What is Knowledge Management?


Concepts are best defined from how people use them. So let me try to define Knowledge Management by looking at what people in this field are doing. Both among KM-vendors (researchers and consultants) and KM-users (read short descriptions of what companies and other practitioners are doing) there seem to be two tracks of activities - and two levels.

**IT-Track KM = Management of Information.** Researchers and practitioners in this field tend to have their education in computer and/or information science. They are involved in construction of information management systems, AI, reengineering, group ware etc. To them Knowledge = Objects that can be identified and handled in information systems. This track is new and is growing very fast at the moment, assisted by new developments in IT.

**People-Track KM = Management of People.** Researchers and practitioners in this field tend to have their education in philosophy, psychology, sociology or business/management. They are primarily involved in assessing, changing and improving human individual skills and/or behaviour. To them Knowledge = Processes, a complex set of dynamic skills, know-how etc, that is constantly changing. They are traditionally involved in learning and in managing these competencies individually - like psychologists - or on an organisational level - like philosophers, sociologists or organisational theorists. This track is very old, and is not growing so fast.

**Level: Individual Perspective.** The focus in research and practice is on the individual.

**Level: Organisational Perspective.** The focus in research and practice is on the organisation.

A 2x2 grid might look like this:

<table>
<thead>
<tr>
<th>Knowledge Management</th>
<th>Track/Level</th>
<th>Organisation Level</th>
<th>Individual Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT-Track KM = Object</td>
<td>&quot;Re-engineers*&quot;</td>
<td>&quot;AI-specialists*&quot;</td>
<td>&quot;Psychologists*&quot;</td>
</tr>
<tr>
<td>People-Track KM = Process</td>
<td>&quot;Organisation Theorists*&quot;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Even if this grid is to oversimplify things, it captures one essential issue: There are paradigmatic differences in our understanding of what knowledge is.

The researchers and practitioners in the "Knowledge = Object" column tend to rely on concepts from Information Theory in their understanding of Knowledge.

The researchers and practitioners in the column "Knowledge = Process" tend to take their concepts from philosophy or psychology or sociology.

Because of their different origins, the two tracks use different languages in their dialogues and thus tend to confuse each other when they meet.

Personally I dislike the notion "Knowledge Management". Knowledge is a human faculty, not something that can be "managed", except by the individual him/herself. A better guidance for our thinking is therefore phrases such as "to be Knowledge Focused" or to "see" the world from a "Knowledge Perspective". To me Knowledge Management is: The Art of Creating Value from Intangible Assets.

Following the matrix above I would label myself an "Organisation Theorist". My own managerial experience and research are in how managers of organisations which produce and sell only knowledge manage their intangible assets. I call them Knowledge Organisations, and I have used epistemology for understanding what knowledge is.

**The developments 1992 - 2000**

KM, as any new concept would, is going through phases of maturity.

In the years leading up to 2000, the "IT track" has been going through three rapid phases:

1. The first phase was inward-looking, focusing on productivity issues - "How can we use IT systems to prevent reinventing-the-wheel?" This phase started around 1992 and created a multitude of project
2. The second phase was similar but now with a customer focus - "How can we leverage what we know about our customers to serve them better?" - Data warehousing was the theme of the day. The trouble with the early installations is that all they did was to create massive data and text archives of dubious value. All passive. No interaction!

3. The third phase is where we are right now (1999-2001) and interaction has reached the surface: Interactive IT web pages, e-business, e-commerce, on-line transactions etc. This phase has created a lot of enthusiasm, witness the hyped valuations of the "dot.coms" during 2000.

4. I am now looking forward to a future phase: the realisation that the key to unlocking the value of Knowledge is People. See below.

The "People-Track", although old in its theory origins, is still in its infancy when it comes to KM applications. It is the most promising because the issues are about how to maximize the ability of an organization’s people to creating new knowledge and how to build environments conducive to sharing of knowledge. The questions are "How do we maximize the knowledge created by our people? How do we create innovation enhancing environments?" In the end innovation is the only competitive advantage that companies have and it is much harder to do then investing in an IT-application. Anyone can buy a new "KM" software, but very few have the ability to create sustainable creative organisations. Investment along the People-Track involves investing in people, recruitment, the office environment etc. The bandwidth of the human infrastructure is the trust between people and between management and employees. The human infrastructure requires investment, just as the IT infrastructure does. Human infrastructure investment means money spent on people meeting each other in person, spending time on proper dialogue, creating environments without fear, etc.

Investment in human infrastructure is not understood by accounting systems still firmly rooted in the early 1900s. How do your accountants for instance treat the costs for your trip to meet and build relationships with the new staff in a recently acquired subsidiary? As a cost! How do the same accountants treat the extension of your firm's fibre optics cable network to the new office? As an investment!

Sentences such as "people are our most imported resource" repeated by tired CEO's with no imagination in Annual Reports are words only. To help managers learn how to create value from knowledge, I have developed tools (collected in www.sveibytoolkit.com), such as simulations for managing Knowledge Organisations, (TANGO and TangoNet) and a tool for measuring and presenting intangible assets, the Intangible Assets Monitor.

