

Enterprise Architecture – Introduction Business-IT Alignment and Agility

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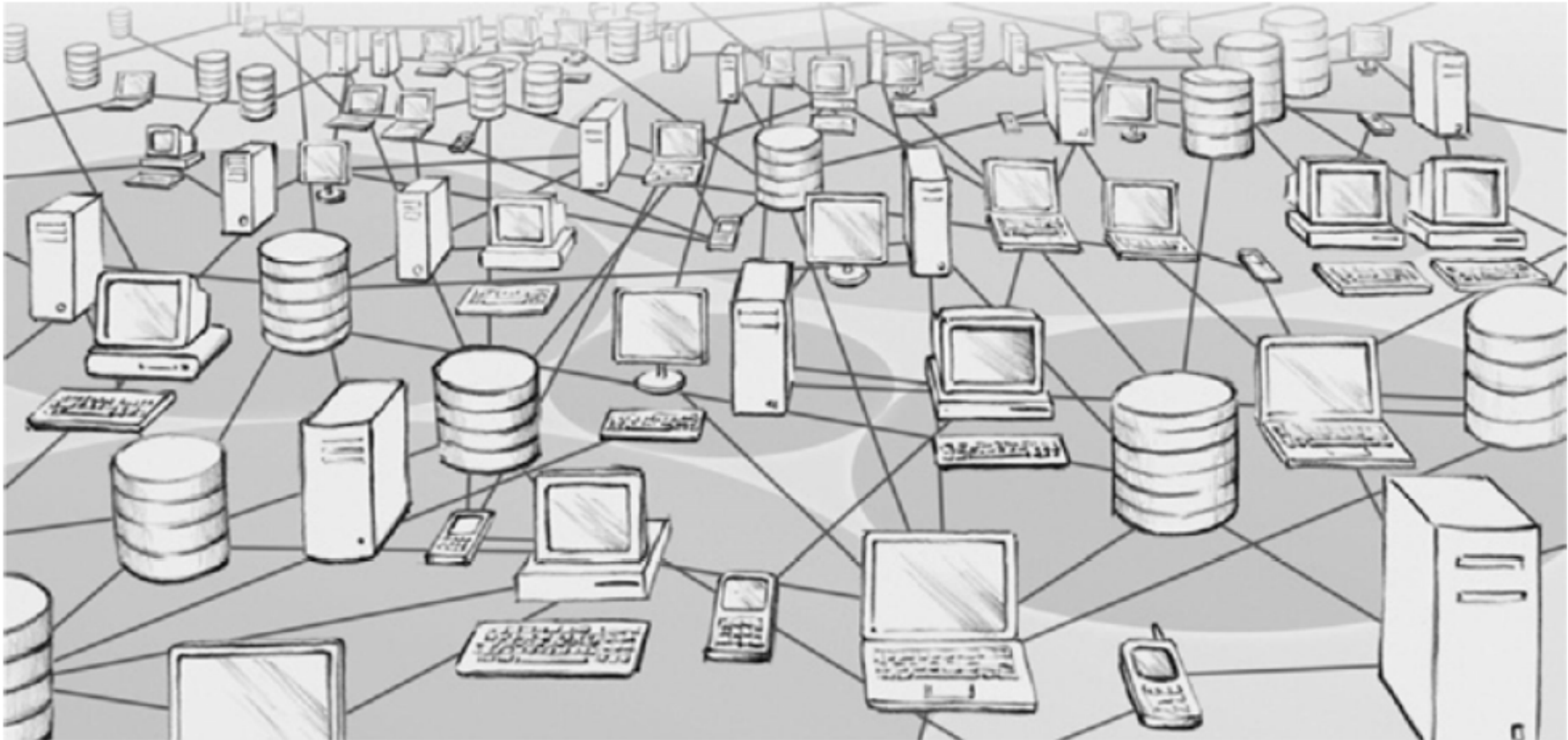


Chapter 1: Business-IT Alignment and Agility

- Motivation: Strategic IT Management
- Business-IT Alignment
- Agility
- Approach: Enterprise Architecture



