

Knowledge Managment

Background and Selected Concepts

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Possible KM perspectives

- **KM** may be a marketing framework
- **KM** may be an application field for ICT and ICT-based tools and systems
- **KM** may be an integrative perspective with high ambitions
- **KM** may be choice of paradigm
- **KM** may be a R&D field with a row of unsolved technical and organizational challenges

Individual knowledge vs Organizational knowledge

Individual knowledge

- *Knowledge* as static assets of facts, experience, familiarity coordinated in one's head
- *Information* as knowledge growth or potential knowledge growth
- *Data* as symbolic representations of information or knowledge

Individual knowledge vs Organizational knowledge

Organizational knowledge

- *Knowledge* as the repository of facts, know-how, competencies, reflections coordinated **in the organization**
- *Knowledge-based assets* as the total repository of **structural** and **intangible** knowledge assets
- *Information* might not add to any individual's knowledge, as long as it adds to the organizational knowledge

Where is "the knowledge"?

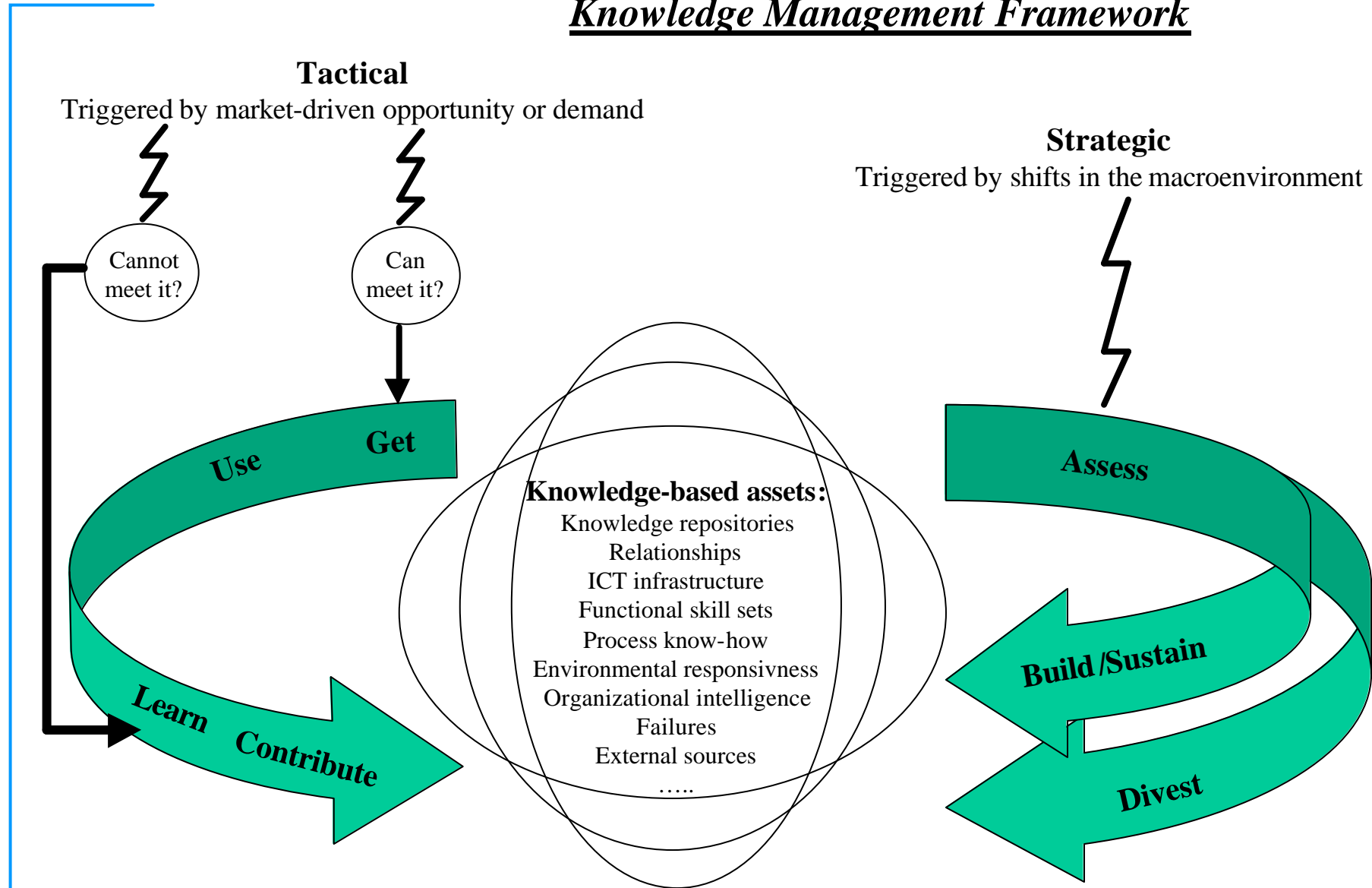
"Knowledge resides in the user and not in the collection [of information]. It is how the user reacts to a collection of information that matters."

