



Alignment of Business and IT Introduction

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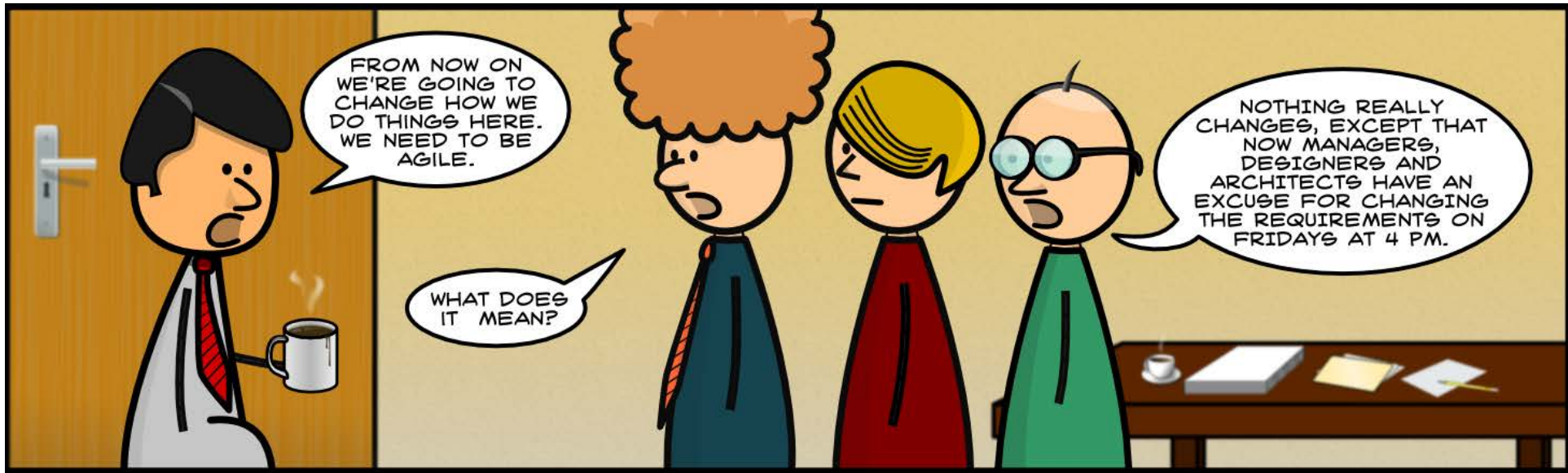


Business-IT Alignment

Business-IT alignment is a dynamic state in which a business organization is able to use information technology (IT) effectively to achieve business objectives

Motivation: Agility

Agility



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

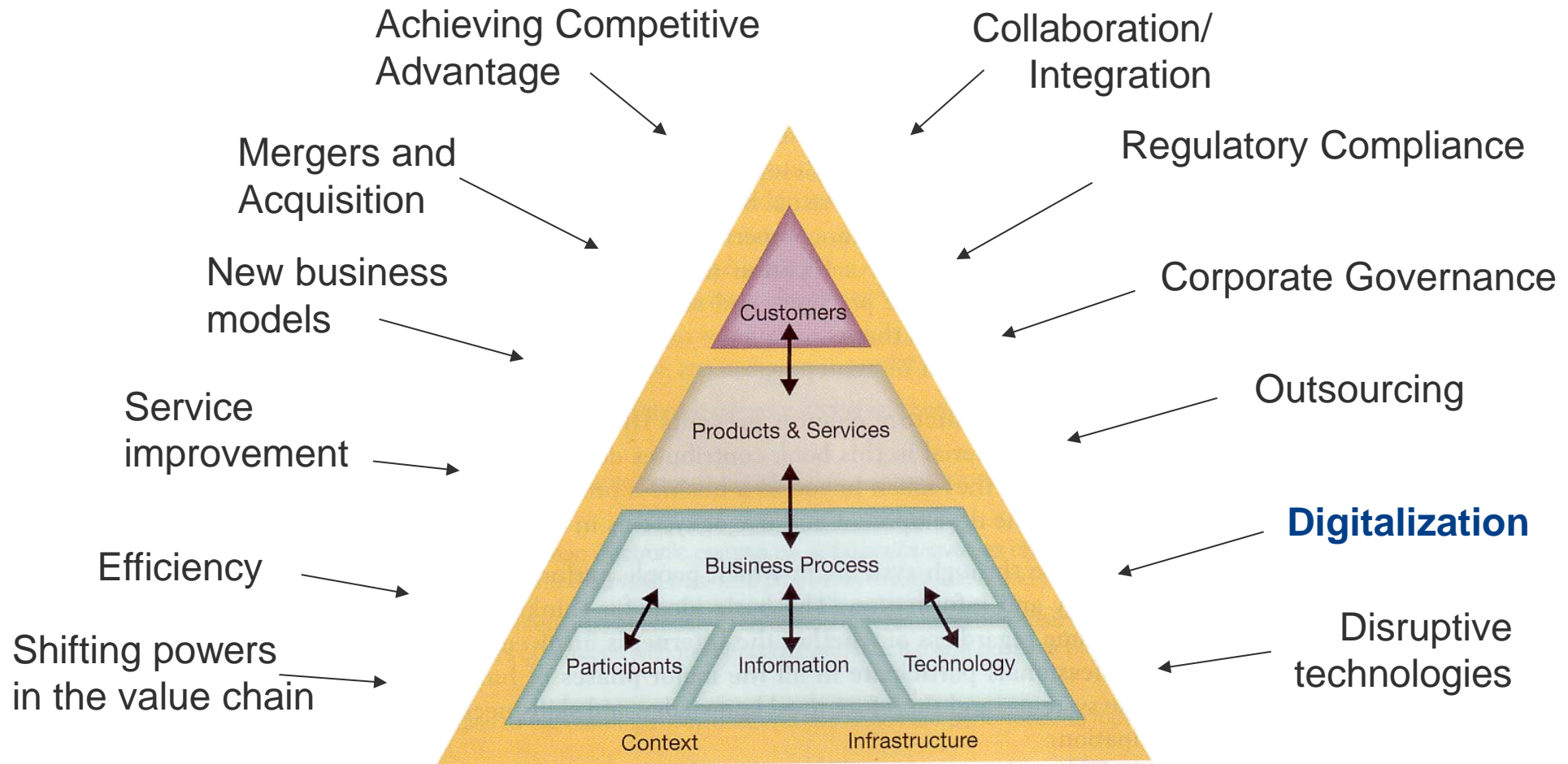
[HTTP://WWW.GEEKHEROCOMIC.COM/](http://www.geekherocomic.com/)

Agility: Demand for Continuous Change

- To improve their chances of survival, enterprises need to be agile.
- Agility is the ability of enterprises to
 - ◆ quickly **adapt themselves to changes** in their environment and
 - ◆ **seize opportunities** as they avail themselves
 - ◆ have **flexibility** to deal with individual customer requirements, to reduce response time to external demands, and to react on events

