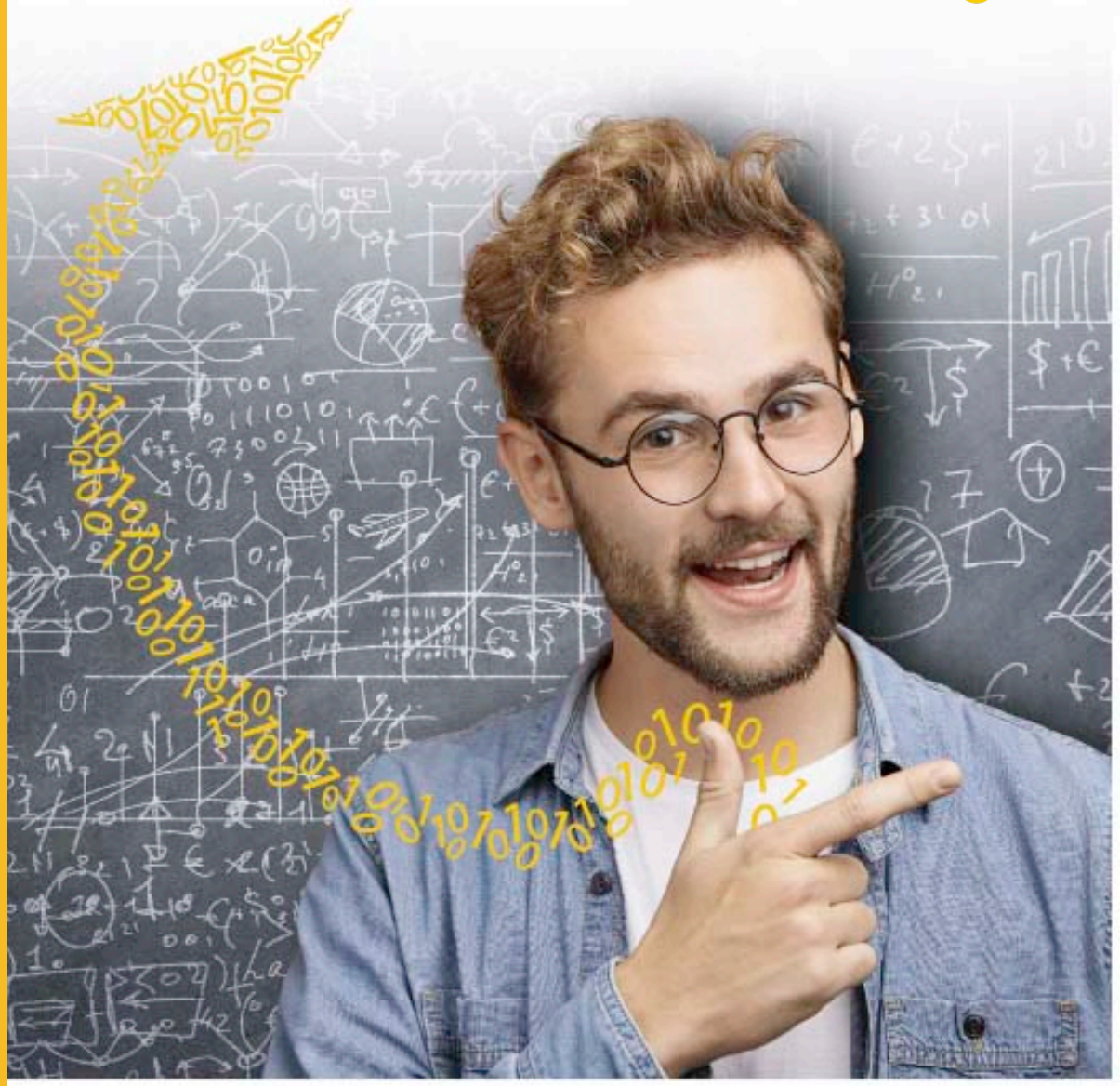
IT Governance



KNOWDigital

November 16, 2020

Lionel Pilorget

Agenda

- Definition of IT Governance
- Defining Process Roles
- Structuring the Organization
- Setting Strategic Objectives
- Nurturing a healthy Corporate Culture

Definition of IT Governance

Information technology (**IT**) **governance** is a subset discipline of corporate governance, focused on information technology (IT) and its performance and risk management. The interest in IT governance is due to the ongoing need within organizations to focus value creation efforts on an organization's strategic objectives and to better manage the performance of those responsible for creating this value in the best interest of all stakeholders. It has evolved from The Principles of Scientific Management, Total Quality Management and ISO 9001 Quality management system.

(…)

The IT Governance Institute's definition is: "... leadership, organizational structures and processes to ensure that the organisation's IT sustains and extends the organisation's strategies and objectives."

Source: Wikipedia, the free encyclopedia

Key-words for IT governance

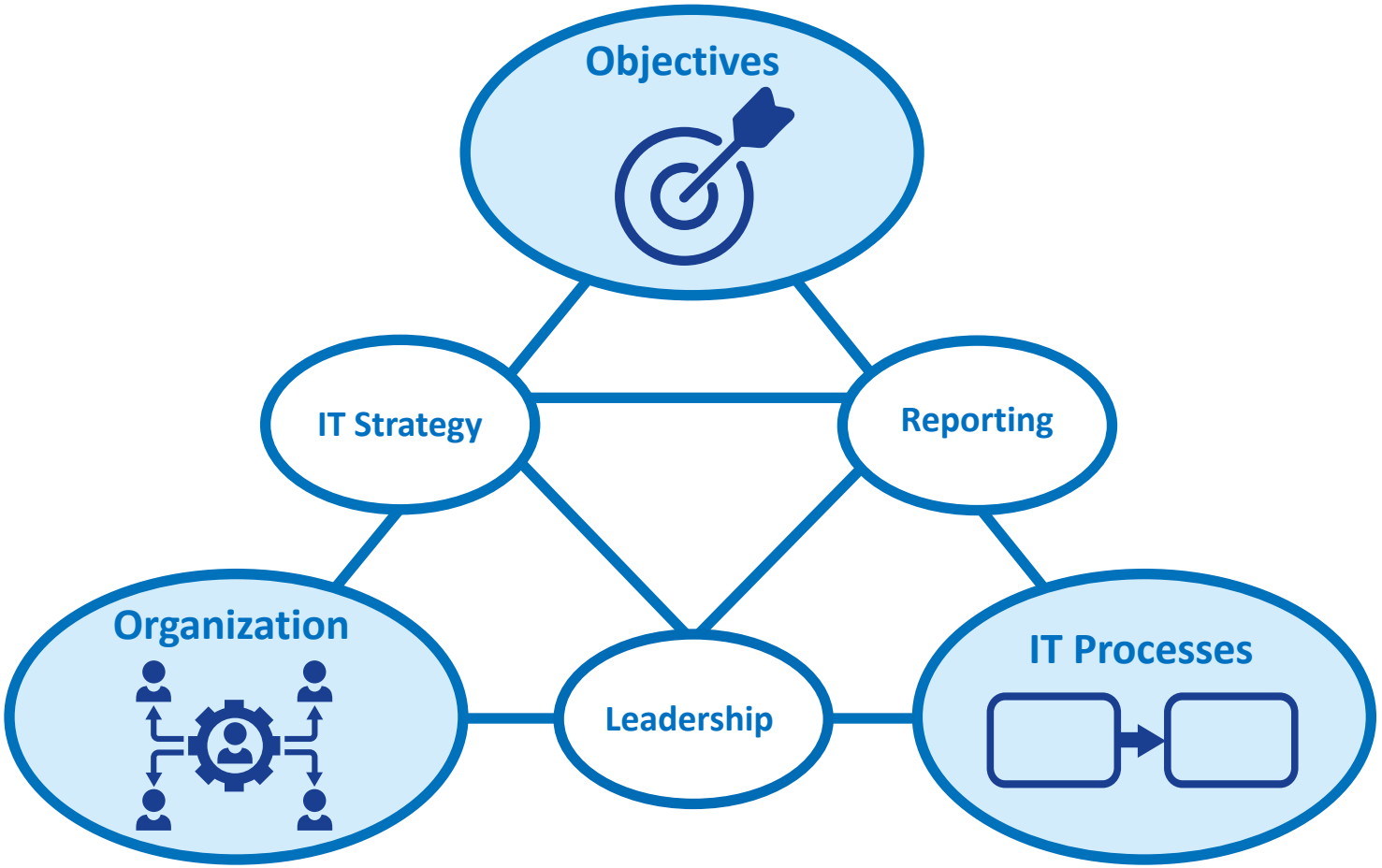
Information technology (IT) governance is a subset discipline of corporate governance, focused on information technology (IT) and its performance and risk management. The interest in IT governance is due to the ongoing need within organizations to focus value creation efforts on an organization's strategic objectives and to better manage the performance of those responsible for creating this value in the best interest of all stakeholders. It has evolved from The Principles of Scientific Management, Total Quality Management and ISO 9001 Quality management system.

(…)

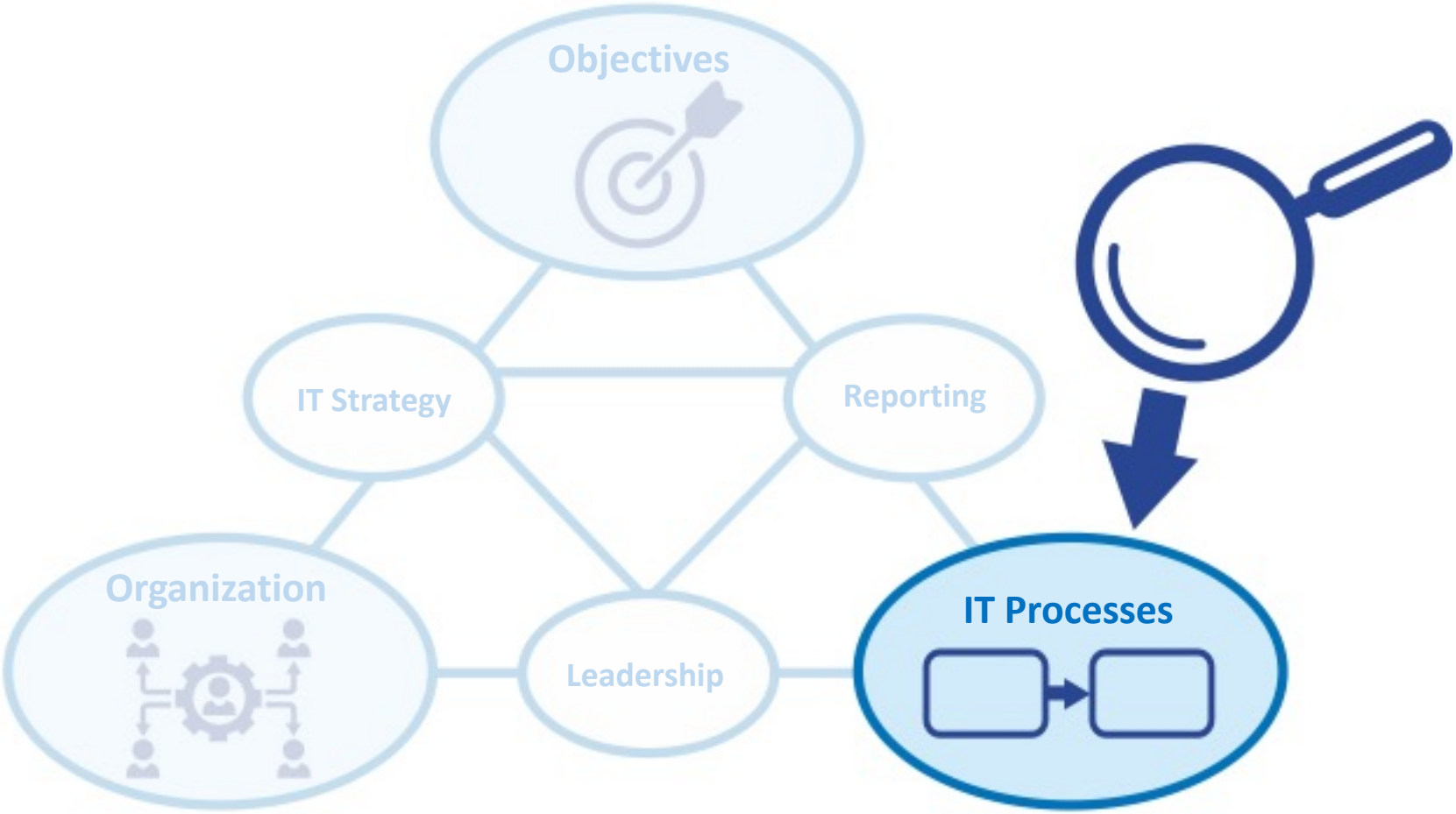
The IT Governance Institute's definition is: "... **leadership**, **organizational structures** and **processes** to ensure that the organisation's IT sustains and extends the organisation's **strategies and objectives**."

3 views on IT Governance

Process Roles - Organization - Objectives



IT Governance based on IT Process Roles



Which roles within the following IT processes?

Process	Roles
IT Strategy	
Service Management	
Project Management	
Continuity Management	
Incident Management	

Which roles are relevant for which processes?

put a cross -> “x”

Role	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12	P13	P14	P15	P16	P17
CIO																	
Project Manager																	
Helpdesk agent																	
SW Developer																	
Security Officer																	
IT Architect																	
System Owner																	

P01 - IT Strategy
P02 - HR Management
P03 - IT Standards & Architecture
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P13 - Applications Development
P14 - IT Operation & Configuration
P15 - Supplier Management
P16 - Incident Management
P17 - Problem Management

Consolidating process activities per role: Example 1

CIO

- Defines the IT strategy
- Determines whether IT services are to be handled internally or outsourced
- Defines the IT organization
- Determines the scope of human resource allocations to the IT organization
- Ensures that the IT organization is operational and that its work is aligned to the IT strategy
- Makes sure that the IT strategy is up to date
- Is responsible for reviewing the IT strategy
- Appoints the business unit managers
- Ensures the definition of IT standards
- Monitors compliance with the IT standards
- Ensures that the planned IT architecture is developed
- Ensures the timely delivery of the IT budget
- Is responsible for adherence to the approved IT budget
- Establishes the quality standards for the specified IT services
- Initiates appropriate measures in response to detected quality deficiencies
- Ensures compliance with the defined quality standards
- Approves the individual IT investments in consultation with the business management

Consolidating process activities per role: Example 2

Project manager

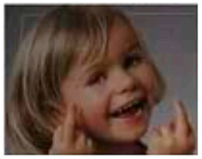
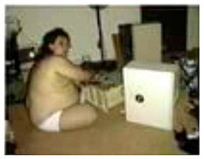
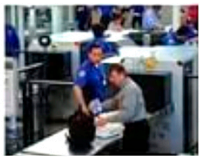
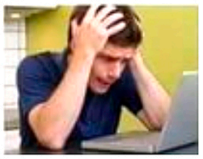
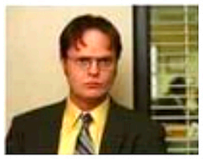
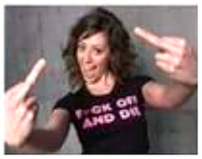
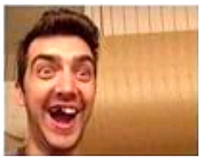
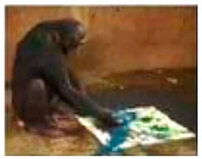
- Is responsible for ensuring the orderly planning and execution of projects
- Is responsible for drafting plausible documentation of project benefits and the solutions that are to be achieved or supported via the given project
- Is responsible for ensuring the realization of the project benefits and issuing accurate and timely reports to the steering committee
- Sends regular reports on the status and costs of projects to the IT project portfolio manager

Consolidating process activities per role: Example 3

Application manager

- Reviews the requirements to ensure their comprehensibility and completeness
- Plays the role of a consultant
- Drafts estimates of the associated costs and proposes detailed plans (activities + resource availability)
- Defines logical data models
- Drafts the specifications
- Programs or parameterizes and completes product tests
- Provides support when it comes to the execution of integration tests, acceptance tests and training programs
- Documents programs and configuration elements