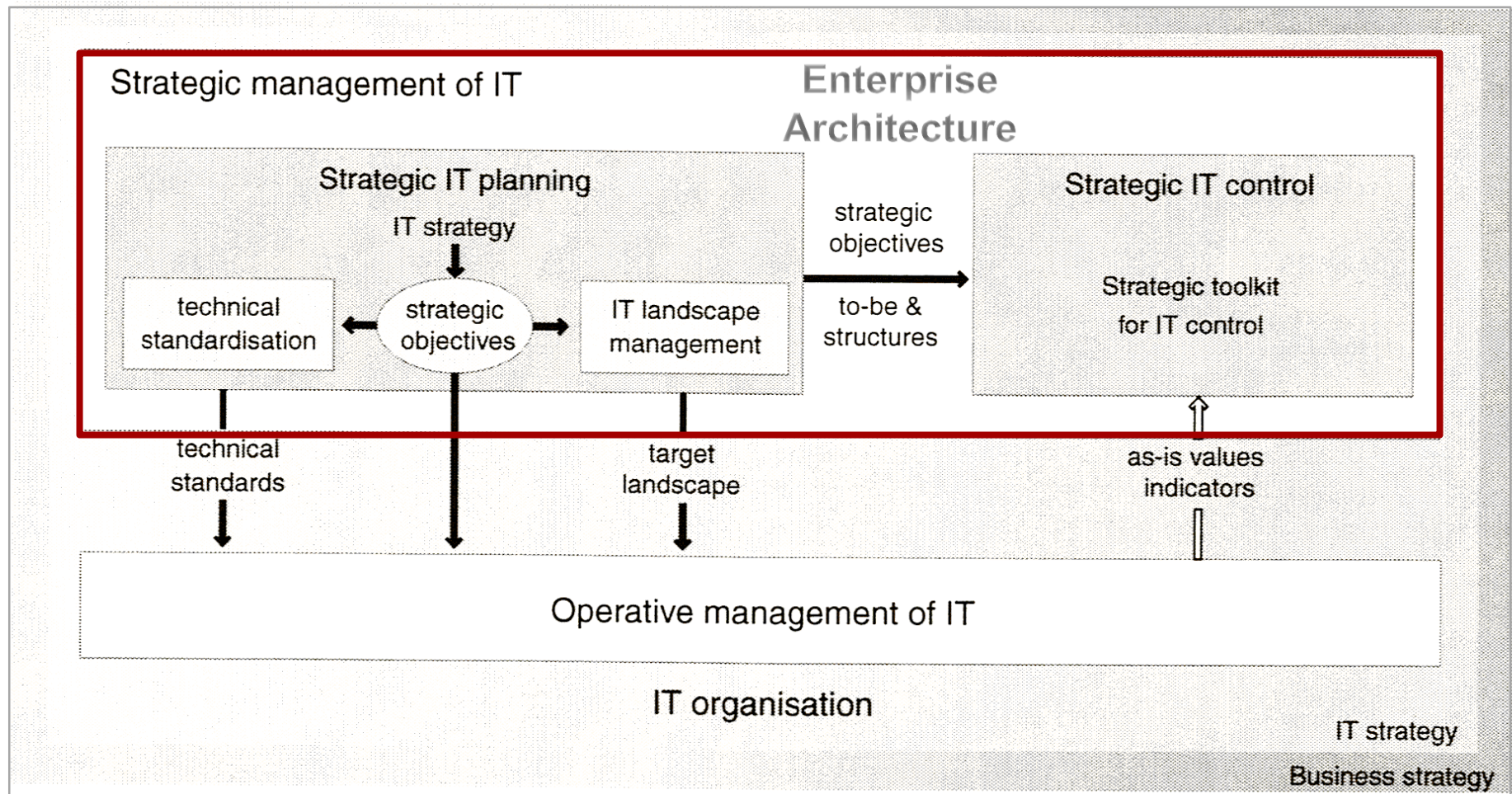
A Common Situation



Heterogeneous and complex IT landscapes: patchwork of systems, processes, technologies etc.

(Hanschke 2010, p. 1f)

IT Management



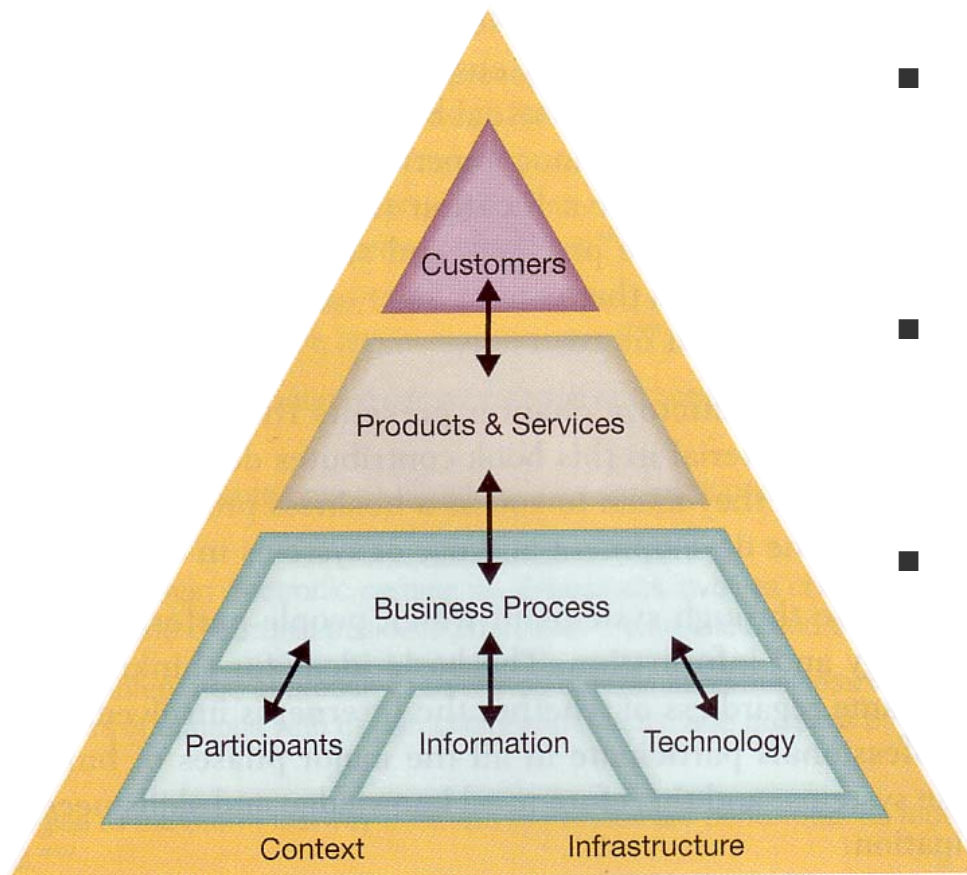
Strategic Planning of Information Technology

The objective of planning IT strategically is to **align** it with overarching corporate goals and business requirements and make it **agile** enough to deal with constant change in the company and its environment

(Hanschke 2010, p. 7)

