3. Why has the subject of ”managing knowledge” emerged as a significant area of study during the past two decades?

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Dominant Business Trends

- Volatility of product-markets.
- Pervasive influence of political, social & economic environment → increasingly turbulent product-markets.
- Increasing globalization of:
  - companies
  - supply-chains
  - product-markets.
- Radical customer and client expectations.
- Dis-intermediation.
- Short-term employment associations with firms → “disenfranchised” aspirations of employees.
The objects of knowledge management

<table>
<thead>
<tr>
<th>ENTITY</th>
<th>INTANGIBLE</th>
<th>TANGIBLE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Information-as-knowledge</td>
<td>Information-as-thing</td>
</tr>
<tr>
<td></td>
<td>Knowledge</td>
<td>Data, document</td>
</tr>
<tr>
<td>PROCESS</td>
<td>Information-as-process</td>
<td>Information-processing</td>
</tr>
<tr>
<td></td>
<td>Becoming informed</td>
<td>Data processing</td>
</tr>
</tbody>
</table>

What does Knowledge Management mean to organizations?

- Exploiting external and internal information, in the form of “competitive intelligence” and “business intelligence”.
- Strengthening core competencies with information to support coordinated, real-time management action and decision-making.
- Making local knowledge available globally, to both participants in both formal and informal information systems.
- Accessing the tacit knowledge and expertise of knowledgeable decision-makers.
- Managing information overload with artificial intelligence.
“Computing eras”... and the strategic shift:
- from make-&-sell to sense-and-respond

Technology Developments

- Advances in artificial intelligence and natural language processing
- E-business infrastructure development
- Co-operation in global networking and security standards
- Real-time integration of corporate information
  - Enterprise systems
Weak Link: HUMAN ANALYST
Reasons: INSIGHT, EXPERTISE AND TIME

Dynamic, global change:
Increasingly novel areas of decision-making

Lack of Access to Information or Knowledgeable Decision-Support

Real-Time Decision-making:
Increasingly small amount of time to devote to each decision

Boundary Spanning Needs:
Local knowledge from other areas of organization
Cannot effectively coordinate decision-making with other knowledgeable decision-makers

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The promise of knowledge repositories

- Document, message and media management
- Transfer of expertise-related information
- The 3 ‘C’s: coordination, collaboration and control
- Managing complexity
- Managing knowledge in all of its forms
<table>
<thead>
<tr>
<th>CONTEXT-SPECIFIC</th>
<th>EXPlicit</th>
<th>IMPlIcIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transferable knowledge</td>
<td>Requires human apprenticeship</td>
<td></td>
</tr>
<tr>
<td>Hidden knowledge</td>
<td>Requires learning from mistakes</td>
<td></td>
</tr>
<tr>
<td>Codifiable knowledge</td>
<td>Routine and programmable decision-making</td>
<td></td>
</tr>
<tr>
<td>Discoverable knowledge</td>
<td>Requires inferences, derived from historical data</td>
<td></td>
</tr>
</tbody>
</table>

**Knowledge Management Processes**

- **Transferable knowledge** requires human apprenticeship.
- **Hidden knowledge** requires learning from mistakes.
- **Codifiable knowledge** is routine and programmable decision-making.
- **Discoverable knowledge** requires inferences, derived from historical data.

**Type of knowledge required for decision**

**CONTEXT** - SPECIFIC

- **Extent to which basis of decision is based on local knowledge**

**GENERALIZABLE**
Chief Knowledge Officer
	noun. A corporate executive in charge of structuring a company's store of technical and business knowledge, and ensuring that employees have access to that knowledge.

- "The hot new job title being batted around in information technology circles these days is chief knowledge officer."
  — Bob Weinstein, "Chief knowledge officers in big demand," Chicago Sun-Times
Why has the subject of "managing knowledge" emerged as a significant area of study during the past two decades?