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>

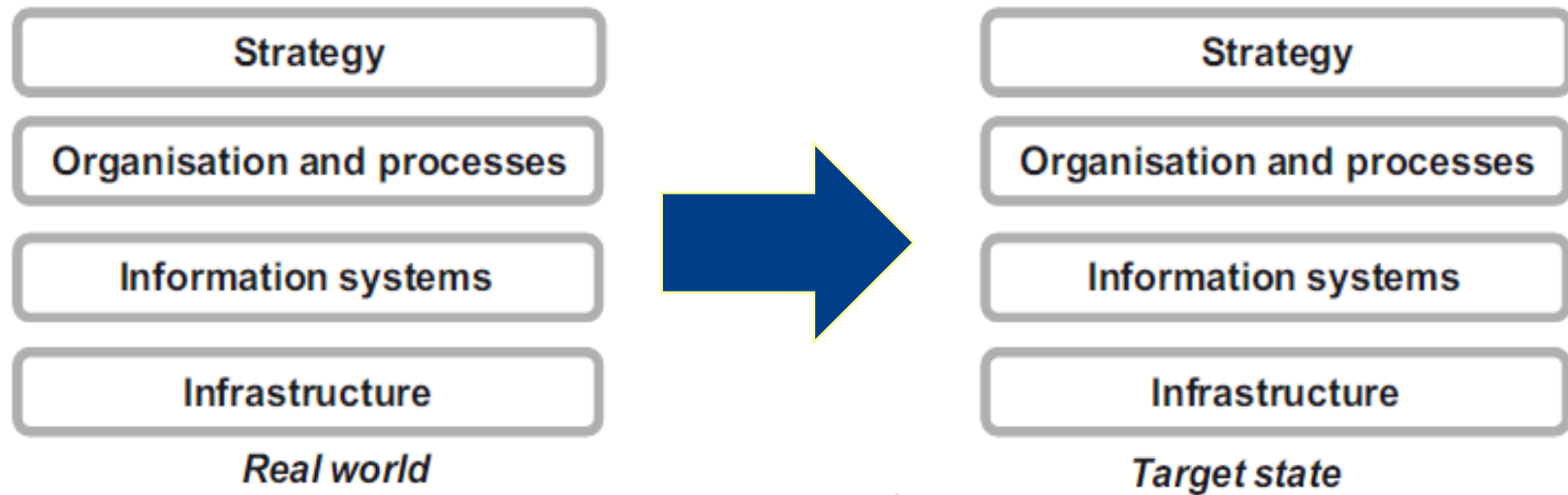
Increasingly dynamic environment: Challenges confronting an Enterprise



Mutual Dependencies between Business and IT

- Almost all processes have become IT reliant, if not fully automated.
- Thus, there is a mutual influence between information systems and the design of the business
 - ◆ A (re-)design of a business process often demands changes in the IT
 - ◆ Changes in IT applications and information systems can demand a re-design of business processes
 - ◆ New IT may lead to new business models or strategies, business process (re-engineering).

Change Projects





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

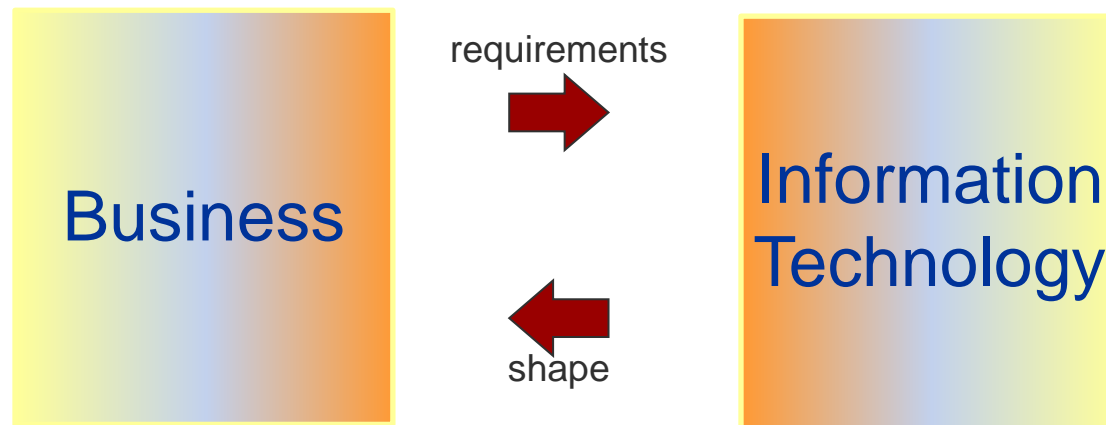
(Hanschke 2010, p. 7)

- **Business-IT alignment**
- **Agility – Ability to change**

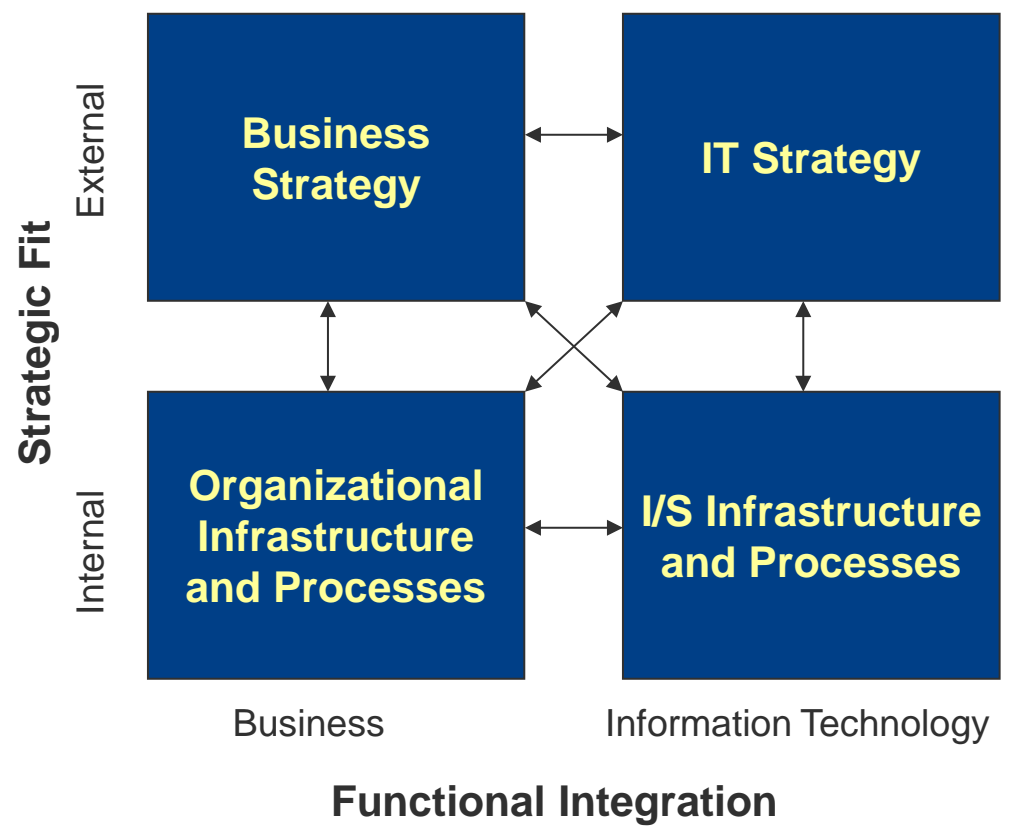
«Old» View on Business-IT Alignment

«Traditional» view on Business-IT Alignment

- IT strategy has been seen as a functional-level strategy that must be aligned with the firm's chosen business strategy
- The alignment of business and IT has to create an environment in which the IT department and the CIO ...
 - ...are not merely installing technology to support business processes but
 - ...are also using technology to shape the business.