- **Business-IT alignment**
- **Agility**

Work-Centered Analysis

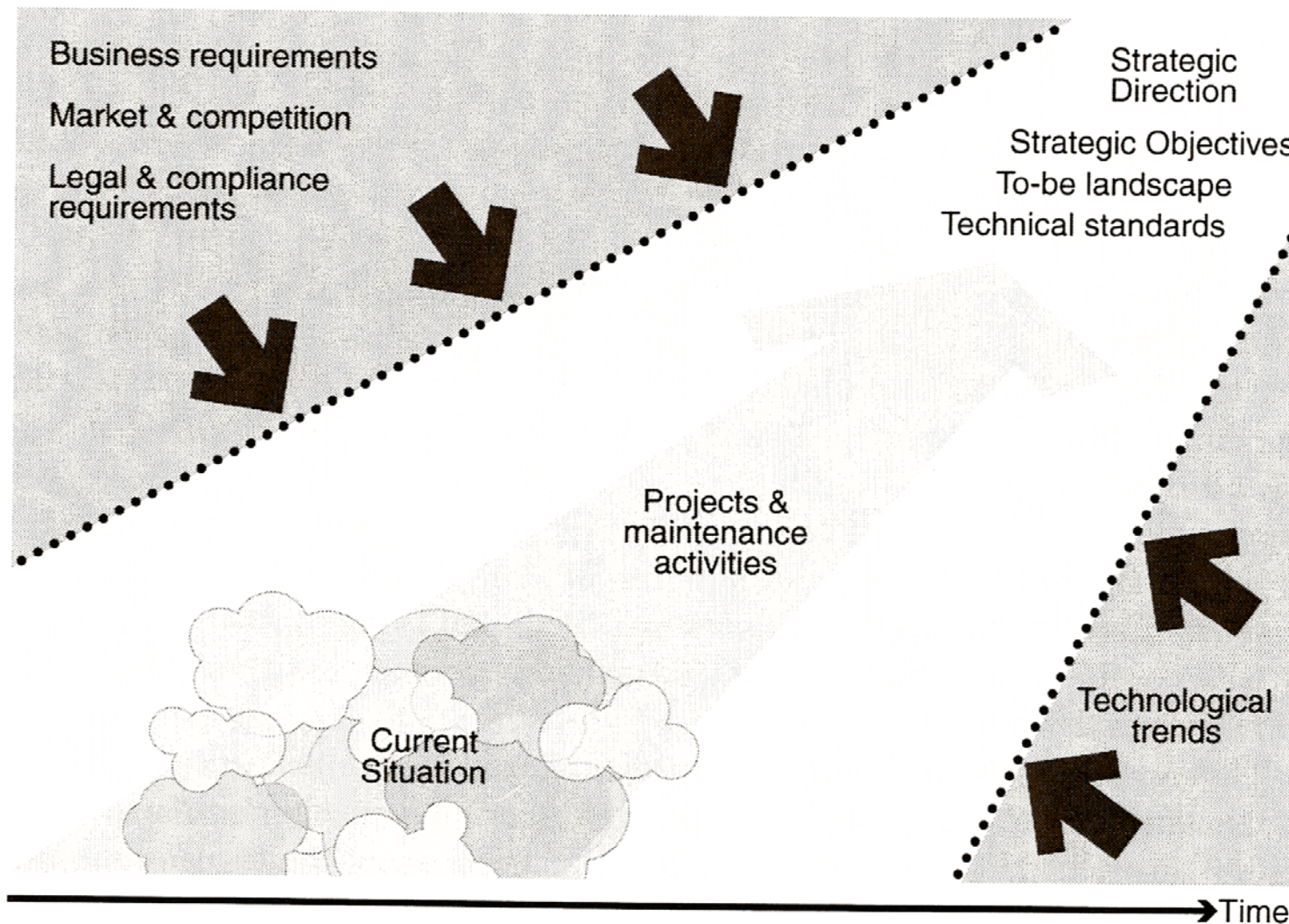


- Value creation: processes realise products and services for a customer
- Processes...
 - ... are executed by people (participants)
 - ... use, create and communitie information
 - ... apply information technology
- The two-headed arrows imply that the elements should be in balance
 - ◆ Change in one element usually requires change in other elements
- Mutual dependencies
 - ◆ products and services are appropriate for customers and customers demand services
 - ◆ business processes are appropriate for producing the products and services
 - ◆ participants, information and technology are appropriate for the business processes – and vice versa

Alignment of Business and Information Technology (IT)

- Almost all processes have become IT reliant, if not fully automated
- The alignment of business and IT has to deal with problems like the following:
 - ◆ What happens to IT if the company has to react on market requirements?
 - ◆ What IT innovations are needed to remain competitive?
 - ◆ How do changes in the IT affect the business?

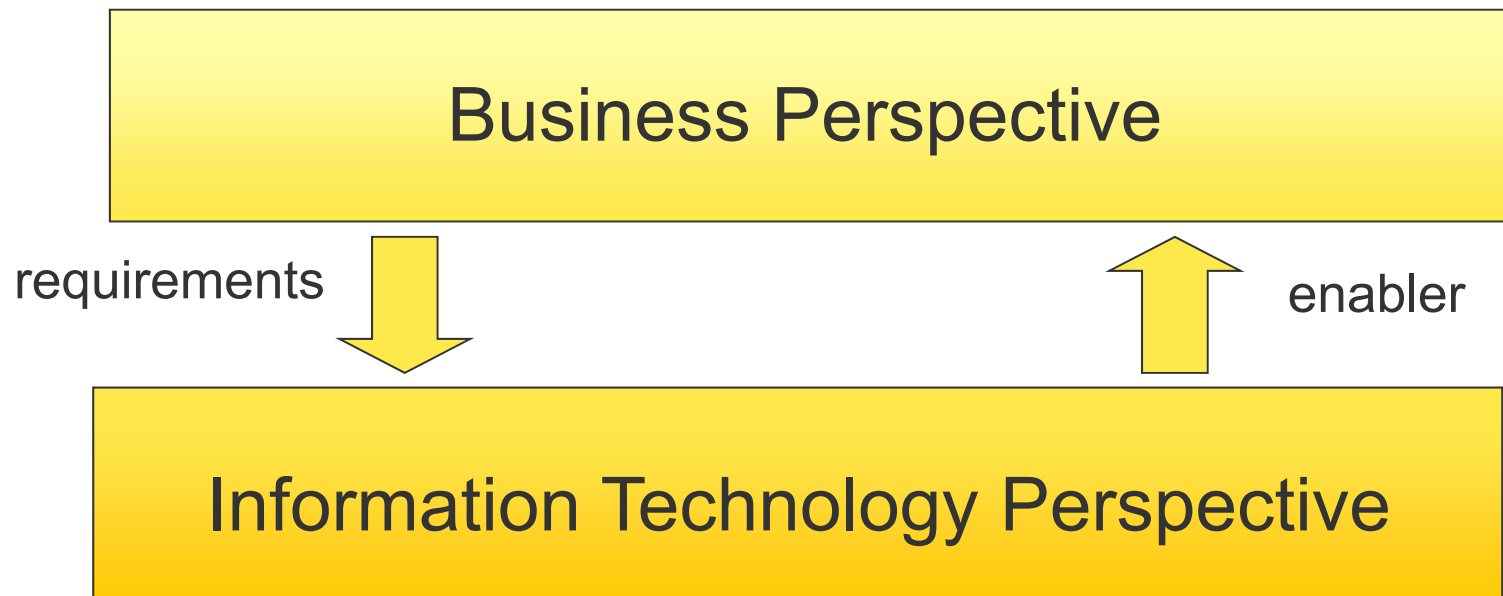
Strategic Alignment of IT



(Hanschke 2010, p. 11)

