Aalto-yliopisto

Ako-E3020
Knowledge Management in Practice (5 op)

Luento #4

27.2. 2020 – Eerikki Mäki eerikki.maki@aalto.fi

Agenda

- Kommentteja harjoitustöihin
- Tiedon ja osaamisen jakaminen
- Työskentelyä ryhmässä tehtävän harjoituksen parissa

Harjoitustyöstä

Assessment and scoring of the case assignment is based on:

- Objectives of the assignment (clarity, ambition, relevance, scope, originality) + style, design, layout (max 5 points)
- Comprehensiveness of the analysis (max 5 points)
- Reasoning and argumentation with appropriate reference material, correct usage of the subject specific terms and models/theories, achievement of the objectives defined by the group, ability to critical thinking (max 10 points)
- Practical relevance of the paper, production and argumentation of own ideas, implementation potential of the development ideas (max 10 points)

Esimerkki työn rakenteesta

– Kansilehti (työn nimi, tekijöiden nimet)
– Sisällysluettelo
1. Johdanto (1-2 sivua)
    - Mistä ilmiöstä on kyse & miksi se on tärkeä
    - Keskeisten käsitteiden määrittely
    - Työn tavoitteet & tutkimuskysymykset
2. Teoreettinen tausta ja työssä hyödynnettävät mallit (2-6 sivua)
    - Alaluku
    - Alaluku
3. Tutkimusmenetelmät (1-2 sivua)
    - Empiirisen aineiston kuvaaminen
    - Miten aineisto keräätttin & analysoitiin
4. Työn tulokset (2-4 sivua)
5. Johtopäätökset ja pohdinta (2-4 sivua)

– Lähteet

Oppimispäiväkirja 3

- Pohdi omakohtaisen esimerkin/esimerkkien avulla tiedon ja osaamisen jakamisen vaikeuksia tietotyössä/tietointensiivisissä organisaatioissa. Pohdi havaintojasi kurssimateriaalin avulla. Esim:
  - Ipe M. (2003) Knowledge Sharing on Organizations: A Conceptual Framework. Human Resource Development Review, Vol. 2 (4), 337-35
  - Nonaka I. (1994) A Dynamic Theory of Organizational Knowledge Creation. Organization Science, Vol. 5 (1), 14-37
  - Riege A. (2005) Three-dozen knowledge-sharing barriers managers must consider. Journal of Knowledge Management Vol. 9 (3), 18-35

Knowledge sharing

- The act of making knowledge available to others within the organization
- Between individuals
  - the process by which knowledge held by an individual is converted into a form that can be understood, absorbed, and used by other individuals
- Sharing involves some conscious actions on the part of the individual who posesses the knowledge
- A voluntary act
- Results in joint ownership of the knowledge between the sender and the recipient

(Ipe 2003)

Why is knowledge sharing important?

1. Coordination of work
   - Knowing what other members (of an organization/team/etc.) are doing
   - Guaranteeing needed information flows
2. Preserving organizational knowledge and competencies
   - Maintaining consistency
   - Knowledge reuse (not inventing the wheel over and over again)
3. Learning form others
   - Creating shared understandings
   - Connecting diverse experts (knowledge and competencies)

Sharing information and knowledge within an organization

Sharing information and knowledge within an organization

That restaurant is not alone….

Of the 431 US and European companies with knowledge management initiatives,

only **13 %** **were**

successful in transferring knowledge within their organization
(Ruggles 1998)

Those 431 companies are not alone…

A survey conducted among over 300 managers showed that

68% of the respondents agreed or strongly agreed with the statement **"Finding the information I need to do my job is difficult and time-consuming."** Delphi Group (2004)

Top-3 reasons:

- Information changes constantly
- No good search tools
- Don't know what he is looking for

Knowledge sharing / transfer

- Why is knowledge sharing / transfer important?
  - Instrumental communication
  - Expressive communication

