Alignment of Business and IT
Introduction

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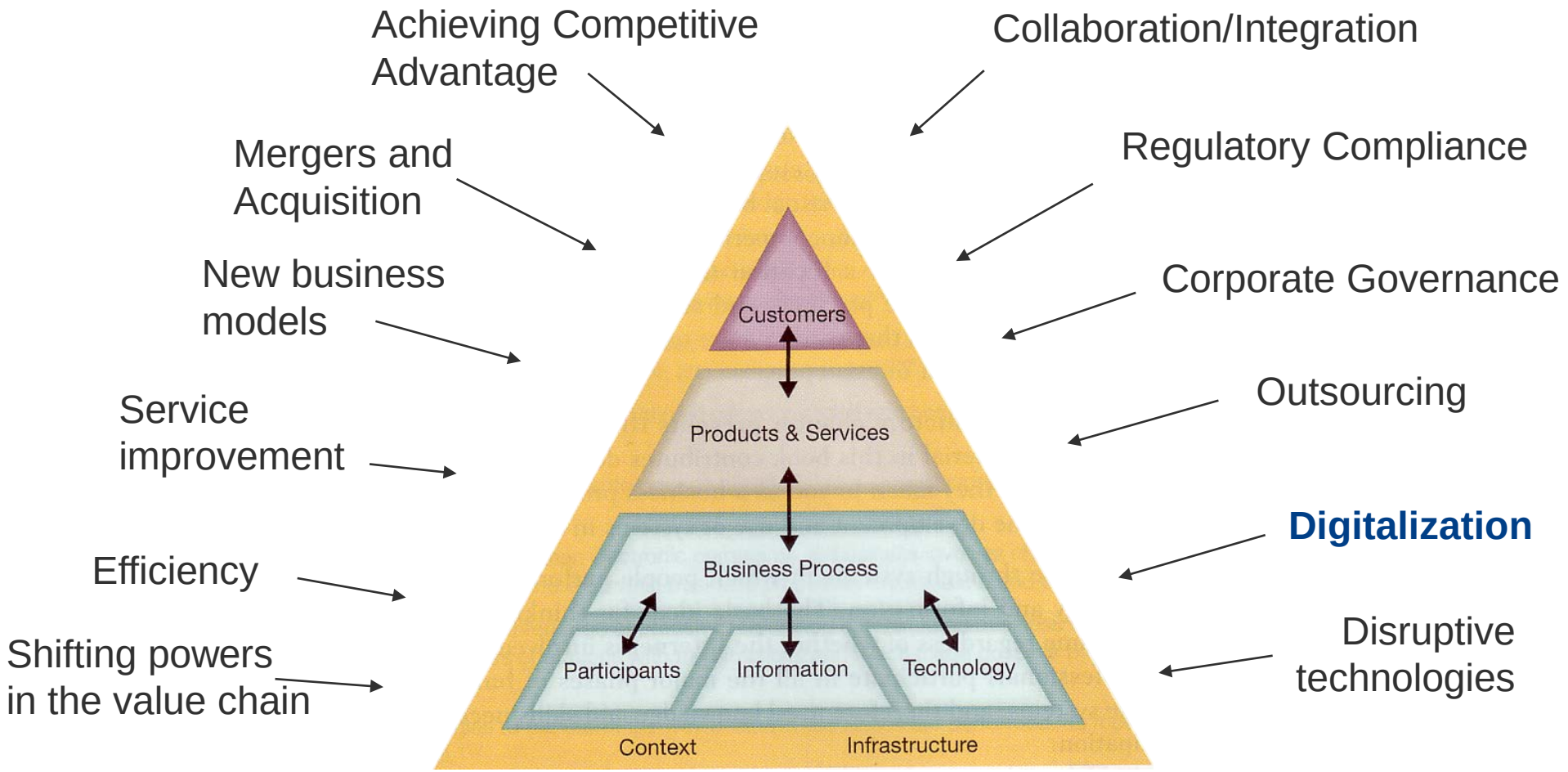
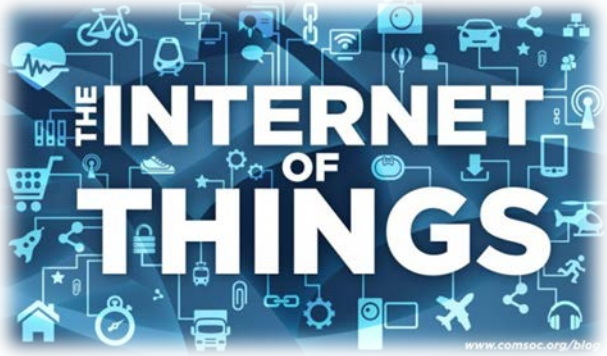
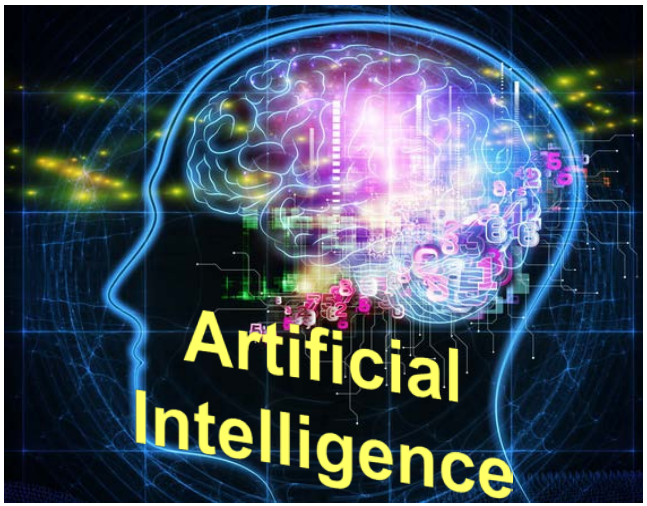
Business-IT Alignment