Churchman, C.W. (1971). The Design of INQUIRING SYSTEMS: Basic Concepts of Systems and Organization, Basic Books, New York, NY, p. 10.

KM objectives

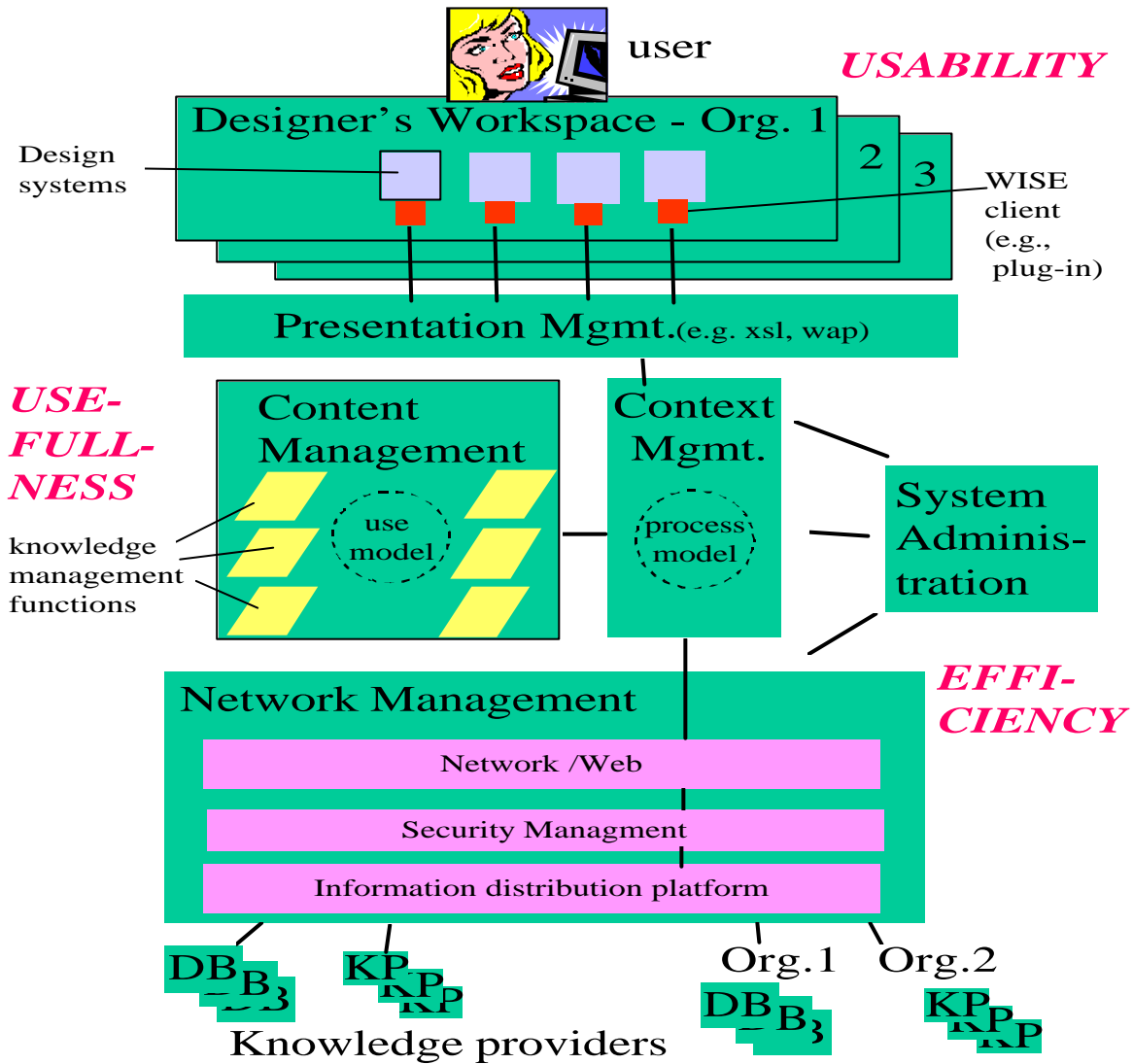
- Support knowledge based work for higher efficiency and/or better quality in the innovation
- Using knowledge for best replication
- Maintain and develop the organisations' knowledge repository as independently as possible of workforce turnover (diffusion / absorption)
- Open new possibilities for knowledge based services - commercialization of knowledge