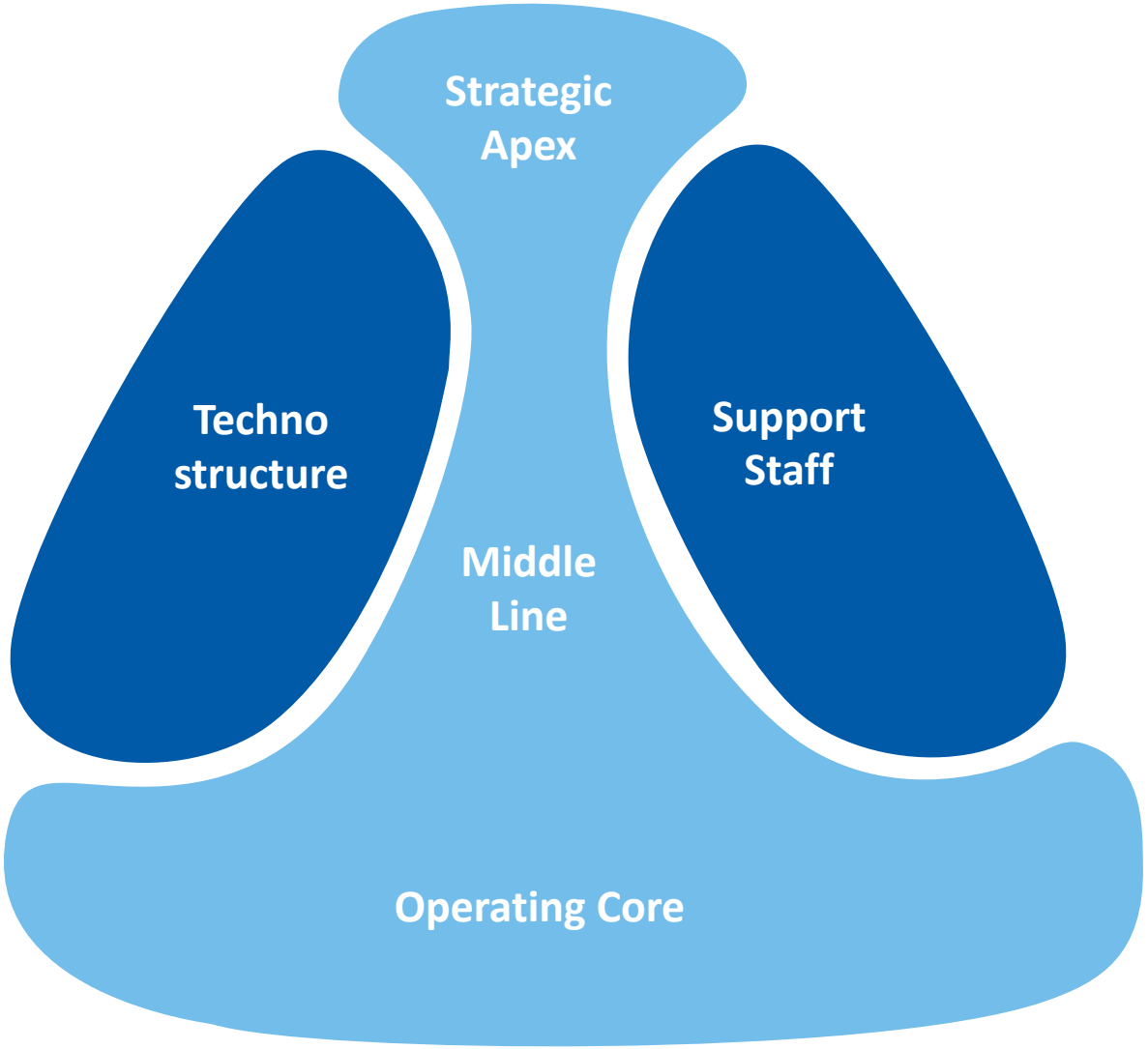
How people see each other

	DEVELOPERS	DESIGNERS	PROJECT MANAGERS	QA	SYSADMINS	SECURITY
SEEN BY DEVELOPERS						
SEEN BY DESIGNERS						
SEEN BY PROJECT MANAGERS						
SEEN BY QA						
SEEN BY SYSADMINS						
SEEN BY SECURITY						

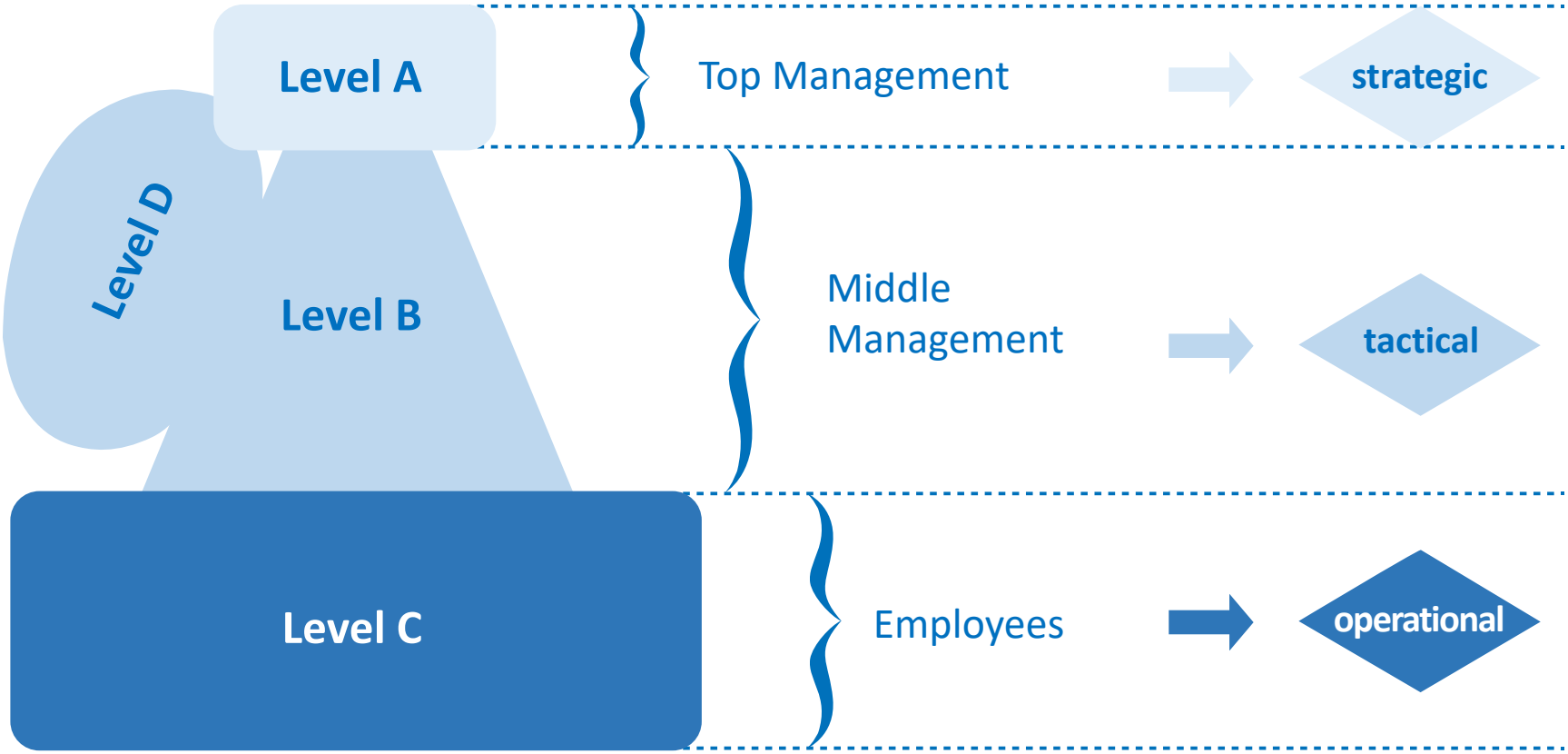
Source: http://infosecstrategy.blogspot.com/

Mintzberg´s Model

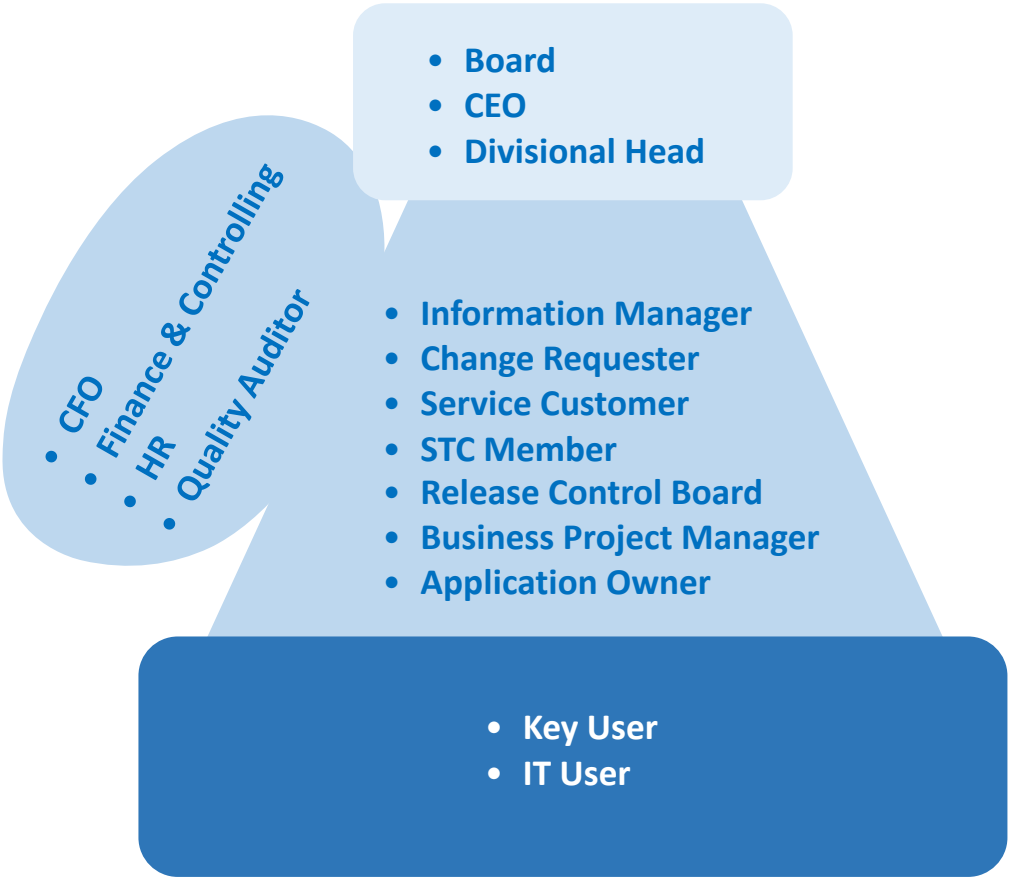
Henry
Mintzberg



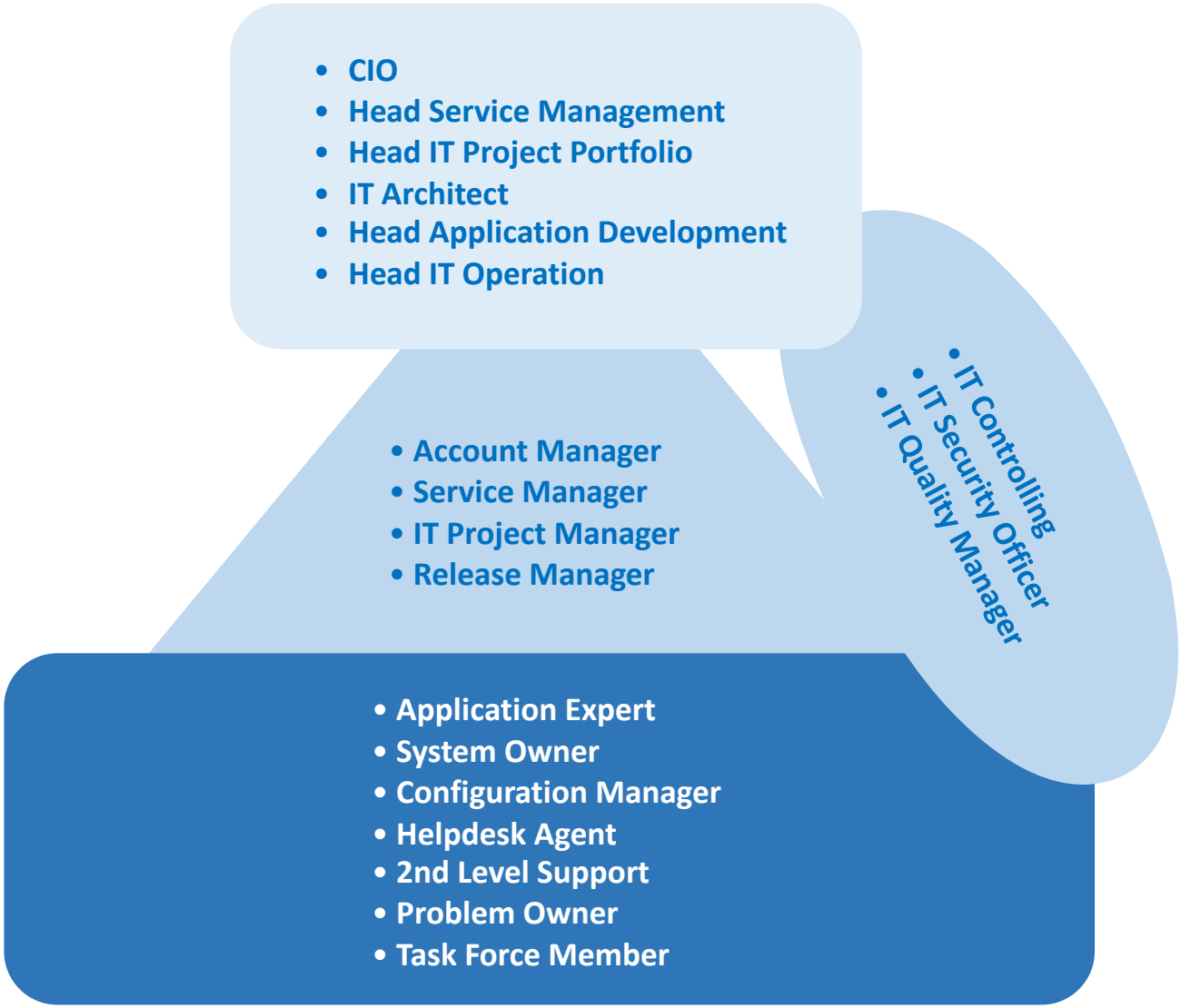
Consider different layers



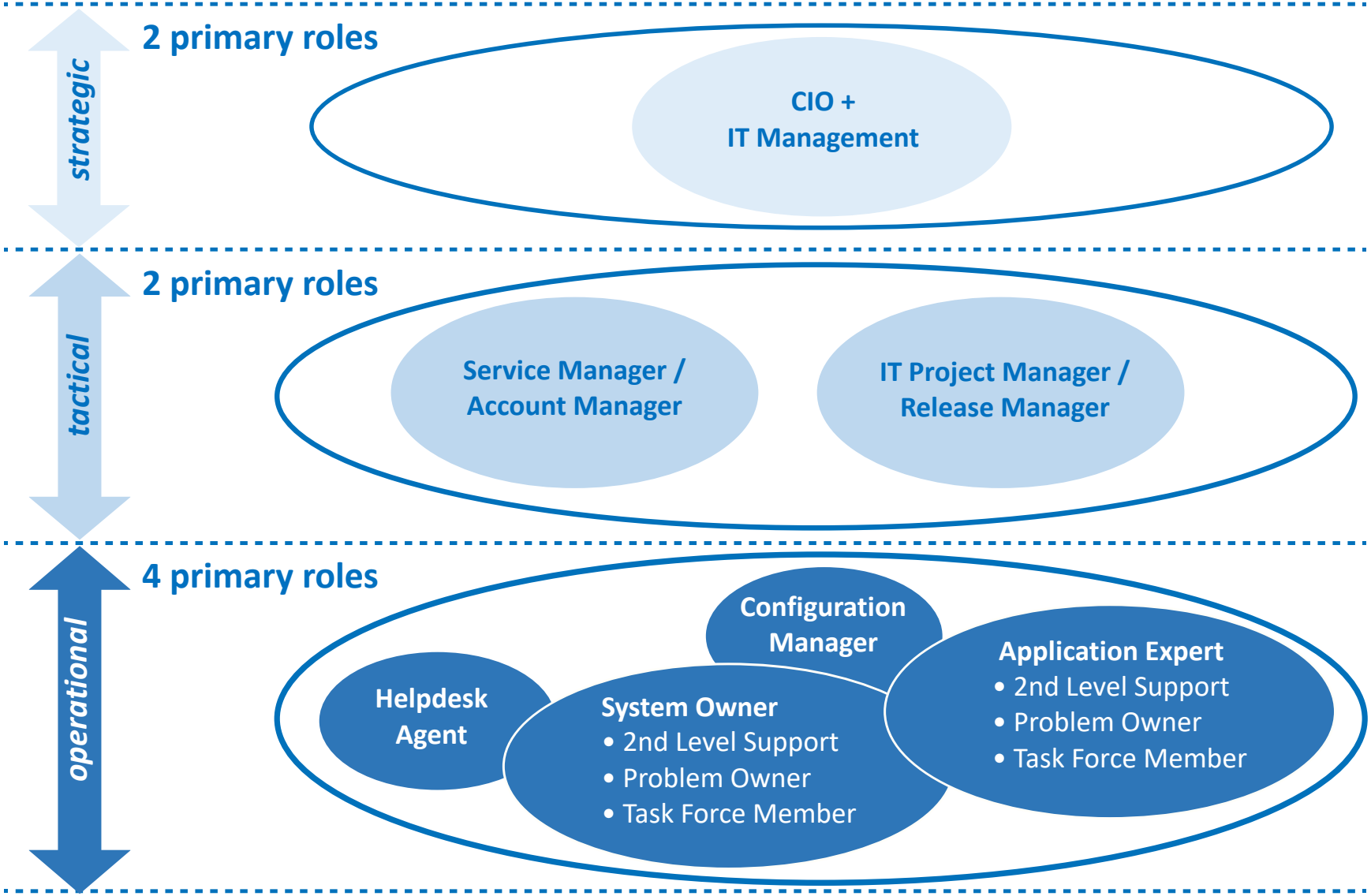
Positioning of business roles



Positioning of IT roles



Combining primary and secondary roles



Process roles for senior management (Business)

