model

- Benefits from business process integration:**
- Enabling the review of data across several business processes
  - Improving customer service
  - Providing management with better information