Increasingly dynamic environment: Challenges confronting an Enterprise



Technology Trends





Demand for Continuous Change

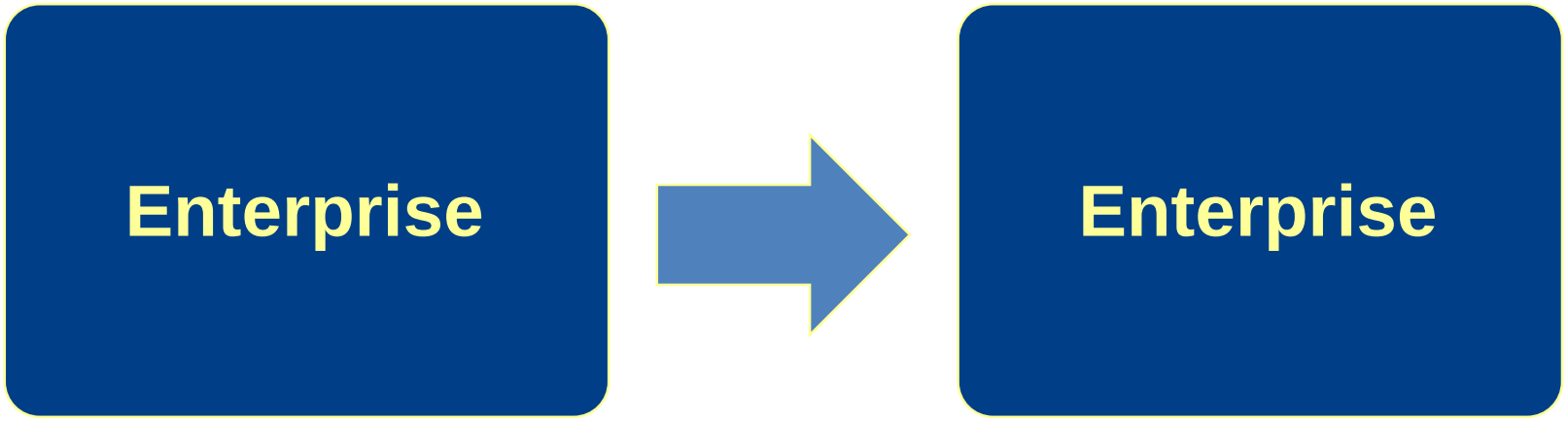
- To improve their chances of survival, enterprises need to be agile.
- Agility is the ability of enterprises to
  - quickly **adapt themselves to changes** in their environment and
  - **seize opportunities** as they avail themselves
  - have **flexibility** to deal with individual customer requirements,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

Agility


FROM NOW ON WE'RE GOING TO CHANGE HOW WE DO THINGS HERE. WE NEED TO BE AGILE.
WHAT DOES IT MEAN?
NOTHING REALLY CHANGES, EXCEPT THAT NOW MANAGERS, DESIGNERS AND ARCHITECTS HAVE AN EXCUSE FOR CHANGING THE REQUIREMENTS ON FRIDAYS AT 4 PM.
#113 - "AGILE DEVELOPMENT, EXAPLAINED" - BY SALVATORE IOVENE, FEB. 21ST 2009
HTTP://WWW.GEEKHEROCOMIC.COM/

Change



Real world *Target state*

Drivers for Change can be internal and external – Business and IT

- External Drivers
  - Demand for new services and products
  - Competitors with new business models
  - Market Opportunities
  - Disruptive Technologies
  - New regulations
- Internal Drivers
  - Business Process Optimisation
  - Increase flexibility
  - Reorganisation
  - Migration of Information Systems
  - Changes in IT infrastructure

Seize **Opportunities**
React on **Threats**

Exploit **Strengths**
Eliminate **Weaknesses**

"There are no IT projects, only business projects."

(Paul Coby, CIO of British Airways)

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

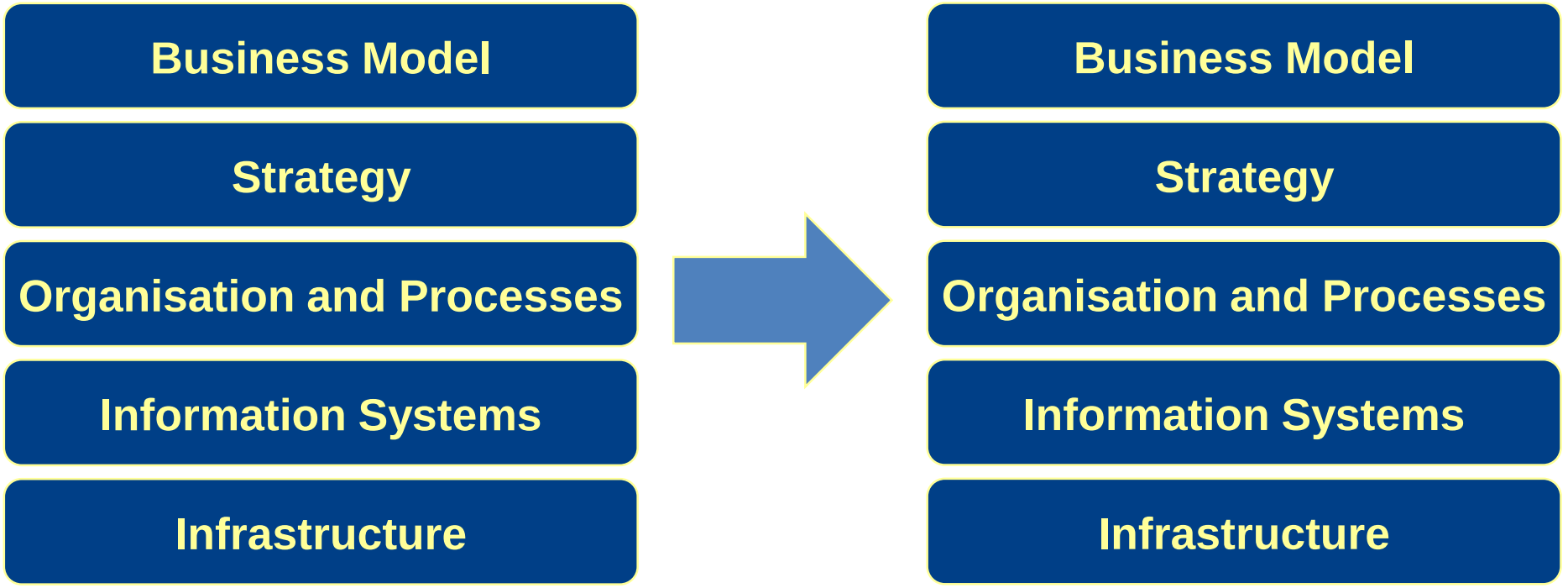
Business Transformation – Operational Level

- Value must come not just from the IT tools that are selected, but also in **the way that they are used** in the organization.
- For this reason, the scope of Business-IT Alignment also includes **business transformation**, in which organizations **redesign how work is accomplished** in order to realize efficiencies made possible by new IT.
- Thus, implementing IT to achieve its full potential for business value includes not only a technical component, but also an **organizational change management** component

Business Transformation – Strategy Level

- The organization must view information technology as an instrument to transform the business. This includes exploring other revenue streams and integrating other facets of their business into each other.
- Business-IT alignment integrates the information technology to the business model, goals and strategy the organization.

