



Information Management and Knowledge Management (IMKM)

Lecture 11

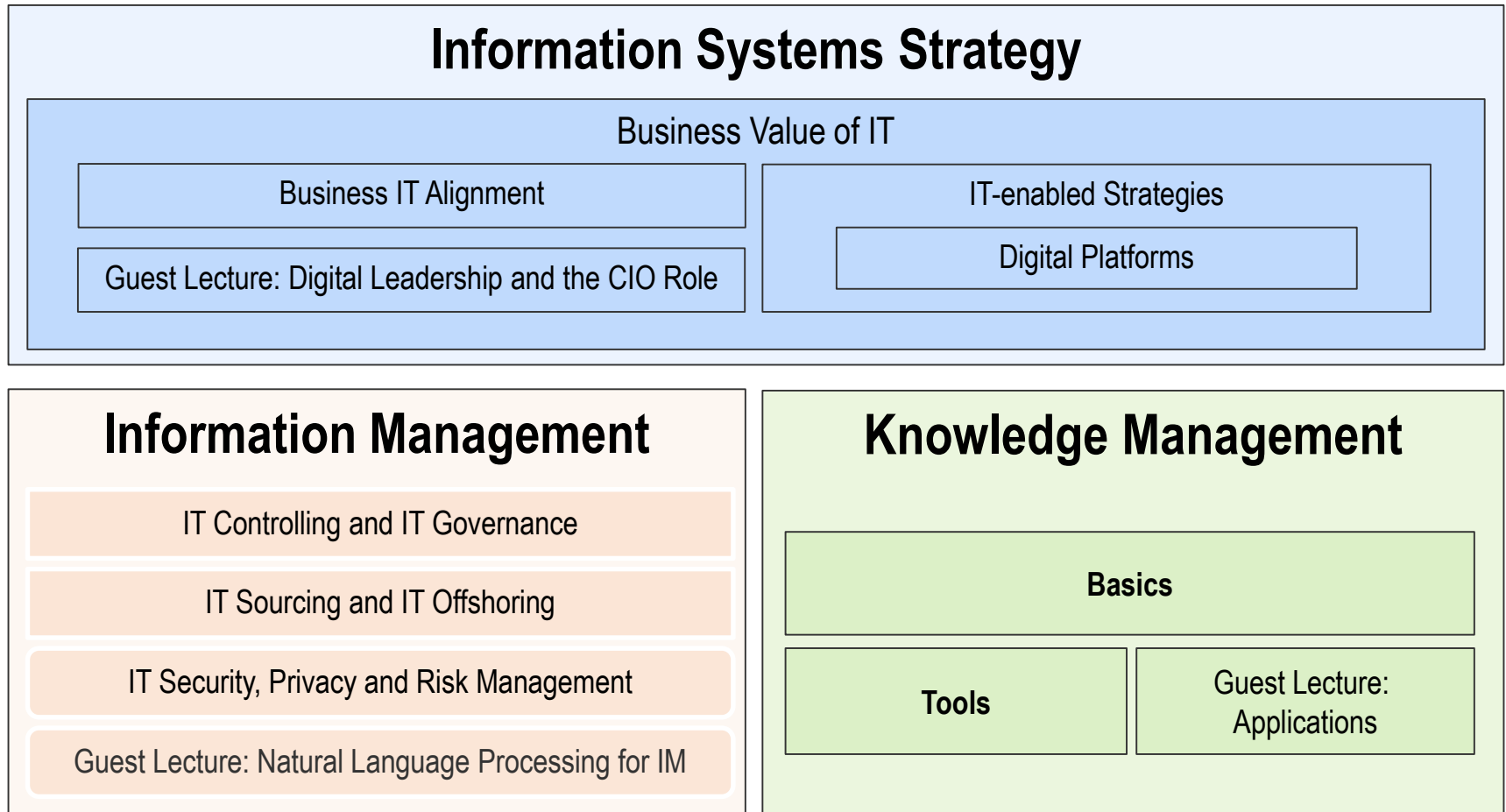
Basics and Tools of Knowledge Management

TUM

Chair for Information Systems

© Prof. Dr. H. Krcmar

Lecture Schedule



IMKM Lecture 11: Basics and Tools of Knowledge Management

Outline

1. Knowledge Management
 1. Recap: Definition of Knowledge
 2. Recap: Types of Knowledge
 3. Definition of Knowledge Management
 4. Knowledge Management & Strategy
 5. Knowledge Management Strategies
2. Core Processes of Knowledge Management
 1. Knowledge Objectives
 2. Knowledge Identification
 3. Knowledge Acquisition
 4. Knowledge Development

Learning Objectives

- You understand and know basic terms of knowledge management and you can distinguish them.
- You understand how knowledge management relate to strategy.
- You can explain different types of knowledge, how they can be converted, and how this scales in organizations.
- You know the core process of knowledge management and can give examples for each step.

Importance of Knowledge Management

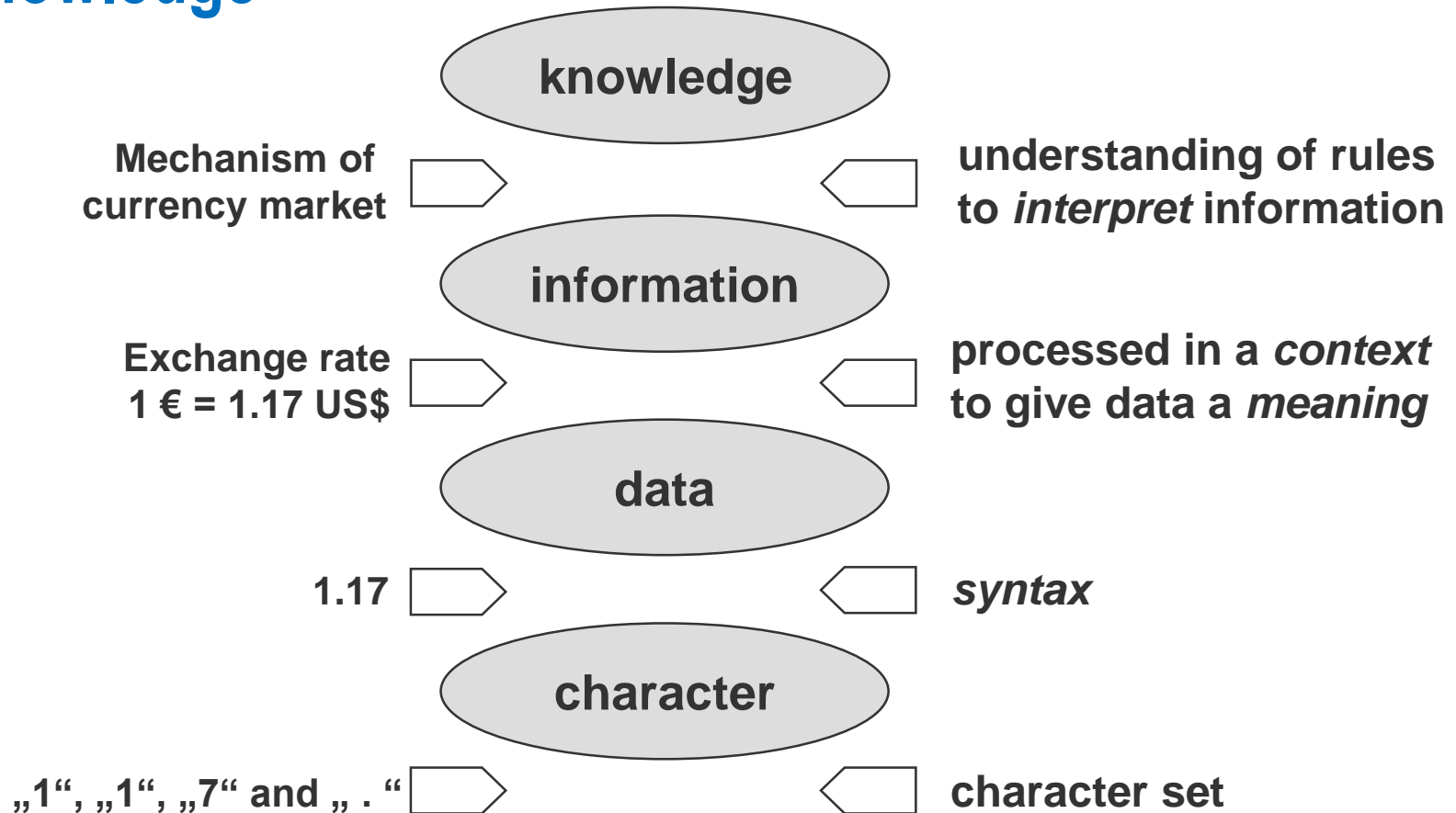
„In an economy where the only certainty is uncertainty, the one sure source of lasting competitive advantage is knowledge.“

Nonaka (1991)

Knowledge economy (Drucker, 1969): Organizational performance is dependent on the production, diffusion, and use of knowledge.

