# Knowledge Management

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# Overview

- What is knowledge management?
- Why has knowledge management been so difficult to define?
- How did we get to where we are?
- Convergence Model
- Implications
- Where to from here?

# What Is Knowledge Management?

- Idea of "managing" knowledge is very abstract.
- Evolving concept
- Global phenomenon
- Shift to knowledge-based economy
- Knowledge: Explicit and Tacit
- Interdisciplinary
- Technology—especially the Web—has been an enabler.
- Organizational complexity: Increasingly complex jobs and need to improve work processes
- Yesterday's success can become today's liability!

# Knowledge Management Umbrella

- Workflow
- E-mail
- Document control and distribution
- Performance support
- Best practices
- Collaborative computing
- Intranets
- Extranets
- E-business
- Customer relationship management
- Business intelligence
- Data mining
- Knowledge portals
- Organizational learning

# What Is KM? Definitions

- *"The broad process of locating, organizing, transferring, and using the information and expertise within an organization."*

- *"Knowledge management is a conscious strategy of getting the right knowledge to the right people, at the right time and helping people share and put information into action in ways that strive to improve organizational performance."*

American Productivity & Quality Center

# What Is KM? Definitions

The Gartner Group defines knowledge management as:

> *…a discipline that promotes an integrated and collaborative approach to the process of information asset creation, capture, organization, access and use. Information assets include databases, documents, and most importantly, the uncaptured, tacit expertise and experience resident in individual workers.* [i]

[i] J. Bair, Knowledge Management Is About Cooperation and Context, *Gartner Group Advisory Services* (May 14, 1998), CD-ROM (Cambridge, MA: Gartner Group Inc., 1998).

# What Is KM? Definitions

- In his book, Bill Gates describes KM this way:

  *Knowledge management as I use it is not a software product or a software category. Knowledge management doesn't even start with technology. It starts with business objectives and processes and a recognition of the need to share information. Knowledge management is nothing more than managing information flow, getting the right information to the people who need it so that they can act on it quickly. It goes back to Michael Dertouzos' idea that information is a verb, not a static noun. And knowledge management is a means, not an end.*

# What Is KM? Definitions

- An article in *Harvard Management Update* defines knowledge management simply *as a formal, directed process of figuring out what information a company has that could benefit others in the company, then devising ways of making it easily available.*[i]
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[i] Do We Know How to Do That? Understanding Knowledge Management. *Harvard Management Update* (February 1999) V4N2, p1.

# What Is KM? Definitions

- Knowledge Management according to Daniel Tkach, IBM worldwide marketing manger for Knowledge Management Solutions (www.kmmag.com):

  *Knowledge management is a discipline used to systematically leverage expertise and information to improve organizational efficiency, responsiveness, competency and innovation. Systematically means that the discipline does not rely on just water cooler conversations, but on planned processes, technology and behaviors. Knowledge management leverages all the key resources that a company has already and that can be put to use in a more effective way.*

# What Is KM? Definitions

- Thomas Bertels provides the following definition of KM (http://www.km-forum.org/what_is.htm):

  *Knowledge management is the management of the organization towards the continuous renewal of the organizational knowledge base--this means e.g. creation of supportive organizational structures, facilitation of organizational members, putting IT-instruments with emphasis on teamwork and diffusion of knowledge (as e.g.GroupWare) into place.*

# What Is KM? Definitions

According to Thomas Davenport (professor at the University of Texas and noted KM guru),

*Knowledge Management caters to the critical issues of organizational adaptation, survival and competence in face of increasingly discontinuous environmental change. Essentially, it embodies organizational processes that seed synergistic combinations of data and information processing capacity of information technologies, and the creative and innovative capacity of human beings.*

# What Is KM? Definitions

According to Helen Ayrton

*Knowledge management can have as many different meanings as there are uses of knowledge and information in an organization. It refers, for example, to the storage of information in knowledge bases and databases, and the archiving of specialized knowledge. It also deals with problems of access to stored corporate knowledge, and difficulties in the communication of knowledge between members of an organization. And it relates to problems of information search, both through an organization's own Intranet and globally on the Internet.*

# What Is KM? Definitions

*"Knowledge management (KM) is a newly emerging, interdisciplinary business model that has knowledge within the framework of an organization as its focus."*

Elias M Awad and Hassan M. Ghaziri, *Knowledge Management,* Prentice Hall, 2004

# Common Themes

- Understanding
- Transfer and Exchange
- Collaboration and teamwork
- Information in Action
- Human interaction
- Getting information to the right people, in the right place, at the right time.
- Facilitating learning and collaboration
- Information as an infinite resource
- Managing organizational knowledge
- Process not a technology
- Improving organizational performance
- Diffusion of knowledge
- Organizational adaptation

# What KM Is NOT

- KM is NOT reengineering
- KM is NOT a discipline
- KM is NOT a philosophic calling
- KM is NOT intellectual capital, per se
- KM is NOT based on information
- KM is NOT about data
- Knowledge value chain is NOT information value chain
- KM is NOT limited to gathering information from the company's domain experts or retiring employees and creating databases accessible by intranets.
- KM is NOT digital networks.
- KM is NOT about "knowledge capture," per se.