Business Transformation



Real world

Target state

Mutual Dependencies between Business and IT

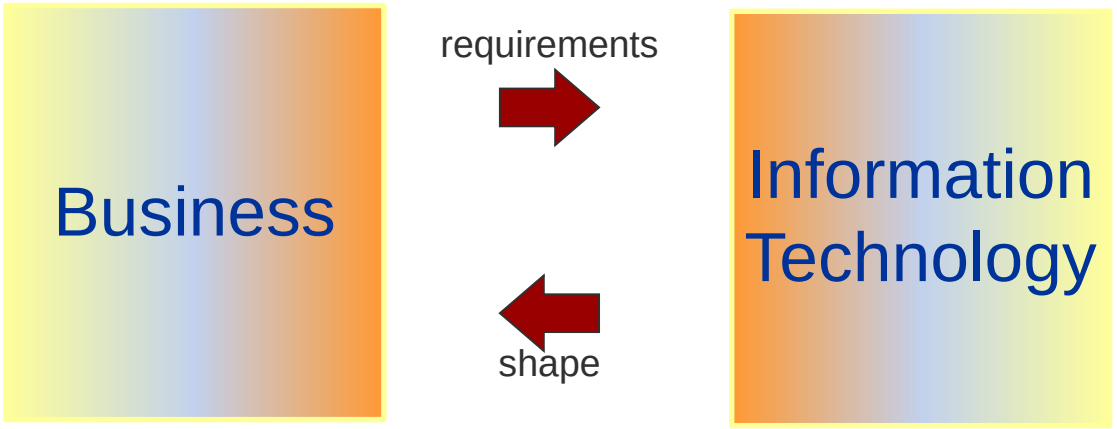
- Almost all processes have become IT reliant, if not fully automated.
- Thus, there is a mutual influence between information systems and the design of the business
  - New IT may lead to new business models, strategies, or business process (re-engineering).
  - A (re-)design of a business process often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

Business-IT Alignment

- The alignment of business and IT has to create an environment in which information technology…

  …not merely supports business processes but

  …is also used to shape the business.



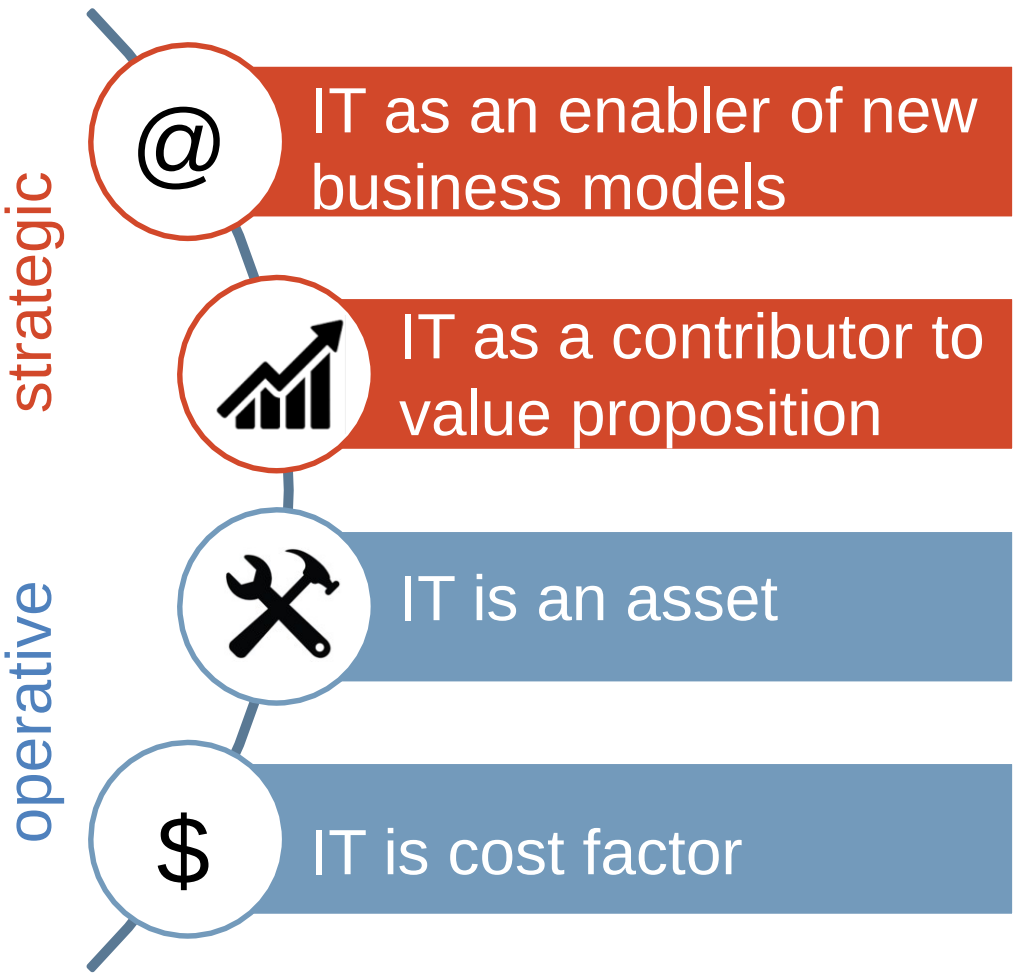
The Ultimate Goal: Business-IT Convergence

"Forget IT-business alignment. [There is] a small number of companies where business and IT are virtually indistinguishable... IT and the business are not so interested in aligning but rather are fully engaged in converging on an enterprise vision or goal that hovers above every department and project plan and is crystal clear to each and every employee."