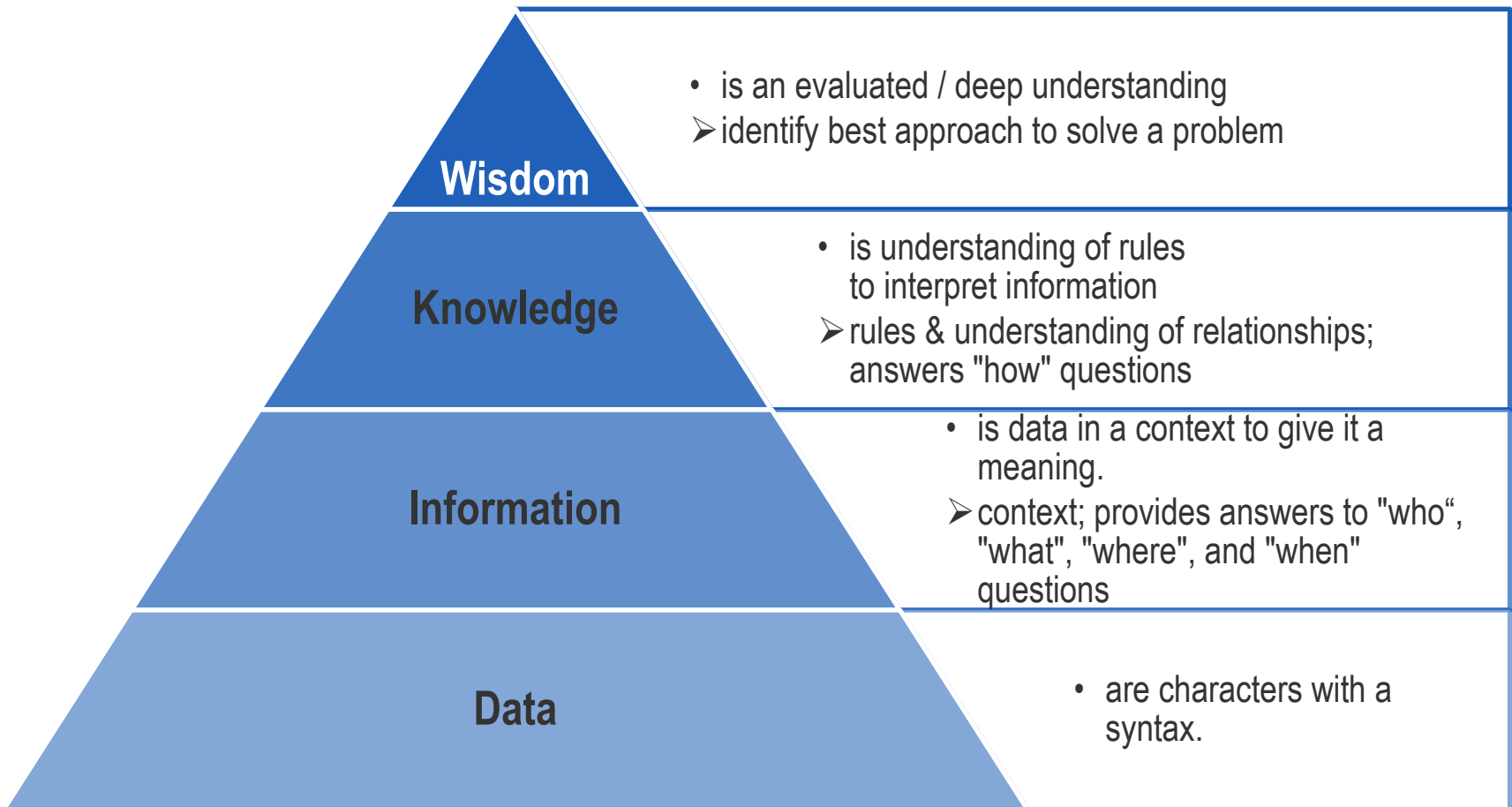
Knowledge-based theory of the firm (Grant, 1996): Knowledge is the major source of competitive advantage of a firm.

Recap: Character – Data – Information – Knowledge



Krcmar, Informationsmanagement (2015), p. 12

Data – Information – Knowledge – Wisdom



Ackoff (1989)

Recap: Knowledge

- Knowledge is the **understanding of rules needed to interpret** information
- Knowledge is the appropriate **collection** of information, such that its intent is to be useful
- Characteristics of knowledge:
 - Using knowledge does not consume it
 - Transferring knowledge does not result in losing it
 - Knowledge is abundant, but the ability to use it is scarce
 - Much of an organization's valuable knowledge walks out of the door at the end of the day.

Knowledge – Detailed Definition

Knowledge

- is a fluid mix of framed **experience**, **values**, contextual **information**, and **expert insight**
- that provides a **framework** for evaluating and incorporating **new** experiences and information.
- It originates and is applied in the **mind** of knowers.
- In organizations,
 - it often becomes embedded not only in **documents** or repositories
 - but also in organizational **routines**, **processes**, **practices**, and **norms**.

Davenport & Prusak (1983)

Recap: Types of Knowledge

“Embodied knowledge is embodied knowledge. But with reflection or careful observation, patterns of tacit knowledge can be experienced, expressed and described.”

Senge (2006)

Explicit Knowledge

knowledge that is set out in tangible form (physical)
e.g. policies, goals, strategies, papers, reports
Codified / Leaky knowledge

Tacit Knowledge

knowledge that would be extremely difficult
(operationally) to make explicit (*implied*)
Subjective, cognitive, experiential learning
Highly personalized
Difficult to formalize
Sticky knowledge



Recap: What is Knowledge Management?

*“KM is understanding the organization’s information flows and implementing **learning practices** which make explicit the key aspects of its knowledge base” (Broadbent, 1997, 8-9)*

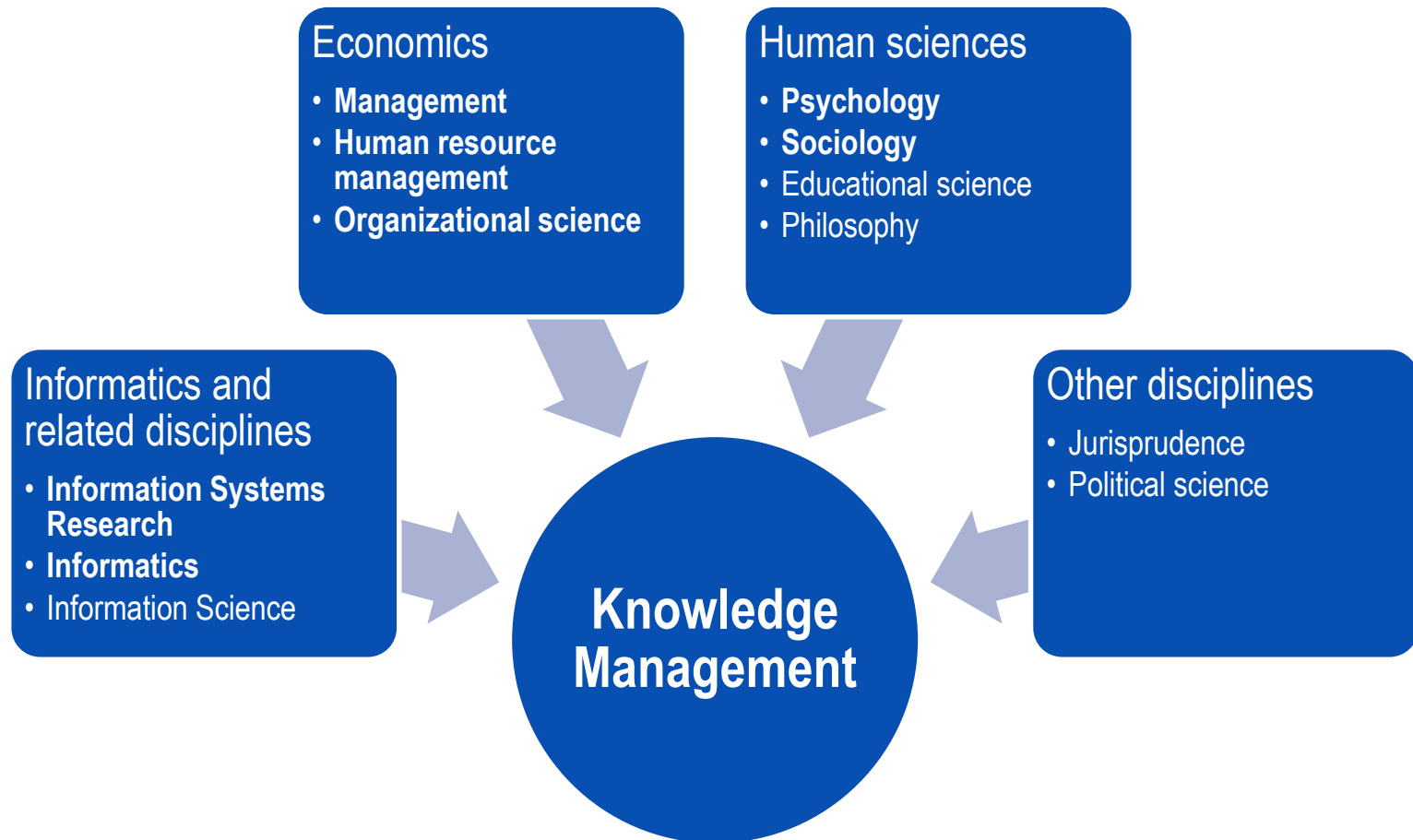
*“KM is a collaborative and integrated approach to the creation, capture, organization, access, and use of an **enterprise’s intellectual assets**” (Brooking, 1999, 154)*

*“KM is the capability to create, enhance, and share **intellectual capital** across the organization” (Lank, 1997)*

*“KM comprises the development, discussion, and testing of theories, methods, and tools that enable a more systematic approach with **knowledge as a resource**” (Bellmann, et al. 2002, cited in Krcmar, 2015, 660)*

- **Knowledge** Management deals with all kinds of knowledge, **information** management with some forms of explicit knowledge.