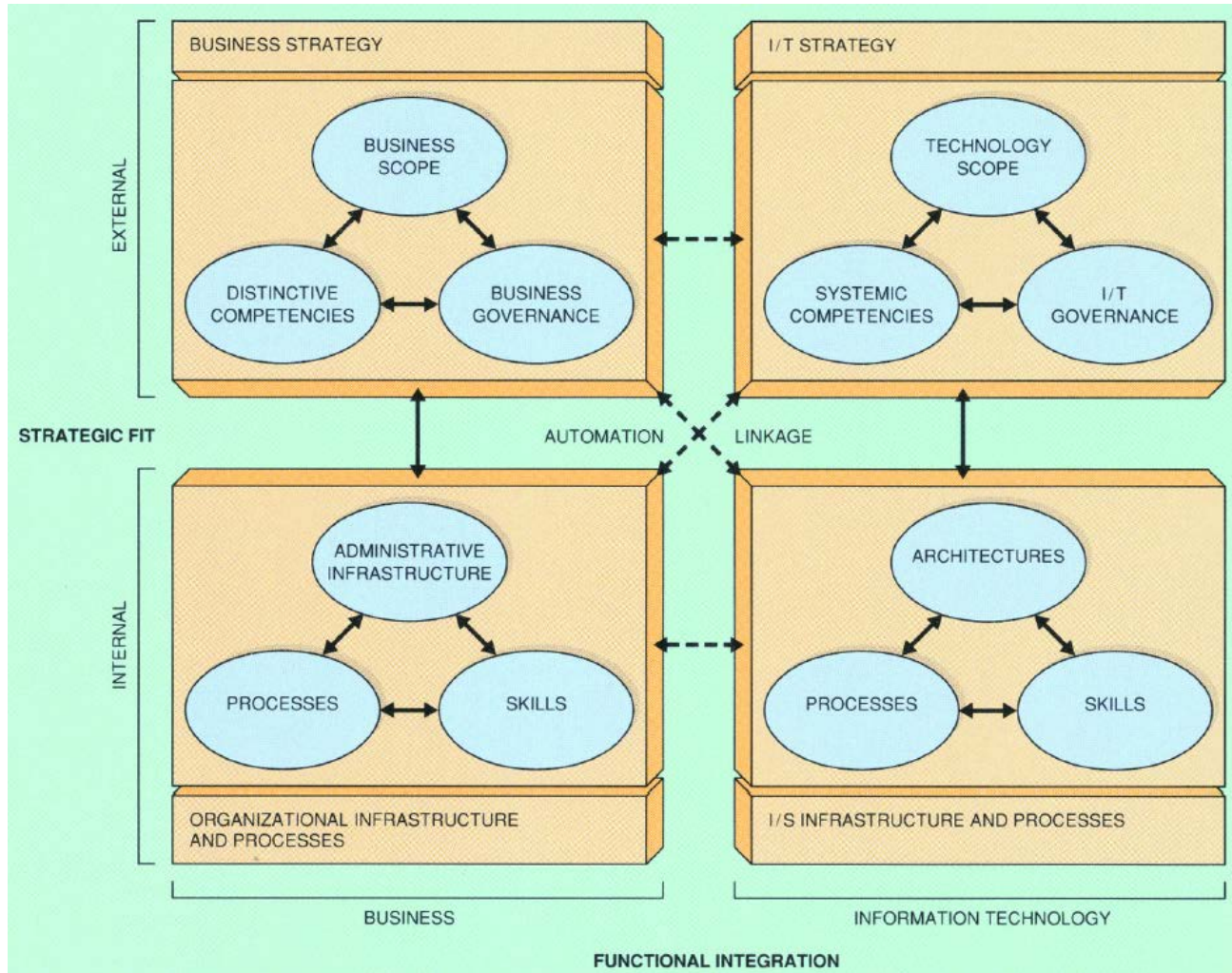
Strategic Alignment Model



- The strategic alignment model of Henderson and Venkatraman (1993) combines the two dimensions
 - ◆ Aligning business and IT (functional integration)
 - ◆ Aligning internal and external drivers (strategic fit)
- Two principle approaches for alignment:
 - business-driven: take the business strategy as the starting point and derive the IT infrastructure
 - IT driven: focus on IT as an enabler; start from IT strategy deriving organisational infrastructure



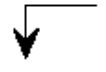

(Henderson & Venkatraman 1993)

Strategic Alignment Model – Detailed View



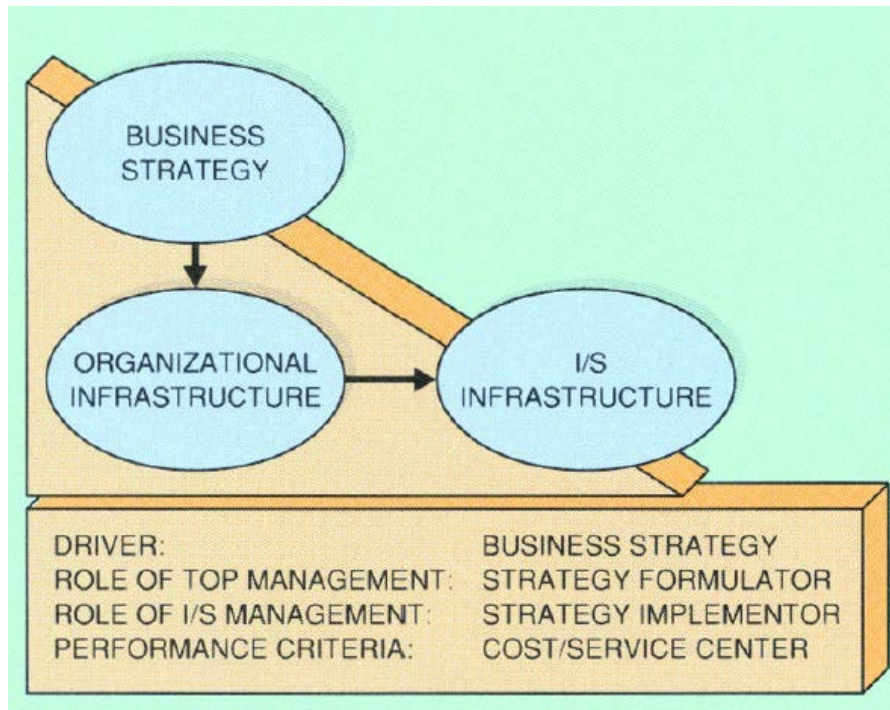
(Henderson & Venkatraman 1993)