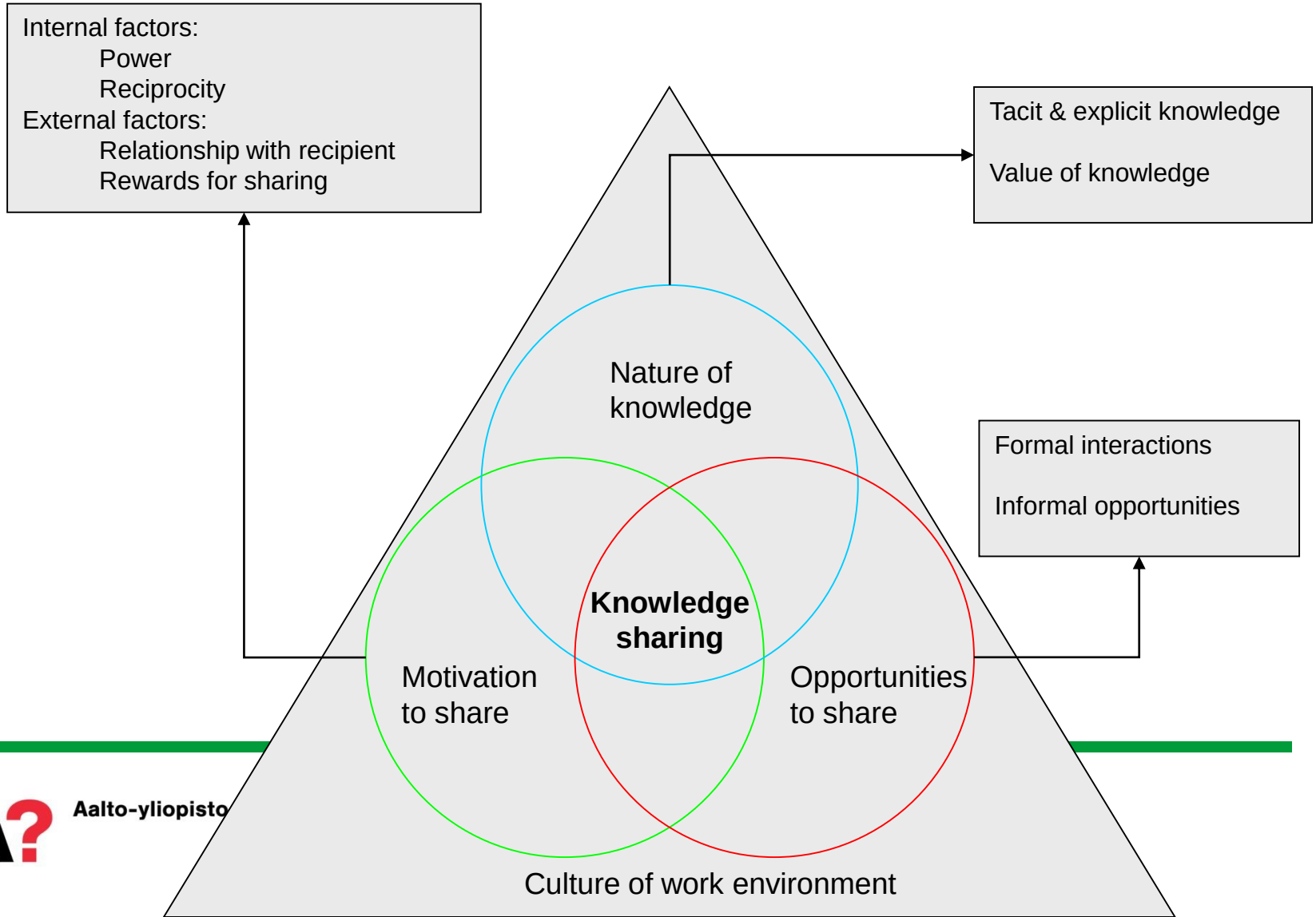
Two aims of knowledge sharing (Thomas et al. 2001)

- Instrumental communication (and knowledge sharing) improves efficient use of knowledge and competence resources
  - Aims at delivering messages that are needed to accomplish job-related tasks.
  - The forms and media of instrumental communication are usually preplanned.

- Expressive communication (and knowledge sharing) improves trust and social capital
  - Is used for sharing different types of experiences, for nurturing friendship, for getting to know others, etc.

Knowledge sharing between individuals

(Ipe 2003)



Factors influencing knowledge sharing (1)

Nature of knowledge

- Tacit or explicit knowledge
- Embedded or rationalized knowledge
- Value of knowledge
  - Commercial value, linked to status, career, reputation etc

Motivation to share knowledge

- Internal factors:
  - Perceived power
  - Reciprocity: kn sharing is expected to be beneficial
- External factors
  - Relationship with recipient: trust, and power and status of the recipient
  - Rewards for sharing: formal rewards vs. intrinsic rewards

Factors influencing knowledge sharing (2)

Opportunities to share knowledge

- Formal opportunities
  - Formal interactions, purposive learning channels
  - Training programs, structured work teams, formal meetings, techology-based systems, etc.
  - Sharing mainly explicit knowledge

- Informal opportunities
  - Relational learning channels
  - Most knowledge is shared in informal settings
  - Face-to-face communication, communities of practice, informal networks, etc.

Factors influencing knowledge sharing (3)

