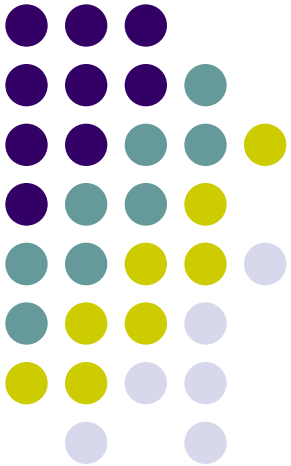
Knowledge Management Model

Lecture #3



Suryo Widiantoro, ST, MMSI, M.Comm(IS)

Lecture Objective

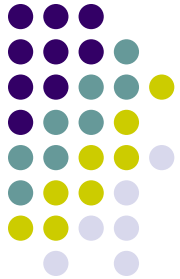
Students can explain various theoretical models of Knowledge Management and relate Knowledge Management framework to stages in Knowledge Management cycles

Basic Thoughts

- Knowledge is subjective, complex, and dynamic, so that it needs a holistic knowledge management approaches
- Measurements are needed to monitor the progress to achieve desired benefits from knowledge management implementation
- Knowledge could enable innovation on products, services, and systems

Basic Thoughts

From Data to Knowledge



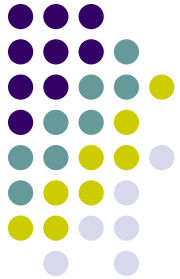
Data → a collection of objective facts on an event

Information → a message in the form of document, audio, or visual communication

Knowledge → a combination of experience, value, contextual information, and expert point of view as an evaluation foundation to produce new experience and information

Basic Thought

80/20 rule

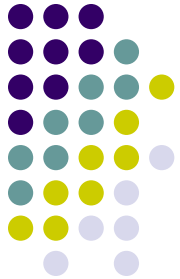


- *Tacit knowledge* → difficult to translate formally, personally, difficult to communicate, and is root of all knowledge (80%)
- *Explicit knowledge* → has been codified, expressed formally, easy to be shared and stored, can be stated using words and algorithms, but only contains little knowledge (20%)

KM Model

- Represents holistic approach to knowledge management
- Has been reviewed, critized, and discussed extensively
- Has been implemented and tested for reliability and validity

Model of Organizational Epistemology
von Krogh and Roos



- Knowledge resides both in the individual of an organization and in the relations between individuals at the social level
- There can be no knowledge without a knower
- Need to maintain links between the knowledge objects and those who are knowledgeable about them

Model of Organizational Epistemology
von Krogh and Roos

KM success factors in organization:

1. Individual mindset
2. Communication in organization
3. Organizational structure
4. Relationship between members
5. Human resource management

Model of Organizational Epistemology
von Krogh and Roos

Knowledge enabling → overall set of organizational activities that positively affect knowledge creation

By facilitating relationships and conversations, sharing local knowledge throughout organization

Knowledge Spiral Model

Nonaka and Takeuchi

Knowledge (tacit and explicit) and sharing knowledge, both are needed to create knowledge and produce innovation

Key success factors for Japanese company innovation is tacit approach on knowledge management

Knowledge Spiral Model

Nonaka and Takeuchi

Knowledge creation process:

- Started from individual
- Personal/private knowledge
- Translated into public organizational knowledge available for others
- Process is continual, interactive, and spiraling – interaction between tacit and explicit knowledge