Four Dominant Strategic Alignment Perspectives

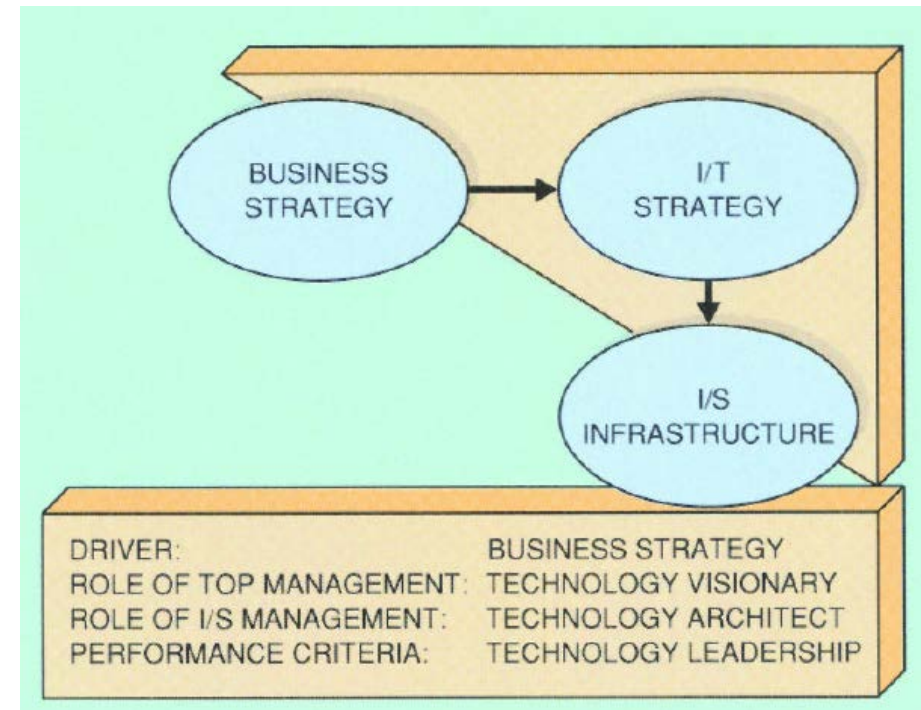
Perspective	Driver	Role of top management	Role of IT management	Performance criteria	Alignment approach
Strategy execution	Business strategy	Strategy formulator	Strategy implementer	Cost/service center	
Technology transformation	Business strategy	Technology visionary	Technology architect	Technology leadership	
Competitive potential	IT strategy	Business visionary	Catalyst	Business leadership	
Service level	IT strategy	Prioritizer	Executive leadership	Customer satisfaction	

Four Dominant Alignment Perspectives:

I) Business Strategy as the Driver



Strategy Execution Alignment

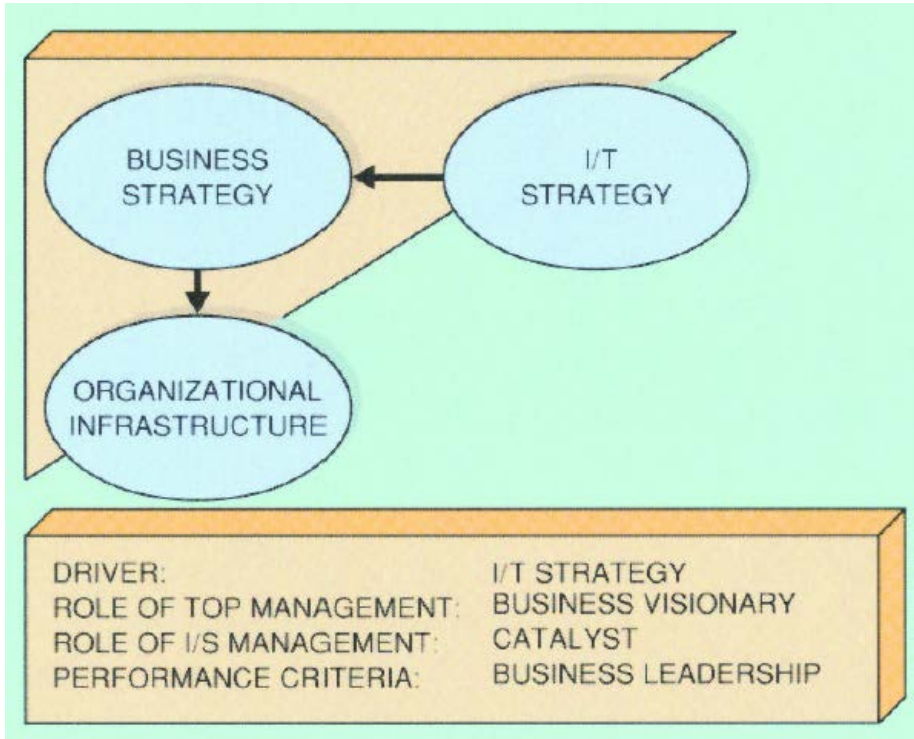


Technology Transformation Alignment

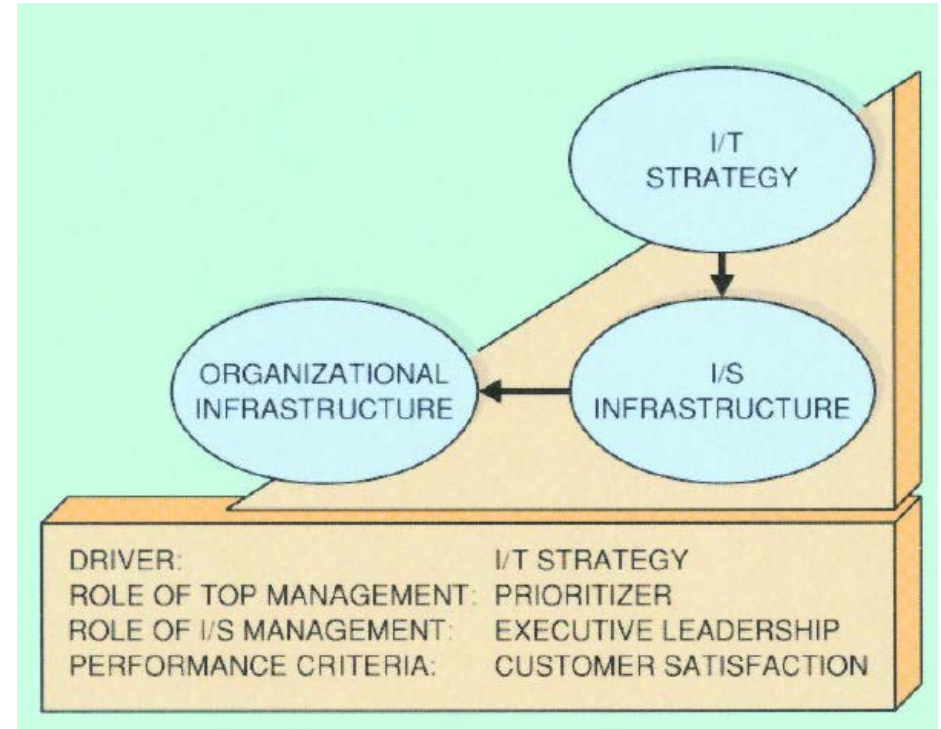
(Henderson & Venkatraman 1993)