Culture of the work environment

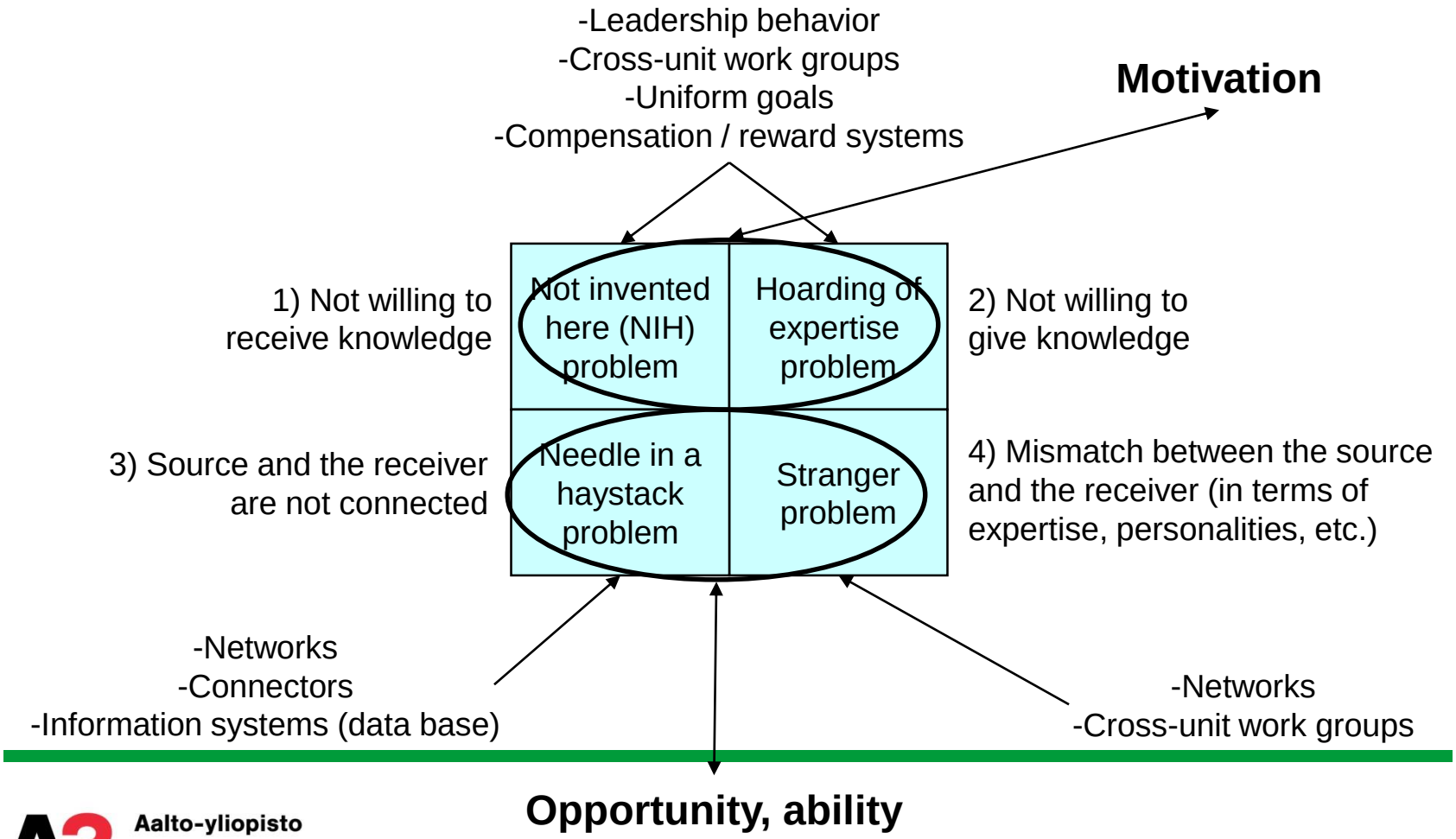
- Organizational culture is one of the major barriers/facilitators for effective knowledge sharing
- Is related to what knowledge is considered important
- Controls knowledge sharing between individuals, groups, and organizational levels
- Creates context for knowledge sharing
- Determines norms and practices for knowledge sharing

Relationships between factors influencing knowledge sharing

- Nature of knowledge, motivation to share, and opportunities to share are embedded in the culture of the work environment

- Organizational culture affects the value of knowledge, relationships and rewards, and formal and informal opportunities of knowledge sharing

Barriers of knowledge flow (~transfer) within an organization (Hansen & Nohria 2004)



“Three dozen knowledge sharing barriers” (Riege 2005)

- **Individual barriers including e.g.:**
  - Differences in experience levels;
  - Lack of trust between people because they may misuse knowledge or take unjust credit for it;
  - Age, gender, lack of social networks
- **Organizational barriers including e.g.:**
  - Physical work environment and layout of work areas restrict effective sharing practices;
  - Communication and knowledge flows are restricted into certain directions (e.g. Top-down);
- **Technological barriers including e.g.:**
  - Lack of compatibility between diverse IT systems and processes;
  - Reluctance to use IT systems due to lack of familiarity and experience with them;
  - Lack of technical support and/or training to use IT systems

Typical features of these barriers (Riege 2005)

- **Individual barriers**
  - knowledge sharing barriers are often related to factors such as lacking communication skills and social networks, differences in national culture, overemphasis of position statuses, and a lack of time and trust.
- **Organizational barriers**
  - barriers tend to be linked to, for instance, the economic viability, lack of infrastructure and resources, the accessibility of formal and informal meeting spaces, and the physical environment.
- **Technological barriers**
  - barriers seem to correlate with factors such as the unwillingness to use applications due to a mismatch with need requirements, unrealistic expectations of IS/IT systems, and difficulties in building, integrating and modifying technology-based systems.

Advantages and disadvantages of converting tacit knowledge into explicit knowledge

- **Advantages**
  - Knowledge can be stored into organizational database where it is easily available to other members of an organization
  - More economical to transfer
  - Knowledge remains in organization even when people leave