Knowledge Management Framework



Structural Knowledge Assets

- Product and services
- Systems and procedures
- Operating practices
- Management practices
- Organizational structure
- Technology
- Patents and licenses
- Knowledge bases
- Permission
- Education and training programs
- ..



Literature

On Knowledge:

- March, J.G.: The Pursuit of Organizational Intelligence
- Rolf, Bertil: Profession, tradition och tyst kunskap

On Knowledge Management:

- [Johannessen, J.A., J. Olaisen, B. Olsen: Mismanagement of Tacit Knowledge](#)
- Liebowitz, J.: Knowledge Management Handbook
- Harvard Business Review on Knowledge Management
- Sveiby, K.E.: The New Organizational Wealth
- Bukowitz, W.R. & R.L. Williams: The Knowledge Management Fieldbook

Research

In Norway:

- [SINTEF: Institute of Industrial Management: Dept. of Knowledge and Strategy](#)
- [Norwegian School of Management: Dept. of KM](#)

Elsewhere:

- [UCFC: Center for KM](#)
- [The University of Nottingham Knowledge Technology Centre](#)
- [Monash University, School of Information Management and Systems, Group of KM](#)
- [IBM's Institute for KM in Cambridge, Mass](#)
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WISE Participants

Industry partners:

- AEROSPATIALE-MATRA AIRBUS (Toulouse)
- DAIMLERCHRYSLER AEROSPACE AIRBUS (Hamburg)
- DAIMLERCHRYSLER RESEARCH (Berlin)
- NOKIA (Helsinki)

Research institutes:

- EURISCO (Toulouse)
- INTERFACE INGENIERE INFORMATIQUE (Toulouse)
- GERMAN RESEARCH CENTER FOR ART.INTELL. (Kaisersl.)
- NORWEGIAN COMPUTING CENTER (Oslo)

Universities:

- NAT. TECH. UNIVERSITY OF ATHENS (Athens)
- TECH. UNIVERSITY OF BERLIN (Berlin)
- TECH. UNIVERSITY OF HELSINKI (Helsinki)