Julia King (2010)

Julia King (2010) Beyond Alignment. Computerworld. https://www.computerworld.com/article/2550559/it-management/beyond-alignment.html

Role of IT Enterprises



Shaping new business models, disruption

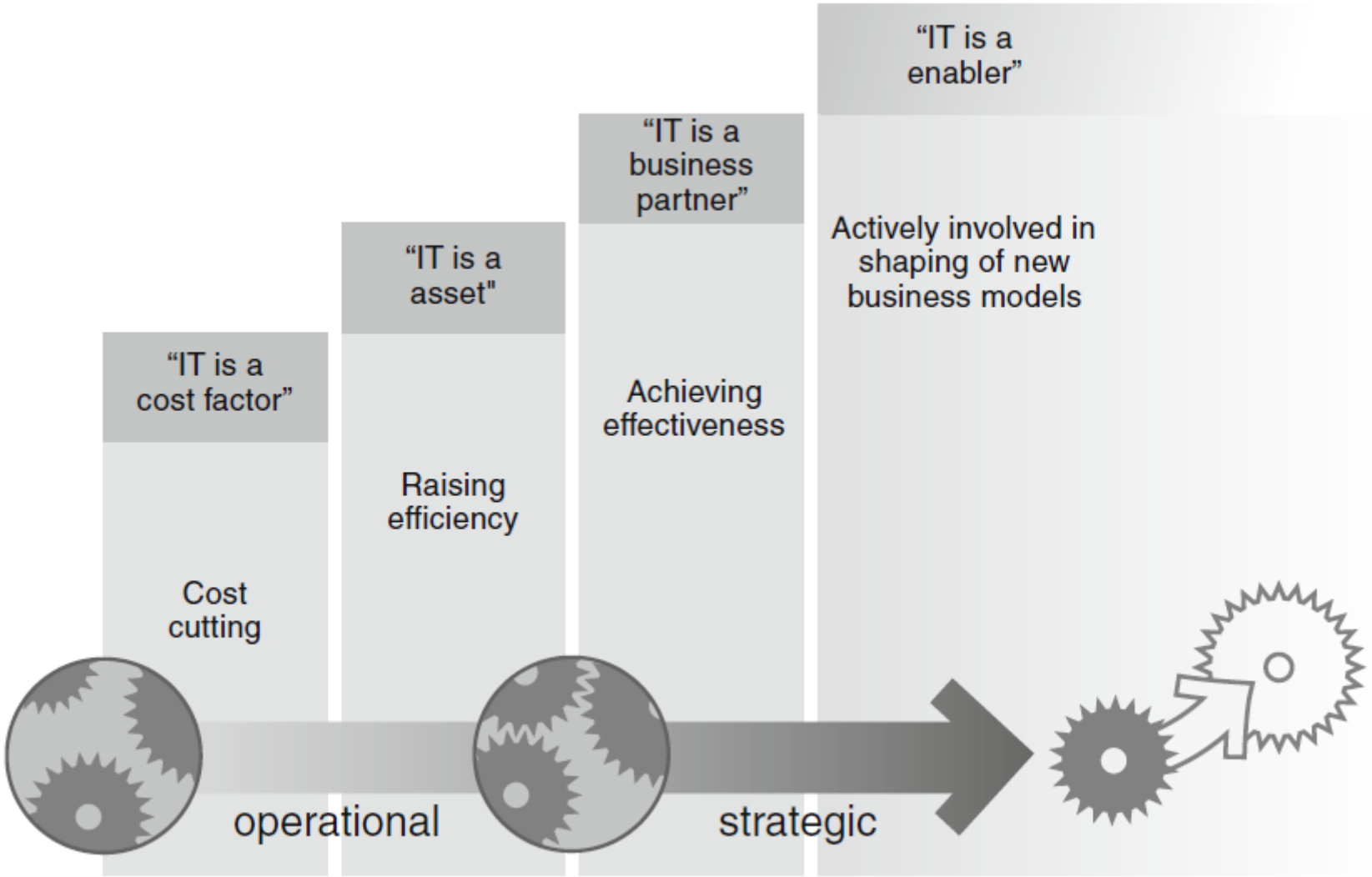
Achieving effectiveness (E-Business, E-Banking, …)

Raising efficiency (automation, ERP systems, …)

cost reduction

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

The Role of IT



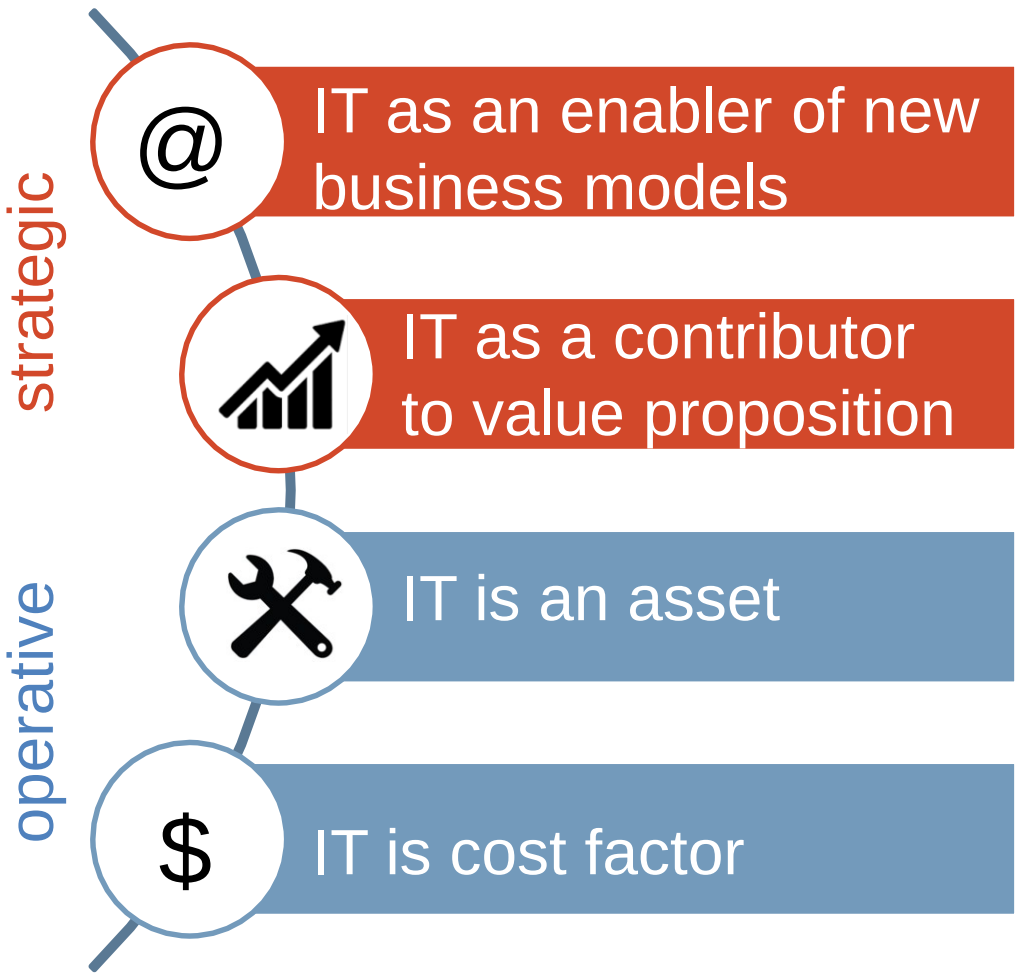
(Hanschke 2010, p. 12)