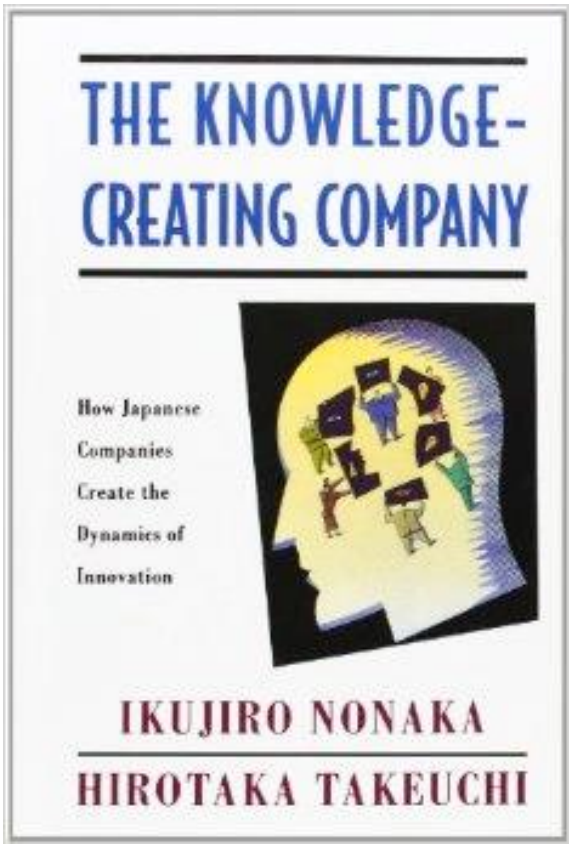
- **Disadvantages**
  - Takes time to convert tacit knowledge into explicit form
  - Explicit knowledge leaks easier to the competitors
  - Loss of richness

Difficulties to share tacit knowledge

- Perception
- Language
- Time
- Value
- Distance

”The knowledge creating company”

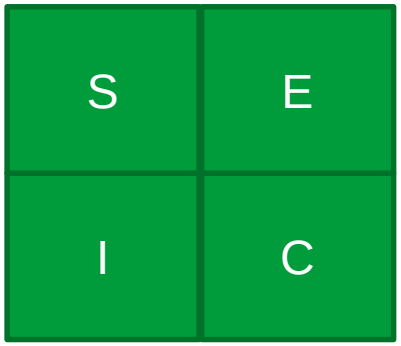
- Nonaka, 1991, Nonaka and Takeuchi, 1995, Nonaka, Toyama and Konno, 2000, Nonaka & Tokyama, 2002
- ”How Japanese companies create the dynamics of innovation”
- ”The best Japanese companies offer a guide to the organizational roles, structures and practices that produce continuous innovation”
- Model of knowledge creation



Creation of new knowledge: Knowledge conversion model (SECI-model)

- Knowledge is created through interactions
  - among individuals and/or
  - between individuals and their environment

- Continuous process
  - S=Socialization
  - E= Externalization
  - C=Combination
  - I=Internalization



Tacit and explicit knowledge

Tacit knowledge

- Highly personal
- Hard to formalise
- Context-specific
- Subjective insights, intuititions, hunches
- Deeply rooted in actions, procedures, routines, commitment, ideals, values and emotions
- Difficult to communicate to others; is an analogue process that requires ”simultaneous processing”

Explicit knowledge

- Formal
- ”Objective”
- Codifiable
- Can be expressed in formal and systematic language
- Can be shared in the form of data, scientific formulae, manuals, etc
- Can be processed, transmitted, stored relatively easily

(modified from Nonaka and Takeuchi 1991, 1995, Polanyi 1966, Nonaka, Toyama & Konno, 2000)

Model of knowledge creation

1. SECI process: knowledge creation through knowledge conversion between tacit and explicit knowledge

   (S=socialization, E=externalization, C=combination, I=internalization)