Planning and Decision making

Role	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12	P13	P14	P15	P16	P17
Board	X	X		X		X		X									
CEO		X															
Business unit manager								X									
CFO	X																
Finance & controlling				X		X					X						
HR		X															
Quality auditor					X												

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Process roles for senior management (IT)

Planning and Decision making

Role	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12	P13	P14	P15	P16	P17
CIO	X	X	X	X	X	X	X		X						X		
Service manager	X			X	X		X		X					X			
Project portfolio manager	X			X	X	X	X				X						
IT architect	X		X														
Application developer													X				
IT operations manager							X	X	X	X				X	X		X
IT controlling				X			X								X		
Security officer			X					X									
Quality officer					X				X								

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Process roles for middle management

Planning and implementing

Role	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12	P13	P14	P15	P16	P17
Information Manager						X											
Client						X				X							
Agent									X								
STC											X				X		
RCB												X					
Project manager						X					X						
Application owner										X							
Account manager						X			X	X		X					
Service manager					X				X					X			
IT project manager											X		X	X	X		
Release Management												X	X	X			

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Process roles for employees

Operating

Role	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12	P13	P14	P15	P16	P17
Key-User												X	X				
IT user										X						X	
Application expert										X		X	X				
System owner							X			X	X	X	X	X	X		X
Configuration manager														X			
Help desk agent										X				X		X	
2nd-level support																X	
Problem owner												X					X
Task force member																	X

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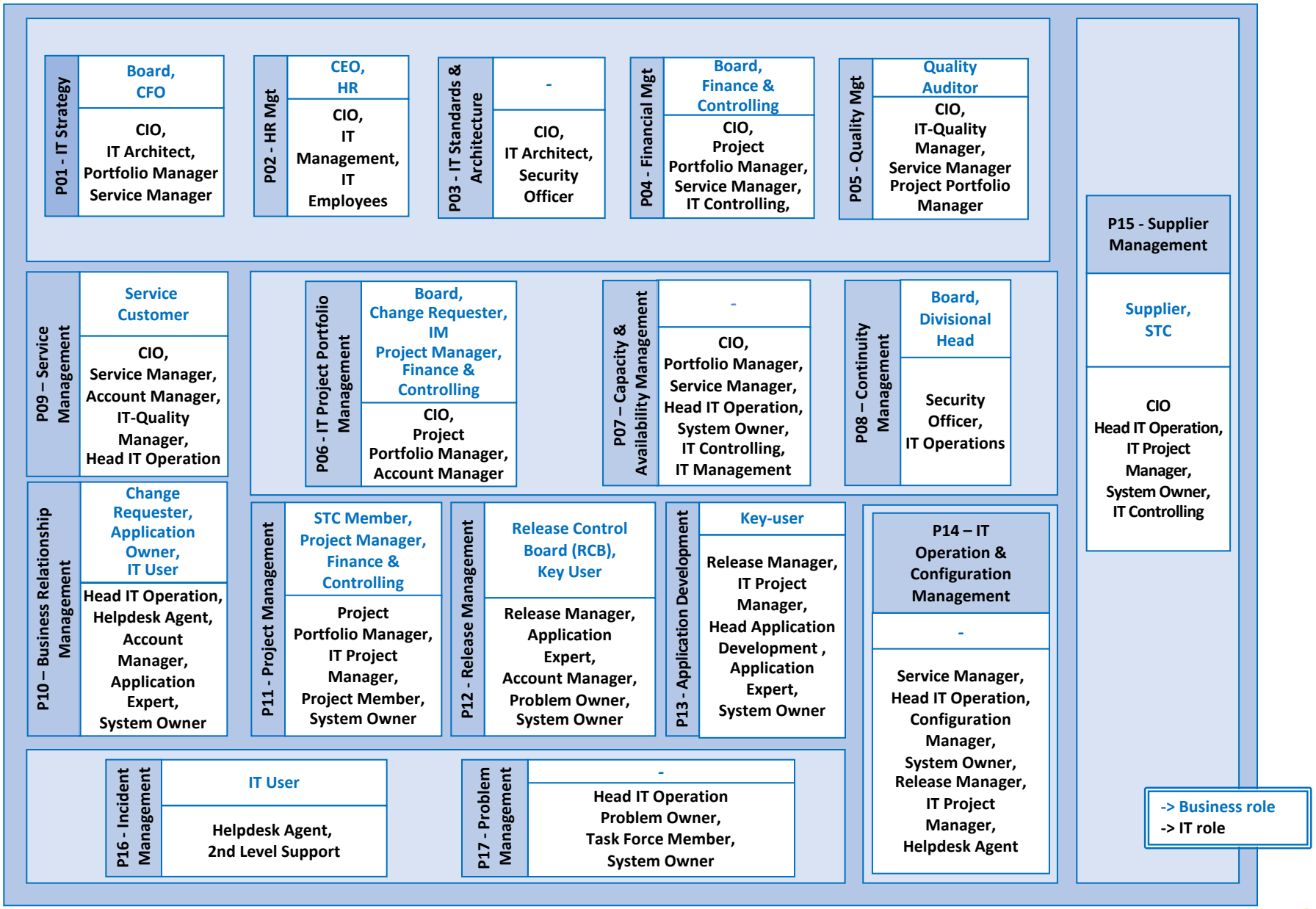
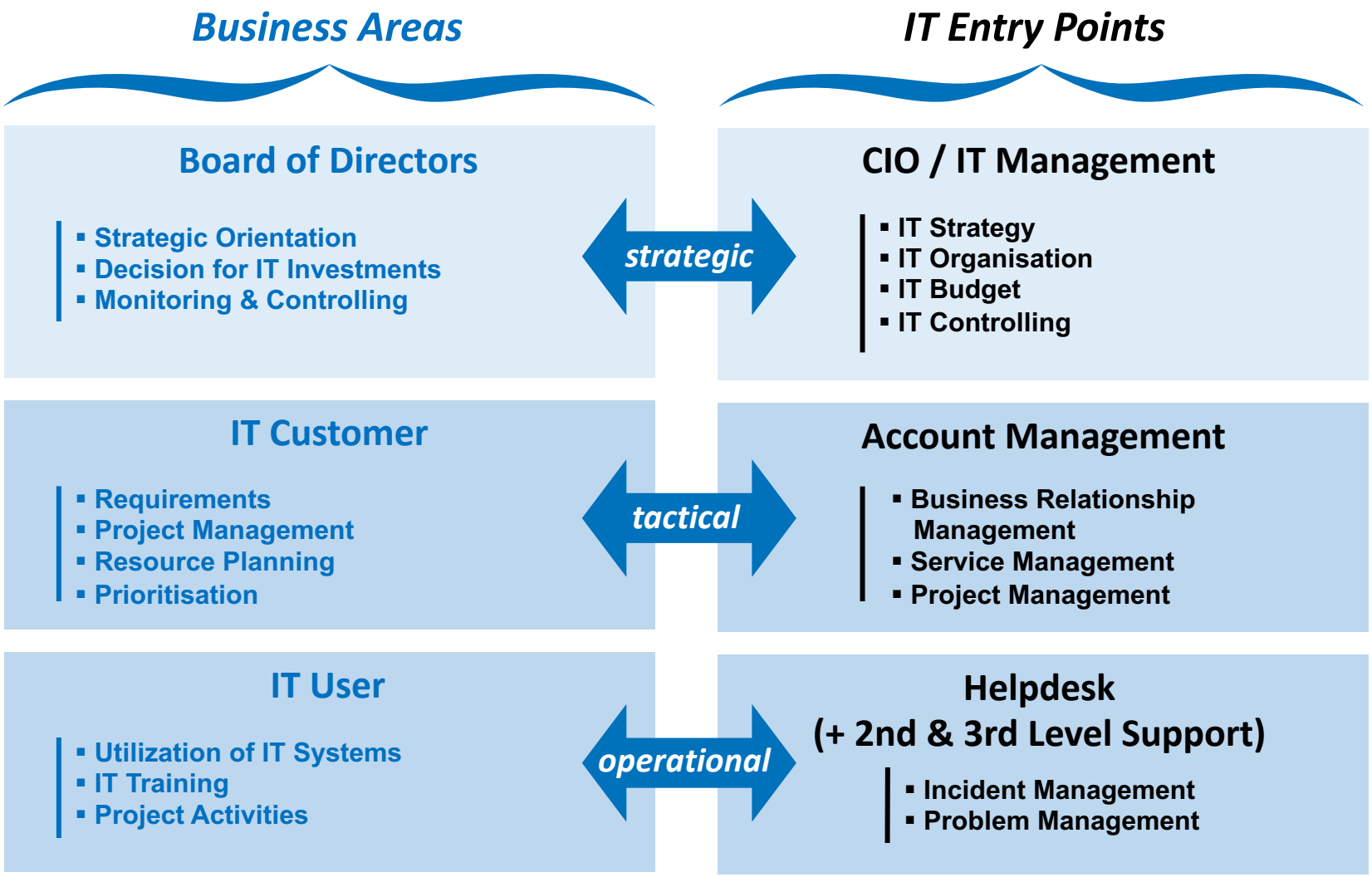
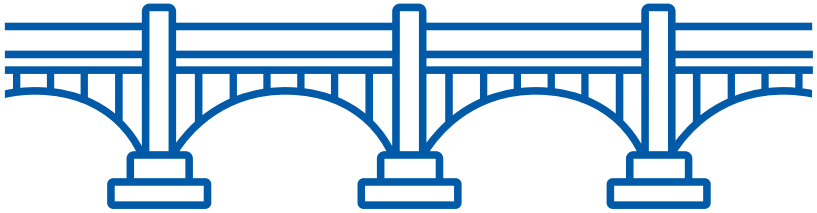
No IT processes without business involvement



Interfaces are key



Building the bridges



Board

- HR
- Finance & Controlling
- Corporate Auditing

strategic

IT Management

IT Customers

tactical

- IT Controlling
- IT Security
- IT Quality

IT middle Management

IT Users

operational

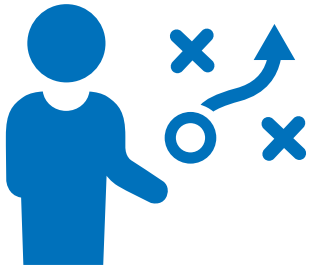
IT Employees

Fitness Check

- Are IT processes identified and documented?
- Are all required process roles documented?
- Is at least one person assigned for each role?
- Do employees know which roles they have to fulfil (job description)?
- How many roles per employee?
- Do we have the appropriate person for the role (matching profile)?
- Are deputies in place?
- Are counter partners on the business side known?
- Are IT suppliers being managed?
- Are outsourcing partners clearly identified?

IT Governance depends on organizational structures

Times are changing



Challenging customer needs

Enabling technologies

Binding regulations

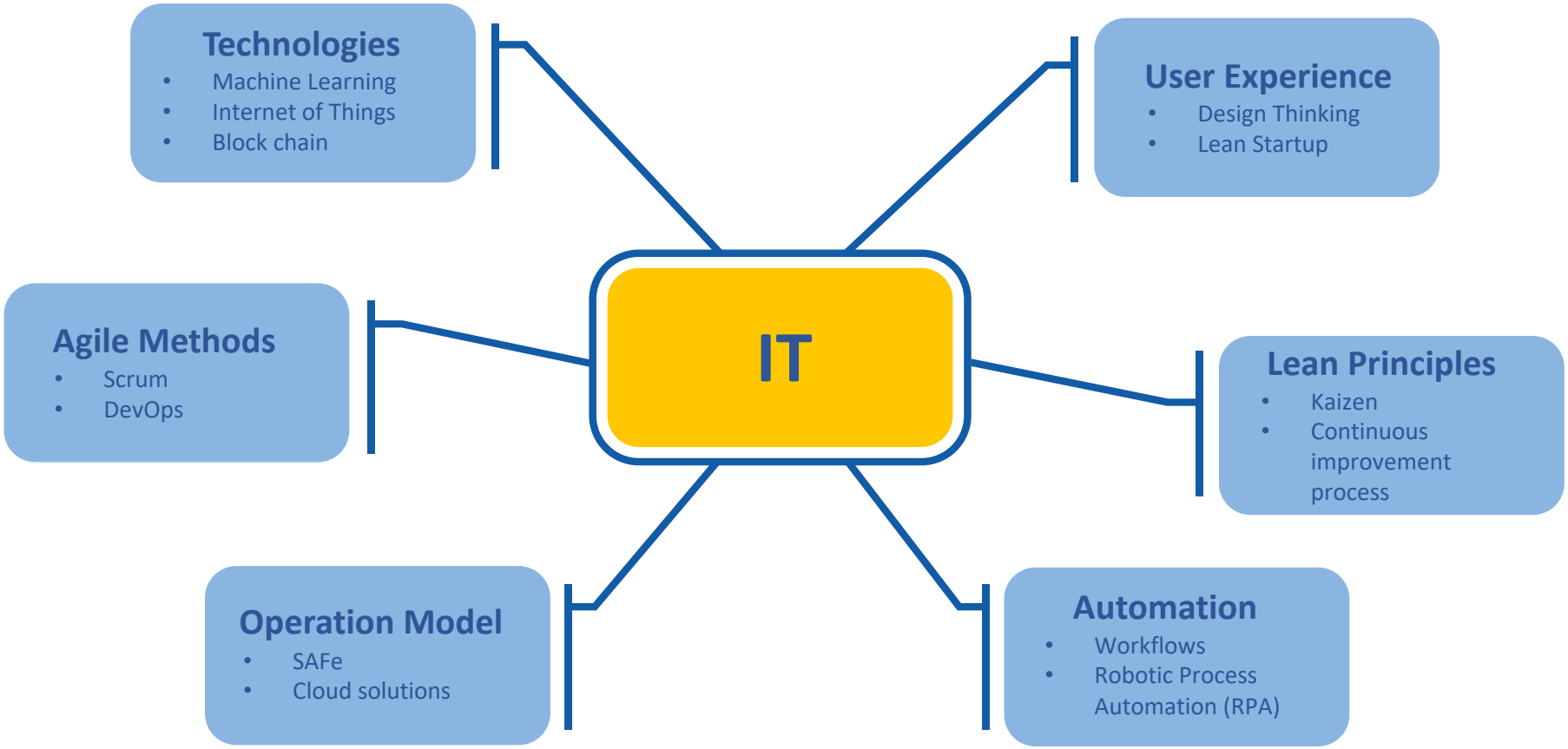
Emerging threats

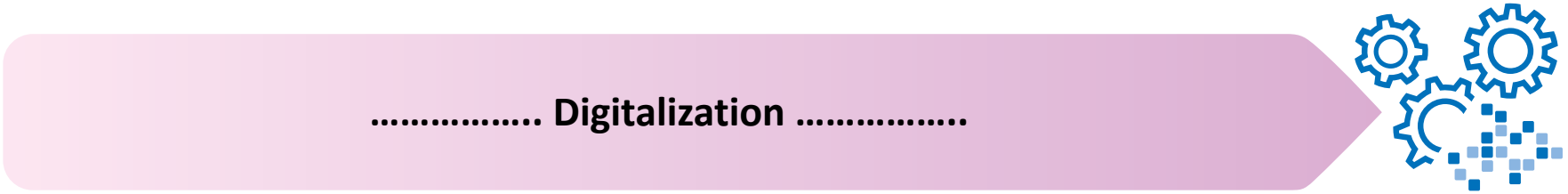
- Agile
- Innovative
- Secure
- Compliant