Four Dominant Alignment Perspectives:

II) IT Strategy as the Driver



Competitive Potential Alignment

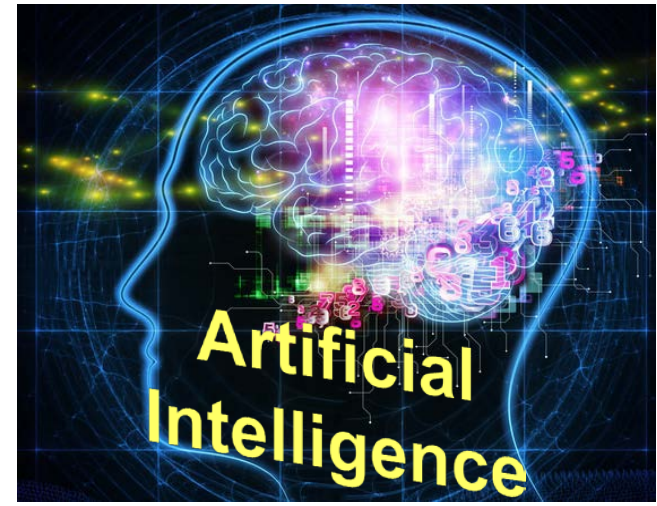
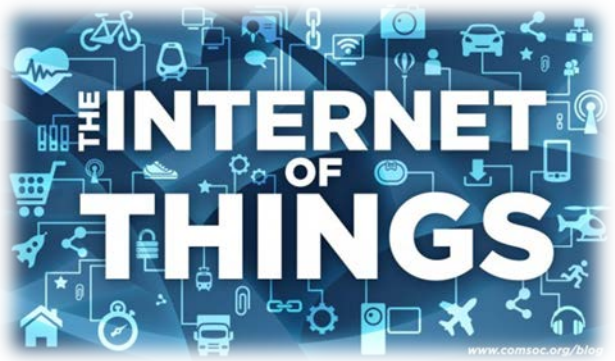


Service Level Alignment

(Henderson & Venkatraman 1993)

Motivation: Changing Role of IT

Technology Trends



Digital Economy

Marketing



Apps



Social Media



Smart Home



Industry 4.0



Energy Sector



Drivers for Digital Revolution



Digital Information



Mobile Devices/Connectivity



networks



Automation

Digital Products: Change of Business Models

Vinyl disc



Compact Disc



Download



Streaming



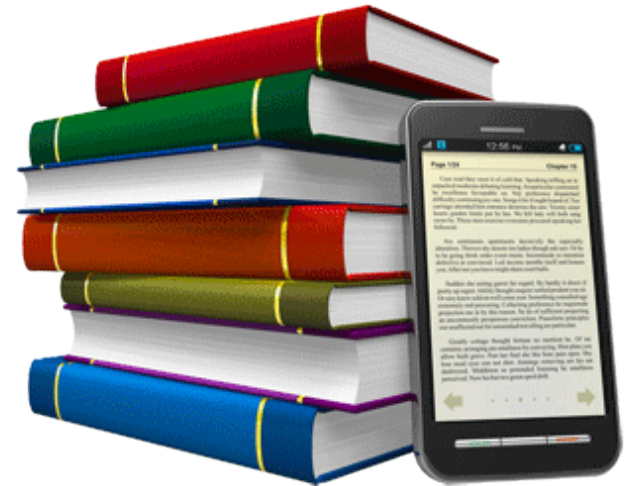
Influencers:

Digitalisation:
medium for storage
and transport

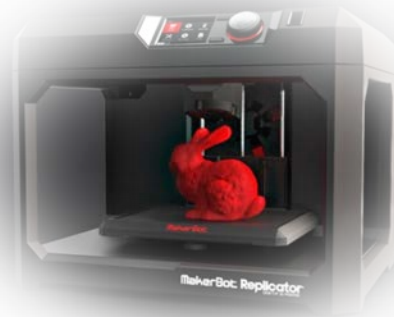
- Device has storage
- Network
(no media necessary for transport)

Always online

Digitalisation of Products



way for the
 news in the
 his newspaper
 on this



3D Print



Digital products shift logistics into the digital world



Internet of Things, robots, drones and self-driving cars can change the game of physical logistics



Physical Products: Sharing Economy

Sharing economy is about renting or borrowing.
Everything will become “on demand”.



Physical Products: Shared Economy

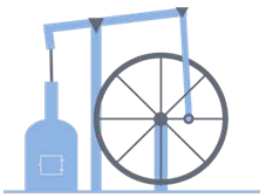


- Broker between user and supplier
 - ◆ Uber has no cars and no drivers
 - ◆ Airbnb has no apartments
 - ◆ Sharoo has no cars
- Platforms
 - ◆ network
 - ◆ reviews