2. Ba, the shared context for knowledge creation

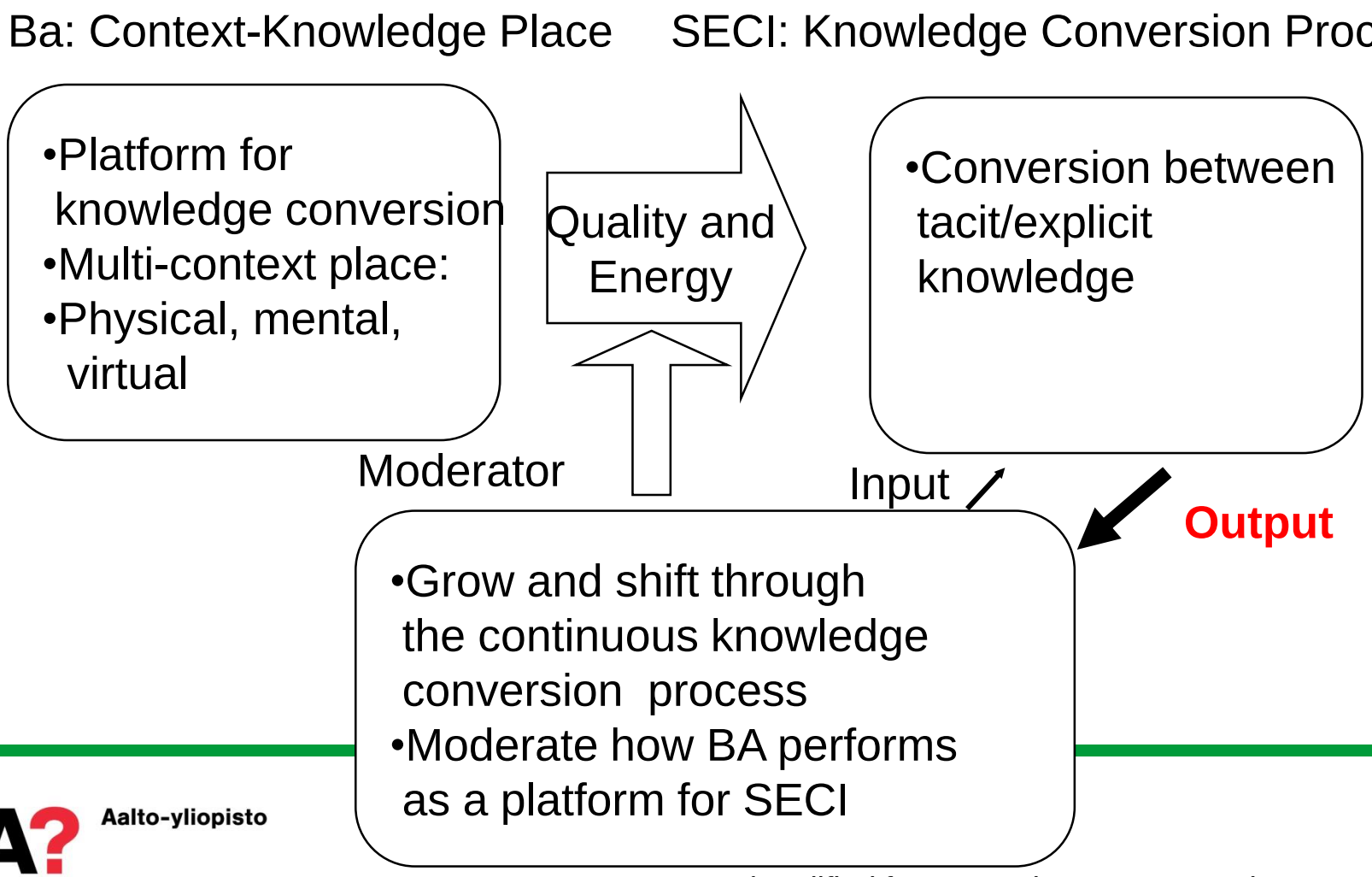
   Ba: place

3. Knowledge assets

   - the inputs, outputs, and moderators of the knowledge creating process

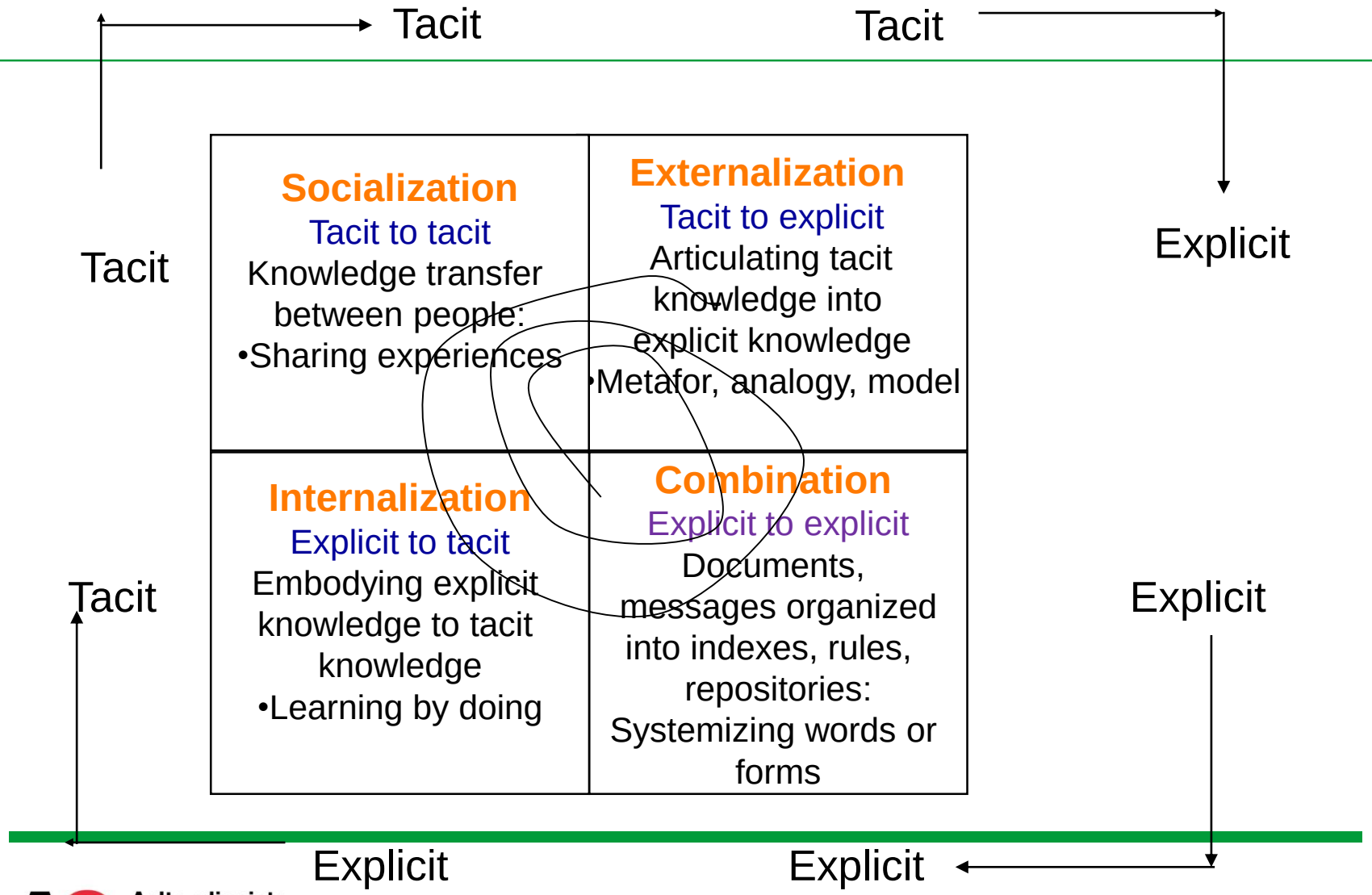
(Nonaka 1991, Nonaka and Takeuchi, 1995, Nonaka, Toyama and Konno, 2000)