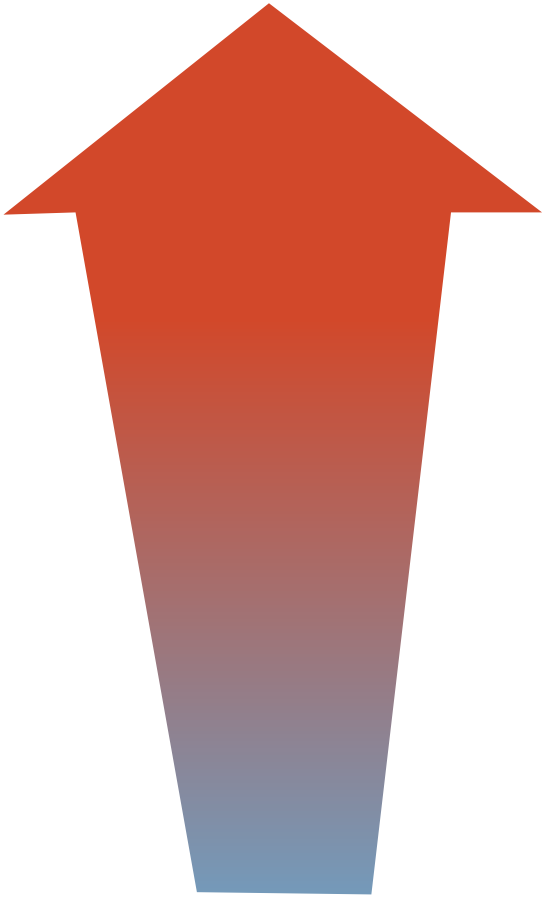
The Different Roles of IT - Portfolio

IT is ...			
Cost factor	**Asset**	**Business partner**	**Enabler**
Product and service portfolio			
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

(Hanschke 2010, p. 14)

Strategic Importance of IT





Source: (Hanschke 2013, S. 27ff)
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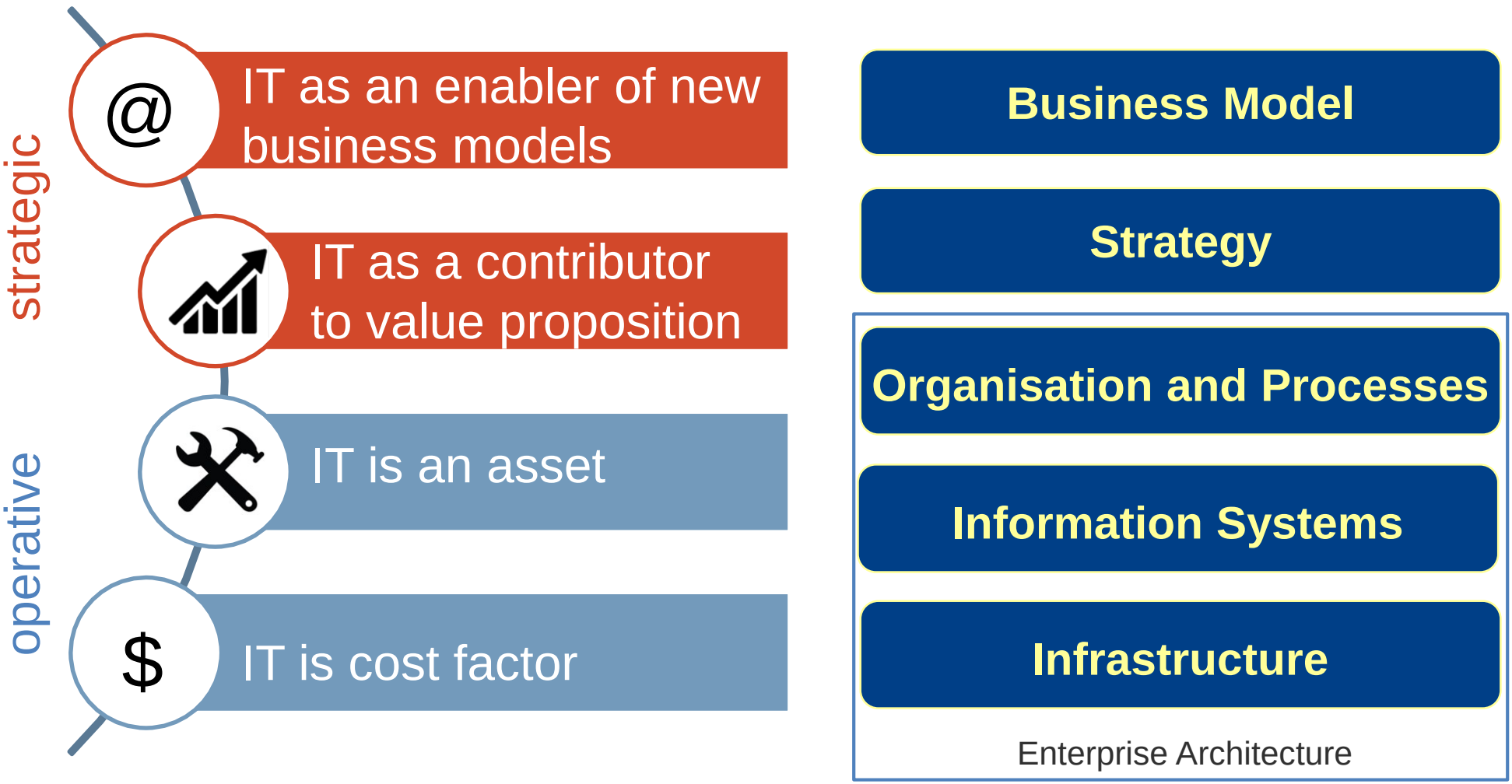
Role of IT and affected Parts of the Enterprise