Knowledge Spiral Model

Nonaka and Takeuchi

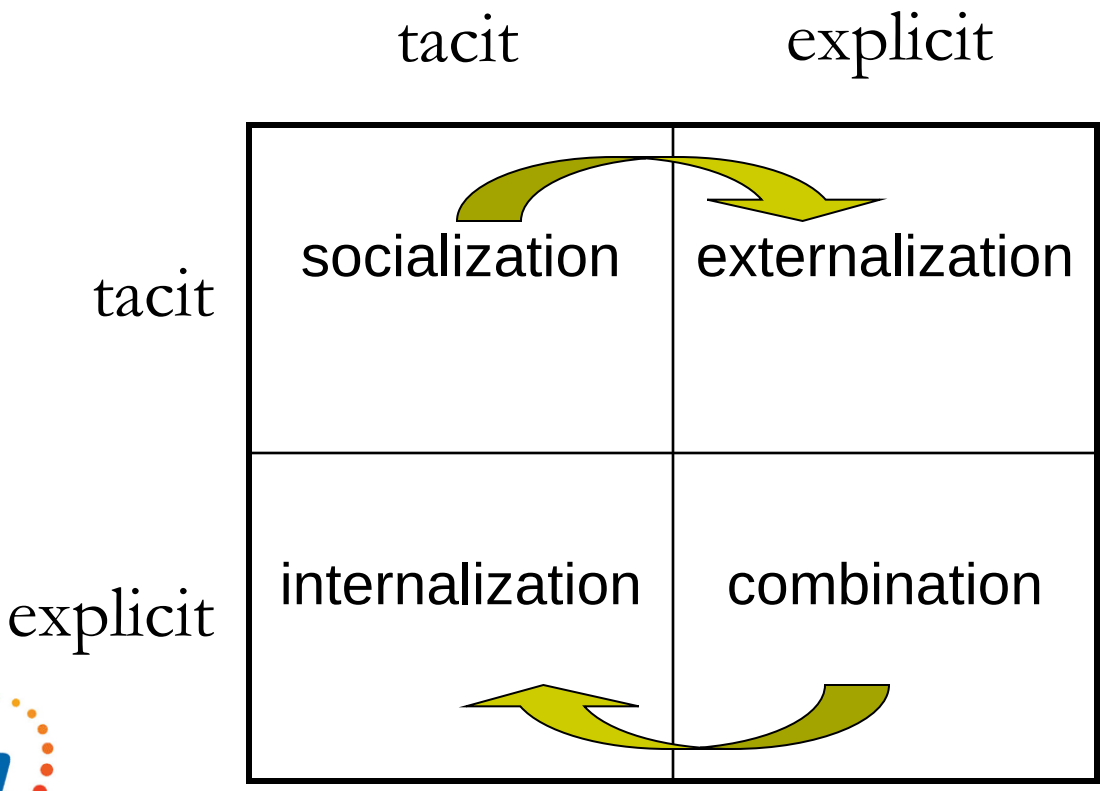
Knowledge conversion:

1. Tacit → tacit = socialization process
2. Tacit → explicit = externalization process
3. Explicit → explicit = combination process
4. Explicit → tacit = internalization process

Knowledge Spiral Model

Nonaka and Takeuchi

Knowledge conversion diagram:



Knowledge Spiral Model

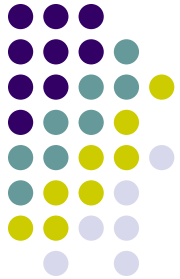
Nonaka and Takeuchi

Socialization process:

- Knowledge shared directly
- Knowledge is still tacit
- Example: brainstorming

Knowledge Spiral Model

Nonaka and Takeuchi

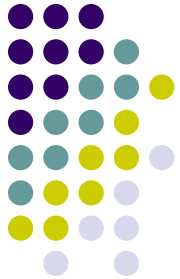


Externalization process:

- Delivers a tangible form of tacit knowledge
- Needs an intermediation to transform knowledge
- Example: journalist

Knowledge Spiral Model

Nonaka and Takeuchi

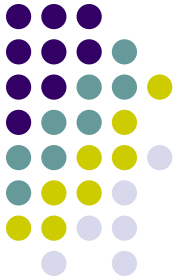


Combination process:

- Combines pieces of explicit knowledge into a new form
- Knowledge is sequenced and systemized in a knowledge systems
- Example: presentation