Three elements of knowledge creating process



(modified from Nonaka, Toyama and Konno, 2000)

Four modes of knowledge conversion: SECI-PROCESS



Socialization

S

A process of converting new tacit knowledge through shared experiences

- Sharing the same experience, e.g. being together, living in the same environment
- From individual to individual

Examples:

- Traditional apprenticeship, learning by hands-on experiences
- Informal meetings at the workplace and outside the workplace
- Interacting with partners, customers and suppliers
- Searching outside the firm; new strategies, market opportunities
- Demonstrations

Externalization

E

- A process of articulating tacit knowledge to explicit knowledge
  - Dialog: sharing of mental models
  - Sequential use of metaphor, analogy and model
  - From individual to group
- Metaphor
  - use of imagination and symbols
  - can combine different contexts and experiences
- Analogy
  - reconciling contradictions, making distinctions
- Model
  - concepts transferable through consistent and systematic logic

Combination/systematization

C

- A process of converting explicit knowledge to more complex and systematic set of explicit knowledge

- Knowledge is collected from inside and outside of an organization

  --> Combined, edited, or processed to form of new knowledge

  --> Disseminated among organizational members
- From group to organization
- Operationalization of concepts, e.g. company vision

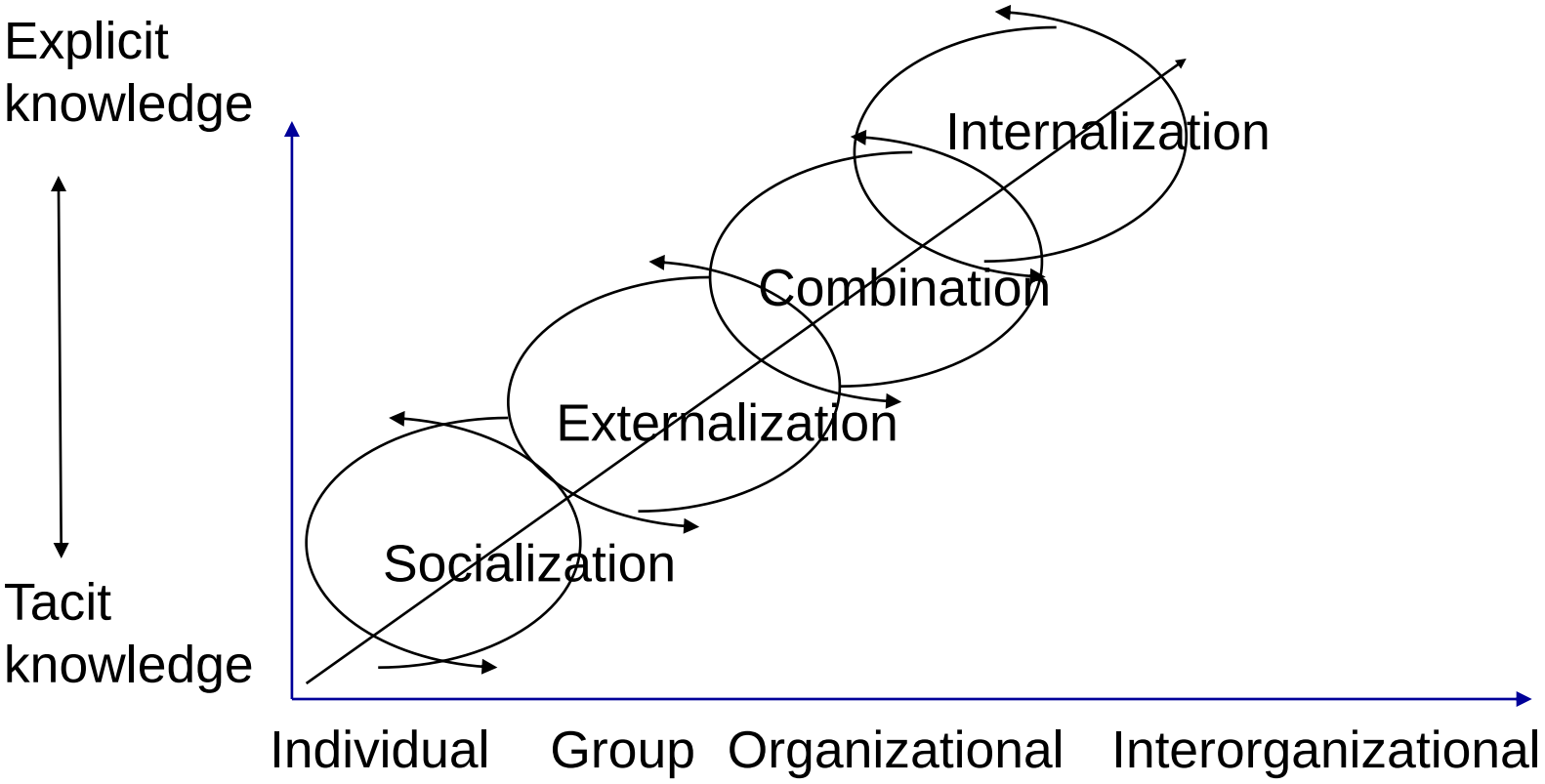
- Use of ICT: communication tools, and databases