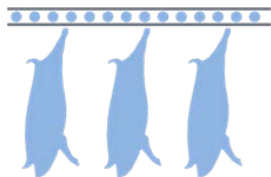


Industry 4.0

1st Industrial Revolution
Mechanization



2nd Industrial Revolution
Mass production



3rd Industrial Revolution
Automatization



4th Industrial Revolution
Cyber-Physical Systems

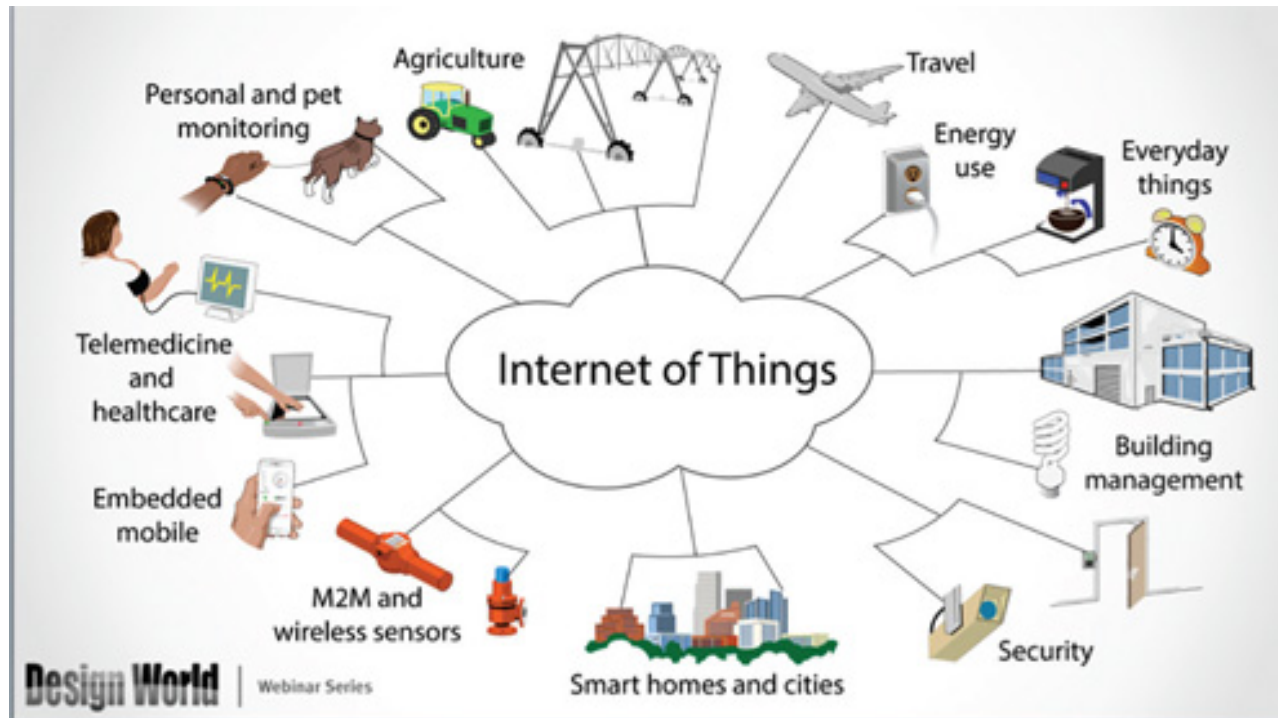


Connecting
machines and
intelligent
products



Internet of Things

Virtual representation of identifiable physical objects



By 2020, the number of devices connected to the internet is expected to exceed 40 Billion