The Role of Modeling

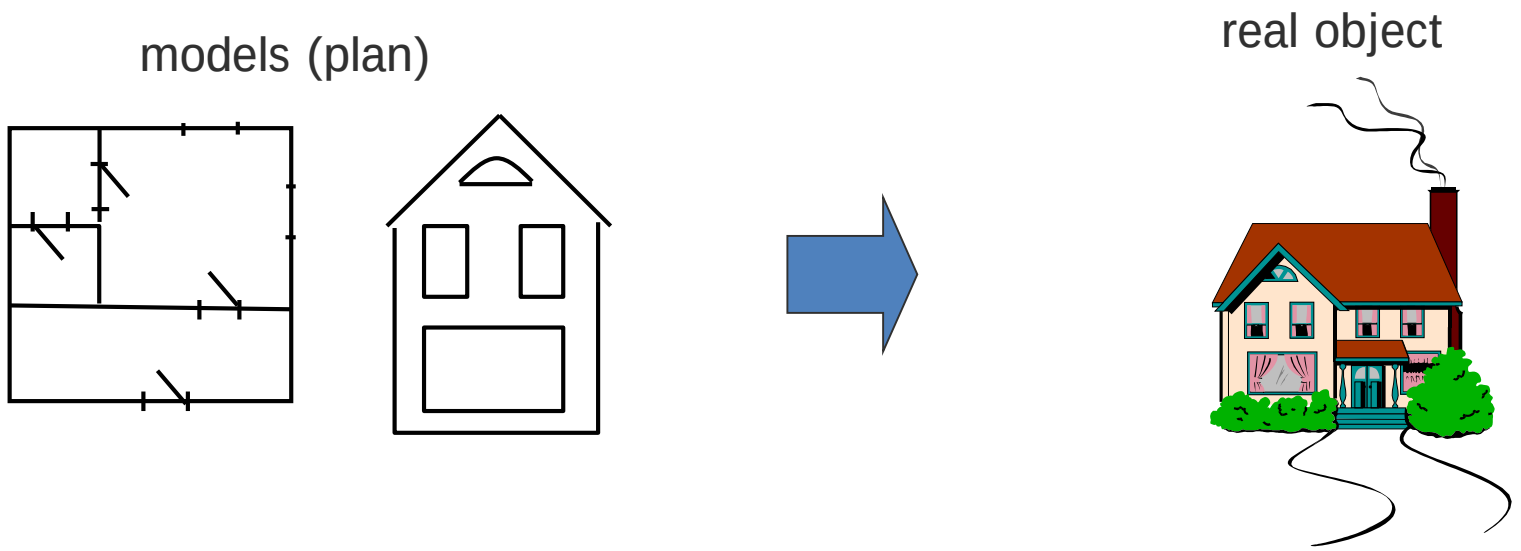
Dealing with Complexity and Change

- If the object you want to create or change is simple, and it is not likely to change, then you can do it directly.
- On the other hand, if the object is **complex**, you can't see it in its entirety at one time and it is likely to **change** considerably over time, you need a description or **model**.

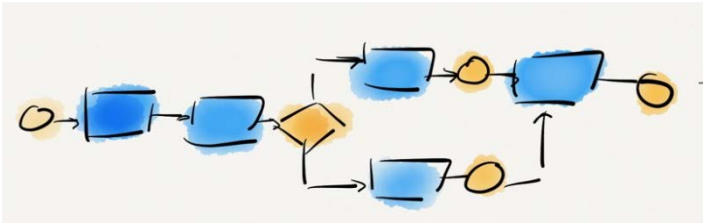
(John Zachmann, 2012)

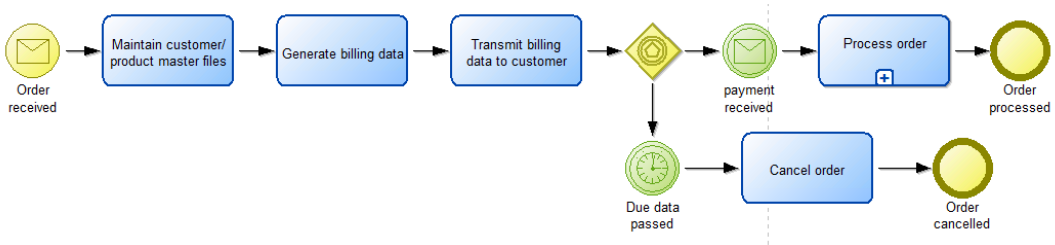
Models

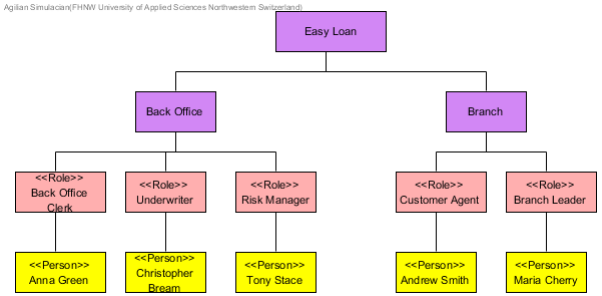
- A Model is a reproduction of a *relevant* part of reality which contains the essential aspects to be investigated.
- Relevance depends on the goal (concern) and stakeholders.