Internalization

- A process of embodying explicit knowledge to tacit knowledge
- Explicit knowledge is shared throughout the organization
- Converted into tacit knowledge by individuals
- From organization to individual
- Related to learning by doing
- Examples:
  - Training programs
  - Reading documents
  - Simulations, experiments

- Shared mental models, technical know-how: --->
- Valuable knowledge assets -----> new knowledge spiral

Knowledge creation as a knowledge spiral



KNOWLEDGE LEVEL

(modified from Seufert et al. 1999)

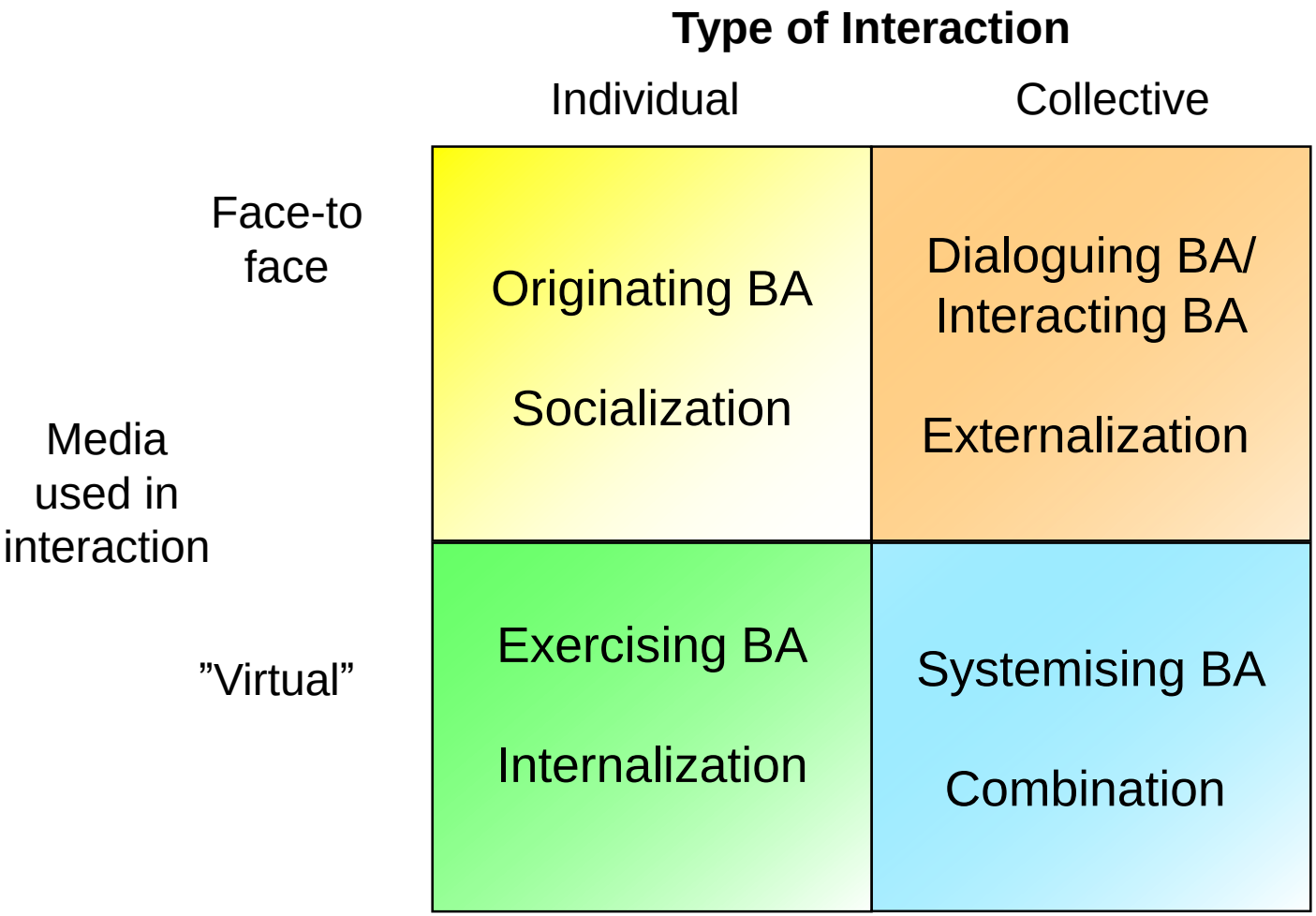
BA: Shared context for knowledge creation

“BA” (place)