Alignment of Business and IT

- Top-down: Business as driver
 - ◆ Business defines requirements for IT
 - ◆ use IT effectively to achieve business objectives
- Bottom-up: IT as driver:
 - ◆ IT as an enabler for new ways of making business



Mutual Dependencies between Business and IT

- Change in the enterprise is usually a compromise, e.g.
 - ◆ Business requirements cannot be fully satisfied, because
 - there are *already systems available* that cannot be replaced (reasons can be costs or other dependencies)
 - standards set by IT strategy avoid unmanageable varieties and ensure reliability
 - centralisation reduces costs at the expense of specialisation
 - ◆ Chances of IT innovations cannot be implemented, because of
 - missing skills of employees
 - business processes or organisation are not appropriate
 - incompatibility with business strategy

Drivers for Business-IT Alignment

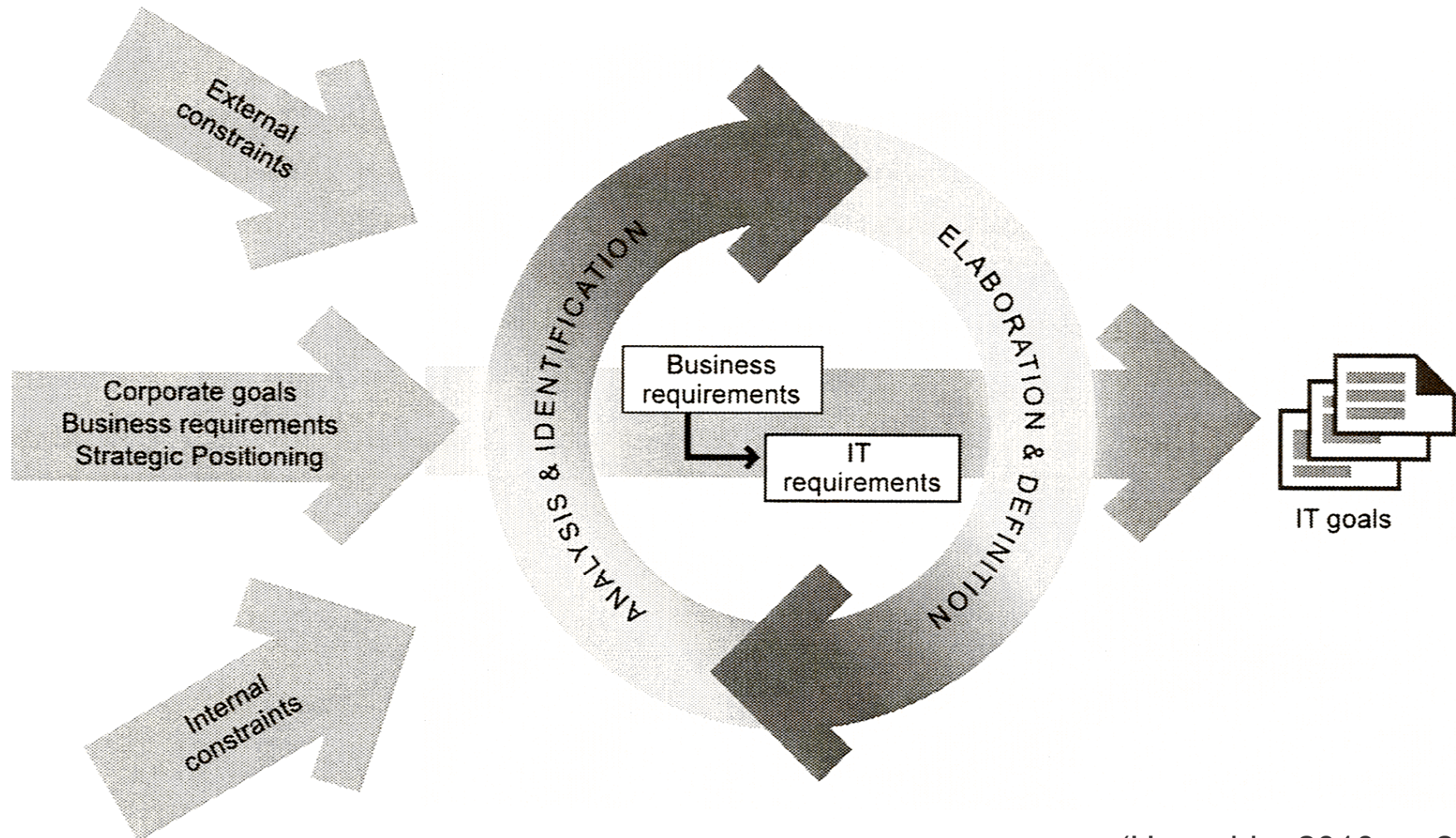
■ Internal Drivers

- ◆ Business Process Management / Optimisation
- ◆ Reorganisation
- ◆ Migration of Information Systems
- ◆ Changes in IT infrastructure

