Introducing Knowledge Management

Lecture One – Part I
Topics

What is Knowledge Management?
What is Knowledge?
Knowledge Management Systems Lyfe Cycle
Knowledge Creation and Knowledge Management Architectures
Capture Knowledge
Knowledge Codification
Knowledge Transfer and Sharing
Knowledge codification in the Semantic Web
Exam

Discussion of a research topic
Objectives

- What is Knowledge Management (KM)?
- What are the driving forces?
- Role of KM in today’s organization
- What is Knowledge Management System (KMS)?
- Classification of Knowledge Management Systems
- Effective Knowledge Management
“Knowledge has become the key resource, for a nation’s military strength as well as for its economic strength... is fundamentally different from the traditional key resources of the economist – land, labor, and even capital...we need systematic work on the quality of knowledge and the productivity of knowledge ... the performance capacity, if not the survival, of any organization in the knowledge society will come increasingly to depend on those two factors” [Drucker, 1994]
What is Knowledge?

The Concise Oxford Dictionary [18] defines knowledge as:

- “1. a) awareness or familiarity gained by experience (of a person, fact, or thing) b) a person’s range of information.
- 2. a) a theoretical or practical understanding of a subject, language, etc. b) the sum of what is known.
- 3. true, justified belief; certain understanding, as opposed to opinion.”

This definition can be more properly described as a collection of definitions. Do they make sense? Are they compatible? How do they contribute to our understanding of Knowledge?
Knowledge Definitions in the KM literature

- “Traditionally researchers have distinguished between tacit and explicit knowledge” (Wensley [29])
- “Thus the authors argue that a complex picture of ‘everyday reality’ of organisational knowledge needs to be developed” (Shepherd et al. [30])
- “… this paper will critique the current pre-occupation of the KM literature with the duality of explicit and tacit knowledge … we argue that organisational knowledge must not be viewed as a static commodity that can be easily transferred, but as dynamic process …” (Bohm [31])
Knowledge Definitions in the KM literature

- “External knowledge [and] internal knowledge” (Andreu and Seiber [16])
- “… we take a social constructivist approach rather than seeing knowledge as something static and easily discovered …” (Bergquist [32])
- “It is suggested that the dynamic, and emergent character of the concept of knowing more accurately represents how understanding in organisations is based in processes of ongoing practice than static conceptions of knowledge” (Hislop et al. [33])
- “A common way of emphasising the human nature of much knowledge is through the notion of tacit knowledge” (Whitley [34])
- “Our instinctive skills, often, favour the fixed and the static, …” (Sharifi and Button [17])
Knowledge Definitions in the KM literature

- “There are some who question how far it is possible to convert tacit into explicit knowledge” (Marshall and Sapsed [35])
- “Much of the firm’s strategically relevant knowledge, we argue, will reside in the tacit form …” (Tovstiga [36])
- “We also suppose that knowledge systems are dynamic and organic, …” (Spender [37])
- “… organisational knowledge is much talked about but little understood” (Tsoukas [38])
What is Knowledge Management?

- Knowledge management (KM) may be defined simply as doing what is needed to get the most out of knowledge resources.

- **KM focuses on organizing and making available important knowledge, wherever and whenever it is needed.**

- KM is also related to the concept of *intellectual capital*. 
Forces Driving Knowledge Management

- **Increasing Domain Complexity**: Intricacy of internal and external processes, the rapid advancement of technology.

- **Accelerating Market Volatility**: The pace of change, or volatility, within each market domain has increased rapidly in the past decade.

- **Intensified Speed of Responsiveness**: The time required to take action based upon subtle changes within and across domains is decreasing.

- **Diminishing Individual Experience**: High employee turnover rates have resulted in individuals with decision-making authority having less tenure within their organizations than ever before.
Role of KM in Today’s Organization

- KM is important for organizations that continually face *downsizing* or *a high turnover percentage* due to the nature of the industry.

Facilitate today’s younger manager to make the tough decisions daily needed.
What is Knowledge Management “Systems”? 