Now, you....

- ....are probably tired of reading! Why not join the growing group of "Nose Finders" in an exercise to explore what Knowledge is!
- .....have the option of drilling deeper into the Knowledge-Based Theory of the Firm.
- .....might be interested in reading more about whatTacit Knowledge is.
- .....might like to understand how the two concepts Knowledge Management and Intellectual Capital are related?
- .....might like to learn more about the history of Knowledge Management charted by Debra M. Amidon Rogers or the history of the Intellectual Capital concept traced by Patrick H. Sullivan.
- .....be challenged by Hirohito Takeuchi on why Western style of Knowledge Management will not succeed.
- .....can participate in an interesting on-line conversation about Knowledge Management. It is hosted by Verna Allee, one of the best practitioners in the KM-field. Her website is well worth visiting too.
- .....learn more about what the actors are doing in the field of Knowledge Management, I have collected a number of mini descriptions below.

After those small detours, you will probably realise that your company is already managing knowledge, albeit not quite so consciously and not structured in this way. This is a very important insight. Knowledge has been "managed" at least since the first humans learned to transfer the skill to make a fire. Many early initiatives to transfer skills and information can be labeled "Knowledge Management", libraries being one, schools and apprenticeships others. Librarians, teachers and master craftsmen can be called "knowledge managers". Later database managers have been added to the list. Today's new professions include Chief
Knowledge Officers, Knowledge Engineers, Intellectual Capital Directors and Intellectual Capital Controllers.

The fairly recent insight that companies can gain tremendously by applying a more structured and conscious knowledge management has given the Knowledge Capital "Movement" a forceful push. Some examples of what companies are doing are found below.

## Knowledge Management Initiatives Round the Globe

I have collected some 40 Knowledge Management Initiatives taken by companies and practitioners worldwide, which reveal how companies create value from their Intangible Assets. The initiatives are summarised under three headings for Intangible Assets, the same that are used in the Intangible Assets Monitor: the External structure, the Internal Structure, and the Competence of the People. Click on the heading in the table or the company name.

<table>
<thead>
<tr>
<th>Knowledge Management Initiatives</th>
<th>External Structure Initiatives</th>
<th>Internal Structure Initiatives</th>
<th>Competence Initiatives</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Build Knowledge Sharing Culture</td>
<td>Create Careers based on Knowledge Management</td>
<td></td>
</tr>
<tr>
<td>Offer Customers Additional Knowledge</td>
<td>Create New Revenues from Existing Knowledge</td>
<td>Create Micro Environments for Tacit Knowledge Transfer</td>
<td></td>
</tr>
<tr>
<td>Capture Individuals' Tacit Knowledge, store it, spread it and Re-use it</td>
<td>Measure Knowledge Creating Processes and Intangible Assets</td>
<td>Learn from Simulations and Pilot Installations</td>
<td></td>
</tr>
</tbody>
</table>

### External Structure Initiatives

**Gain Information and Knowledge from Customers**

**Benetton**, Italy. Produces "masscustomised" apparel to fit latest trends in colours and designs. Daily sales data from their own boutiques are integrated with CAD and CIM.

**General Electric's** Answer centre, USA: GE has since 1982 collected all customer complaints in a database, that supports telephone operators in answering customer calls. GE has programmed 1,5 million potential problems and their solutions into its system.

**National Bicycle** Industrial Company, Japan. Produces "masscustomised" bikes to fit customers exact...
height, weight and colour preferences in a day. Is achieved through computer aided design and computer integrated manufacturing integrated with customer database.

**Netscape** USA. Very close links via Internet to opinion leaders among customers, who are encouraged to report problems enable it to create new generations of software at very fast pace.

**Ritz Carlton**. All staff are required to fill in cards with information from every personal encounter with a guest. These data plus all guest requirements are stored and printed out to all staff when the guest arrives again, so that each guest receives a personal treatment.

**Offer Customers Additional Knowledge**

**Agro** Corp USA. Sells fertilisers and seed. Data on farmers« soils are combined with weather forecasts and information on crops. Analyses are fed back to the farmer via sales reps to help farmer select best combinations of crops.

**Frito-Lay** USA. Sales reps collect daily on the spot data about shelf space utilisation for all brands. Data are computed, combined with market information and re-fed to the sales reps, who use it to give the retailers info on best shelf utilisation.

**Create New Revenues from Existing Knowledge**

**Dow Chemical** USA. Has put all its 25,000 patents into a database, which is used by all divisions to explore how existing patents can gain more revenues. The experience from this application is now being transferred into other intellectual assets, like brands.

**Outokumppu** Finland. Smelter of copper and other metals. Knowledge on how to build smelting plants is used to construct whole plants including education of personnel and managers to customers all over the world. This business is now more profitable than the original smelting business.

**Skandia** Switzerland. Back office system developed by Skandia world-wide is sold to Swiss insurance companies.

**Steelcase** USA. Does basic research into innovation and learning, best learning environments and new interfaces (3D and virtual tools). Steelcase sells its knowledge in this area to other companies.