■ External Drivers

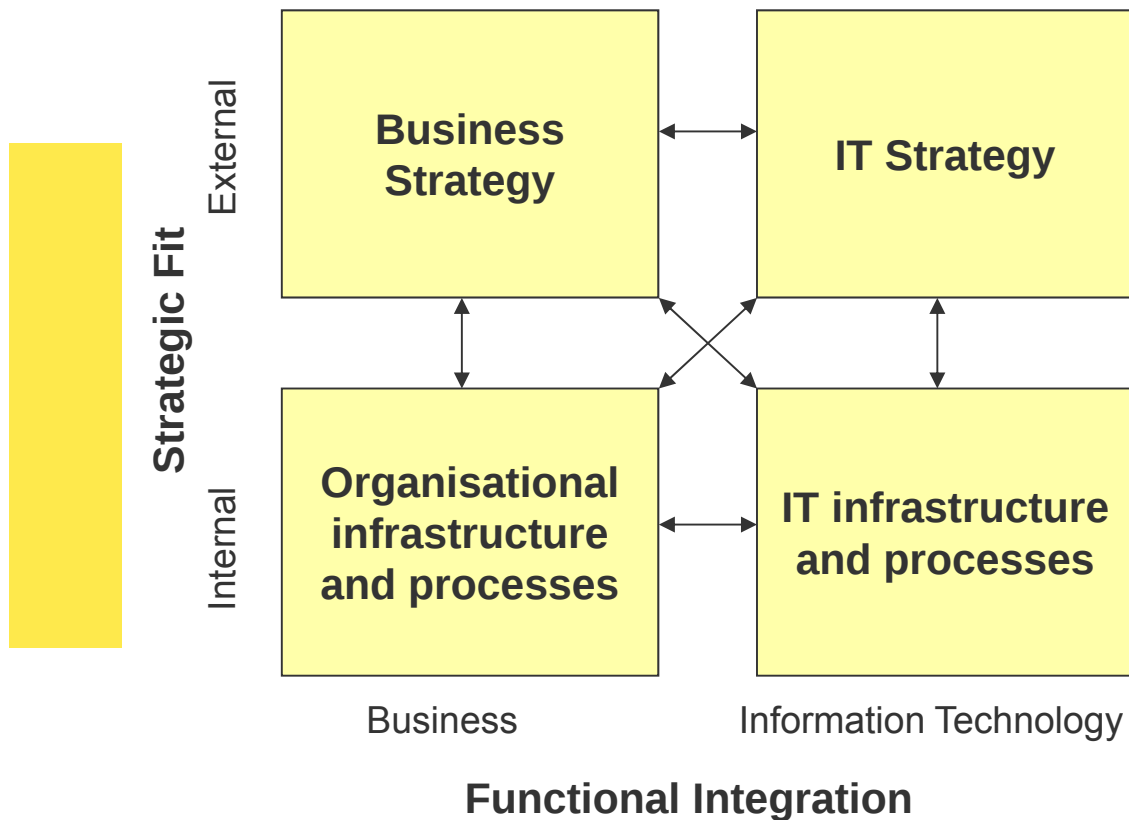
- ◆ Pressures from
 - customers (new integrated services, individual products, ...)
 - suppliers and other business partners
 - regulatory bodies (e.g. SOX, Basel II, and laws in general)
- ◆ Market Opportunities, new business models
- ◆ Innovations

Deriving IT Goals



(Hanschke 2010, p. 23)

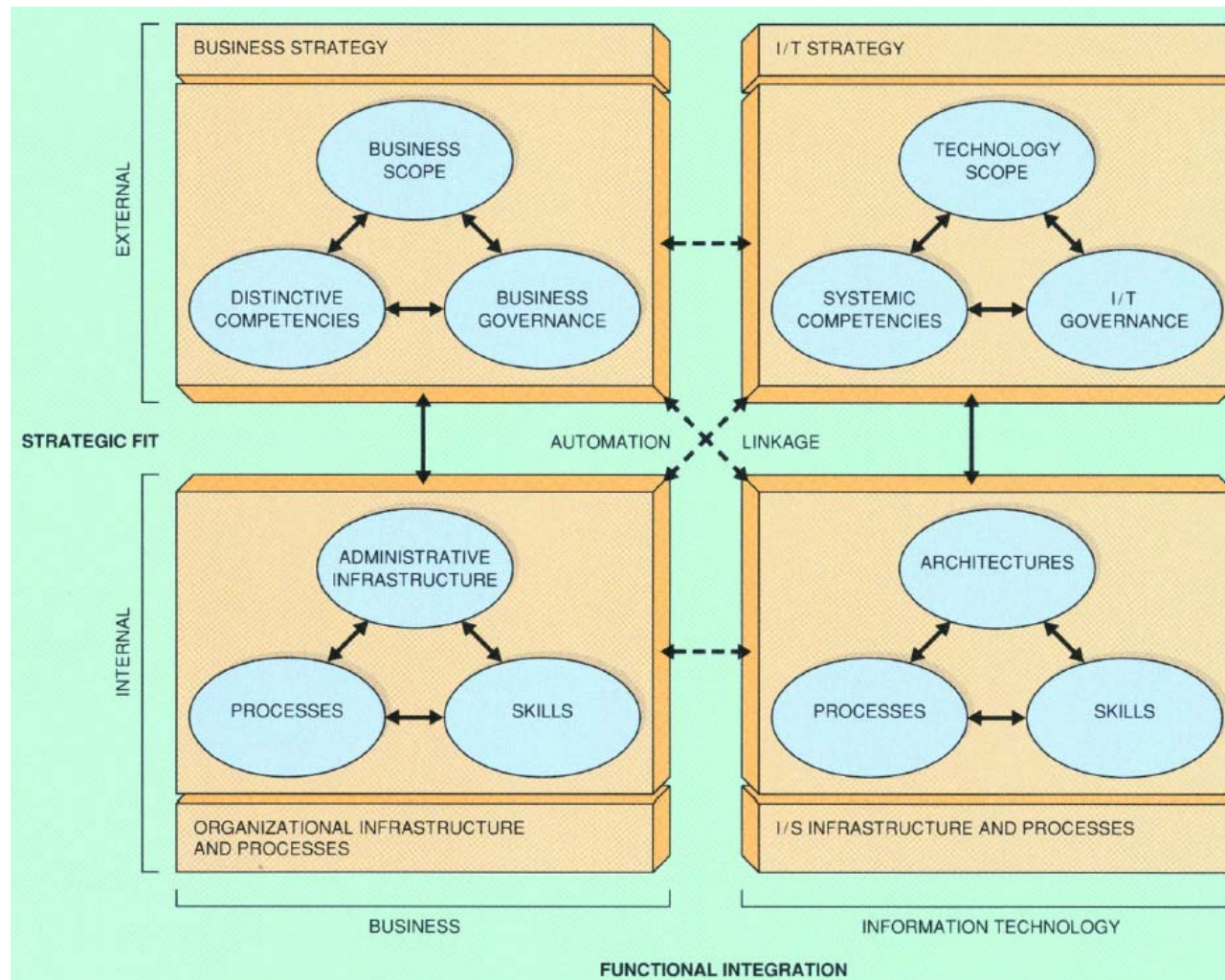
Strategic Alignment Model



- Two dimensions
 - ◆ Functional Integration: Aligning business and IT
 - ◆ Strategic Fit: Aligning internal and external drivers
- Two principle approaches for alignment:
 - top-down: take the business strategy as the starting point and derive the IT infrastructure
 - bottom-up: focus on IT as an enabler: start from IT strategy deriving organisational infrastructure
- Four dominant perspectives to tackle alignment (see figure)