- by Japanese philosopher Kitaro Nishida (1921, 1970), further developed by Shimizu (1995, 1999)
- Shared context in which knowledge is shared, created, and utilized
- Provides energy, quality, and places to perform individual conversations and to move along the knowledge spiral
- can be physical, virtual or mental
- INTERACTION

(Nonaka and Takeuchi, 1995)

Four types of BA



(Modified from Nonaka 1991, Nonaka and Takeuchi, 1995, Nonaka, Toyama and Konno, 2000)

Types of BA (1)

- **Originating Ba**
  - Necessary during the socialization
  - Individual and face-to-face interactions
  - Sharing of feelings, emotions, and experiences
  - Values supporting the transfer of tacit knowledge are care, love, trust, and commitment

- **Dialoguing/Interacting Ba**
  - Associated with externalization, context for it
  - Collective and face-to-face interactions, dialogue, reflection, sharing of mental models
  - E.g. in project teams, cross-functional teams, etc.

Types of BA (2)

- **Systemising Ba**
  - Supports combination, context for it
  - Collective and virtual interactions
  - Capturing, collecting, sorting, editing and integrating new explicit knowledge
  - ICT: groupware, databases, on-line networks, etc.

- **Exercising Ba**
  - Context for the internalization
  - Individual and virtual interactions
  - Learning by doing, mentoring, on-the job training

Knowledge assets

- Asset:
  - Firm-specific resources that are necessary to create values for the firm (Nonaka et al. 2000)

- Knowledge assets:
  - Inputs, outputs and moderating factors of knowledge-creating processes

Knowledge assets

Experiential knowledge assets Tacit knowledge shared through common experiences -Skills and know-how of individuals -Care, love, trust, and security -Energy, passion, and tension S	**Conceptual knowledge assets** Explicit knowledge articulated through images, symbols, and language -Product concepts -Design -Brand equity E
Routine knowledge assets Tacit knowledge routinized and embedded in actions and practice -Know-how in daily operations -Organizational routines -Organizational culture I	**Systemic knowledge assets** Systematized and packaged explicit knowledge -Documents, specifications, manuals -Database -Patents and licenses C

Summary: Knowledge sharing… (1)

- Transfers individuals' knowledge to the organizational level
- Leads to the dissemination of innovative ideas
- Is critical to creativity and innovation

- Contributes to both individual and organizational learning
- On organizational level knowledge is converted into economic and competitive value for the organization

Summary: Knowledge sharing… (2)

A variety of factors influence on knowledge sharing:

- Type of knowledge
- Individual factors
- Organizational factors
- Tools to share knowledge

- Depending on context, different factors are emphasized
- In promoting and developing knowledge sharing, both general, common factors affecting knowledge sharing and the context need to be taken into account

Readings (1)

- Delphi Group (2004) Information Intelligence: Intelligent Classification and the Enterprise Taxonomy Practice (06/01/2004).
- Granovetter M.S. (1973) The strength of weak ties. American Journal of Sociology, vol. 78(6) 1360-1380.
- Haldin-Herrgard T. (2000) Difficulties in Diffusion of Tacit Knowledge in Organizations. Journal of Intellectual Capital, vol. 4 (1), 357-365.
- Hansen M. (2002) Knowledge Networks: Explaining Effective Knowledge Sharing in Multiunit Companies. Organization Science, Vol. 13 (3), pp. 232–248.
- Hansen M.T. (1999) The search-transfer problem: the role of weak ties in sharing knowledge across organization subunits. Administrative Science Quarterly, vol. 44, 82-111-
- Hansen M. & Nohria N. (2004) How to build collaborative advantage. MIT Sloan Management Review, Fall, 22-30
- Ipe M. (2003) Knowledge Sharing on Organizations: A Conceptual Framework. Human Resource Development Review, Vol. 2 (4), 337-35
- Nonaka I. (1994) A Dynamic Theory of Organizational Knowledge Creation. Organization Science, Vol. 5 (1), 14-37
- Nonaka I. & Konno N. (1998) The Concept of "Ba": Building a Foundation for Knowledge Creation. California Management Review, vol. 40 (3), 40-54.
- Nonaka I., Toyama R. & Konno N. (2000) SECI, Ba, and Leadership: a Unified Model of Dynamic Knowledge Creation. Long Range Planning, vol. 33 (1), 5-34.
- Nonaka, I. & Takeuchi H. (1995) The Knowledge-creating Company: How Japanese Companies Create the Dynamics of Innovation. Oxford University Press, New York..

Readings (2)

- Riege A. (2005) Three-dozen knowledge-sharing barriers managers must consider. Journal of Knowledge Management Vol. 9 (3), 18-35
- Ruggles R. (1998) The State on the Notion: Knowledge Management in Practise. California Management Review, vol. 40 (3), 80-89.
- Seufert, A., von Krogh, G. & Bach, A. (1999) Towards knowledge networking. J. of Knowledge management, 3 (3), 180-190.
- Thomas J., Kellogg W. & Erickson T. (2001) The knowledge management puzzle: Human and social factors in knowledge management. IBM Systems Journal, Vol. 40 (4), 863-884
- Watson S. & Hewett K. (2006) A Multi-Theoretical Model of Knowledge Transfer in Organizations: Determinants of Knowledge Contribution and Knowledge Reuse. Journal of Management Studies, Vol. 43 (2), 141-173

Työskentely ryhmässä tehtävän harjoituksen parissa