Current Corporate Challenges

- Short Time-to-Market
- Product and Service Quality
- Low Production Cost
- Improved Productivity
- Stable Operations

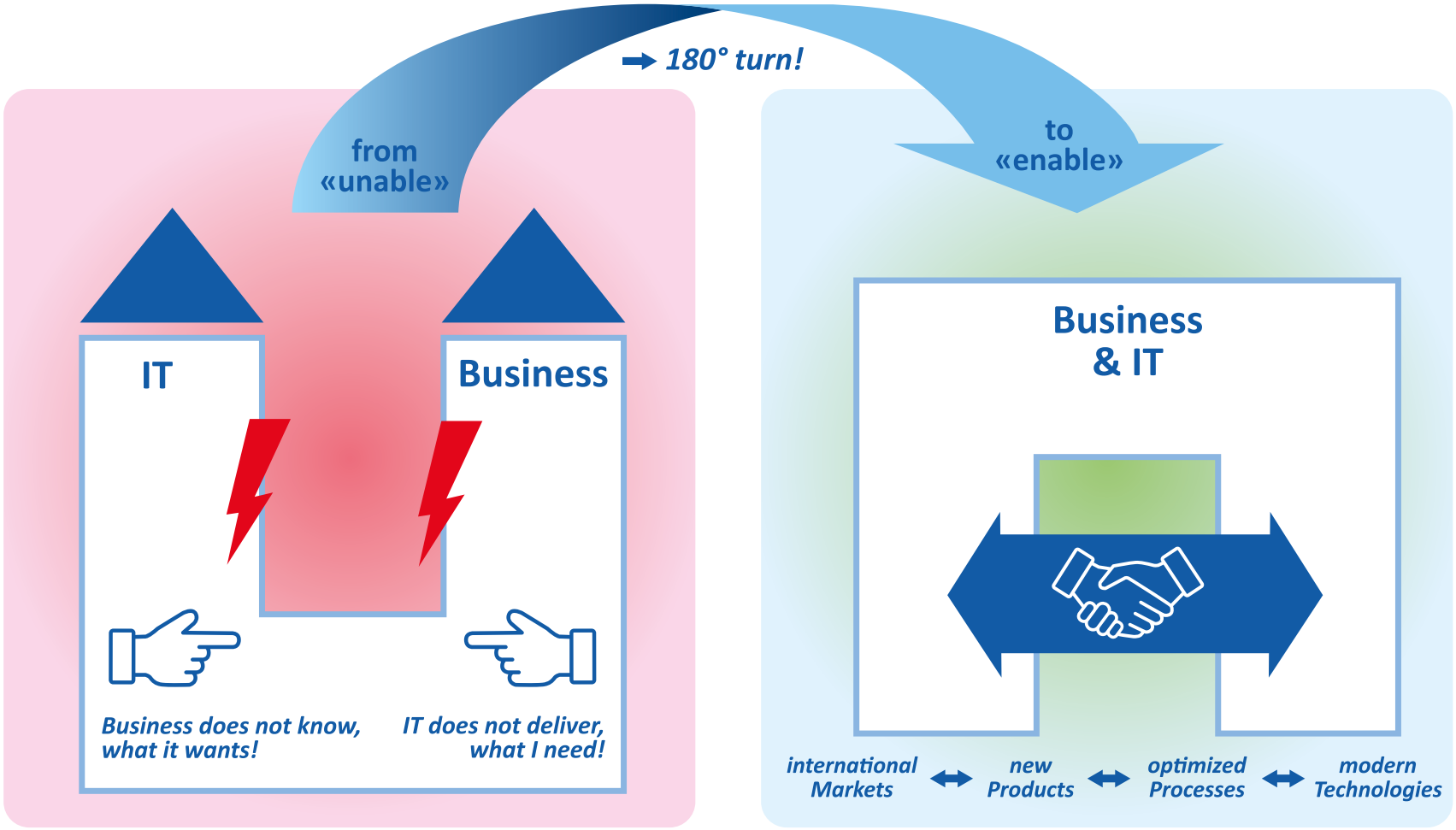
Many major Evolutions in IT in addition



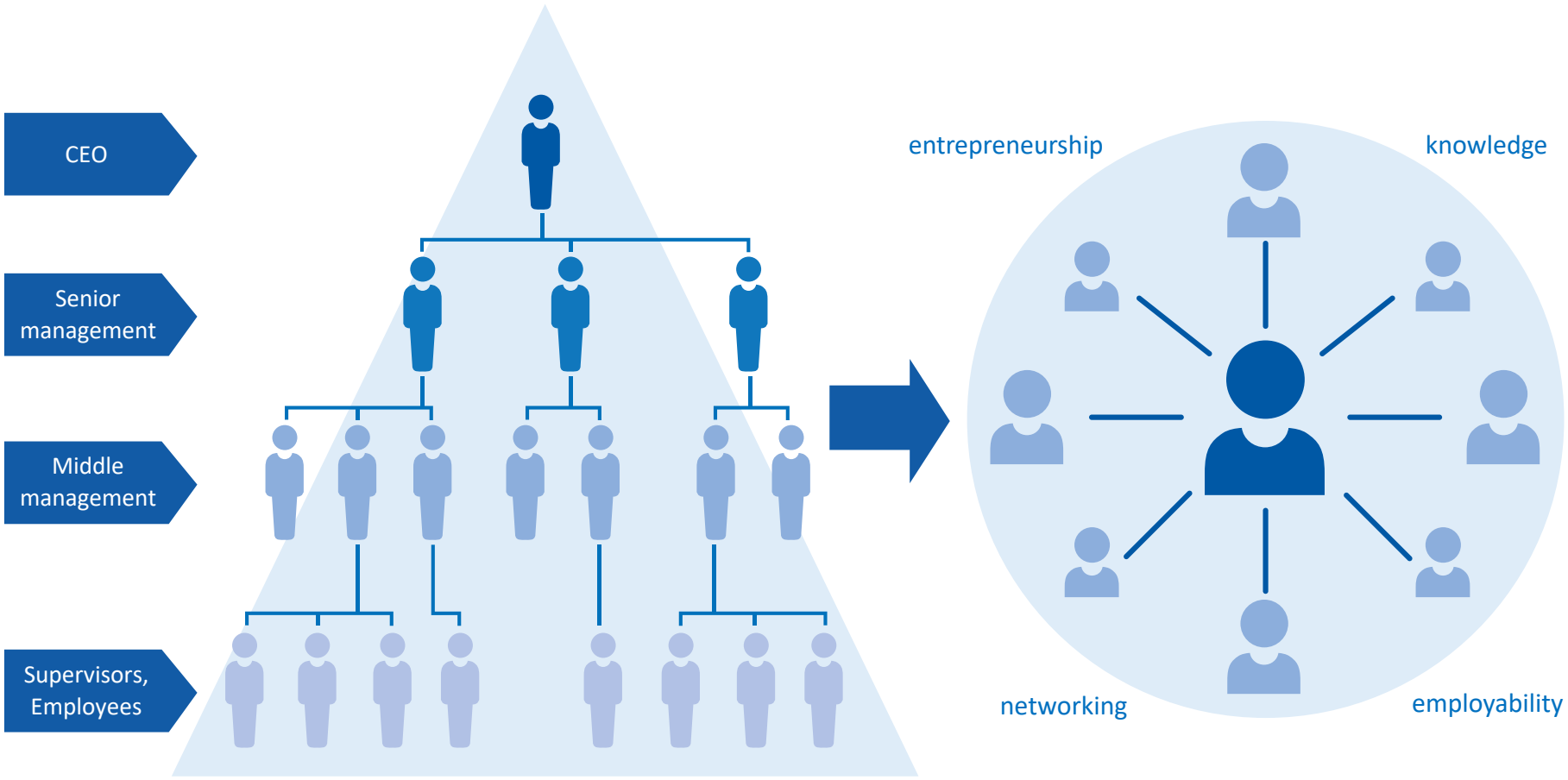


A change is noticeable in many organizations

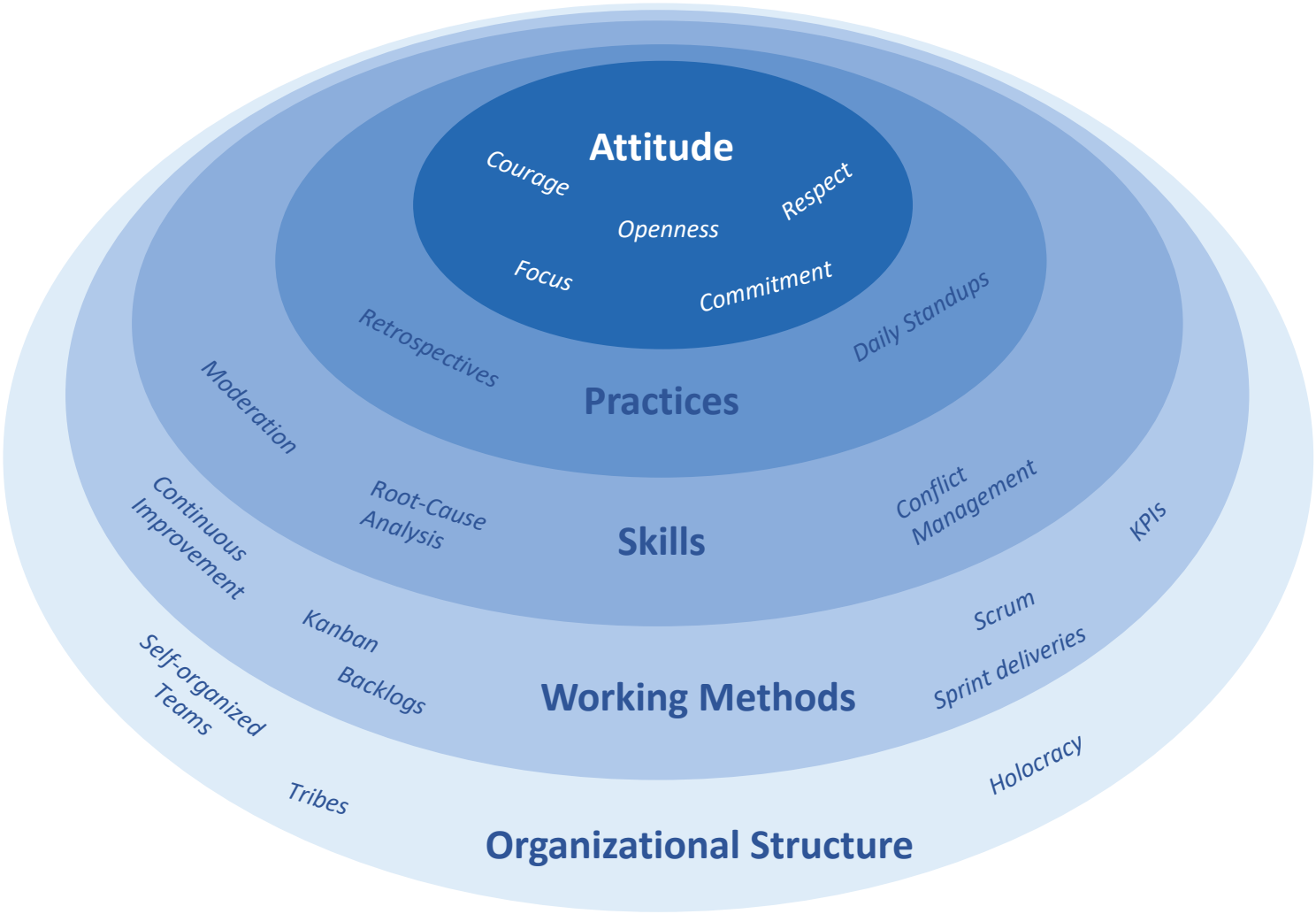
From bell-tower warfare to bridge building



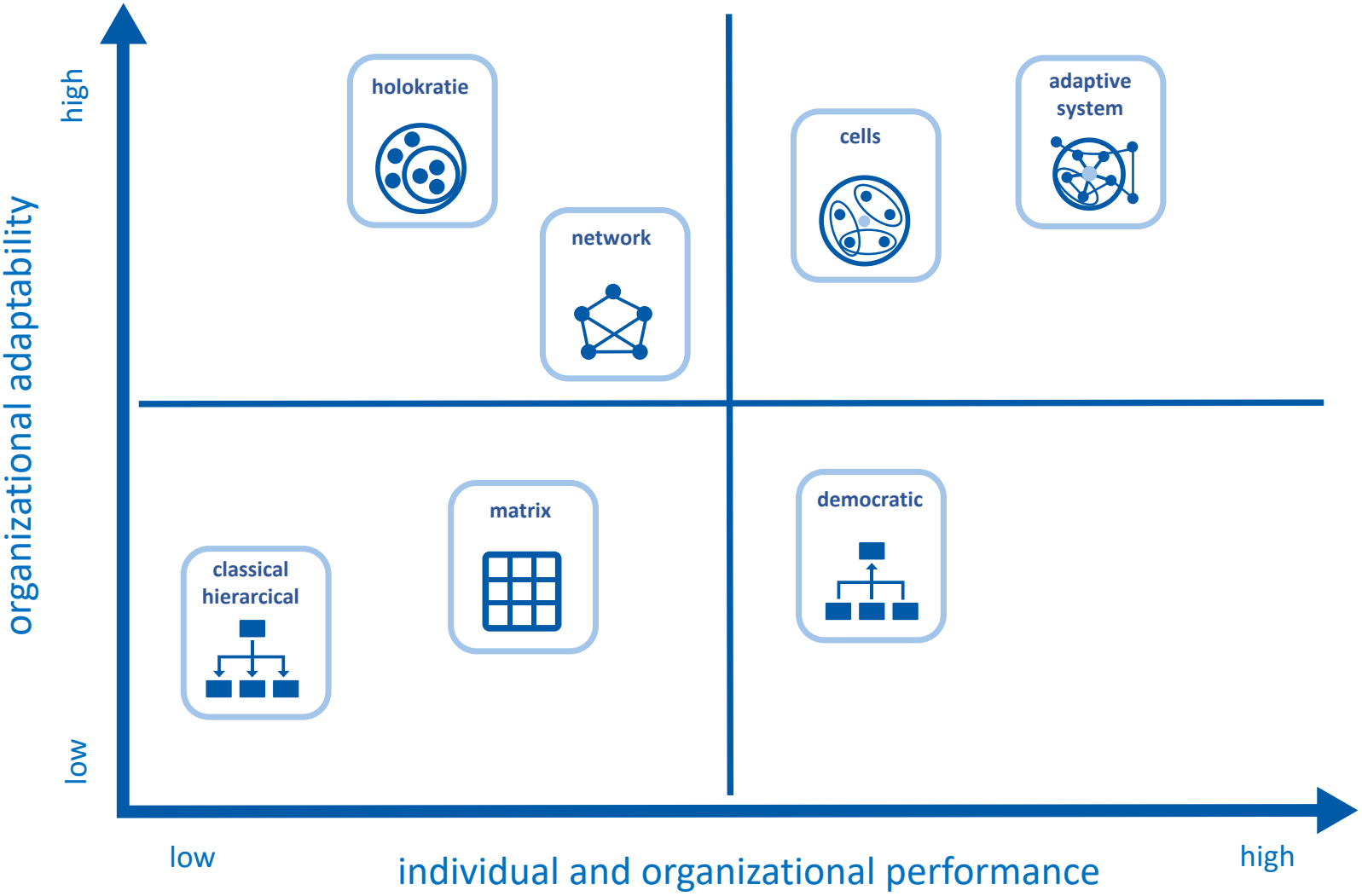
The whole company gets transformed



The impact on organizations is multifaceted



Possible Organizational Designs



Source: https://blog.reflect-beratung.de/agile-organisationsdesigns

Agile can be the answer

Strong **customer orientation** focusing on **business value** instead of detailed specifications and interim results