- Push factors:
  - Global competition
  - Increasingly turbulent social and political environments
  - Short-term ROI
  - The emergence of “real-time” technical infrastructures

- Pull factors
  - Information vs. automation
  - IT system potential (especially Knowledge Portals and AI)
  - The desire to control knowledge “assets”
  - Increasingly distributed decision-making across the organization
  - Need to manage complexity within and external to the organization.
5. How are the concepts associated with KM and knowledge science being arranged into a stable base of knowledge, or are they continuing to be transformed?

- If unstable, what influences may be barring stability?
- Can the transformations be described in a meaningful manner?

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What is knowledge management? … *it depends* …

<table>
<thead>
<tr>
<th>IT Management Knowledge = Data Object</th>
<th>Information Management Knowledge = Basis for decisions/action</th>
<th>Organizational Management Knowledge = Basis for process improvement</th>
<th>Business Management Knowledge = Basis for value added</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Roles</td>
<td>Database Administrator, IT Manager</td>
<td>Corporate Librarian</td>
<td>Quality Improvement</td>
</tr>
<tr>
<td>Organizational Task</td>
<td>Knowledge-base admin.; KM systems “support”</td>
<td>Information and knowledge management</td>
<td>Workflow management; knowledge-flow management</td>
</tr>
<tr>
<td>New Job-Title</td>
<td>Knowledge Engineer; CIO</td>
<td>Information analyst; Chief Knowledge Officer (CKO)</td>
<td>Business process improvement specialist</td>
</tr>
</tbody>
</table>
Stability Through Knowledge Management Technologies

Create knowledge

Knowledge Work Systems

Organizational Information Systems

Artificial Intelligence & Decision-Support Systems

Group Collaboration, Coordination & Control Systems

Capture and codify knowledge

Share knowledge

Knowledge Management Education

- Integrating perspectives in a classroom setting:

Understanding of human role in knowledge cycle

Integrative needs of knowledge management

Knowledge Management

Business Management Perspective

Information Management Perspective

Organizational Management Perspective

IT Systems Support Perspective
Is technology driving the agenda?

“How do you do an enterprise-scale content repository as well as collaboration space?”
- Modeling “meta-data”: mapping the contents of email, documents, databases and knowledge-bases into one huge information portal.
- Developing user-applications that are independent of the data.

“Customers want an enterprise collaboration solution that has elements of portals, elements of team-based collaboration, and elements of knowledge management in a platform. We think the winners that are going to be standing out are going to be a broader-based platform.”

People have realized that the next generation of portals has to have a rich collaborative and KM component. Most vendors are realizing that it is easier to partner with KM vendor experts than to attempt to do this themselves.

“As people look for different ways to do business -- other than jump on a plane – KM technology applications like Intraspect are going to be top-of-mind for people. I think anyone in this collaboration space is going to be a net beneficiary because there is heightened awareness of finding creative ways to do work.”

Source: ‘Intraspect execs explain why knowledge management is critical to the enterprise’, by Michael Vizard, February 1, 2002, INFOWORLD, URL: http://www.infoworld.com/articles/hn/xml/02/02/01/020201hnintraspect.xml
Forces For Stability

- Developments in knowledge-based IT systems
- Developments in understanding how expertise is transferred
- Vendor-driven, integrated “business intelligence” systems
- Developments in understanding our limitations in managing complexity
  - e.g. knowledge management at KPMG
Forces For Instability

- Developments in artificial intelligence and the continual drive to codify tacit knowledge
- Disputes between the various perspectives on knowledge management
- Proprietary IT system vendor standards (e.g. ontologies embedded in XML)
- Faddism
- Things change … 😊
Future Directions

- **Our original interest:**
  - How are the concepts associated with KM and knowledge science being arranged into a stable base of knowledge, or are they continuing to be transformed?

- **A refined question:**
  - How will Universities challenge the market-driven, technology-vendor perspective of knowledge management?