Reference Disciplines of Knowledge Management



Objectives of Knowledge Management

Knowledge Management helps us to know what we know

Knowledge Management

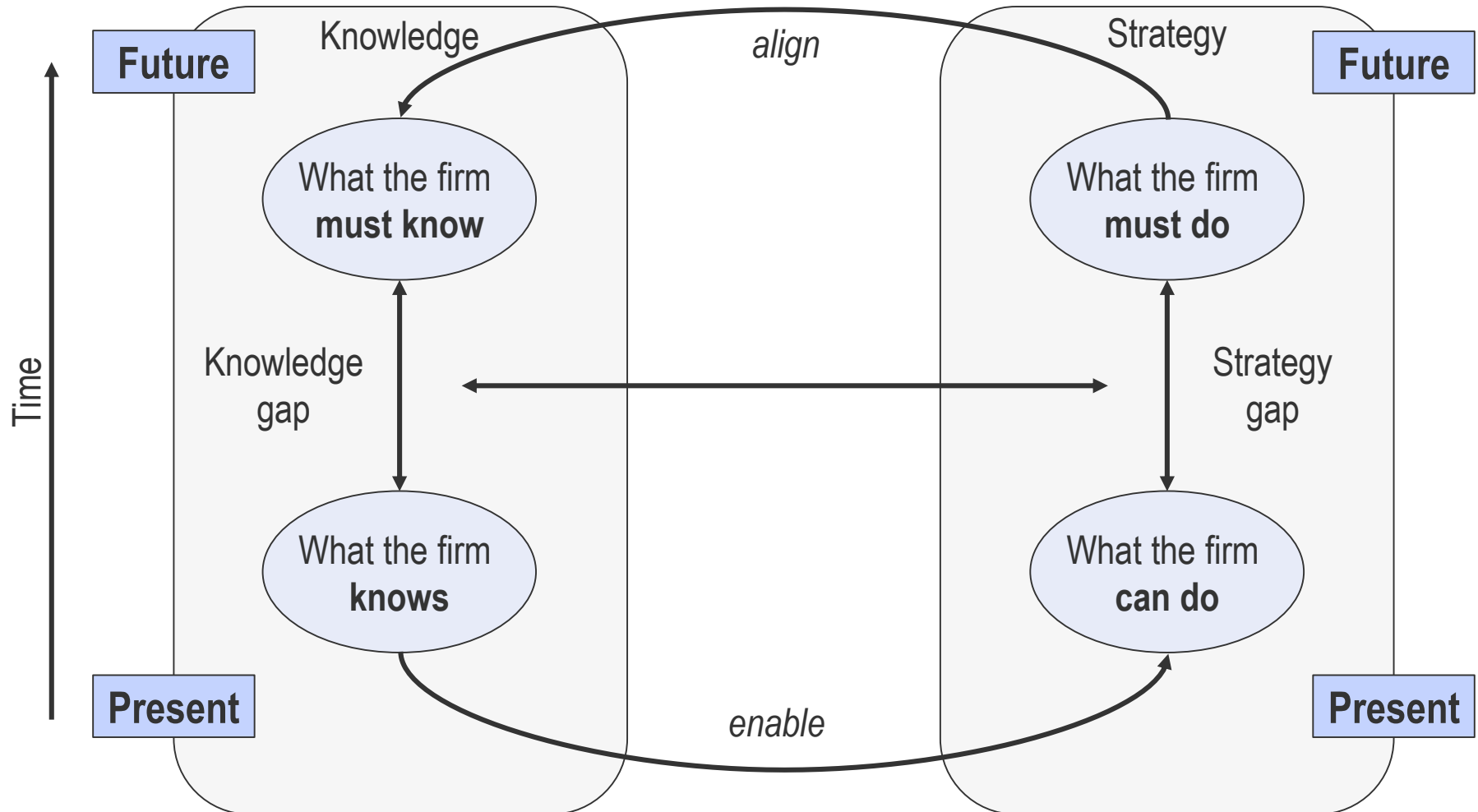
Identifying, capturing, evaluating, retrieving, and sharing all of an enterprise's information assets.

Knowledge Sharing

Focus on the individual providing knowledge to other individuals.

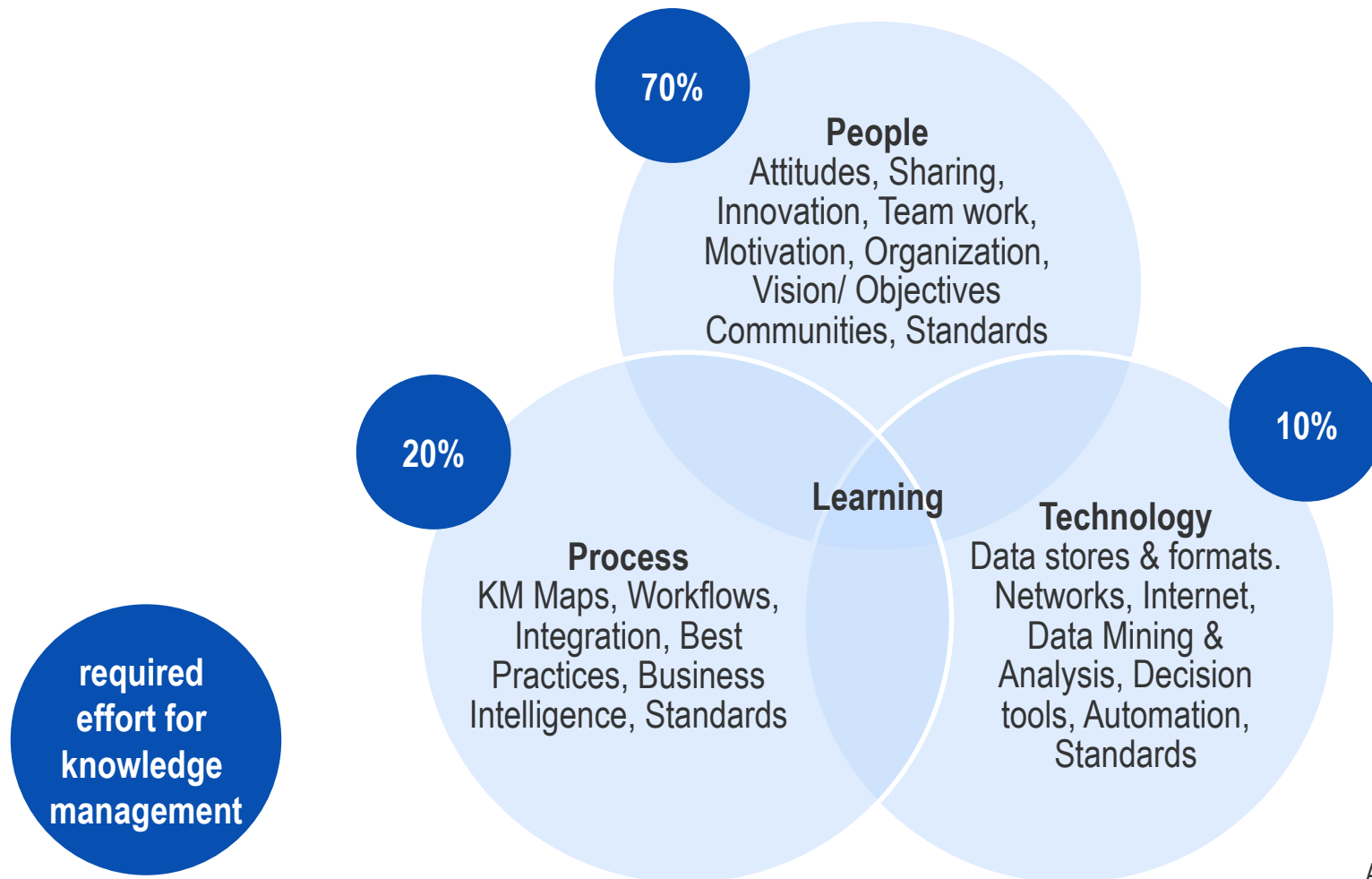
➔ Fundamentally a social process, not (only) a question of „management“!