(Henderson & Venkatraman 1993)

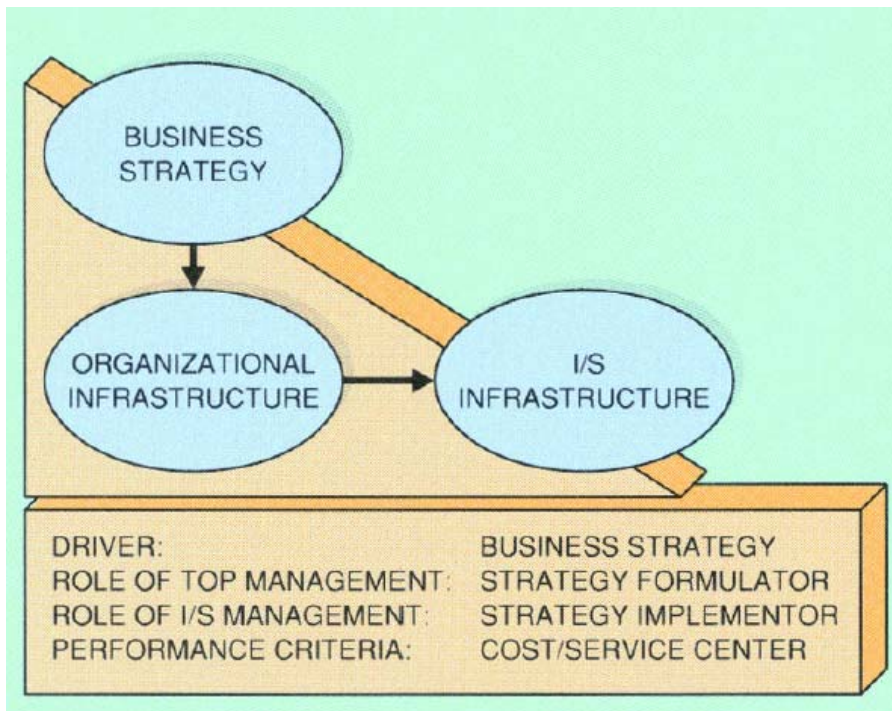
Strategic Alignment Model – Detailed View



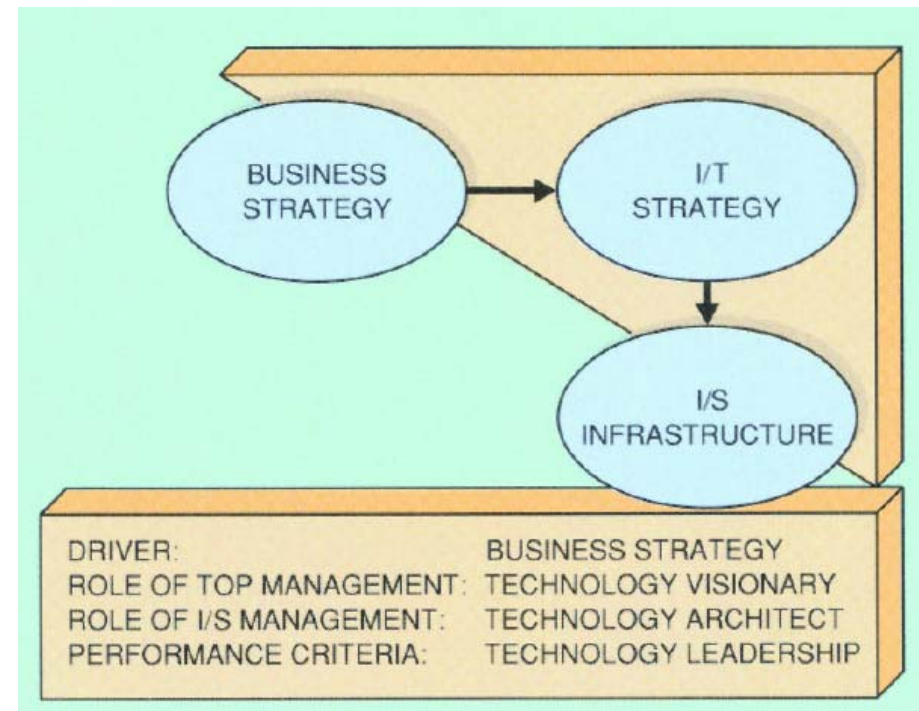
(Henderson & Venkatraman 1993)

Four Dominant Alignment Perspectives:

I) Business Strategy as the Driver



Strategy Execution Alignment

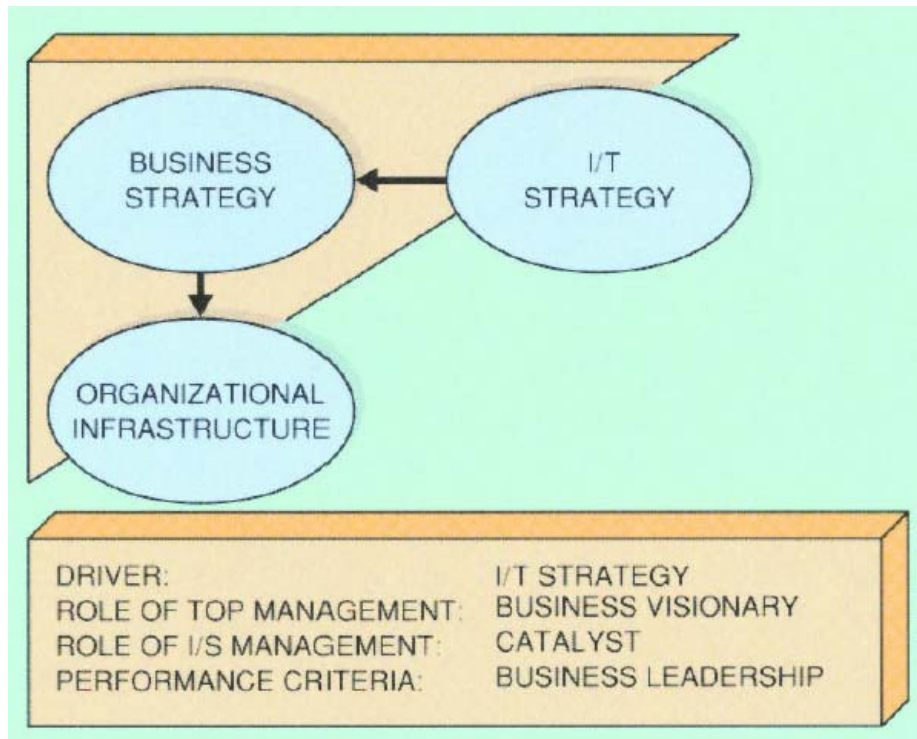


Technology Transformation Alignment

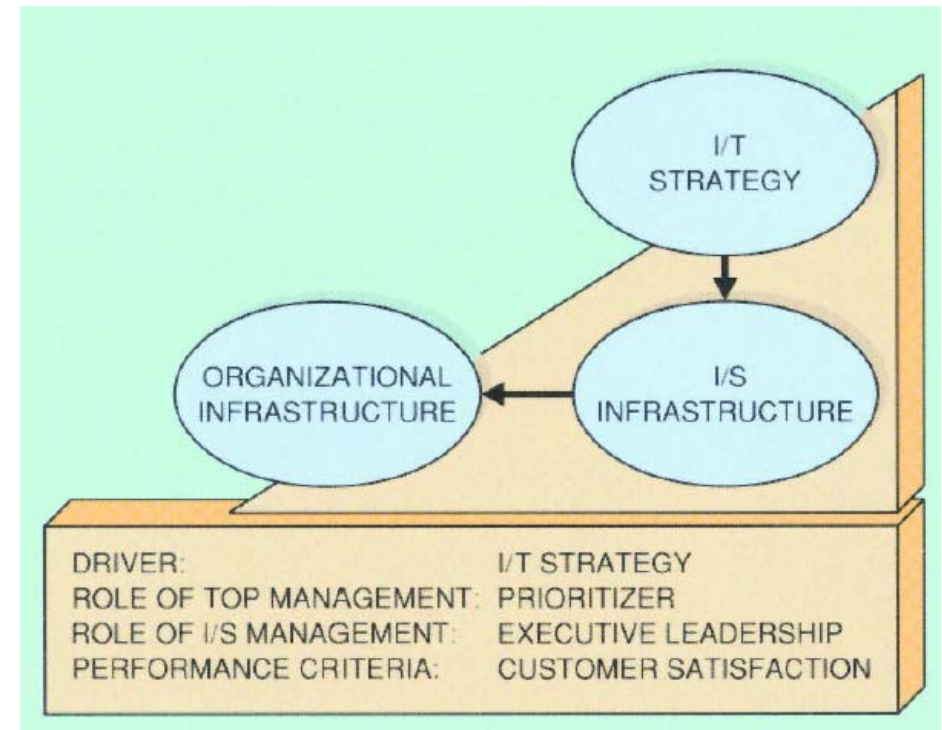
(Henderson & Venkatraman 1993)

Four Dominant Alignment Perspectives:

1) IT Strategy as the Driver



Competitive Potential Alignment



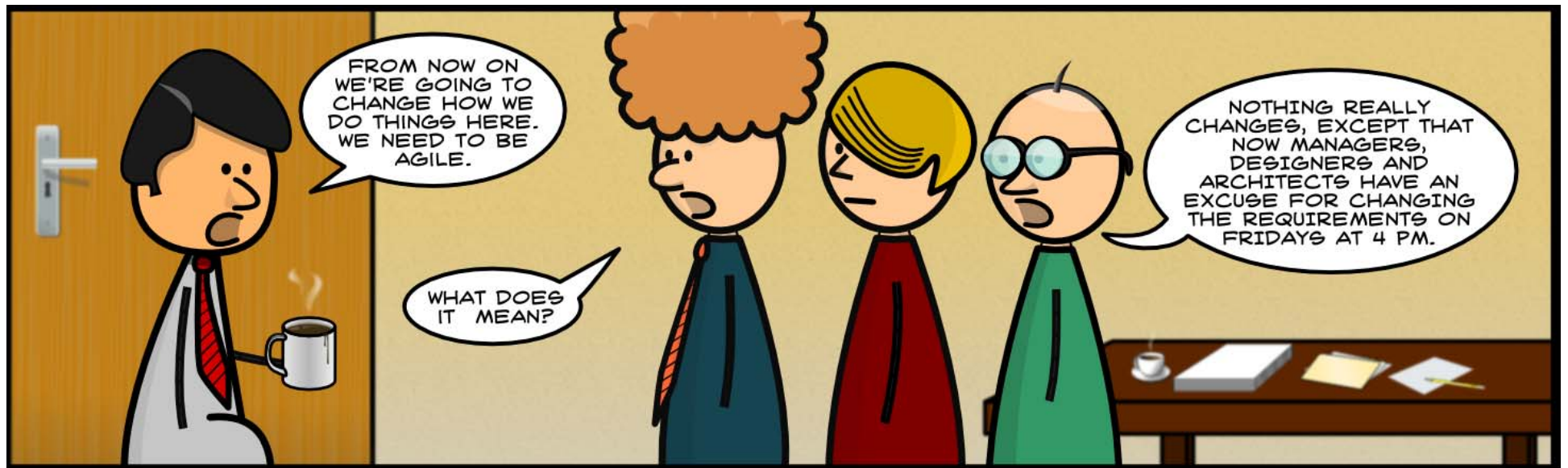
Service Level Alignment

(Henderson & Venkatraman 1993)

Key Issues and management challenges

Characteristics	Traditional Linkage	Strategic Alignment
Predominant focus of information systems and technology	Internal I/S function and organization	Internal I/S function and organization <i>and</i> external I/T marketplace
Management objectives	Ensuring that I/S activities are linked to business requirements	Selecting appropriate alignment perspectives for achieving business objectives
I/S executive roles	Line leadership and I/S functional support	Multiple executive roles for line and I/S managers
Dominant criteria for performance assessment	Cost and service considerations	Multiple criteria