# From Whence We've Come?
# Back to Its Roots

- Information and Records Management IRM
- Best Practice Transfer
- Organizational Learning & Innovation
- EPSS Electronic Performance Support Systems
- Database / Data Warehousing
- Information Economics: Knowledge as an Asset
- Internet: The Information Highway

# Best Practice Transfer

1. **Best Practice Transfer**. One of the most dominant themes is the systematic transfer of best practices. According to a study conducted by the **American Productivity and Quality Center (APQC, 1996),** best practice management was the one strategy pursued by 100 percent of the firms implementing knowledge management approaches. This is the approach taken in the **O'Dell and Grayson book, *If Only We Knew What We Know*,** based on research and work with numerous Fortune 500 firms conducted by the APQC, Houston, Texas.

# Information and Records Management

2. **Information and Records Management**. KM also has roots in document management, both paper and image. Both the **Association of Information Image Management (AIIM) and ARMA, International, the former Association of Records Managers and Administrators,** have a huge presence in the knowledge management market. This approach reflects a strategic view of managing and safe guarding information resources from a corporate perspective. It is the approach reflected in the book by **Jan Duffy,** ***Harvesting Experience, Reaping the Benefits of Knowledge.***

# Organizational Learning & Innovation

3. **Organizational learning and innovation**. The concept of the learning organization is generally associated with **Peter Senge, author of *The Fifth Discipline*.** It embodies the notion that organizations as well as individuals can learn from experience, and it emphasizes the need for information sharing and collaboration. Senge defines the learning organization as "a group of people continually enhancing their capacity to create what they want to create." This is essentially a human resources approach and reflects the changing view of organizations from a mechanistic industrial era to the information age, from a structural view to a process view, from adaptive learning to generative learning. Whereas adaptive learning has to do with coping, "generative learning emphasizes continuous experimentation and feedback in an ongoing examination of the way organizations go about defining and solving problems." Generative learning, in Senge's view, "requires systemic thinking, shared vision, personal mastery, team learning, and creative tension." The concept of learning organization is increasingly relevant given the increasing complexity and uncertainty of the 21century organizational environment.

# EPSS Electronic Performance Support

4. **Electronic performance support systems (EPSS)** and computer-based training (CBT). One of the early precursors of KM is electronic performance support, the concept of just-in-time delivery of online reference, training, and help. During the 1980's hundreds of firms focused on creating online performance support and computer based training using tools such on Goal Systems Preference and Phoenix CBT authoring system. This approach is described in books such as ***Designing Electronic Performance Support Systems*** **by Gloria J. Gery and *Designing and Writing Online Documentation* by William K. Horton. Also Ruth Clark**

# Database Management & Data Warehousing

5. **Data base management and data warehousing**. Another school of thought that has received a great deal of attention is based on the methodologies related to data warehousing and data mining. This approach is represented in works such as the book by **Thomas H. Davenport and Laurence Prusak, *Working Knowledge: How Organizations Manage What They Know*** **(Harvard Business School Press, 1997, 224 pp)**