Personalisation

Customer Segmentation

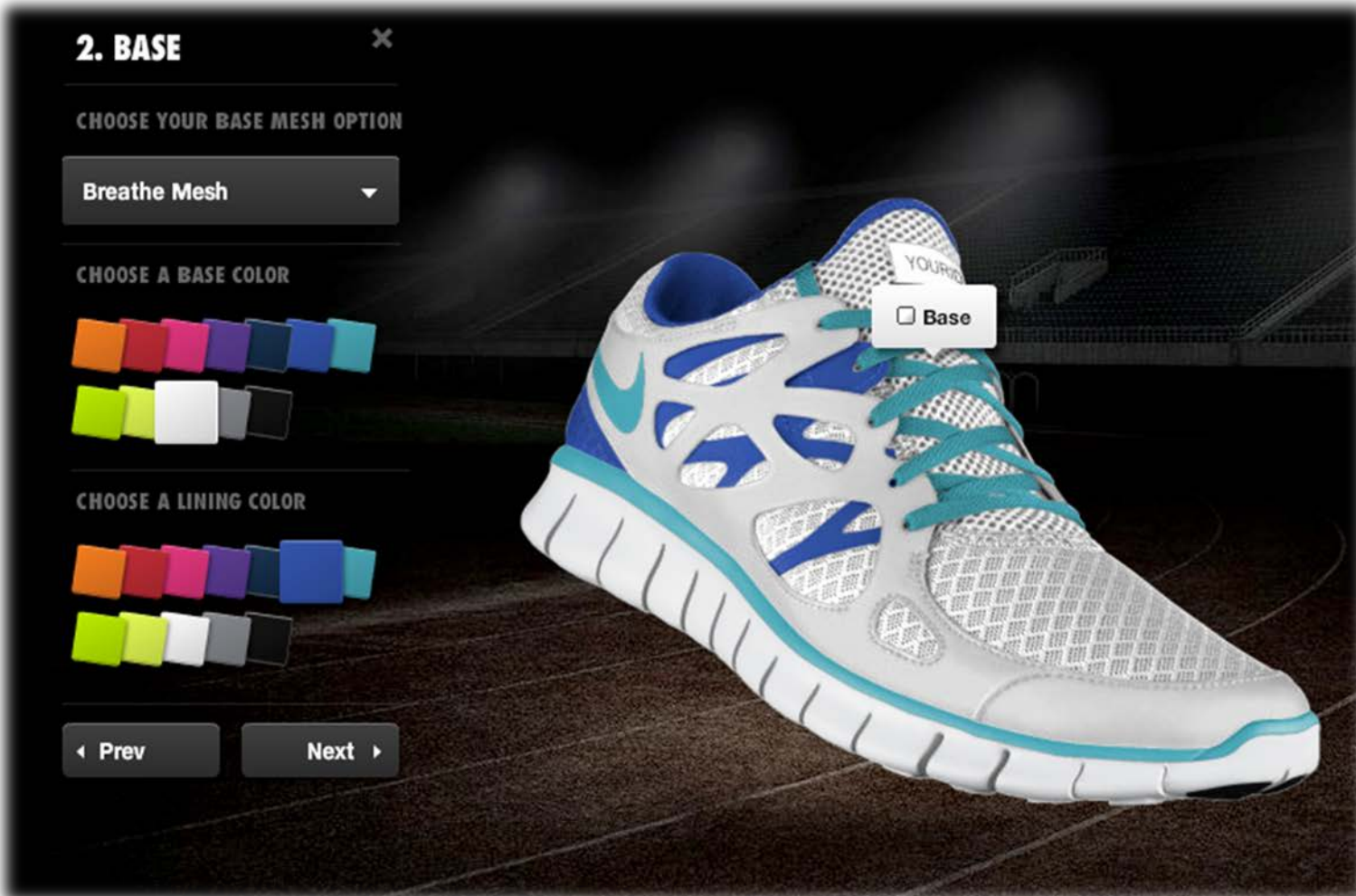


Segements of One

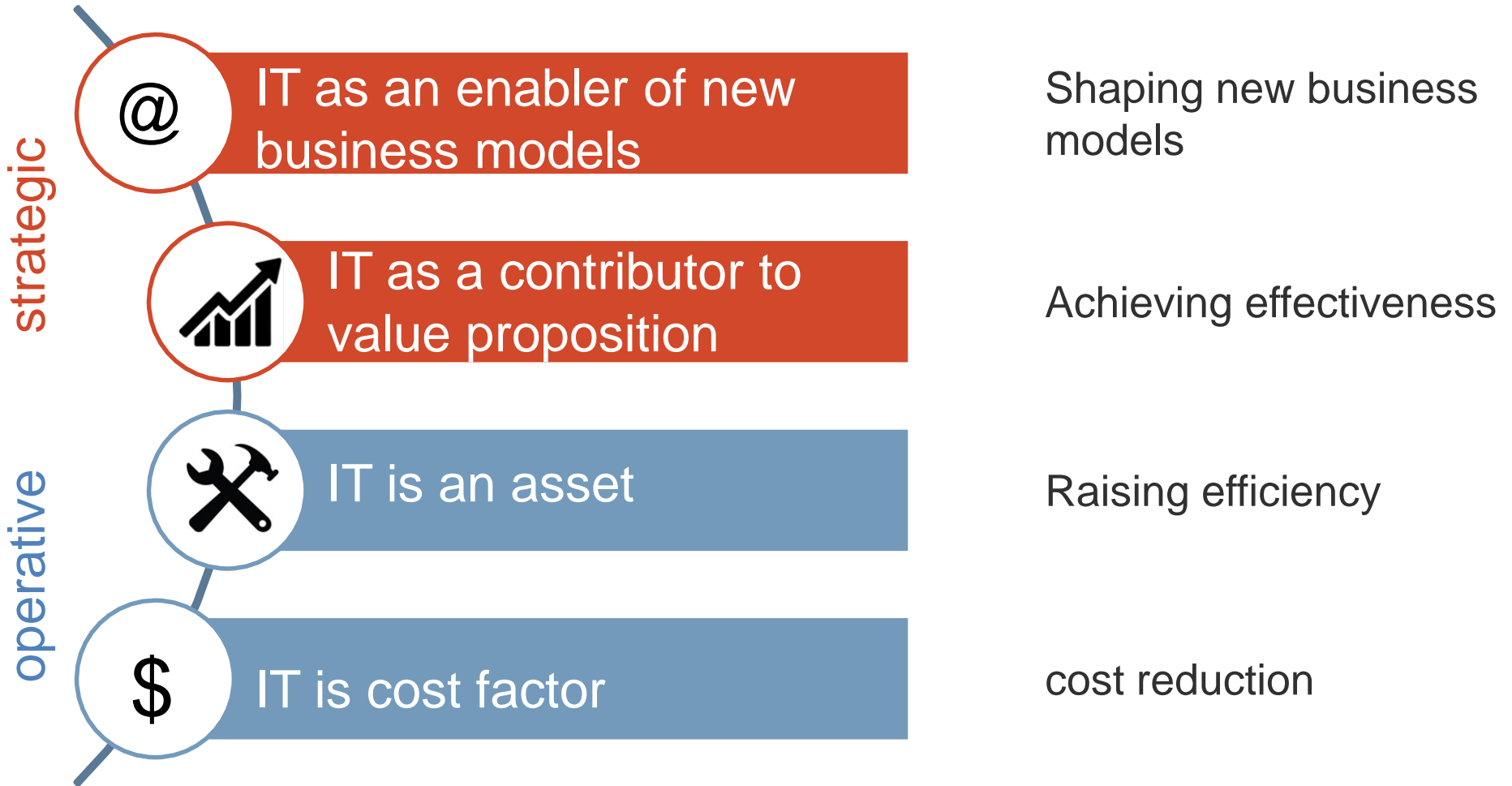


Mass Customization

mass production of individually customized goods and services, e.g. car industry, electronics (PC), clothes, furniture

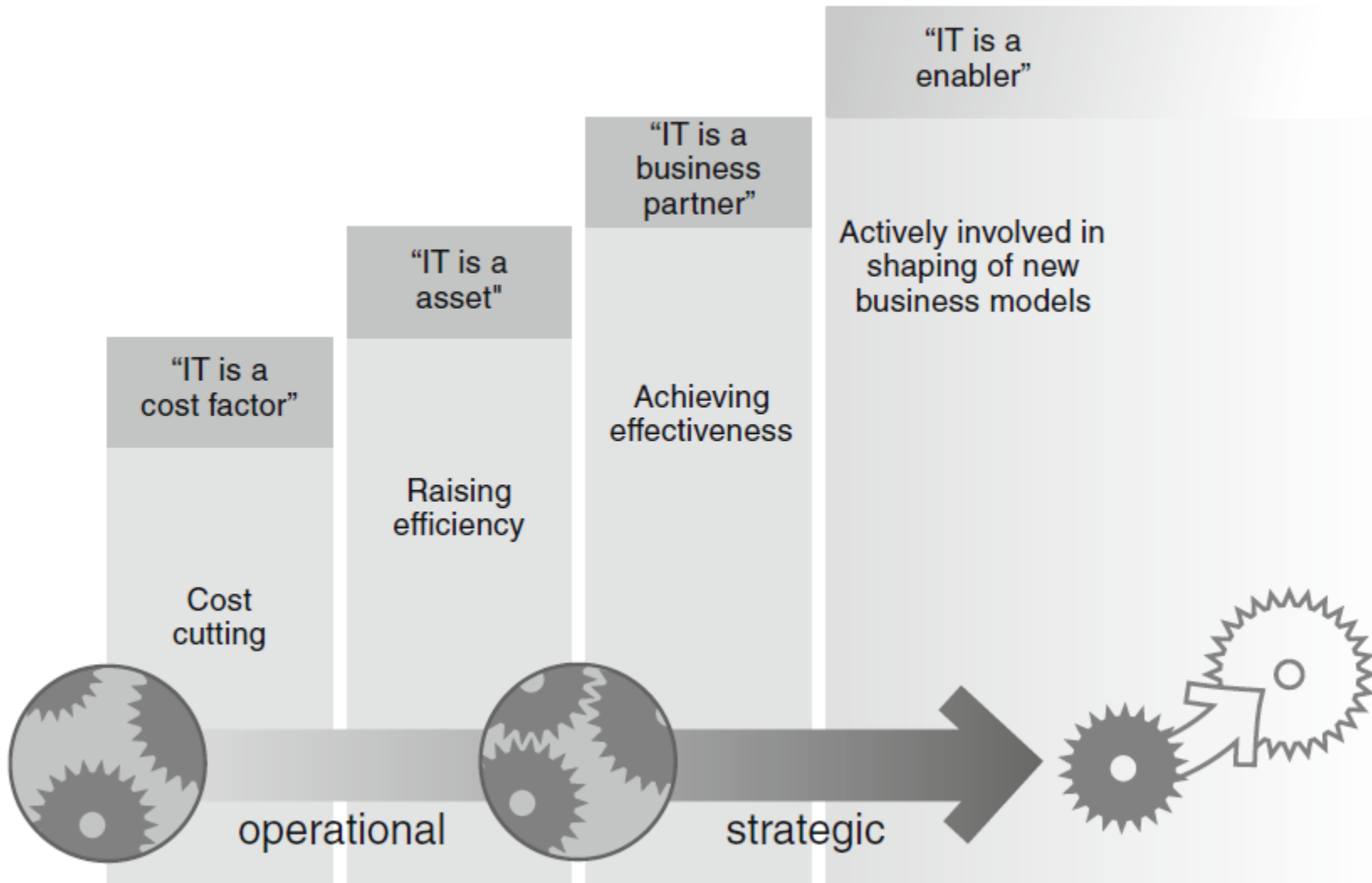


Role of IT Enterprises



Source: (Hanschke 2013, S. 27ff)
N. Tschichold, ELCA

The Role of IT



The Different Roles of IT - Portfolio and IT Controlling

IT is ...

Cost factor	Asset	Business partner	Enabler
<i>Product and service portfolio</i>			
Commodity IT, such as provision of peripheral equipment and operating standard software	Securing business operation through reliable, cost-effective basic IT Fulfilment of security and compliance requirements	Business-relevant IT products e.g. focused on business processes or the enterprise's products Reliable, cost-effective basic IT	Impetus for business through new technologies and business-relevant IT products Reliable, cost-effective basic IT
<i>IT controlling focuses mainly on...</i>			
Cost reduction	Cost/benefit and operational excellence Benchmarks	Contribution to value-added and cost/benefit	Contribution to value-added and strategy, and cost/benefit

(Hanschke 2010, p. 14)

Integration of Business and IT

- The higher the role of IT, the more are business planning and IT planning intermeshed

IT is ...