Knowledge Spiral Model

Nonaka and Takeuchi



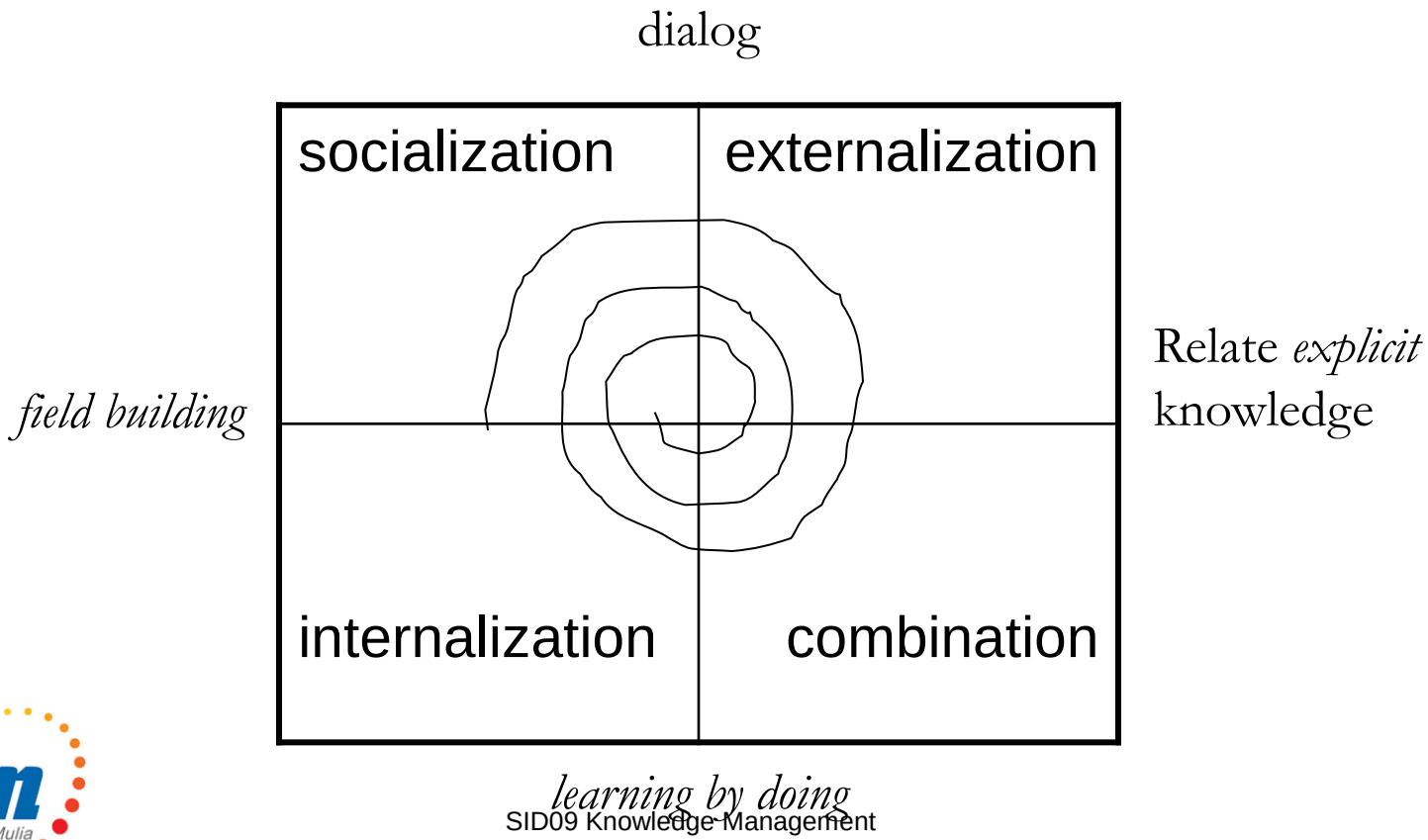
Internalization process:

- *Learning by doing*
- Transforms shared knowledge and experiences into a individual mental model as a basis for tacit knowledge
- Example: database systems

Knowledge Spiral Model

Nonaka and Takeuchi

Knowledge Spiral:



KM Sense-Making Model

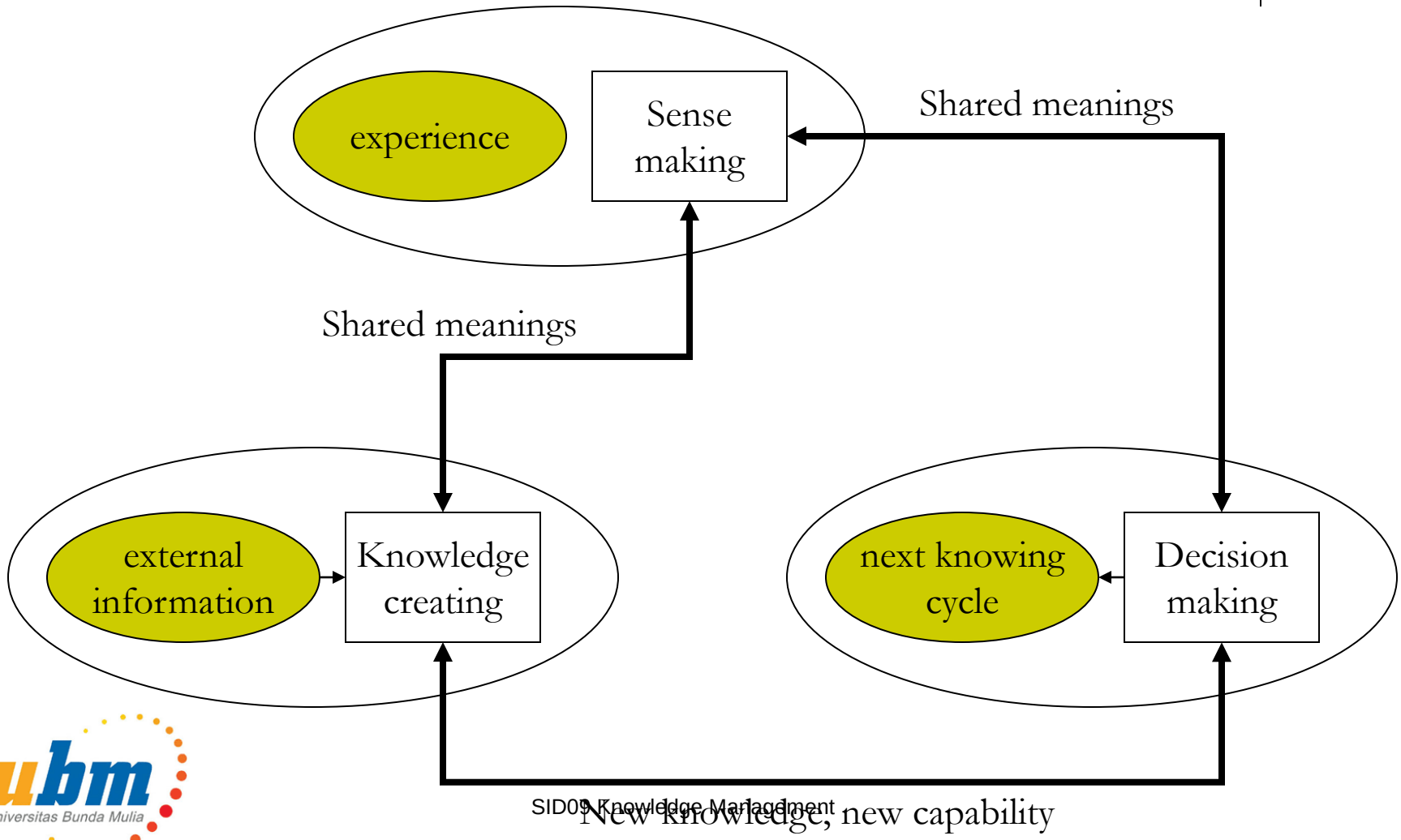
Choo

Model stresses the importance of *sense-making*, *knowledge creation*, and *decision making*

How information elements are selected and subsequently fed into organizational actions

KM Sense-Making Model

Choo



Model for Building & Using Knowledge
Wiig

Knowledge should be organized to be useful and valuable

Wiig model's dimensions:

1. Completeness-*relevansi knowledge*
2. Connectedness-*relasi antar knowledge*
3. Congruency-*konsistensi*
4. Perspective & purpose-*point of view*

Model for Building & Using Knowledge
Wiig

Semantic networks → used to represent various point of views on an object/same content of knowledge

Model for Building & Using Knowledge
Wiig

Three forms of knowledge:

1. Public knowledge – explicit, available
2. Shared expertise – held by knower and shared in works
3. Personal knowledge – tacit, least accessible

Complex Adaptive Systems Model

ICAS (*intelligent complex adaptive system*) views organization as an intelligent complex adaptive systems

CAS consists of independent agents interacted each others locally

Complex Adaptive Systems Model

Key process in ICAS model:

1. Understanding
2. Creating new ideas
3. Solving problems
4. Making decisions
5. Taking action to achieve desired results

Thank you !

This is the end of today's lecture