Alignment of Knowledge and Strategy



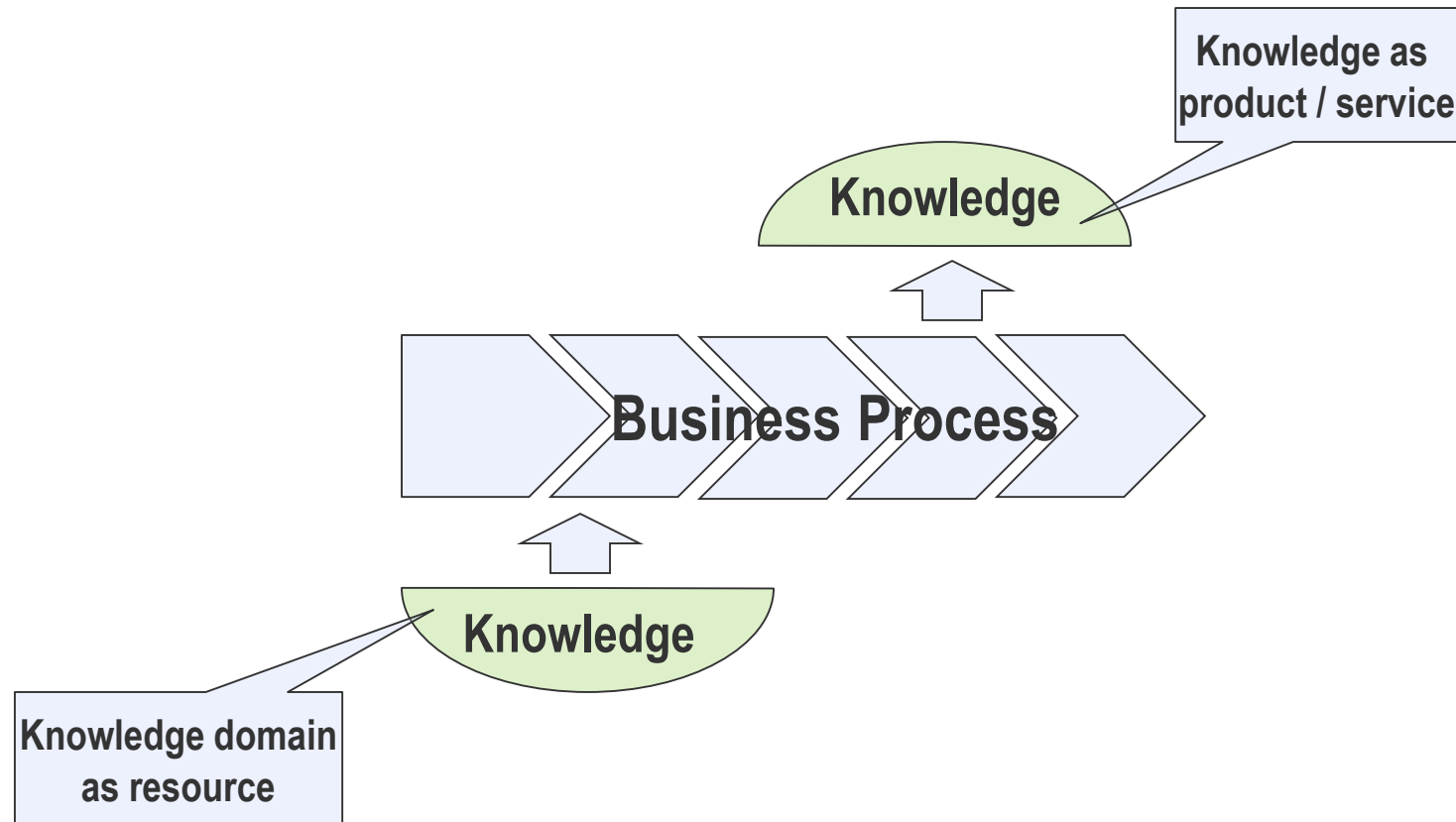
Zack (1999), p. 136

What to manage in knowledge management

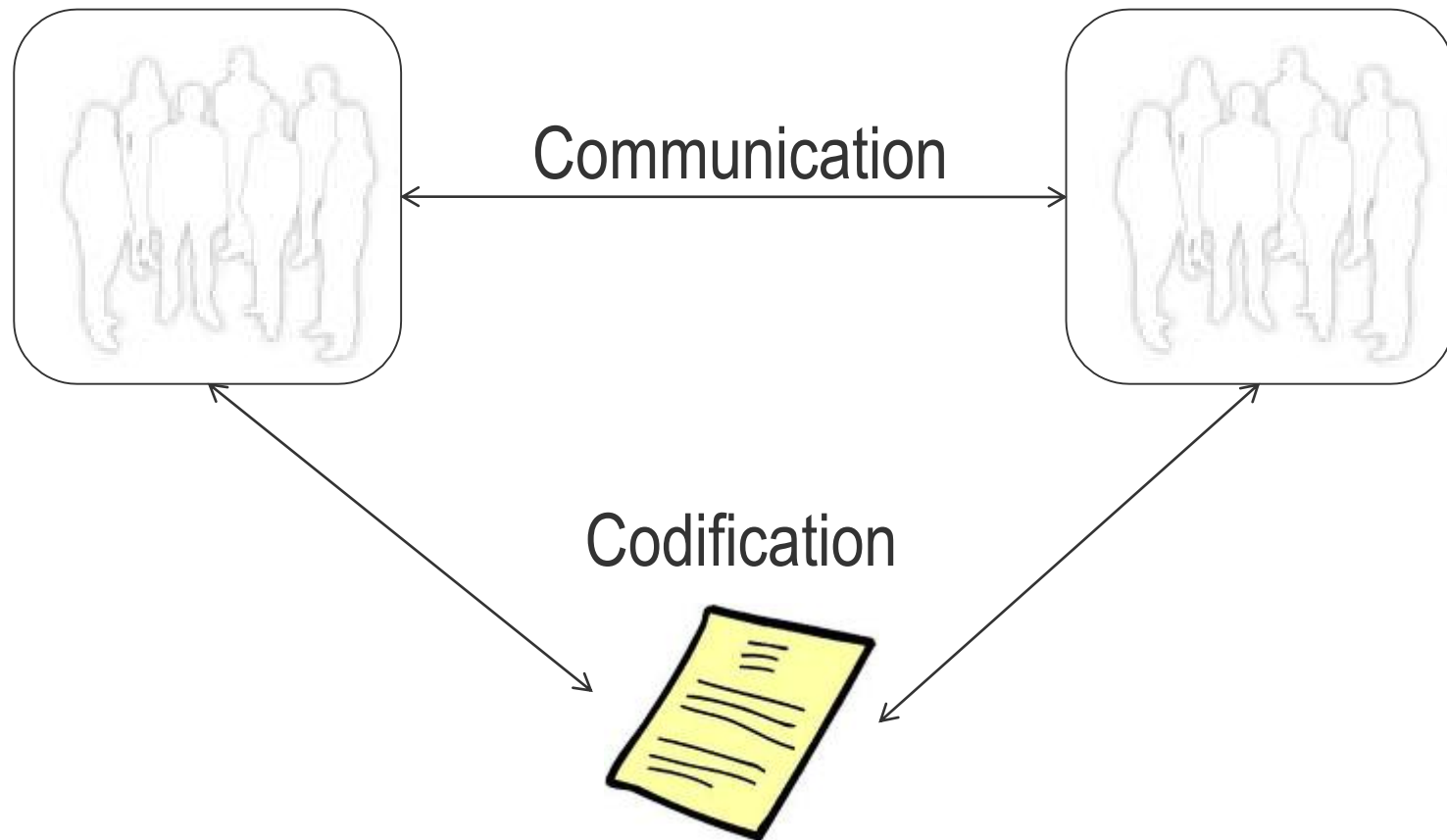


Adapted from Bhatt (2000)