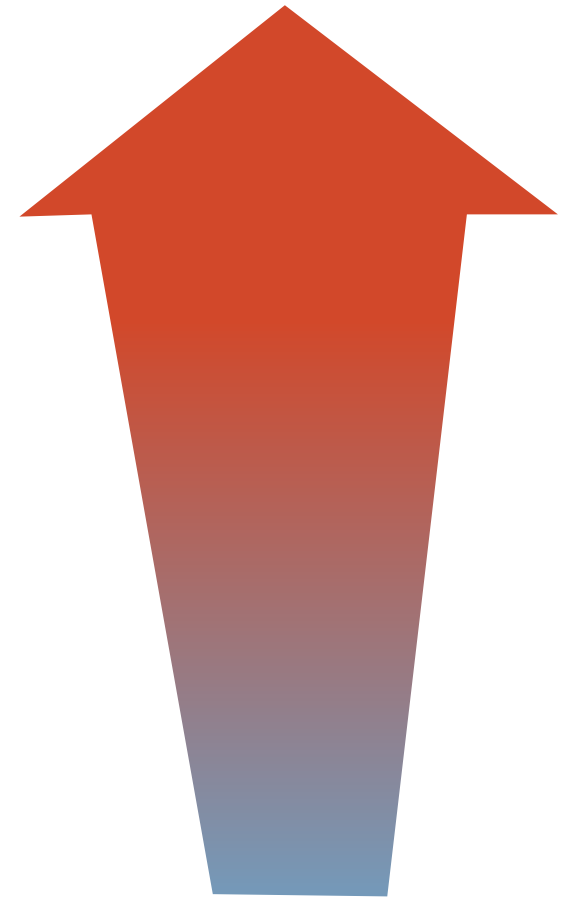
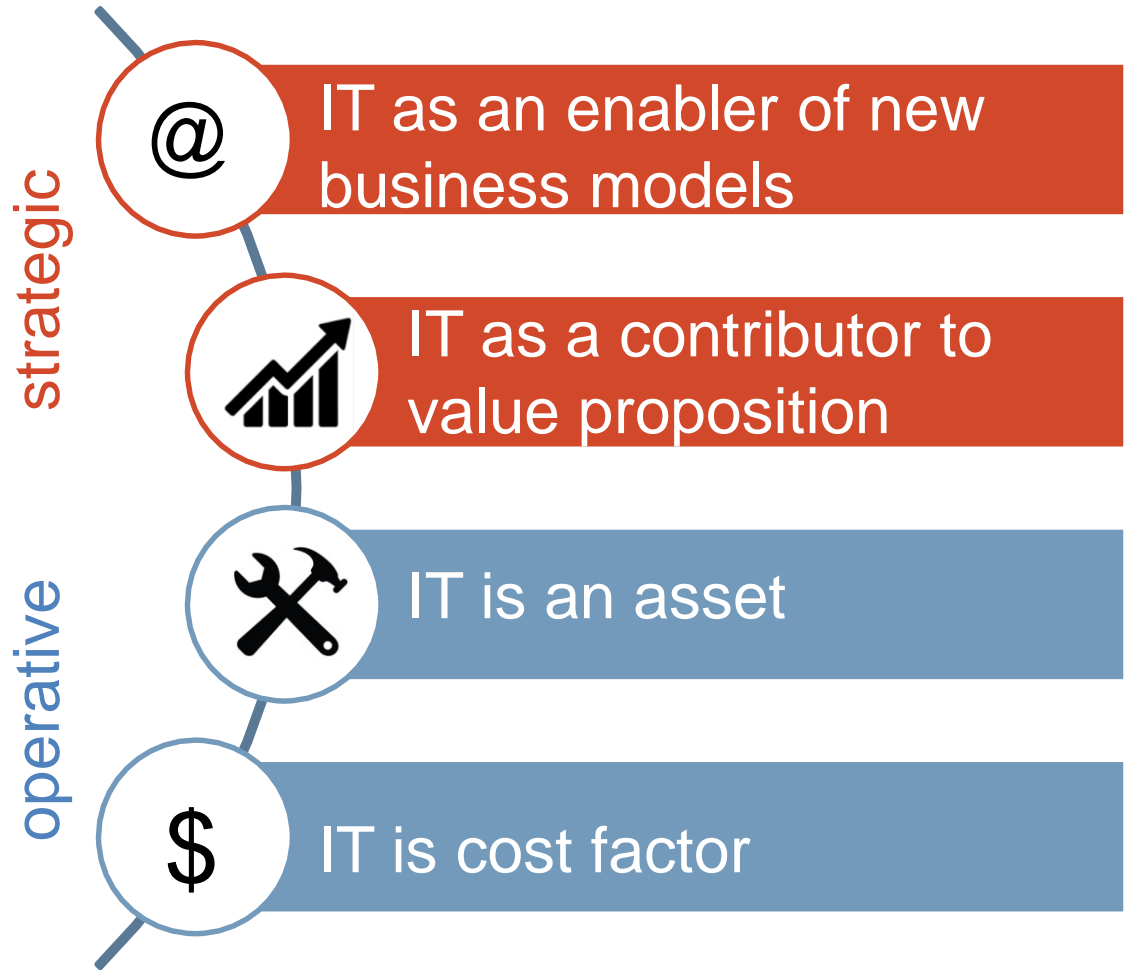
Cost factor	Asset	Business partner	Enabler
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IT planning focuses mainly on. . .

Reactive planning	Operational IT planning based on business planning	Business planning and IT planning intermeshed	Business planning and IT planning intermeshed
Decision on outsourcing or in-sourcing	Transparency of IT landscape Technical standardisation	Strategic planning of IT landscape	Anticipatory planning, e.g. future scenarios

(Hanschke 2010, p. 14)

Strategic Importance of IT



Source: (Hanschke 2013, S. 27ff)
N. Tschichold, ELCA

New: Digital Business Strategy

"There are no IT projects, only business projects."
(Paul Coby, CIO of British Airways)

New: Digital Business Strategy

- Digital technologies are fundamentally transforming business strategies, business processes, capabilities, products and services
- **Digital Business Strategy:** Fusion between IT strategy and business strategy



Digital Business Strategy

- Digital business strategy is an ***organizational strategy formulated and executed by leveraging digital resources to create differential value.***
- Overcoming the view of IT strategy as a function following business strategy
- Recognizing the pervasiveness of digital resources in other functional areas such as operations, purchasing, supply chain, and marketing
- Explicitly linking digital business strategy to creating differential business value (...) drive competitive advantage and strategic differentiation

(Bharadwaj et al. 2013)

Drivers of the Four Key Themes of Digital Business Strategy

Key External Digital Trends

- Pervasive Connectivity
- Information Abundance
- Global Supply Chains
- Improved Price/Performance of IT
- Growth of Cloud Computing
- Emergence of Big Data

Key Organizational Shifts

- Limitations of Traditional Business Models
- Trans-functional Role for IT
- New Mandate for IT and the CIO
- Increased Familiarity with IT

- Scope of Digital Business Strategy
- Scale of Digital Business Strategy
- Speed of Decision Making
- Sources of Value Creation and Capture

Performance

(Bharadwaj et a. 2013)