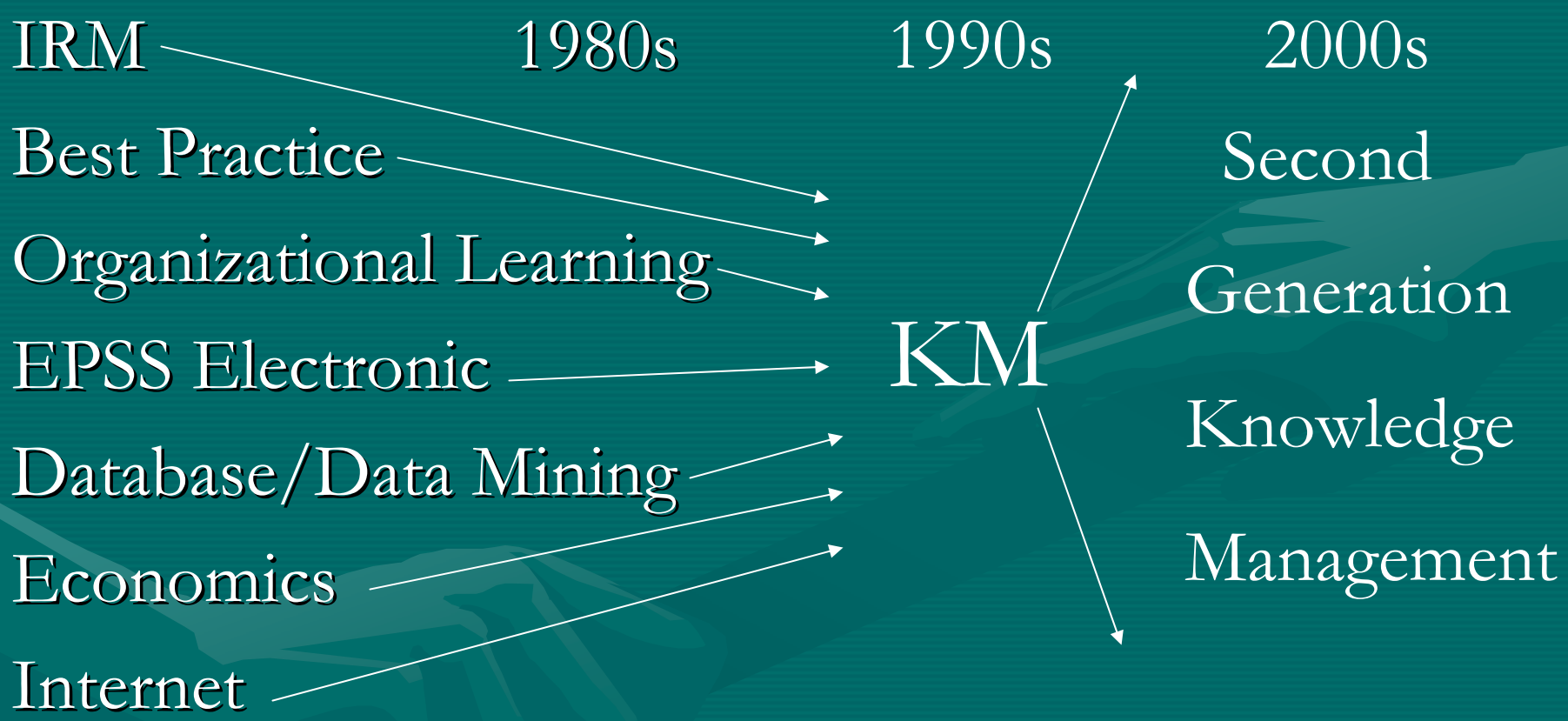
# Internet and E-Business

6. **Internet and e-business**. And more recently customer relationship management, business intelligence, portal technologies, and e-business. This appears to be the dominant focus of ***Knowledge Management Magazine*****, subtitled Business Intelligence for Strategic Decision Makers**, aimed at executives interested in organizational and technological knowledge-management strategies.

# Knowledge Economy

7. **The knowledge economy and knowledge as a corporate asset.** Another perspective is based on economic concepts related to productivity and measuring economic value in the new economy. Economists and business leaders today are concerned with whether traditional accounting and statistical models are capable of calculating the true productivity gains created by knowledge in the new economy. Recent works in this area include **Paul A. Strassmann, columnist on knowledge metrics in for *Knowledge Management Magazine* and Thomas A. Stewart, author of Intellectual Capital: The New Wealth of Organizations ( Doubleday, 1997, 240 pp).**

# Convergence
# A Synthesis NOT a Progression



# This Legacy Helps Explain

- Contradictory views
- Inconsistencies
- Multiple perspectives
- Plethora of definitions
- Uncertain directions

# Implications

Business Context

- Start with the business need
- Analyze the performance requirements

versus

Information Architecture

- Start with identifying and classifying corporate information.
- Legacy of life cycle approach

# My Definition

KM = Knowledge + Business Process

- Information tailored to business context
- Critical distinction between data or information and knowledge
- Implies human understanding and action

# Knowledge Management Systems

Knowledge + Business Process
+ Information Technology

- A wide range of tools
- Not an off-the-shelf system

# KM: Tools and Products

- Content management
- Data capture, mining, reporting, analysis, business intelligence
- Imaging and document management
- KM infrastructure technology
- Knowledge management
- Messaging, collaboration, groupware
- Portals, web services
- Search engines, agents, wizards
- Workflow, process management

# Current Directions

- The rise of the corporate portal
- Knowledge economics
- Strategic KM
- More focus on organizational behavior
- Major vendors get on the bandwagon
- Intellectual capital as a corporate asset
- Inter-organizational knowledge exchange
- Less  is more – Tailoring information access to individual use
- Outsourcing
- E-Knowledge

*KM Magazine 1999

# SGKM: Second Generation Knowledge Management

- Supply-side versus demand-side KM
- The knowledge life cycle
- Knowledge processes
- Knowledge as rules
- Knowledge structures
- Nested knowledge domains
- Organizational learning

# Alignment with Changing Organizational Concepts

- Process versus functional view (ERP Systems)
- Knowledge-based economy
- Global workforce
- Growing complexity

# Conclusions and Future Research

- Critical to work toward common definition or understanding of KM concept
  - Risk of confusing business leaders
  - Risk of losing credibility of concepts / high failure rate on projects
  - Critical to validate business value
- Convergence model useful to understanding the wide divergence in KM
- Model provides a foundation for helping sort out current and future directions.

# Future Directions?

- Wikipedia
- Blogs
- Genome collaborative database
- E-Knowledge

# Questions?

- Thanks for the opportunity to share this research.