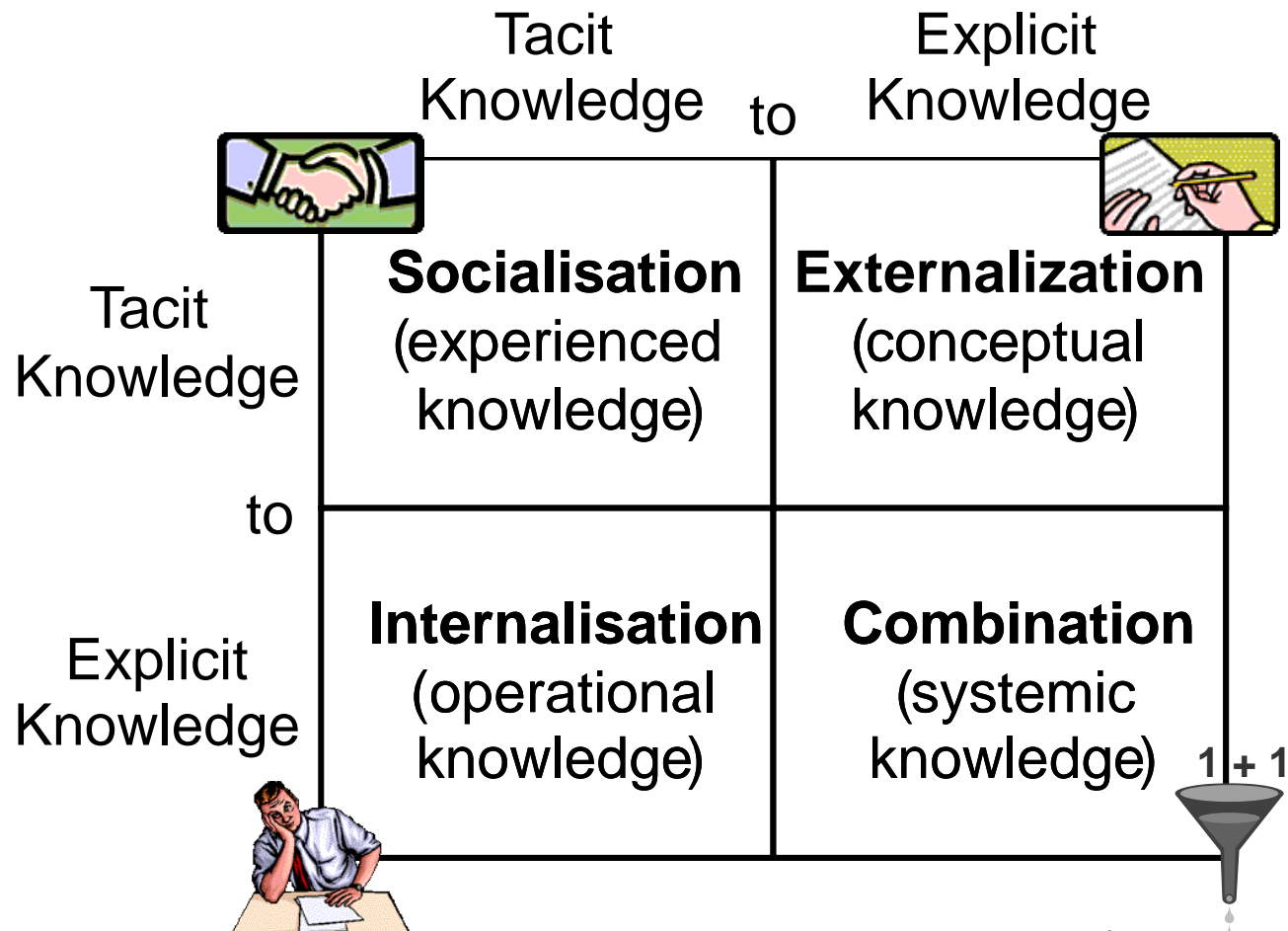
Business Process as Area of Application and Context



Strategies for Knowledge Management: Communication and Codification

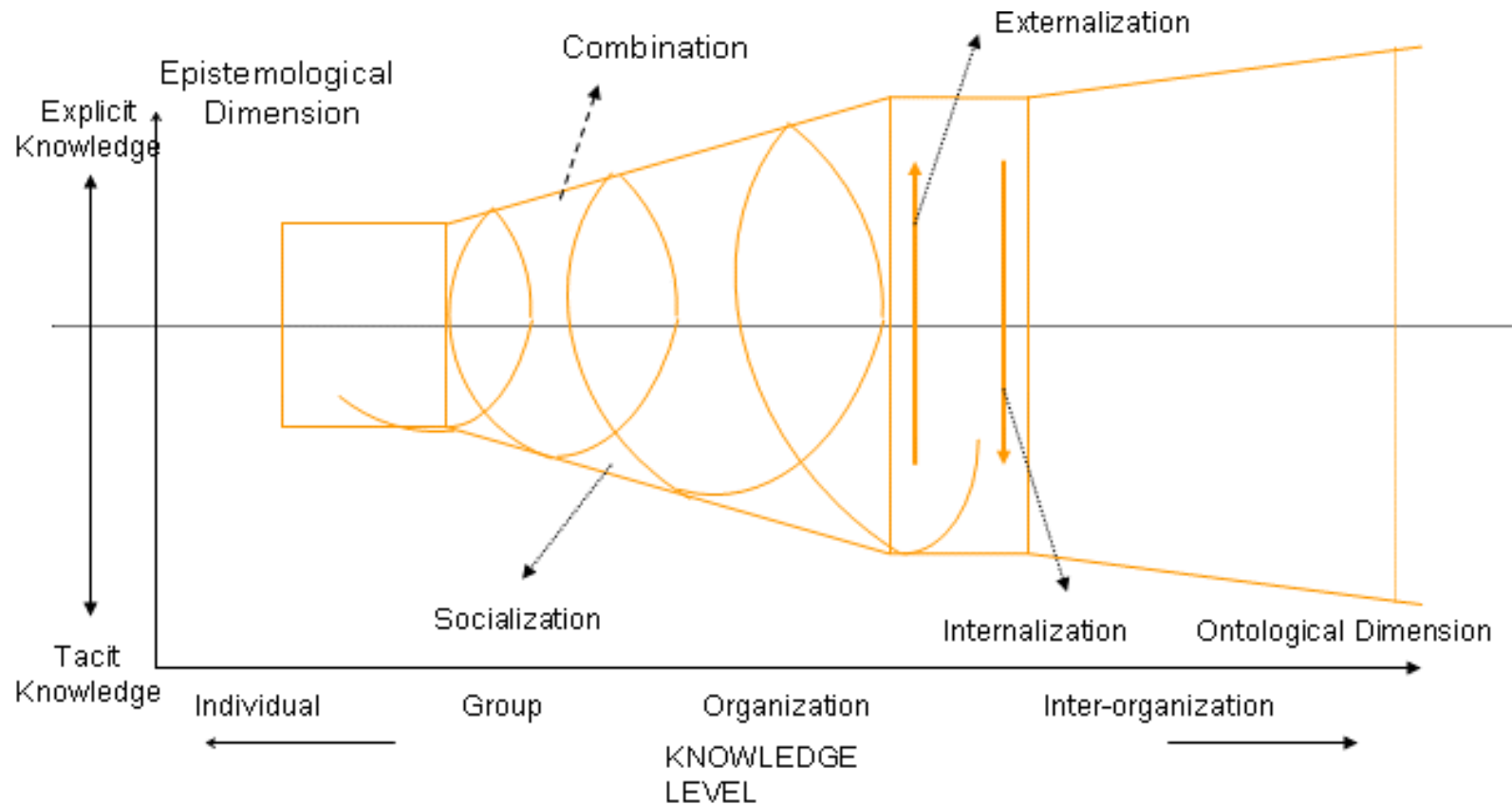


Four Types of Knowledge Conversion



Adapted from Rehäuser & Krcmar (1996), p. 34

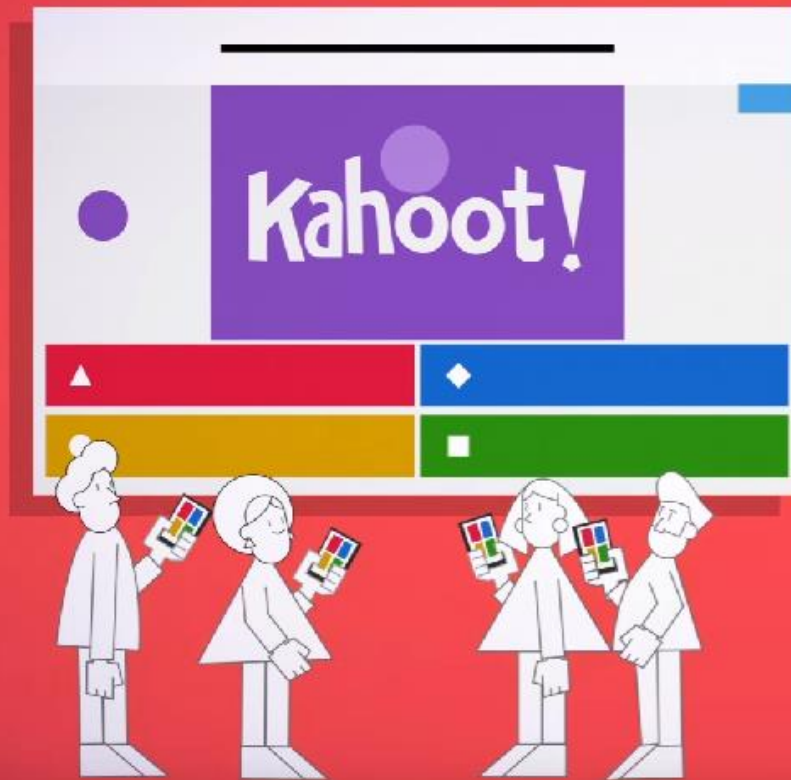
Spiral of Organizational Knowledge Creation



Nonaka (1994)

Quiz Time!