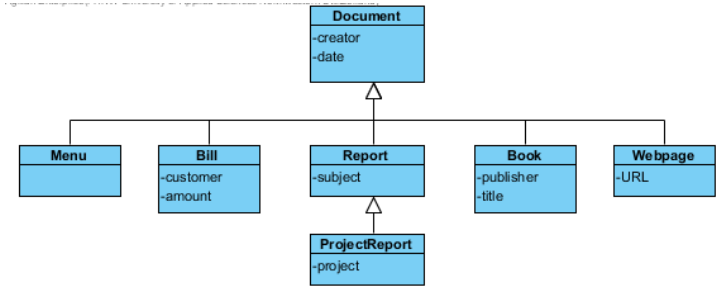


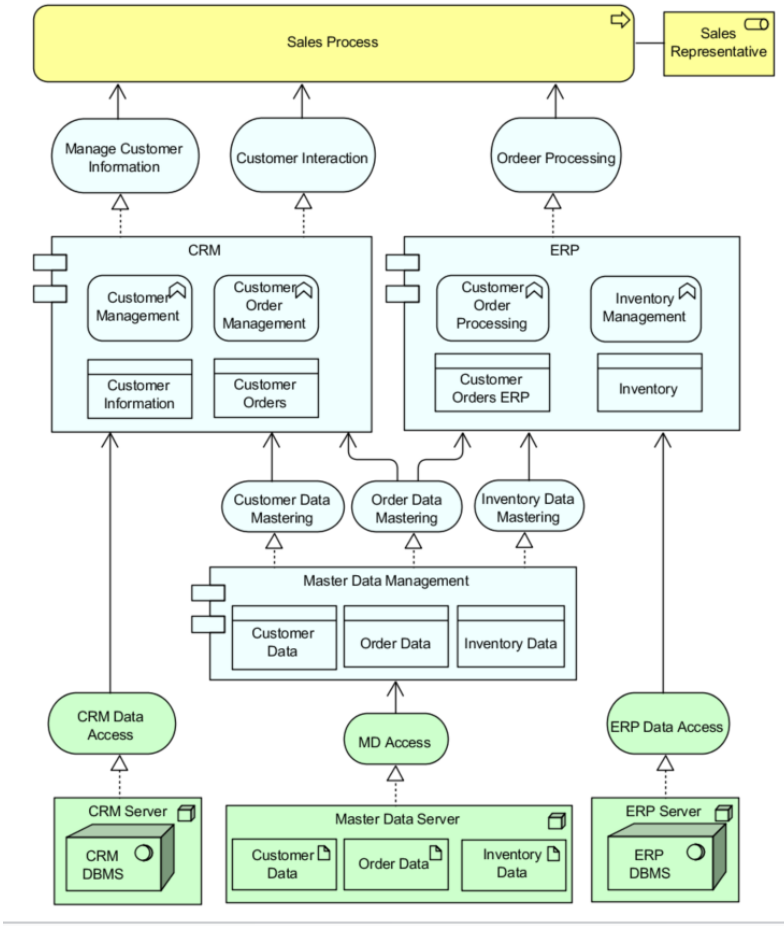
Enteprise Models











Models

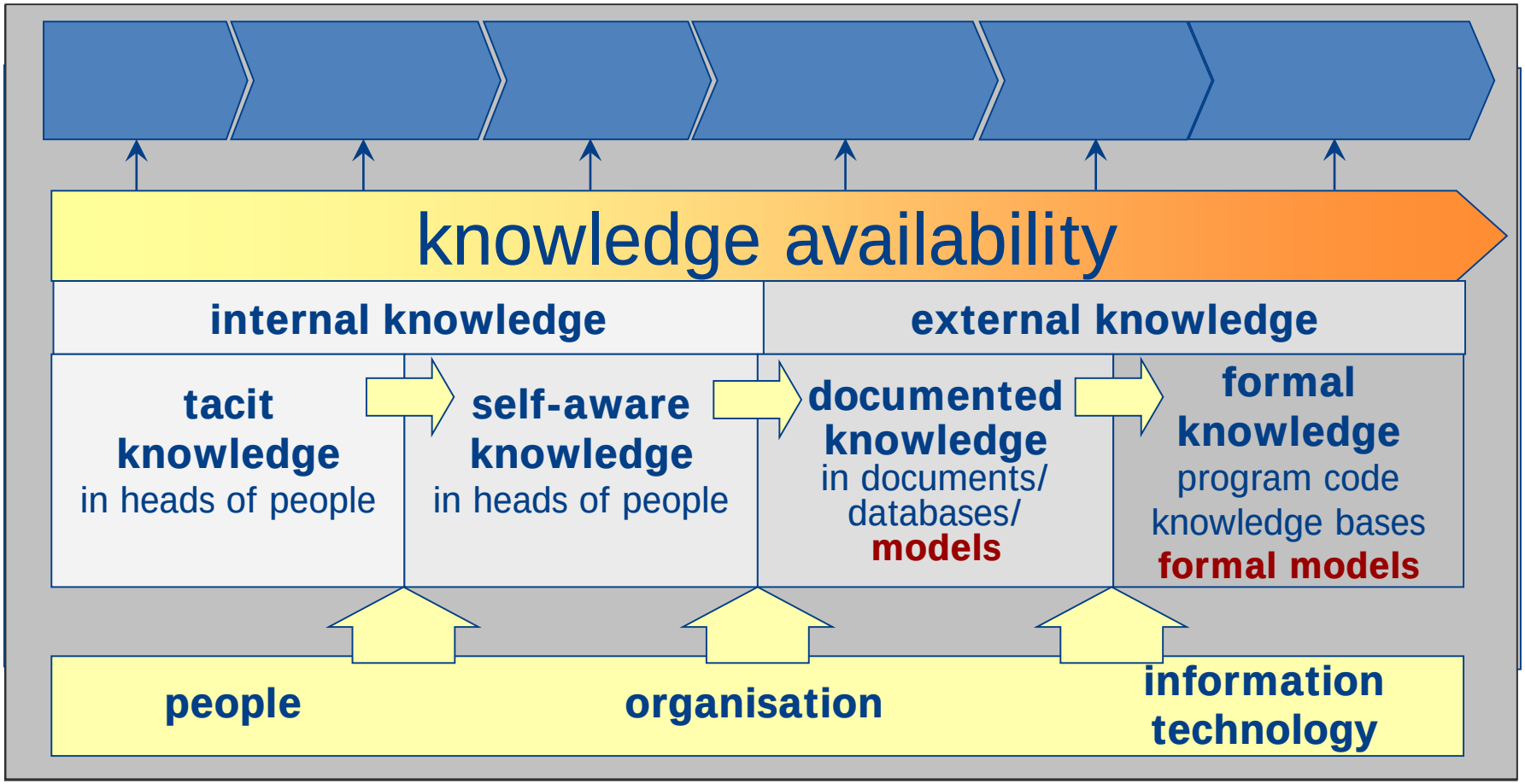
- Models are not mere pictures; rather, they
  - provide a precise, meaningful description that can be visualized in different ways for different stakeholders;
  - can also be used to analyze the impact of changes, cost, risk, security, compliance and other relevant KPIs.