Interdisciplinary teams focused on shared goals instead of working in functional silos and achieving only local optimization

Continuous delivery of products and services in **increments** rather than providing the scope at the end of long projects

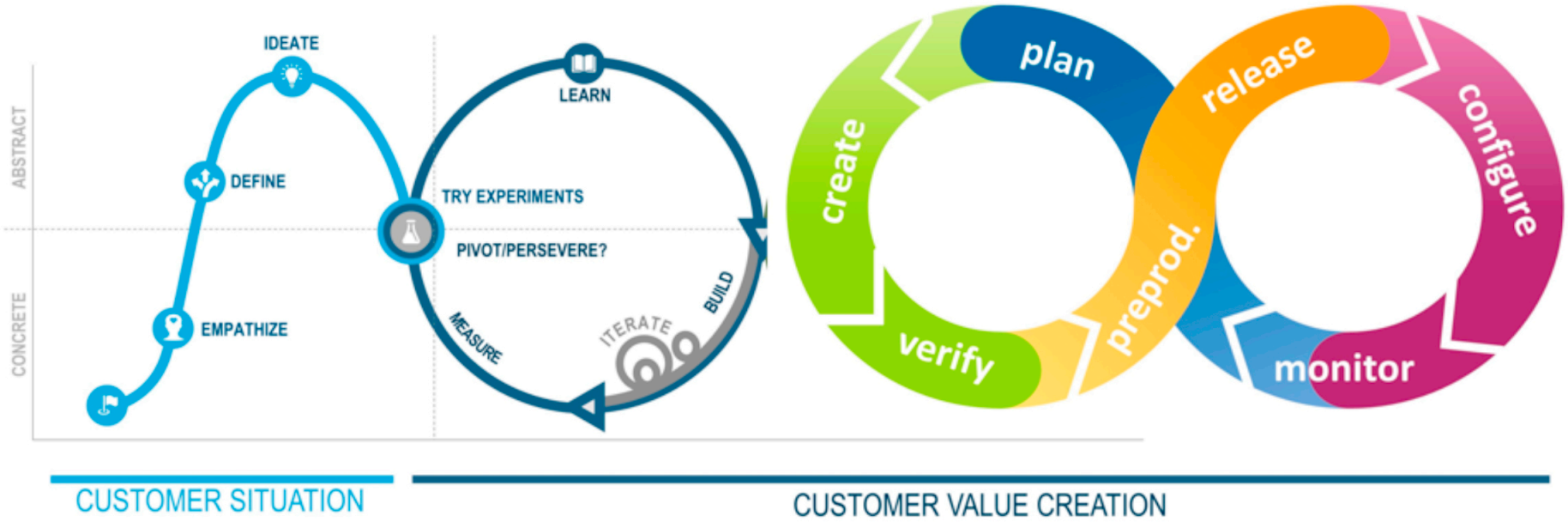
DevOps in IT as part of the Agile Methodology

The cross-functional approach that integrates Development and IT Operations into a product-oriented culture brings advantages

	Traditional	DevOps
Software Programming	Own programming	Version control Software Library
Software Delivery	Once every few months	Continuous Delivery into Multiple Environments with high frequency (e.g. daily)
Software Quality	Ressource Intensive manual testing	Risk based automated testing
Software Deployment	Manual and complex	Automated and continuous Deployment
IT Infrastructure	Manual setup	Automated and Fast provisioning
System Monitoring	Reactive	Continuous Monitoring And Security, Log Management

DevOps Best Practices: Start small and then Scale up

Accelerate Innovation, Learning and Customer Value

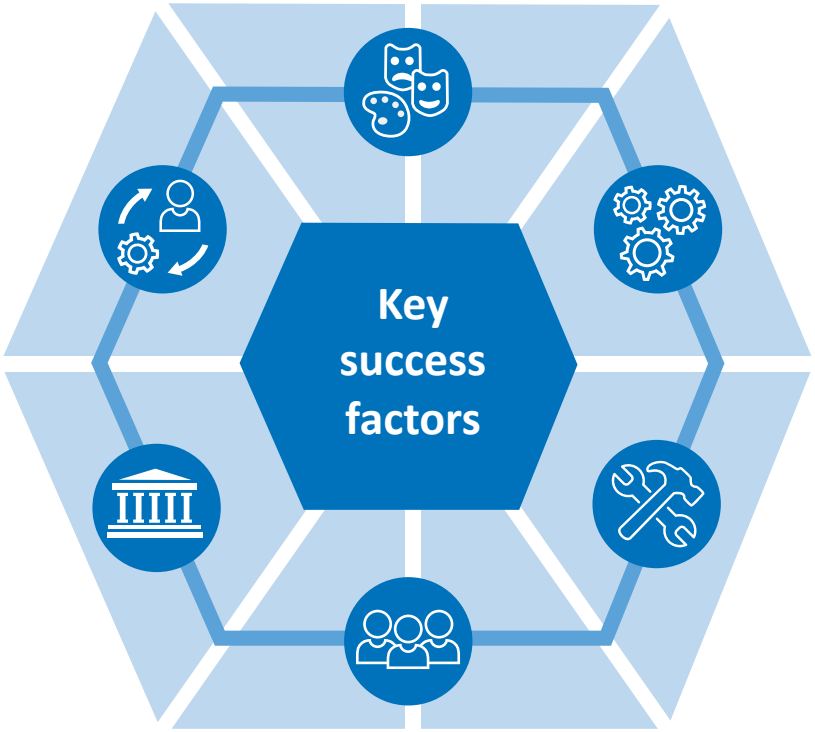


Source: [InnovationDOloopsv2.jpg (4000×2250) (gartner.com)]

Critical Success Factors for DevOps Implementation

Agile Culture
Create favorable conditions to **promote DevOps** collaboration based on **agile and lean** principles

Change Management
Have management drive **cultural change** and **transformational leadership**



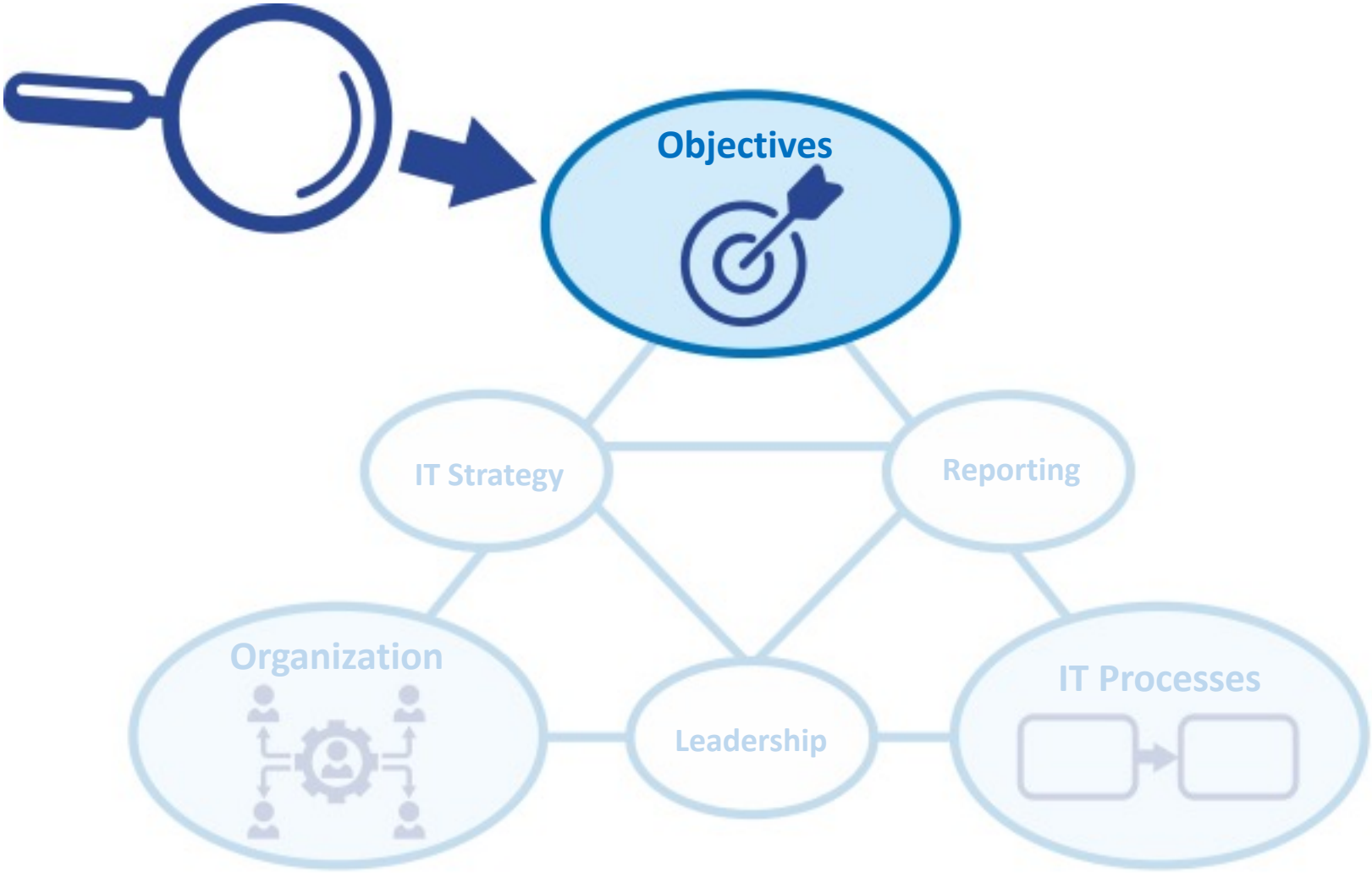
Delivery Process
Drive **standardization and automation** of IT delivery processes to **shorten lead times** from development to production and to implement **best practices** for software engineering

IT Architecture
Provide the IT architecture required to **separate the change cycles** from the rest of the architectural components

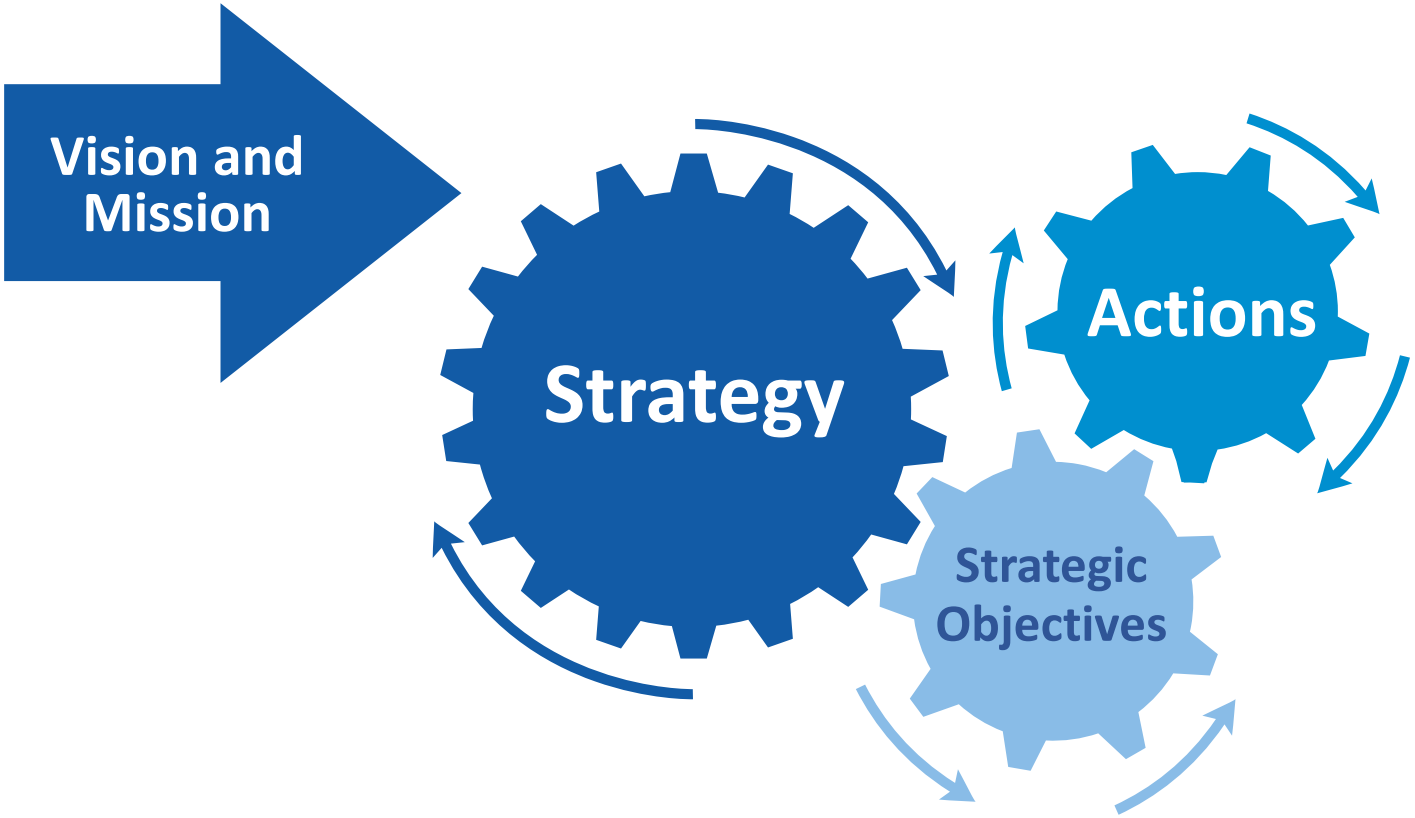
Tools
Provide an **integrated toolset** to IT delivery teams to support software delivery based on **scalable environments** that are available **on demand**

Organization
Set up DevOps teams **organized by products or services** and **put them in charge** of build and run activities of their application perimeters