Go to kahoot.it



IMKM Lecture 11: Basics and Tools of Knowledge Management

Outline

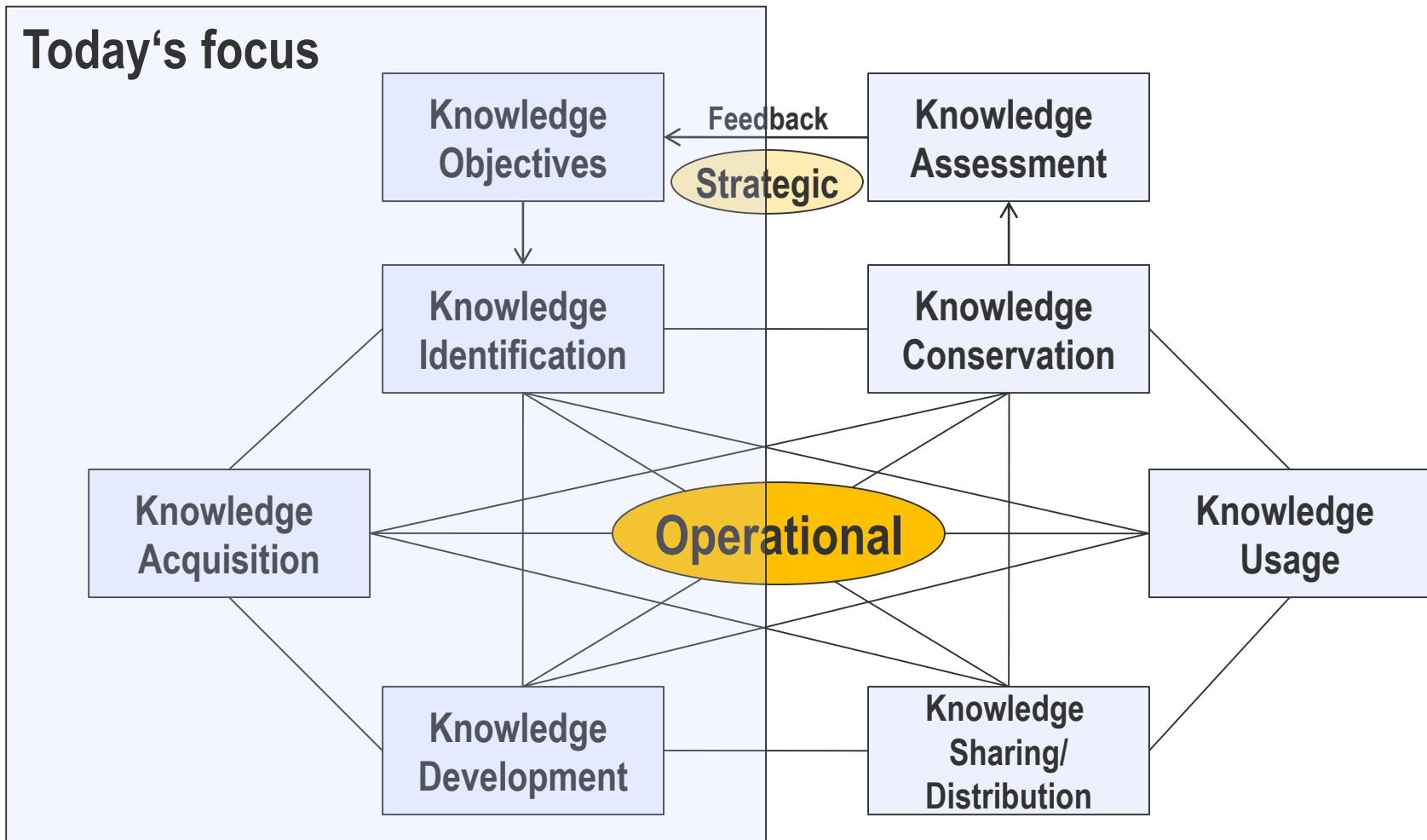
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Learning Objectives

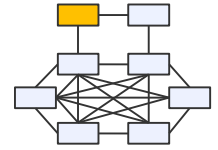
- You understand and know basic terms of knowledge management and you can distinguish them.
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Core Processes of Knowledge Management

Today's focus



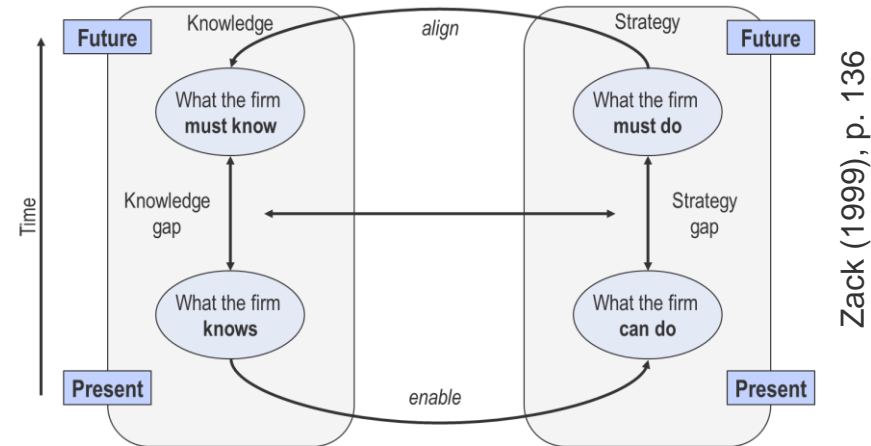
Adapted from Probst et al. (2010)



Knowledge Objectives

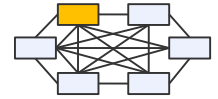
*“What kind of knowledge is **important today** as well as in the **future** to have a knowledge-based competitive advantage?”*

*“Where in the organization is what kind of know-how or knowledge **needed**?”*



- Strategic planning of organizational knowledge base
- **Knowledge goals** (St. Gallen Management Model)
 - **Normative**: Establish a knowledge oriented corporate **culture**
 - **Strategic**: define which knowledge to **retain** and which to **establish**, organizational structures, management systems
 - **Operative**: **Execution** of strategic knowledge goals and definition of **operational** knowledge goals for the day-to-day business

Probst et al. (2010)

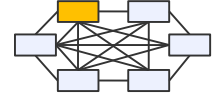


Knowledge Identification

“How do I create transparency about existing knowledge?”

- **Task:** Analysis and description of knowledge environment
- **Challenge:** Provide overview over internal and external data, information, and capabilities.
- **Problems:** Inefficiency, uninformed decisions, duplication

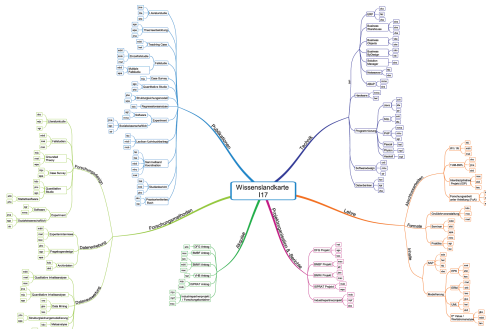
Probst et al. (2010)