WISE Project Goals

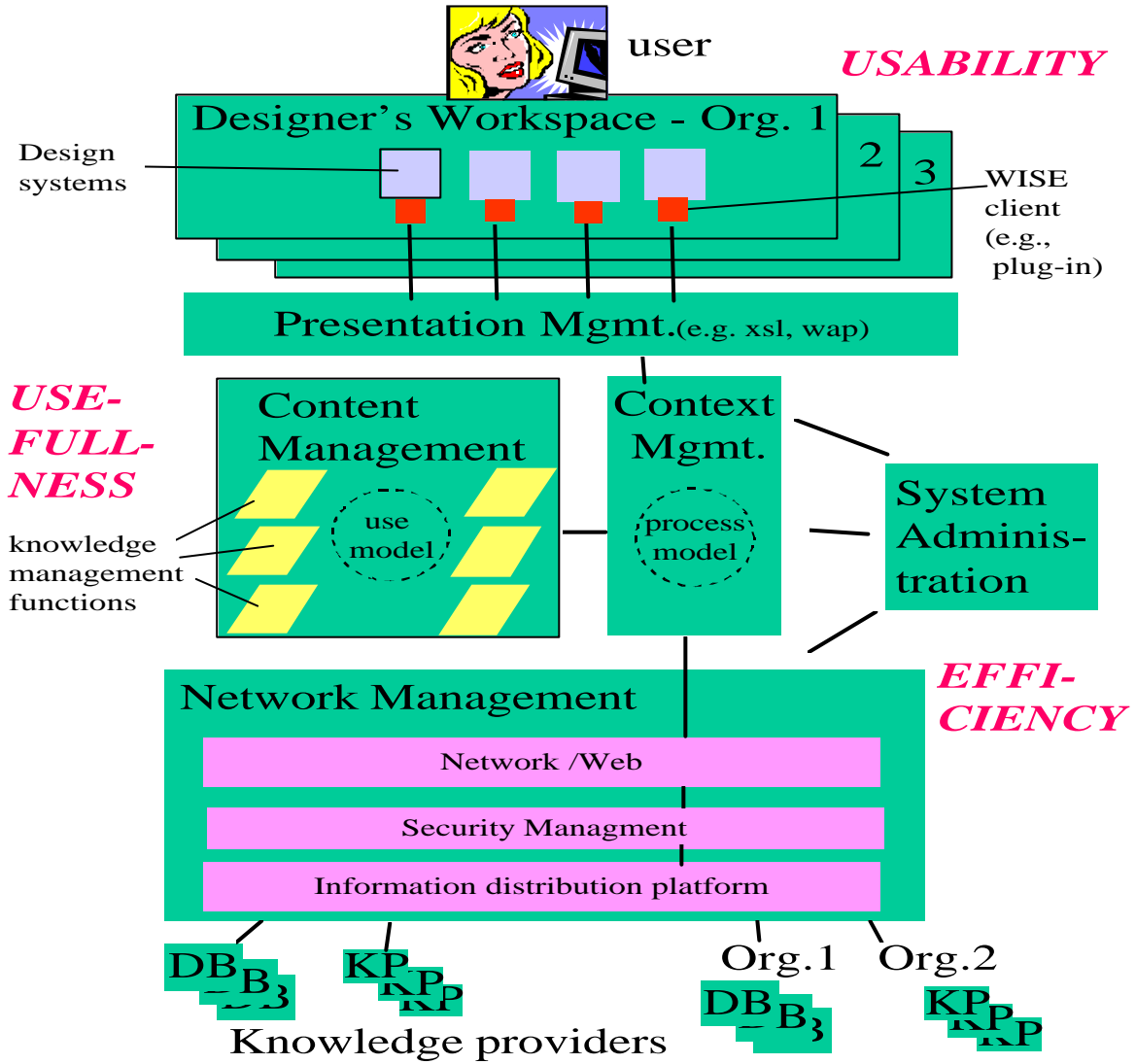
ASSIST ENGINEERS AND DESIGNERS BY

- **Actively** providing relevant information and knowledge in real-time within the actual design work space
- Creating a **networked** engineering knowledge environment (repository) within a emerging cooperative design work space

WISE Objectives

WISE will provide a platform for KM in product development and manufacturing, including processes, methods and a tools for:

- **Acquiring and storing knowledge**
relevant to product design tasks of the organisation
- **Distributing knowledge to all users**
wherever they need it (e.g. intranet, internet, mobile platforms)
- **Efficient reuse of knowledge by**
 - adequate retrieval techniques
 - adaptation of knowledge presentation to e.g. user, context, task



NR's main contributions to WISE

- Knowledge system specification
- System design and prototyping
 - Information objects
 - IT/Communication platform
 - User interaction
 - Knowledge Management Functions
- Putting into Operation

The End:

"Exploiting the informed environment means opening the information base of the organization to members at every level, assuring that each has the knowledge, skills and authority to engage with the information productively."

Zuboff, S. "The Emperor's New Workplace," *Scientific American*, 273(3), September 1995, pp. 202-204.