IT Governance to achieve strategic objectives

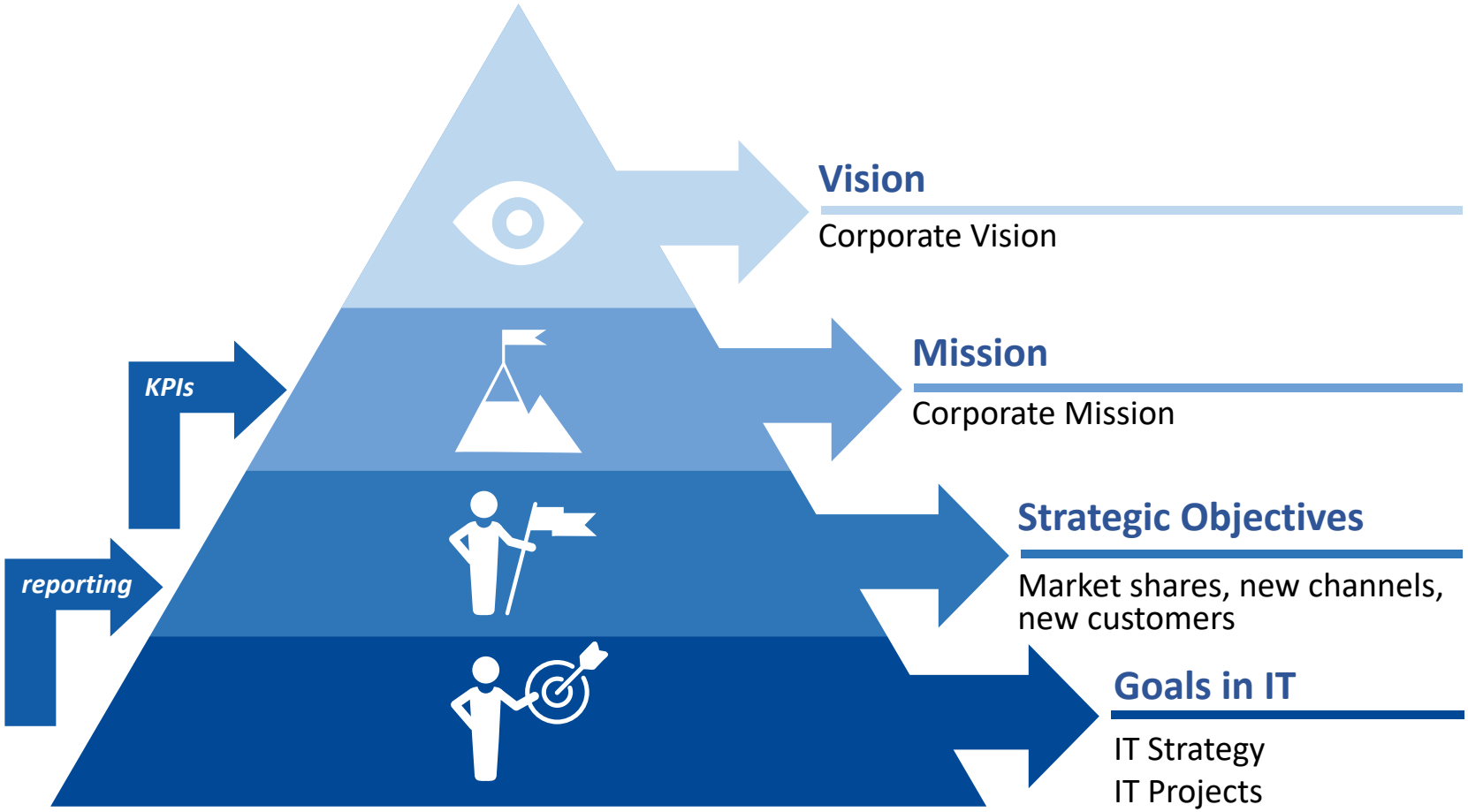


Defining strategic objectives



Enable Mission, Vision & Strategy by
Aligning Actions with Strategic Objectives

Goals in IT



Vision

Corporate Vision

Mission

Corporate Mission

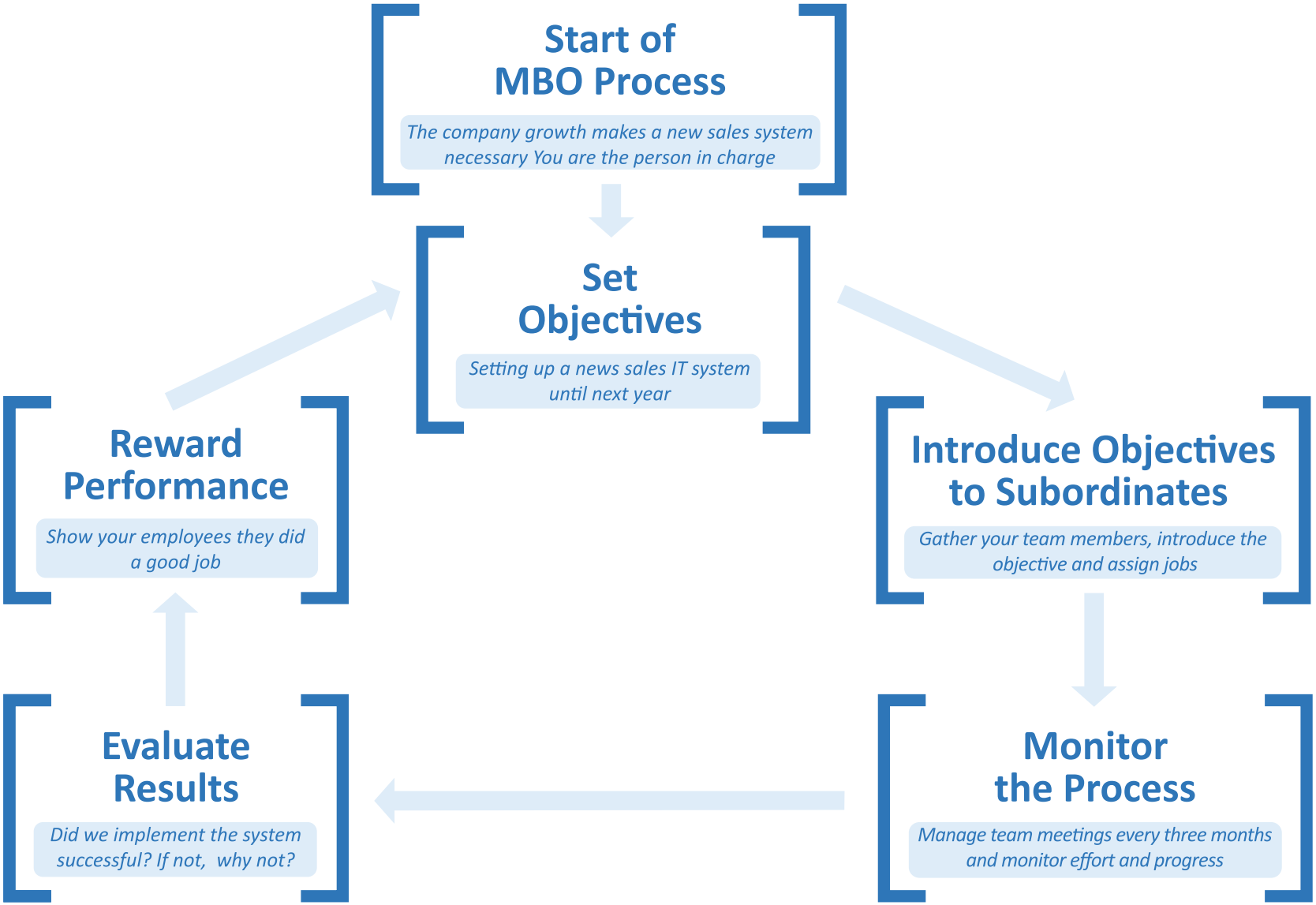
Strategic Objectives

Market shares, new channels, new customers

Goals in IT

IT Strategy
IT Projects
IT Services
Personal Competencies

Employee Performance Management Process

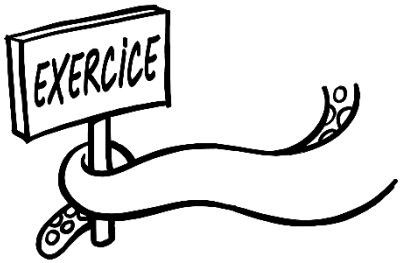


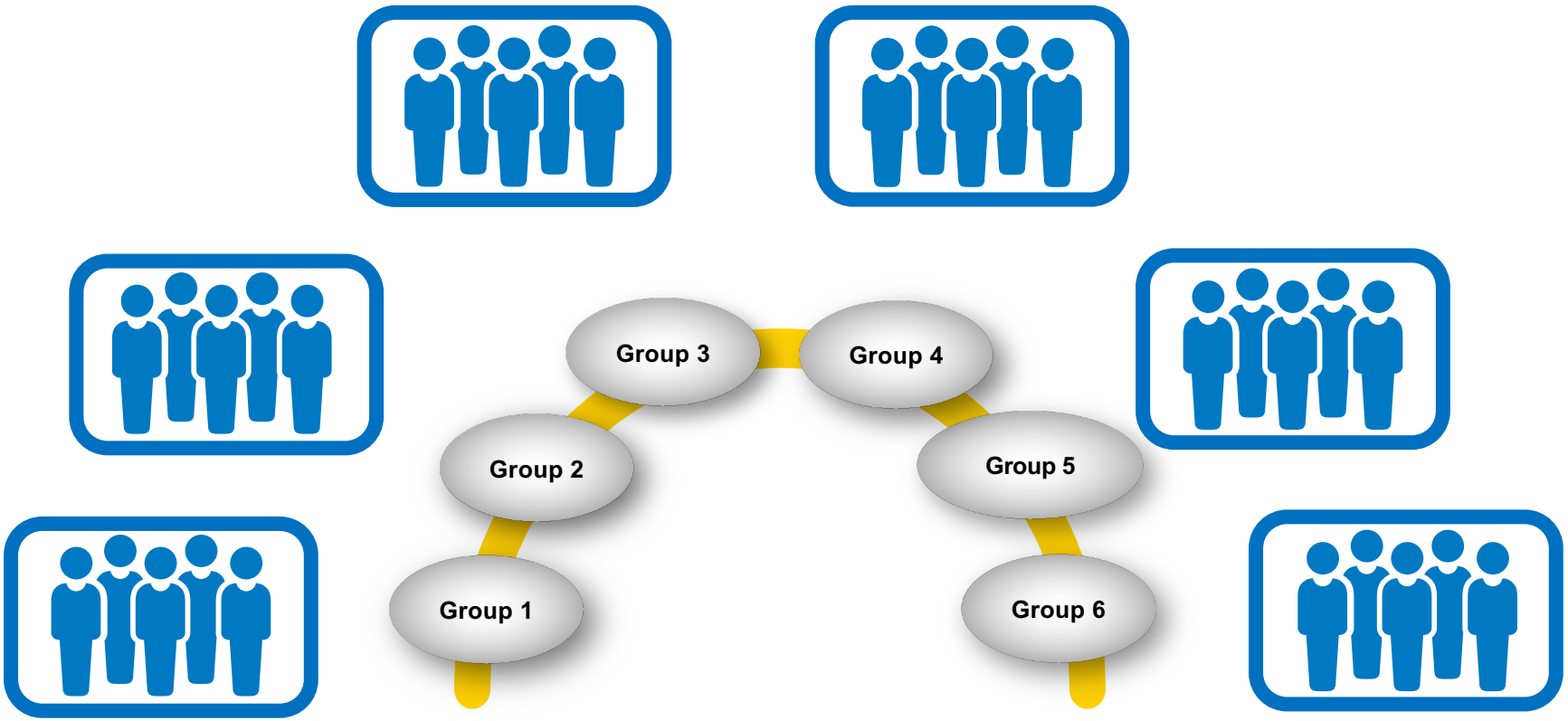
Source: Peter Drucker, The Practice of Management

Exercise: Criteria to assess individual performance

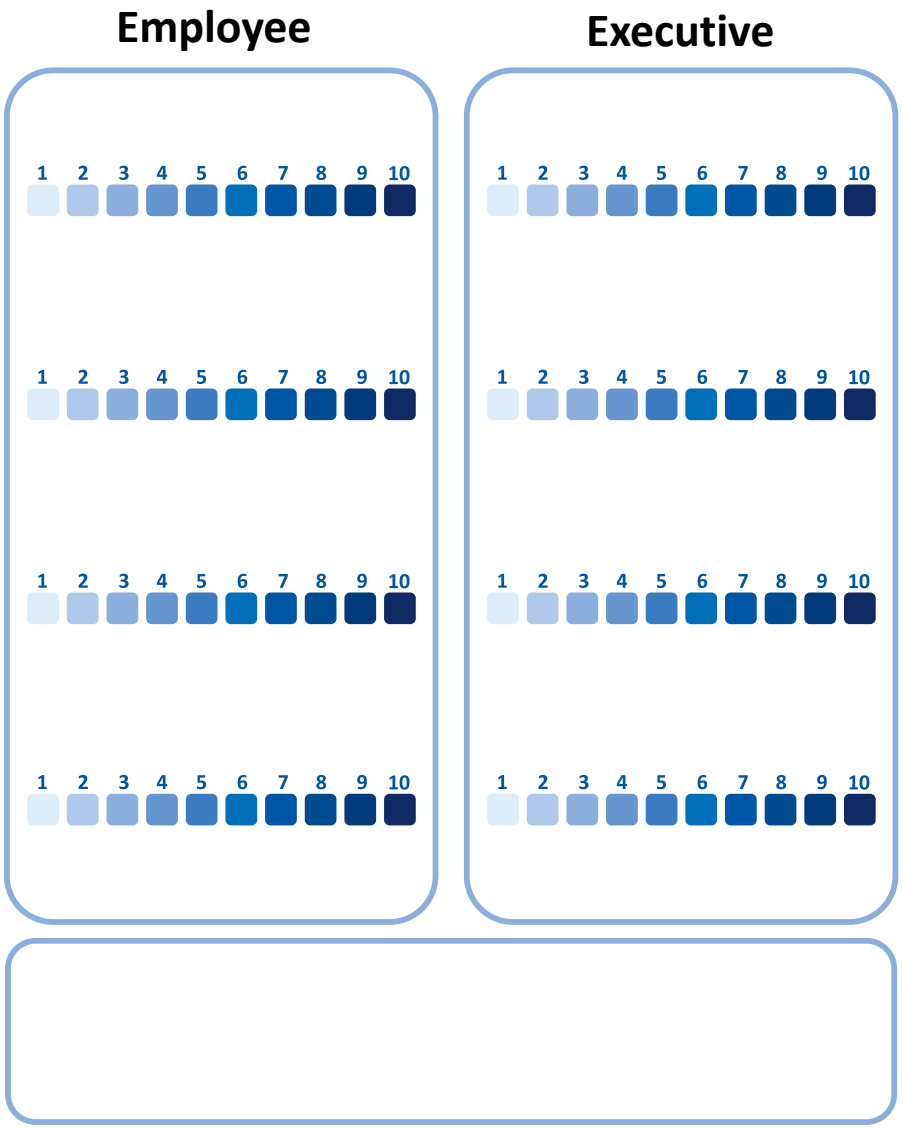
In terms of

- Achievements (IT Strategy, IT Services, IT Projects)
- Personal Competencies





Example of “Management by Objective” (MbO)



Assessment of the performance
quantitative targets actually achieved

Technical Expertise
expertise which makes the employee successful

Methodological skills
your working way as target-oriented and efficient

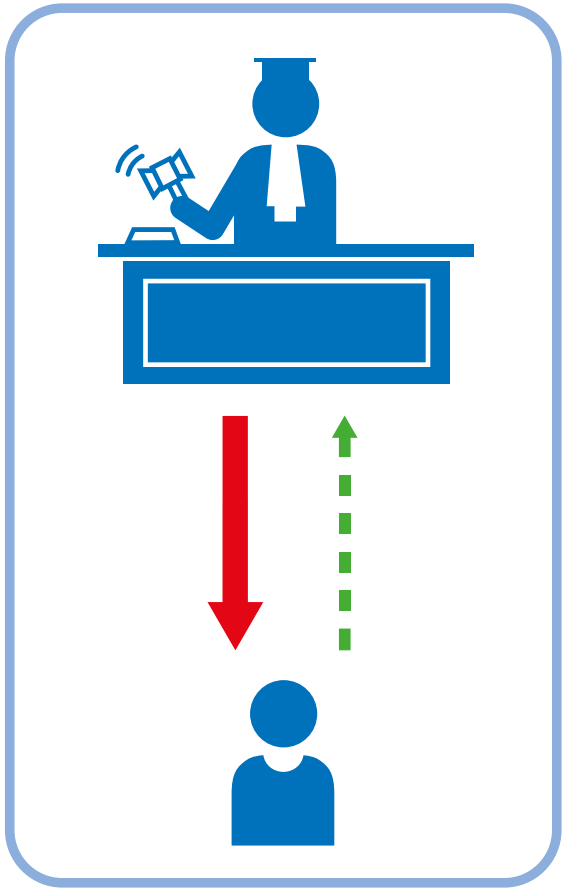
Personal competencies
self-motivation, persuasiveness, empathy, service orientation appreciative communication

Personal development measures
training, education program, job enrichment, new responsibilities