Knowledge Identification

Approaches to Knowledge Identification

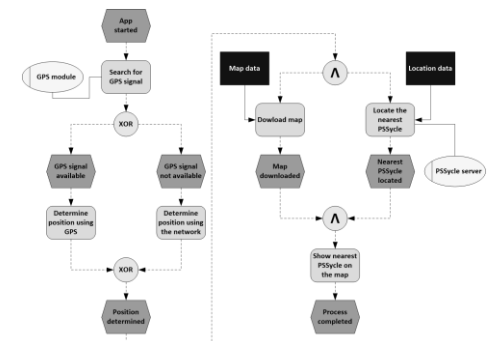
Knowledge Bearer Maps



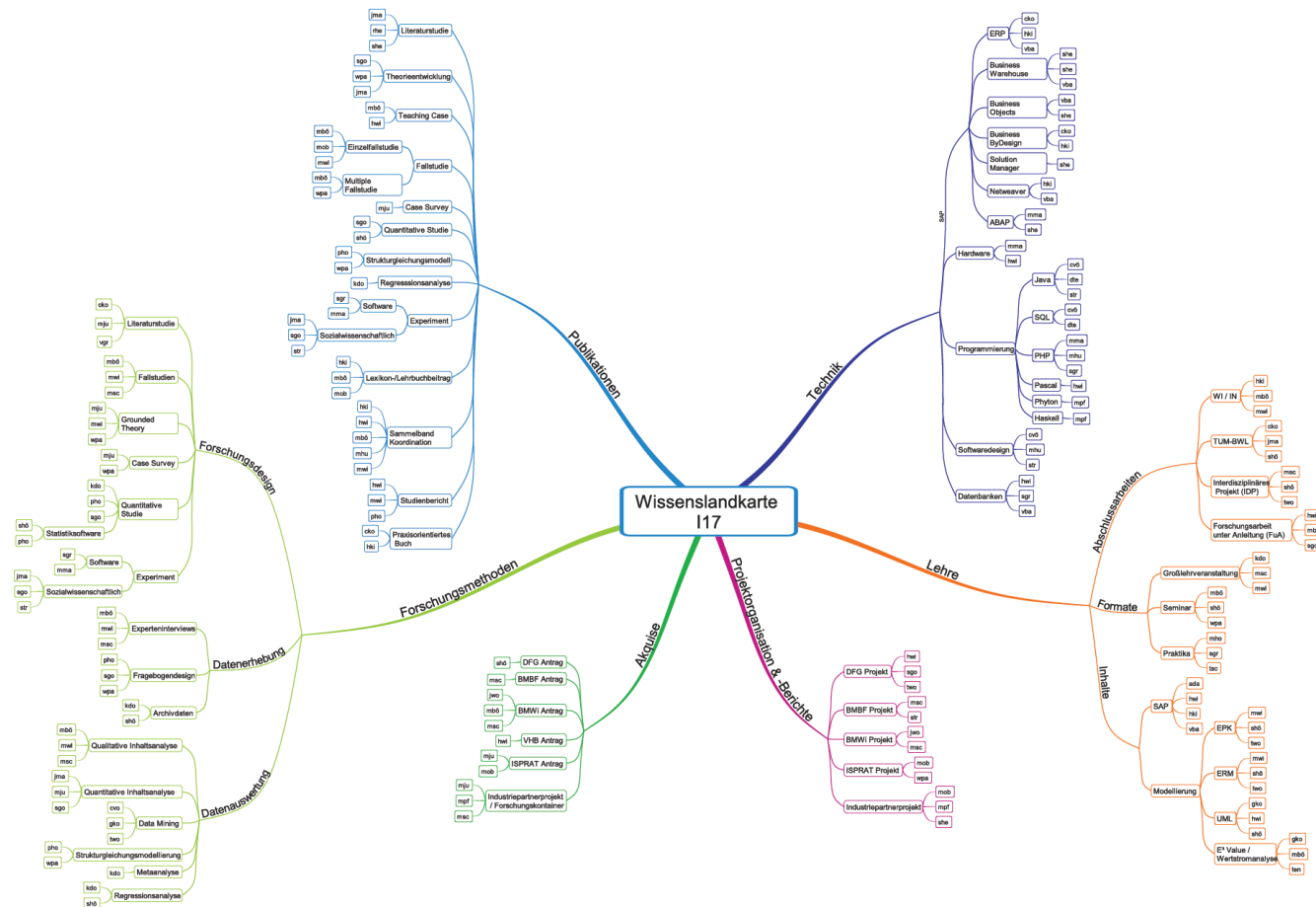
Knowledge Balance Sheet



Process Modelling



Example: Knowledge Bearer Map



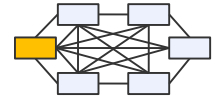
Example: Knowledge Balance Sheet



Wirkung von Einflussfaktoren (Zeilen) auf andere Einflussfaktoren (Spalten)			GP-1	GP-2	GP-3	GE-1	GE-2	GE-3	HK-1	HK-2	HK-3	HK-4	SK-1	SK-2	SK-3	SK-4	SK-5	SK-6	BK-1	BK-2	BK-3	BK-4	BK-5	Aktivsumme
	Ursache																							
GP-1	Akquisition	X	3	2	1	3	3	2	1	2	0	0	0	0	2	2	1	2	1	1	1	2	1	30
GP-2	Softwareentwicklung	1	X	1	3	2	3	1	0	0	0	1	1	3	1	2	2	3	2	1	2	2	31	
GP-3	Service & Kundenbetreuung	2	0	X	1	3	1	1	1	0	0	1	1	2	2	2	1	3	0	0	0	0	21	
GE-1	Wachstum	3	2	2	X	2	3	0	0	2	0	0	2	1	2	0	2	1	1	1	2	2	28	
GE-2	Image/ Kundenzufriedenheit	3	0	2	3	X	2	0	1	3	0	0	1	0	0	0	0	3	1	2	2	2	25	
GE-3	Rentabilität	1	2	0	2	2	X	0	0	2	0	0	0	0	1	0	0	1	1	1	3	3	19	
HK-1	Fachkompetenz	2	3	3	2	3	1	X	0	2	1	1	1	3	3	3	1	1	1	0	2	2	35	
HK-2	Soziale Kompetenz	3	0	3	0	2	0	0	X	3	1	0	2	0	0	1	0	3	1	3	3	2	27	
HK-3	Mitarbeitermotivation	3	3	3	1	2	1	1	2	X	1	0	1	1	2	2	3	2	2	2	1	2	35	
HK-4	Führungskompetenz	3	2	1	2	2	2	2	3	3	X	3	2	1	2	2	3	1	1	0	2	2	39	
SK-1	Führungsinstrumente	1	1	0	1	1	2	2	2	3	3	X	1	1	1	1	1	1	0	0	1	1	24	
SK-2	Unternehmenskultur	0	1	1	0	0	0	1	2	2	0	0	X	0	1	2	3	2	1	1	0	2	19	
SK-3	Informationstechnik	2	2	2	1	2	2	3	1	1	2	3	0	X	2	2	3	1	1	0	1	1	32	
SK-4	Dokumentiertes Wissen	3	3	2	2	2	2	2	1	2	1	0	1	2	X	3	1	0	1	1	1	2	32	
SK-5	Innovation	2	3	1	3	3	2	2	0	2	0	0	1	1	2	X	1	2	1	2	2	2	32	
SK-6	Interne Kooperation	2	2	2	1	2	1	2	2	2	2	2	2	2	3	X	1	1	0	0	0	31		
BK-1	Kundenbeziehungen	2	2	1	2	3	2	0	2	2	1	0	1	1	1	3	0	X	1	1	1	1	27	
BK-2	Lieferantenbeziehungen	1	1	1	1	1	2	1	0	1	0	0	0	2	2	2	0	2	X	1	2	1	21	
BK-3	Beziehungen zur Öffentlichkeit	2	0	0	0	1	0	0	2	2	0	0	1	0	0	0	0	2	1	X	2	1	14	
BK-4	Beziehungen zu Kapitalgebern, Investoren und Eignern	1	2	0	2	0	2	0	0	1	0	0	0	0	0	1	0	0	0	0	X	1	10	
BK-5	Beziehungen zu Kooperationspartnern	1	3	1	1	1	1	2	2	1	0	0	0	1	2	3	2	1	1	0	3	X	26	
	Passivsumme		38	35	28	29	37	32	22	22	36	12	11	18	23	28	33	25	31	19	17	32	30	

0: keine Wirkung 1: schwache Wirkung 2: mittlere Wirkung 3: starke Wirkung (es können positive oder negative Wirkungen eingegeben werden)

Quelle: https://www.bmwi.de/Redaktion/DE/Downloads/W/wissensmanagement-fw2013-teil3.pdf?__blob=publicationFile&v=1

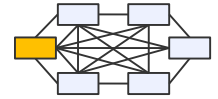


Knowledge Acquisition

“What capabilities do I acquire from external sources?”

- **Task:** Decide what knowledge to acquire through recruiting or acquisition (Consultants, mergers, or acquisitions)
- **Challenge:** Ensure best possible access to external knowledge
- **Problems:** Un-used potential for knowledge acquisition in existing cooperations

Probst et al. (2010)



Knowledge Acquisition

Approaches to Knowledge Acquisition

Hiring

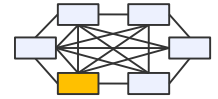


Consulting



Outsourcing, Mergers, or Acquisitions



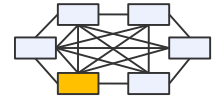


Knowledge Development

“How do I build up new knowledge?”

- **Task:** Build up new knowledge in addition to external acquisition
- **Challenge:** Develop new capabilities, better ideas, and increasingly powerful processes
- **Problems:** Creation of new knowledge in areas without expertise is very difficult (e.g., R&D)

Probst et al. (2010)



Knowledge Development

Approaches to Knowledge Development

Learning Environment



Room for Experiments

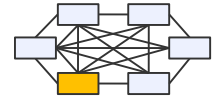


Workshops



Prerequisites

- Create freedom
- Reduce workload
- Congruence of interests
- Make room for errors



Example: Knowledge Development: MOOC



Über openSAP
Kursbereiche ▾
Kurse
Ankündigungen
Deutsch ▾
Anmelden ▾

Leadership in Digital Transformation

Prof. Dr. Helmut Krcmar

Kurs im Selbststudium

Bitte melden Sie sich an, um fortzufahren.

Leadership in Digital Transformation






Teilen
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Digital transformation is first and foremost not about new technologies. It is about changing the way a company creates value, interacts with its customers and business partners, and competes in established and emerging markets. It is an organizational change process that reaches every corner of the company.

Digital transformation projects are characterized by high social complexity, structural rigidity, and procedural ambiguity. Initiating, executing, and governing the digital transformation of their companies is a major challenge for today's leaders.

In this course, you'll learn about the characteristics of digital transformation, how it evolved, and how the organizational and technological changes associated with digital transformation change the role, the skills, and the concept of leadership.