http://blog.bizzdesign.com/how-to-not-fail-when-implementing-strategy

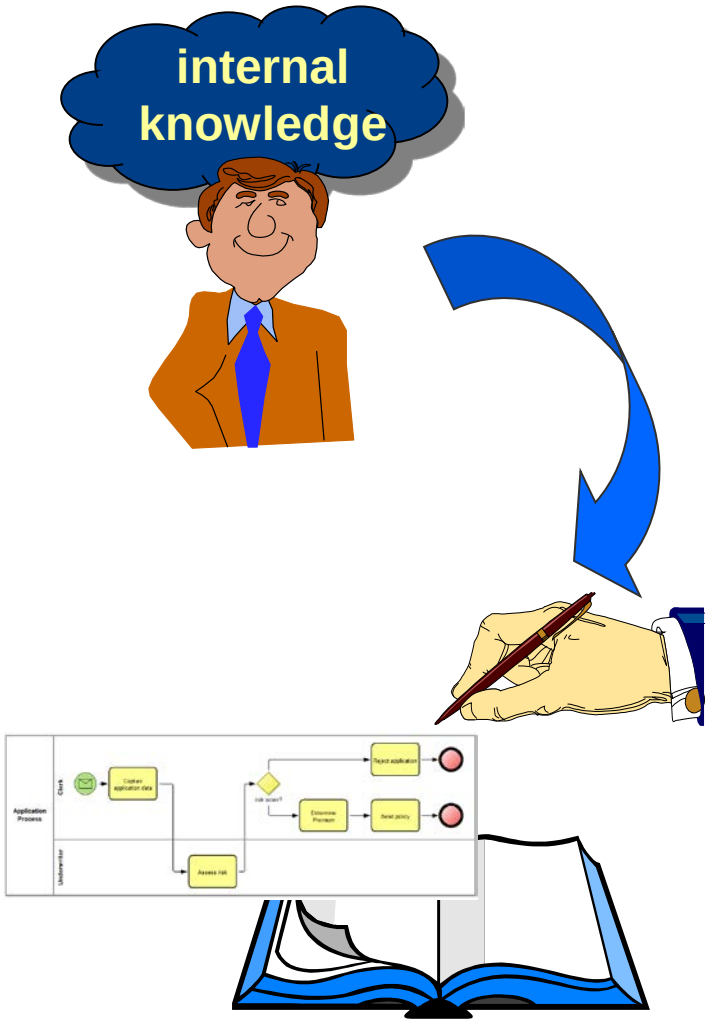
Business Value of Modeling

- **Communication between people**
- **Knowledge management and reuse**
- Training and learning
- **Persuasion and selling**
- **Analysis of a business situation**
- Compliance management
- Development of software requirements
- Direct execution in software engines

Models = Externalized Knowledge



Internal vs External Knowledge



- Internal Knowledge
  - ♦ subjective
  - ♦ in the mind of people
  - ♦ based on experience, intuition
- External Knowledge
  - ♦ based on rationality
  - ♦ text, models, rules
- By making knowledge explicit it can be …
  - …commonly agreed upon
  - …preserved independent of people, e.g. if expert leaves company

Communication

- A picture is worth a thousand words

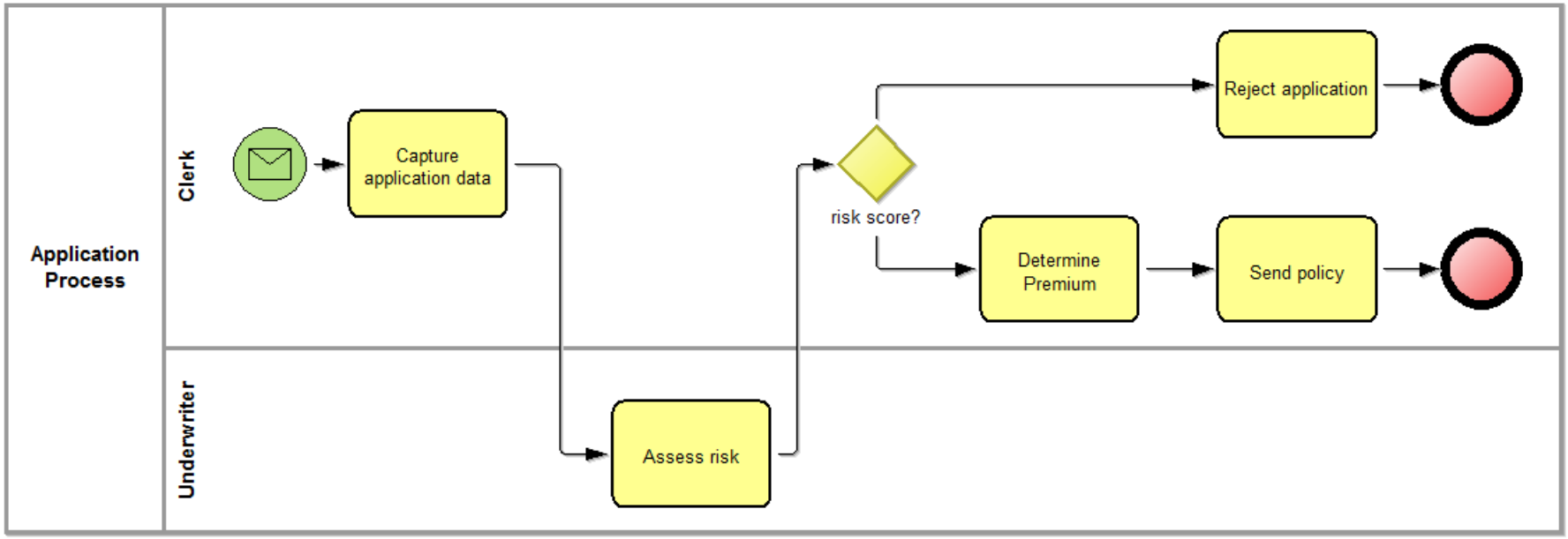
Experiment: Text vs. Model (1)

Process description:

In the business process for health insurance, first the application data are captured by the clerk. Then the underwriter makes the risk assessment is made by the underwriter. Depending on the risk score, the clerk determines the premiums and sends the policy or the application is rejected.

- Is «application data are captured» a task or an event?
- Which tasks are executed in parallel?
- Which activity is first: «determine premium» or «reject application»

Experiment: Text vs. Model (2)



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Business Transformation