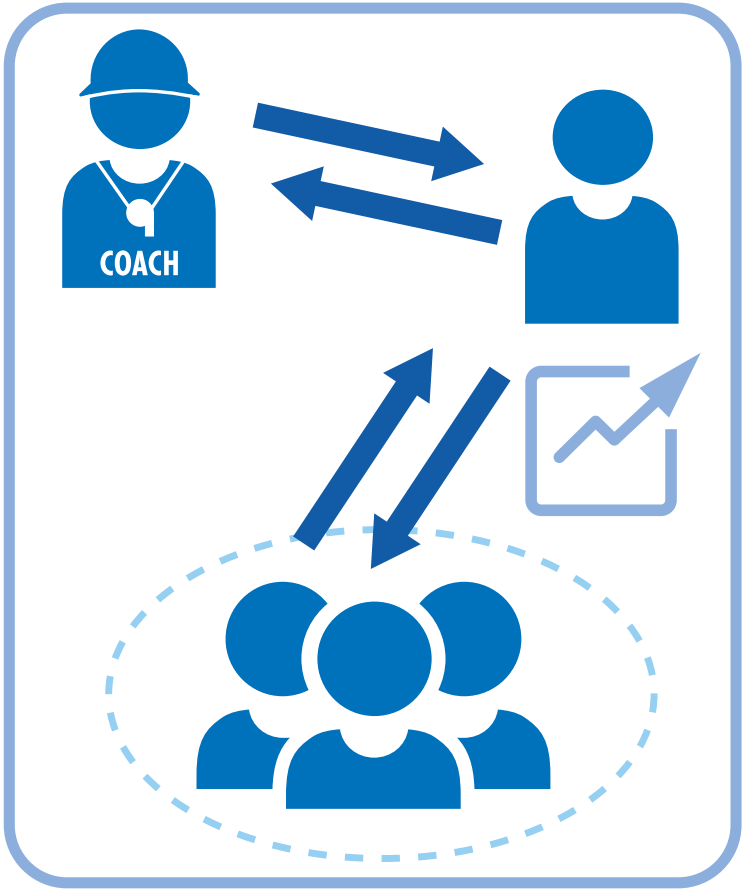
1: very low 10: very high

From Management to Leadership Assessment

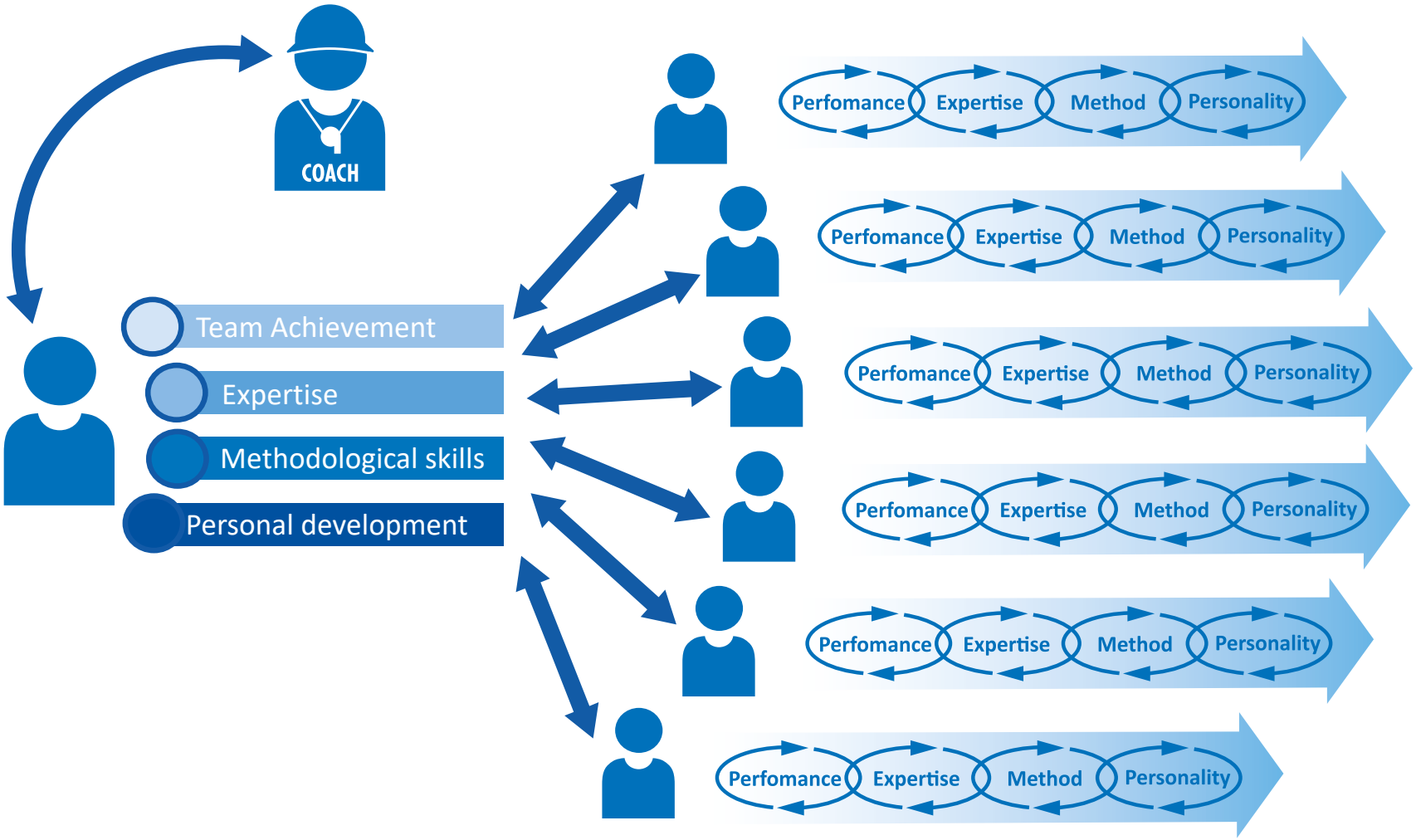
Management by Objectives (MbO)



Leadership by Objectives (LbO)



The manager as a coach

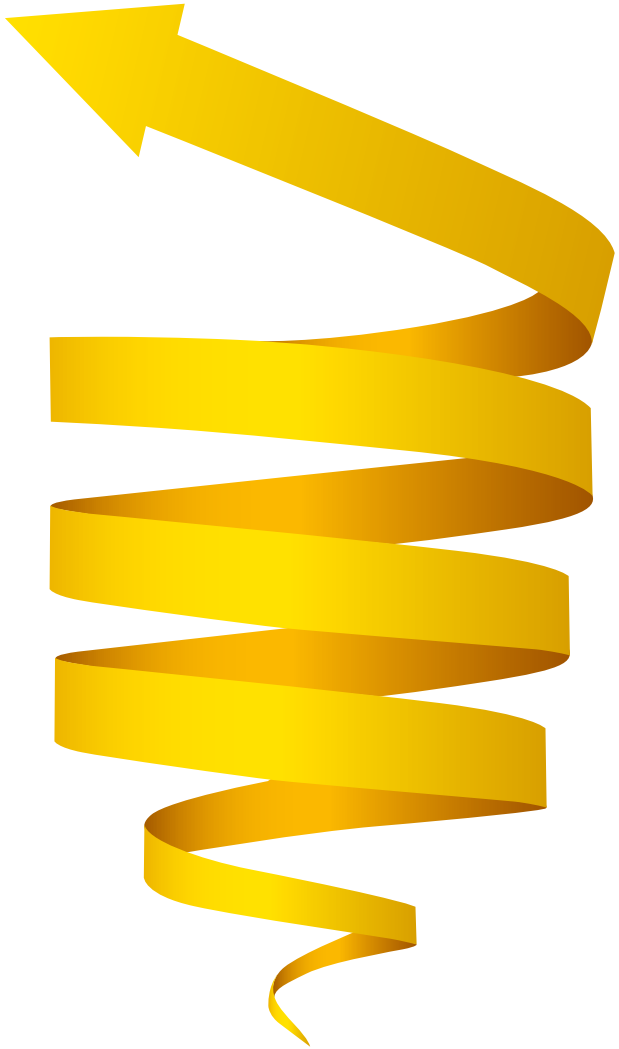


Creating virtuous circles

Complex strategic mission

Trustful tasks

Positive feedback



Key position

Management expertise

Self-confidence

Corporate Culture (from the Latin “to cultivate”)

Definition of Corporate Culture

Corporate Culture means…

the beliefs and ideas that a company has and the way in which they affect how it does business and how its employees behave

Source: https://dictionary.cambridge.org/de/worterbuch/englisch/corporate-culture

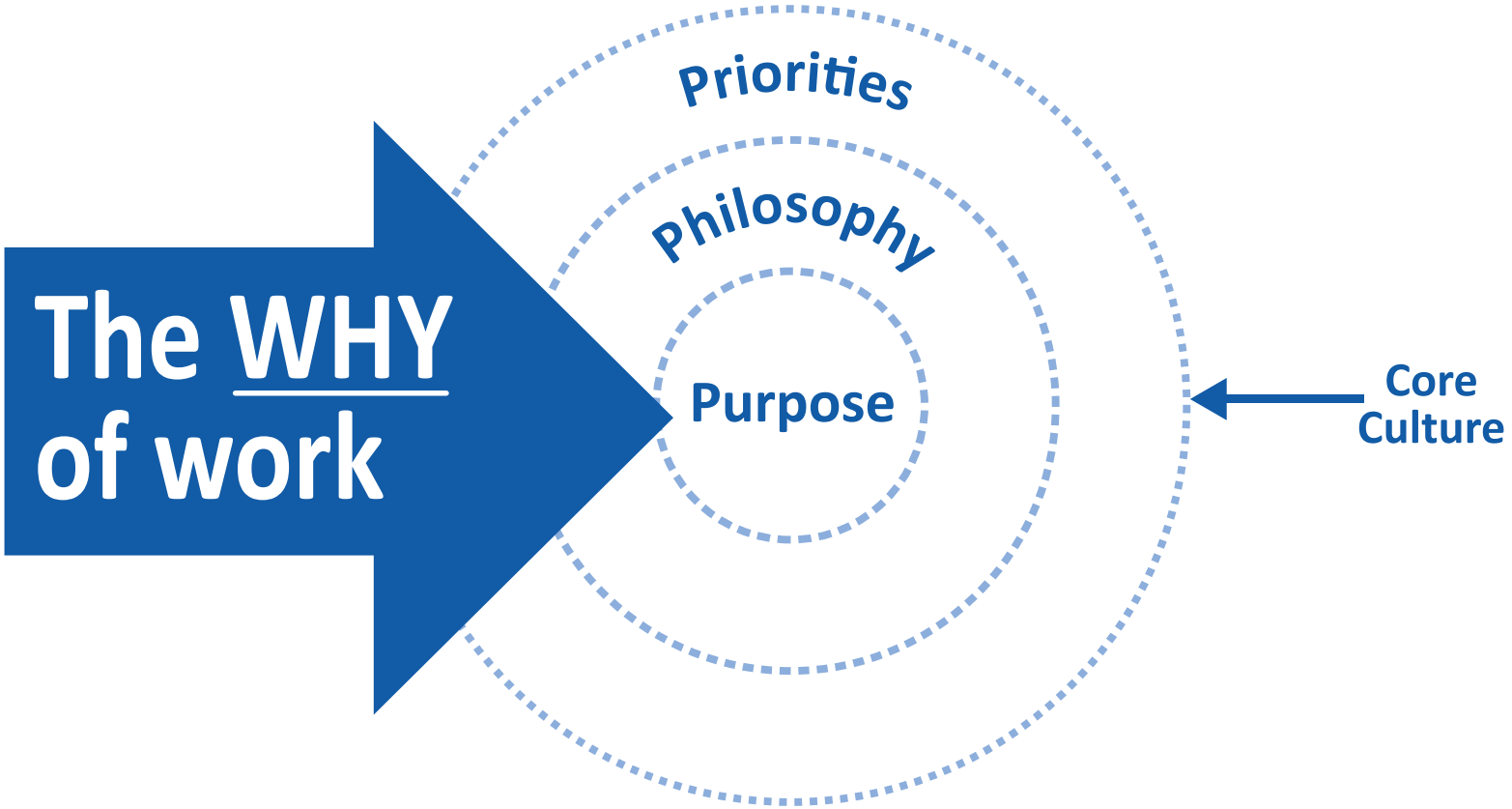
Corporate culture refers to the shared values, attitudes, standards, and beliefs that characterize members of an organization and define its nature. Corporate culture is rooted in an organization's goals, strategies, structure, and approaches to labor, customers, investors, and the greater community

Source: https://www.inc.com/encyclopedia/corporate-culture.html

The key to a successful organization is to have a culture based on a strongly held and widely shared set of beliefs that are supported by strategy and structure. When an organization has a strong culture, three things happen: Employees know how top management wants them to respond to any situation, employees believe that the expected response is the proper one, and employees know that they will be rewarded for demonstrating the organization's values.

Source: https://www.shrm.org/resourcesandtools/tools-and-samples/toolkits/pages/understandinganddevelopingorganizationalculture.aspx

Core Culture = Purpose + Philosophy + Priorities



Source: https://sheilamargolis.com/core-culture-and-five-ps/the-five-ps-and-organizational-alignment/purpose/

Corporate Values: Example 1

Cap Gemini Consulting: Seven Values lie at the heart of everything we do

Our values are:

- **Boldness**: We promote a spirit of entrepreneurship in all of our consultants. We balance a willingness to take on new challenges with an emphasis on considering risks in a prudent and clear-sighted way.
- **Trust**: Trust implies a willingness to empower employees and teams and to allow managers to experience their own initiatives and decisions. To us, it also means openness and transparency in the flow of information. Trust is at the heart of our Collaborative Business Experience®.
- **Honesty**: The integrity of our business is based on a solid foundation of honest practices and transparency. We refuse to engage in unfair business practices aimed at obtaining a particular contract or advantage. To uphold this principle, Capgemini Consulting has established clear rules with respect to commissions and gifts. We need to be able to present our clients with the real picture.
- **Freedom**: Our definition of freedom encompasses creativity, innovation, independence of mind, and respect for diversity of cultures, habits, and customs. These are essential points of flexibility for a group present in more than 30 countries and with an employee team that includes over 100 nationalities.
- **Team spirit**: It is important to us that our clients, employees, and partners understand that they are working for mutual benefit, through times of success and difficulty.
- **Modesty**: We strive for modesty and moderation in our relationships and in our problem-solving approach.
- **Fun**: If a corporate strategy is not enjoyable and rewarding, it will be extremely difficult, if not impossible, to implement.