Dienstag, 06. Oktober 2015, 09:00 Uhr (UTC) bis Mittwoch, 04. November 2015, 09:30 Uhr (UTC)

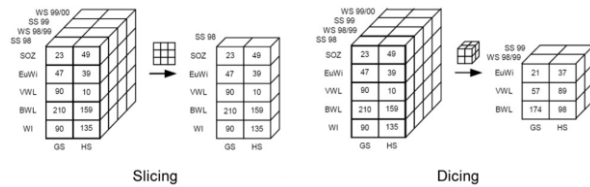
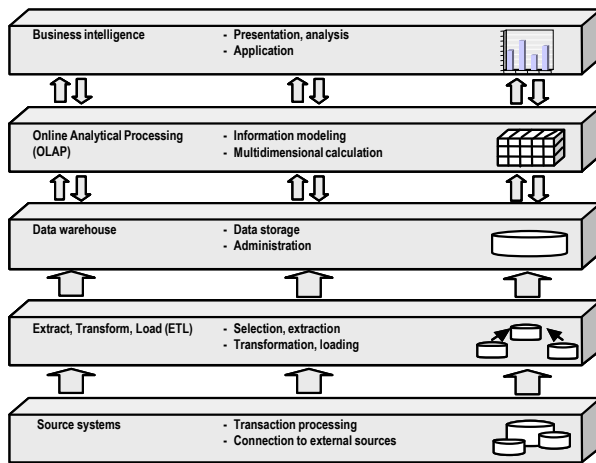
Kurssprache: English

Für den Kurs einschreiben

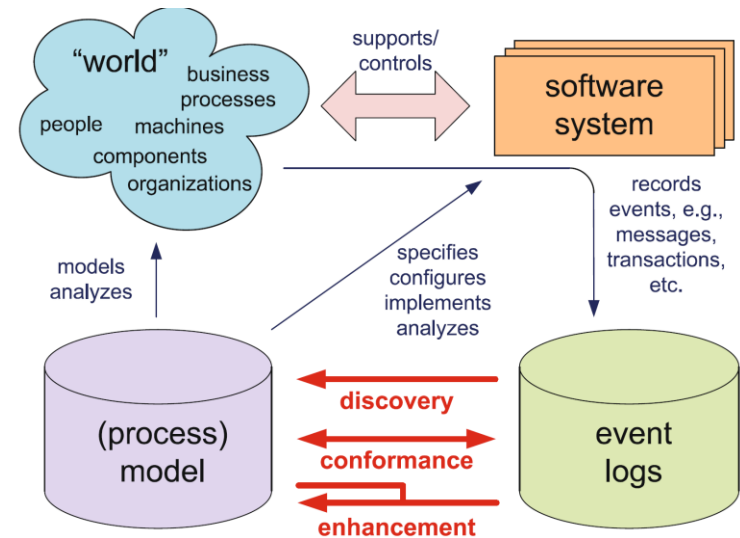
openSAP (2010)

Example: Experiment with discovering knowledge from data or information

Data Warehouse



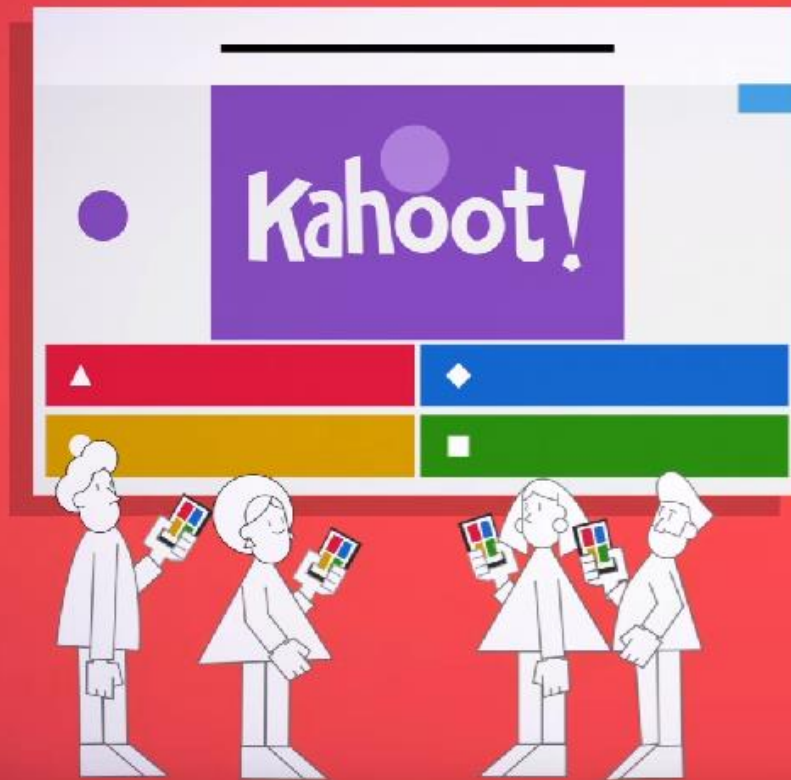
Process Mining



(van der Aalst, 2011)

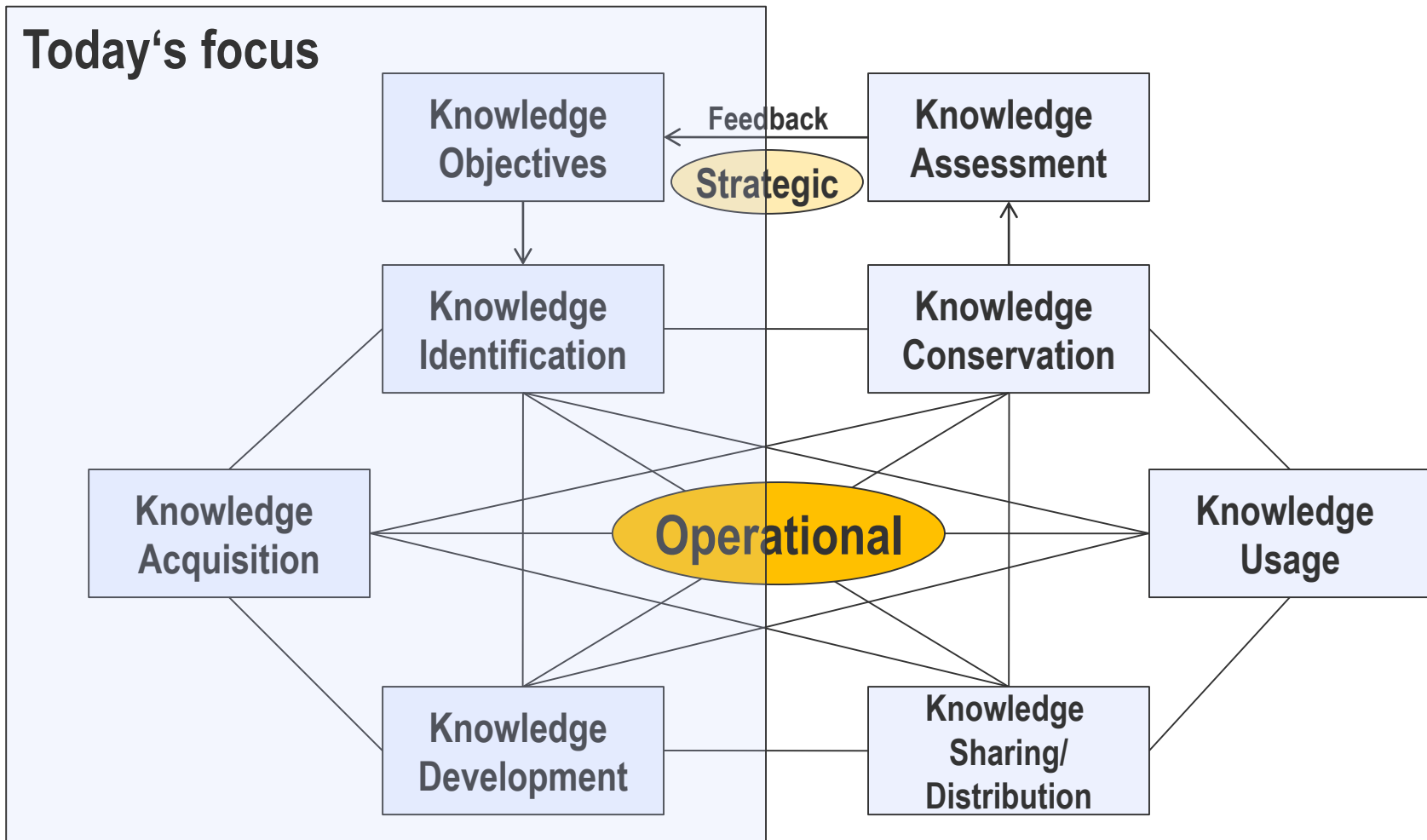
Quiz Time!

Go to kahoot.it



Core Processes of Knowledge Management

Today's focus



Adapted from Probst et al. (2010)

Literature

Core Literature

- **Krcmar, H. (2015):** Informationsmanagement (Vol. 6), Springer Verlag, Berlin 2015. pp. 660-695.
- **Probst/Raub/Romhardt (2010):** Wissen managen: Wie Unternehmen ihr wertvollste Ressource optimal nutzen (6. Aufl.). Gabler, Wiesbaden.

Additional Reading

- **M. Bellmann, H. Krcmar, T. Sommerlatte (2002):** Praxishandbuch Wissensmanagement. Strategien - Methoden – Fallbeispiele. Symposion, Düsseldorf

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