- Social/Structural mechanisms (e.g., mentoring and retreats, etc.) for promoting knowledge sharing.
- Leading-edge information technologies (e.g., Web-based conferencing) to support KM mechanisms.
- Knowledge management systems (KMS): the synergy between social/structural mechanisms and latest technologies.
Classification of Knowledge Management Systems

- Knowledge Discovery Systems
- Knowledge Capture Systems
- Knowledge Sharing Systems
- Knowledge Application Systems
Effective Knowledge Management (1)

- 80% - Organizational processes and human factors
- 20% - Technology
Effective Knowledge Management (2)

- Knowledge is first created in the people’s minds.

- **KM practices must first identify ways to encourage and stimulate the ability of employees to develop new knowledge.**
Effective Knowledge Management (3)

* KM methodologies and technologies must enable effective ways to elicit, represent, organize, re-use, and renew this knowledge.
KM should not distance itself from the knowledge owners, but instead celebrate and recognize their position as experts in the organization.
State of the Notion: KM in Practice

- 1998, Broad Study of 431 Corporations
- Activities
  - Generating new K
  - Accessing K from outside
  - Using K in Decision Making
  - Embedding K in work
  - Representing K in technology
  - Facilitating K growth
  - Transferring K
  - Measuring K (p 81)
KM Efforts Underway

- Generating new knowledge: 46%
- Accessing valuable knowledge for external sources: 34%
- Using accessible knowledge in decision-making: 30%
- Embedding knowledge in processes, products, and/or services: 29%
- Representing knowledge in documents, databases, software, etc.: 27%
- Facilitating knowledge growth through culture and incentives: 19%
- Transferring existing knowledge into other parts of the organization: 13%
- Measuring the value of knowledge assets and/or impact of knowledge management: 4%

% of respondents
That’s All?
Accomplishing KM

How can any one, any group do all these?

Is the *Journey* the Reward?

Making people aware of Knowledge helps to establish KM.

Focus on rewarding and acknowledging KM work.
KM Project Priorities

- Creating an intranet: 25% (47% of respondents)
- Data warehousing/creating knowledge repositories: 24% (33%)
- Implementing decision-support tools: 20% (33%)
- Implementing groupware to support collaboration: 11% (33%)
- Creating networks of knowledge workers: 15% (30%)
- Mapping sources of internal expertise: 18% (33%)
- Establishing new knowledge roles: 15% (9%)
- Launching new knowledge-based products or services: 14% (19%)
- Planned Projects

% of respondents: 10 20 30 40 50 60 70 80 90 100
KM & KMS Challenges

- Is it possible to get beyond a buzzword?
- Can technology solve everything?
- Can people solve everything?
- Can organizations and groups solve everything?

Of Course Not
KM Difficulties

1) Changing people’s behavior - 56%
2) Measuring the value and performance of knowledge assets - 43%
3) Determining what knowledge should be managed - 40%
4) Justifying the use of scarce resources for knowledge initiatives - 34%
5) Mapping the organization’s existing knowledge - 28%
6) Setting the appropriate scope for knowledge initiatives - 24%
7) Defining standard processes for knowledge work - 24%
8) Making knowledge available - 15%
9) Overcoming technological limitations - 13%
10) Identifying the right team/leader for knowledge initiatives - 12%
11) Attracting and retaining talented people - 9%

% of respondents
KM Barriers

1) Culture: 54%
2) Top management’s failure to signal importance: 32%
3) Lack of shared understanding of strategy of business model: 30%
4) Organizational structure: 28%
5) Lack of ownership of the problem: 28%
6) Non-standardized process: 27%
7) Information/communication technology restraints: 22%
8) Incentive system: 19%
9) Staff turnover: 8%
10) Configuration/physical features of workspace: 5%
A new view of KM

- Technology
- Users
- Organizations
KM as a Network

* Networking metaphors are apt
  * Routing (around damage)
  * Frequency
  * Latency
  * Information Gain
  * Entropy
  * Chaos and Complexity Theory

* The whole is greater than the sum of its parts.
  * is the greater than Knowledge?
End of Part One