Source: www.capgemini.com/our-company/values-ethics

Corporate Values: Example 2

Gore: the culture of innovation

The objective of the Entreprise is to make money and have fun doing so

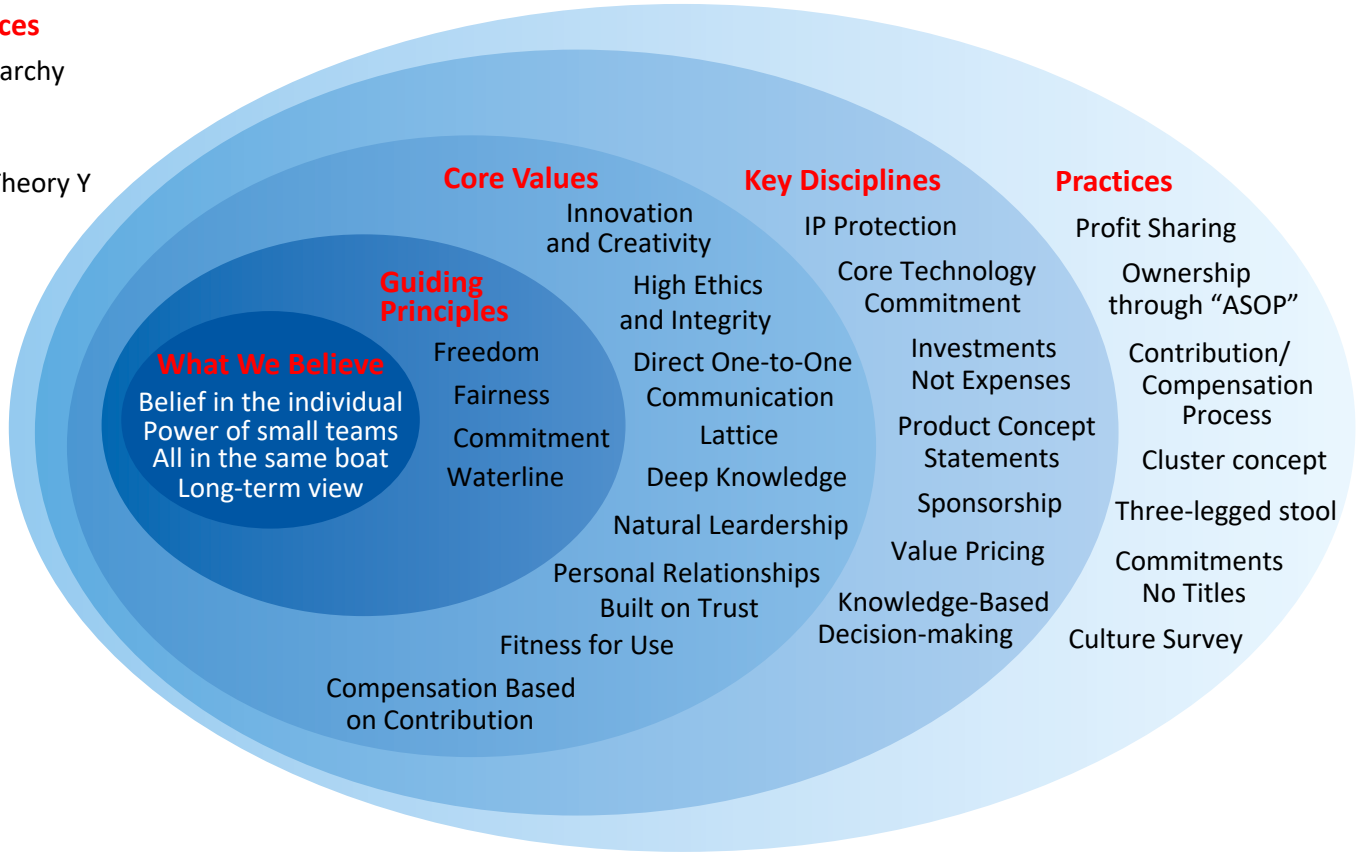
Early Influences

Maslow's Hierarchy of Needs

McGregor's Theory X VS. Theory Y

DuPont Task Force

Creating an Entreprise



External Influences

Customers

Economic Climat

Local Cultures

Globalization

Government

Suppliers

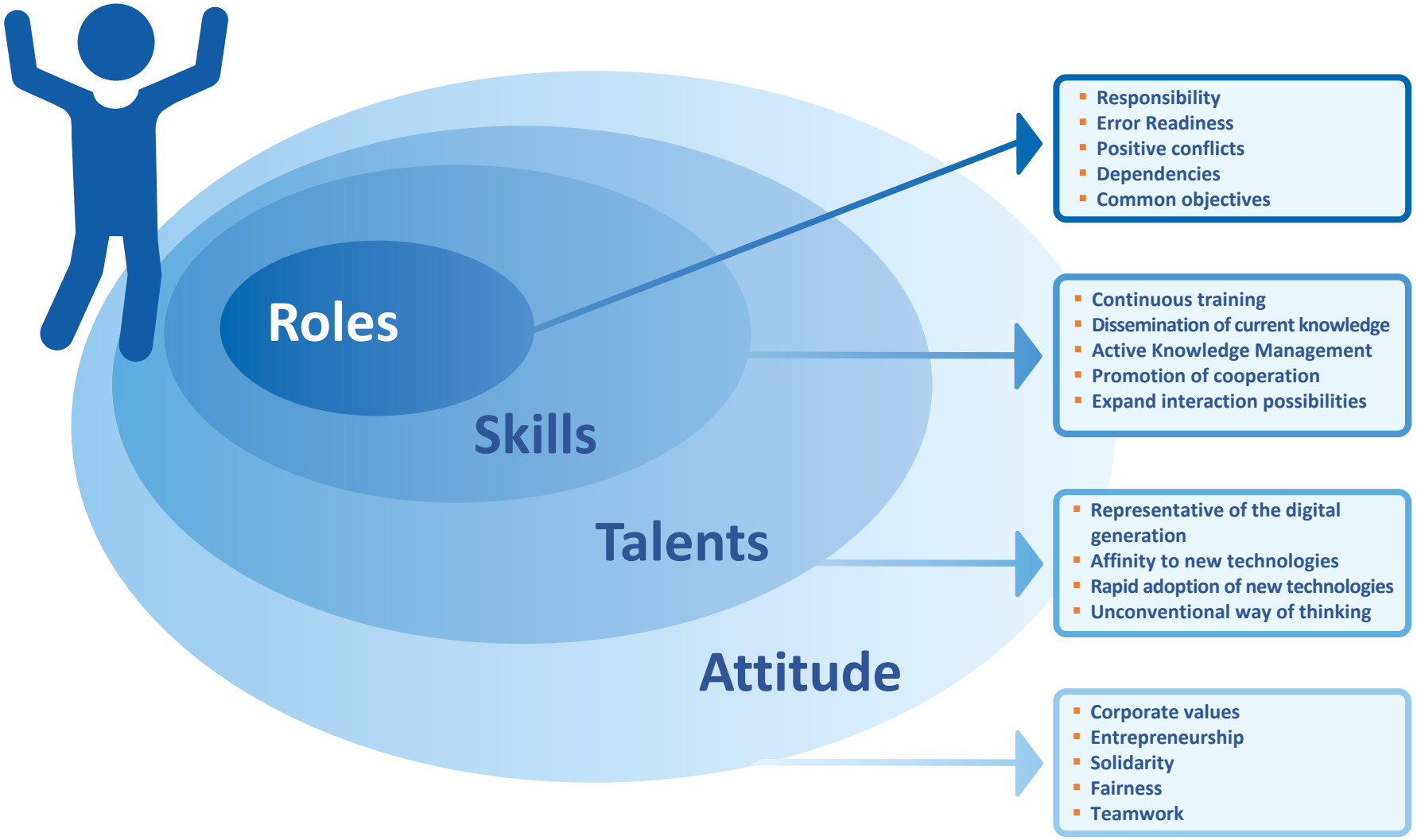
Technology

Competition

Labor Market

Environment

The human being as key factor

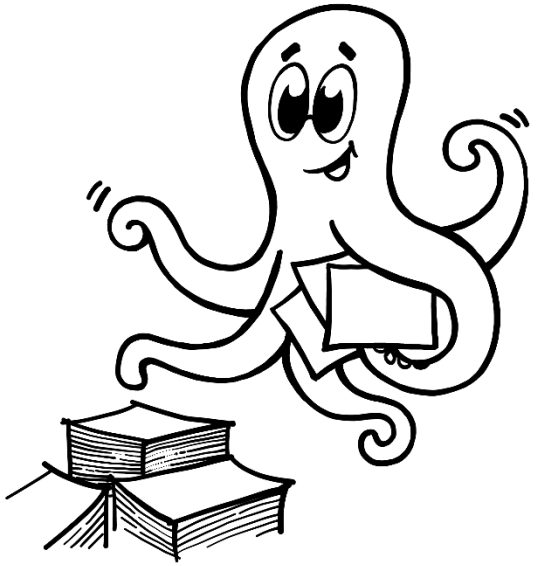


Some final recommendations…

- Choose not only a job, but also a good manager (and mentor)
- Make sure you share the values of the company
- Never deny own values
- Be a positive team-player
- Always be fair
- Understand the system and improve it (tomorrow is a better day than today)

Take away and must know!

- Mintzberg´s Model of organisation
- Business roles are needed for IT processes



Literature

- Drucker P (1954) The Practice of Management. Harper & Row, New York
- Mintzberg H (1978) Structuring of Organizations. Pearson Academic
- Pilorget L, Schell T (2018) IT Management. Springer, Wiesbaden

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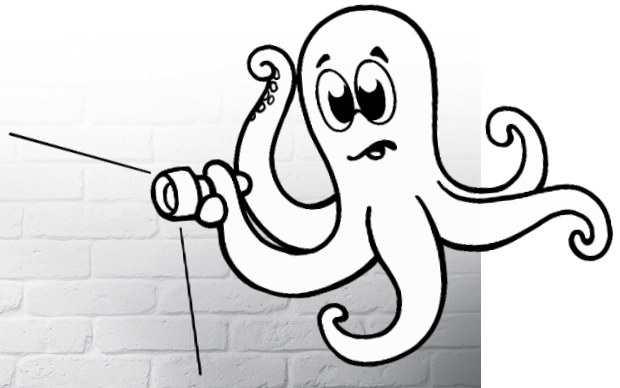
-> [Berufe der ICT – Berufe der ICT (berufe-der-ict.ch)]



ICT Roles and Salaries (CH – 2017)

CIO or IT Manager

- Brief description

  Overall management and leadership of the information and communication technologies divisions and organization of a company

- Responsible for:

  - ✓ *Formulating the ICT vision and the ICT strategy for the company derived from the business strategy of the management.*
  - ✓ *Ensuring ICT Governance*
  - ✓ *Ensuring ICT operation, ICT security and the further development of ICT systems*
  - ✓ *The ICT services required for optimal support of business processes*

Source: Berufe der ICT, 9.Auflage 2017

Head Plan or Head of ICT Corporate Development

- Brief description

  Overall management and leadership of the professional group: planning, steering and consulting

- Responsible for:
  - ✓ *The conception of ICT architectures and ICT services derived from the company's ICT strategy*
  - ✓ *Strategic planning, quality strategy, quality management and security in the ICT sector*
  - ✓ *Checking the quality, security and compliance of ICT systems*
  - ✓ *The management of ICT risks*
  - ✓ *Creating the sourcing strategy derived from the ICT strategy of the company*
  - ✓ *Procurement of IT resources and services*
  - ✓ *Providing the necessary information of ICT governance*

Source: Berufe der ICT, 9.Auflage 2017

Head Build or Head of System Development

- Brief description

  Overall management and leadership of the professional group: design, engineering, provision and implementation

- Responsible for:

  - ✓ *Engineering, design, creation, testing and implementation of system, software, database and telecommunications solutions*
  - ✓ *Procurement of ICT systems*
  - ✓ *Integration of standard solutions*
  - ✓ *Providing ICT services in accordance with the ICT strategy and ICT architectures*

Source: Berufe der ICT, 9.Auflage 2017

Head of IT Operations or Head of IT Services

- Brief description

  Overall management and leadership of the professional group: operations, administration and support

- Responsible for:
  - ✓ *Infrastructure in the ICT operation environment and for production*
  - ✓ *Operation of hardware: host, server, network, peripheral devices, workstation systems*
  - ✓ *The operation of software: operating, communication, database and application software*
  - ✓ *Operation of the data center, decentralized systems and service desk*
  - ✓ *Production*
  - ✓ *Configuration Change Management and its processes in the ICT operations environment*
  - ✓ *Compliance with Service Level Agreements (SLAs)*
  - ✓ *Integration of services in the area of ICT operation from external service providers*
  - ✓ *The guarantee of operational safety*

Source: Berufe der ICT, 9.Auflage 2017

Head ICT Project Portfolio Management

- Brief description

  In charge of project management

- Responsible for:
  - ✓ *Prioritization, coordination, execution and monitoring of projects and programs in the ICT and organizational area*
  - ✓ *Project portfolio management*

Source: Berufe der ICT, 9.Auflage 2017

Head of Organization and Business Administration

- Brief description

  Leading the Organization Department

- Responsible for the support of the company management with regard to:
  - ✓ *Strategy, organization, use of resources, project management and business administration*
  - ✓ *The design of business processes*
  - ✓ *Process management and process optimization*
  - ✓ *Definition and assignment of roles and functions*
  - ✓ *Ensuring quality management, risk management and cost management*

Source: Berufe der ICT, 9.Auflage 2017

ICT Salaries 2017

- Branch
- Company size
- Size of IT Department
- Regions of CH

-> Competence level S1: Junior

-> Competence level S2: Professional

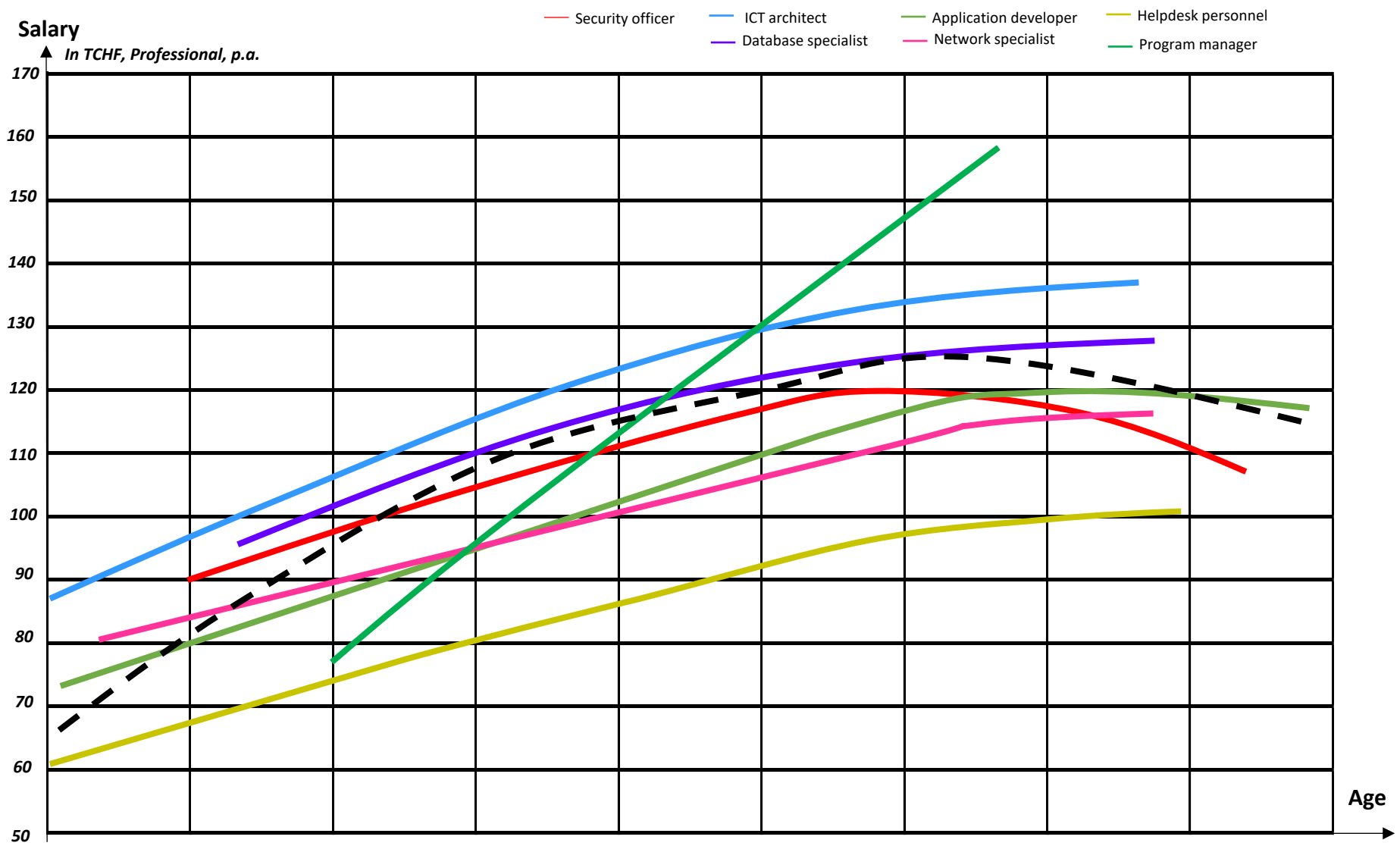
-> Competence level S3: Senior

-> Competence level S4: Expert

-> Competence level S5: Senior Expert

Source: Berufe der ICT, 9.Auflage 2017

ICT Salaries 2017 in Switzerland



Source: Berufe der ICT, 9. Edition 2017

KNOWLEDGE

www.know-ledge.ch