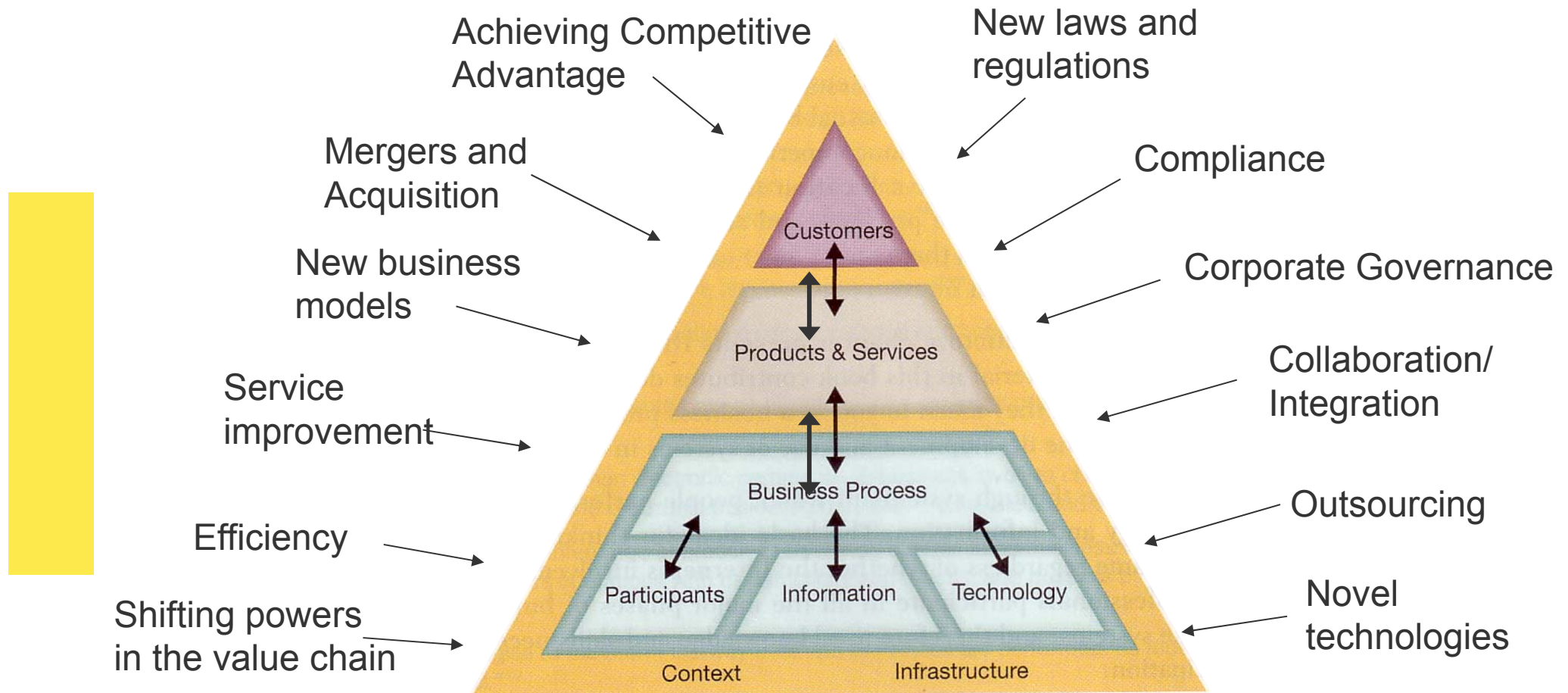
Demand for Agility



#113 - "AGILE DEVELOPMENT, EXPLAINED" - BY SALVATORE IOVENE, FEB. 21ST 2009

[HTTP://WWW.GEEKHEROCOMIC.COM/](http://www.geekherocomic.com/)

Increasingly dynamic environment: Challenges confronting an Enterprise



Business-IT alignment has to be adapted to constant changes: → Agility

Challenge: Agility

- Agility is the ability of enterprises to
 - ◆ quickly adapt themselves to changes in their environment and
 - ◆ seize opportunities as they avail themselves
- Agility has become a business requirement in many lines of business, e.g.
 - ◆ car industry (new model within few months instead of 6 years)
 - ◆ banking industry (time to market for new product in few weeks instead of 9-12 months)

Problems for Agility in Today's Enterprises

In practice, enterprises see themselves hampered in their ability to change in several ways:

- ◆ being uninformed about their own products, services, capabilities, internal structures
- ◆ traditionally, organisations were designed with efficiency and effectiveness in mind rather than agility
- ◆ no common understanding and governance of key data resources
- ◆ a plethora of legacy applications and infrastructures
- ◆ duplicated functionality in terms of people and/or technology
- ◆ interwoven and unclear responsibilities
- ◆ organisational silos, self-contained business units who operate on their own, with no sharing of data
- ◆ silo applications, i.e. self-contained and isolated applications, which only provide functionality to a specific business process

Source: Op 't Land, M.; Proper, E.; Waage, M.; Cloo, J. and Steghuis, C.: Enterprise Architecture - Creating Value by Informed Governance, Springer-Verlag 2009, page 6. <http://www.springerlink.com/content/k8jp3r/#section=132347&page=2&locus=10>

Enterprise Architecture: Knowledge about the Enterprise

- Any organisation benefits from having a clear understanding of its
 - ◆ structure, products, operations, technology etc.
 - ◆ the relations tying these together and
 - ◆ relations connecting the organisation to its surroundings
(Lankhorst et al. 2005, p. 6)
- Transparency is a key input for strategic IT control
 - ◆ Clarity on the interdependencies that exist in the landscape
 - ◆ A clear statement of progress made toward goals
 - ◆ The extent to which planning and business requirements have been enacted
(Hanschke 2010, p. 3)

Enterprise Architecture

- **An Enterprise Architecture** is a coherent whole of principles, methods, and models that are used in the design and realisation of an enterprise's organisational structure, business processes, information systems, and infrastructure
- An Enterprise Architecture contains all *relevant*
 - ◆ Business structures
 - ◆ IT structures
 - ◆ and their relationships
- Enterprise Architecture gives an overall view on the enterprise
 - ◆ merge distributed information from various organisational entities and projects into a whole
 - ◆ show the interconnectedness and dependencies between these information
- Show which information systems contribute to which business processes.

Objective of Enterprise Architecture

- Ensuring alignment of business strategy and IT investments
- Describing the interaction between business and information technology
- Making dependencies and implications of changes in business and IT visible
- Supporting communication between different stakeholders by appropriate models