**Internal Structure Intitiatives**

**Build Knowledge Sharing Culture**

**3M**, USA. With 60,000 products of their own innovation process, this company has an organisation that balances between creativity and conservatism. 3M«s values encourage learning and risk taking, but managers are required to link continuous learning to revenues.

**Analog Devices**, USA. CEO Ray Stata initiated break down of functional barriers and competitive atmosphere and created a collaborative knowledge sharing culture from the top. Encourages "community of inquirers" rather than "community of advocates".

**Boeing 777** USA. First “paperless” development of aircraft. Included customers in design teams. More than 200 teams with wide range of skills both designed and constructed sub parts, rather than usual organization design team, construction team. Suppliers world-wide used same digital databases as Boeing.

**Buckman Labs** USA. A biotech firm has reorganised itself to optimise knowledge sharing. Has created a Knowledge Transfer Department to co-ordinate efforts. Employees best at Knowledge sharing gain both financial rewards and management positions.

**Chaparral Steel** USA. Mini steel mill that has introduced broad range of initiatives like: Flat hierarchy, broad education, blue collar workers as responsible for customer contacts and rewarded for personal initiatives. Egalitarism and trust building. Chaparral uses 1.5 hrs labour per ton compared to the industry standard 1.5 - 3.0 hrs per ton.

**Ford Motor Co.** Old company that has transformed itself by outsourcing and creating virtual networks of vendors using IT.
Hewlett-Packard. Famous for its overall culture of collaboration, which encourages knowledge sharing and risk taking on all levels. H-P even supports people who try out things that don’t work.

Oticon Denmark. Has created a "spaghetti organisation", a chaotic tangle of interrelationships and interactions. Knowledge workers have no fixed job descriptions, but work entirely on project basis.

WM-data. No work unit allowed to be larger than 50 employees. This creates sense of “family” and belonging, which in its turn increases trust and knowledge sharing.

Capture, store and spread Individuals’ Tacit Knowledge

McKinsey and Bain & Co. These two management consulting firms have developed "knowledge databases" that contain experiences from every assignment including names of team members and client reactions. Each team must appoint a "historian" to document the work.

Chevron. Has created a "best practice" database. It captures experience of drilling conditions and innovative solutions to problems on site in a database for sharing globally with other sites.

British Petroleum. Is using KM as a means of drawing together talents from all over the organisation. BP emphasises transfer of tacit knowledge rather than accumulation and transmission of raw data and has installed a communication network comprising video-conferencing, multi-media and email.

Skandia AFS, Sweden. Has created a formalised procedure to capture experiences while starting new financial services products has reduced the time from start to profitability from 2 years to 6 months.

Measure Knowledge Creating Processes and Intangible Assets


PLS-Consult, Denmark. Categorises customers according to value of knowledge contribution to the firm. Follows up in management information system.


Telia, Sweden. Sweden’s Telecom company publishes since 1990 an annual Statement of Human Resources including a profit & loss account visualising human resource costs and a balance sheet showing investments in human resources.

WM-data Sweden. One of Europe’s fastest growing and most profitable IT-companies. A pioneer in linking non-financial indicators to strategy and publishes an extensive report on Intangible Assets in its Annual Report. Considers traditional financial ratios of little use for management.

Competence Initiatives

Create Careers based on Knowledge Management

Buckman Labs, USA. Employees best at Knowledge sharing gain both financial rewards and management positions.

IBM, USA and most Japanese large companies. Dual careers. Employees are encouraged to switch between professional and managerial jobs, in order to gain more holistic knowledge about the company.

Pfizer, Switzerland. Has created competence models for recruiting treasury executives that call for knowledge building/sharing in addition to basic financial skills.

WM-data, Sweden. Actively seeks to recruit equal numbers of women and men. Claims that a wider diversity of both gender and cultures improves creativity.

Create Micro Environments for Tacit Knowledge Transfer

Affärsvärlden Sweden. Business journal uses "piggy-backing" and "team-writing" to speed up learning among new journalists. Interviews and larger articles are routinely assigned as team work, rather than one-man shows. This speeds up transfer of the seniors’ tacit skills and networks to the juniors.

Hewlett - Packard, USA and Affärsvärlden Sweden. Build offices as open spaces with no partitions or partitions at eye level. This increases sharing of tacit knowledge and values.

Honda and others. Japanese companies routinely build "redundancy"; people are given information that goes beyond their immediate operational requirements. This facilitates sharing in responsibilities, creative solutions from unexpected sources and acts a self-control mechanism.

PLS-Consult, Denmark. Appoints "mentors" with task to facilitate transfer of tacit skills between members in large projects. Actively seeks large projects, so that junior consultants can be added to the teams for learning.

Xerox USA. Provides convenient places where people can get together routinely. Called the "distributed coffee pot" these environments encourage cross-functional links.

Support Education with Communication Technology

National Technological University USA and Open University UK. New universities sell formal training as continual learning via satellite to companies like General Electric, Hewlett-Packard, Texas Instruments. Learners interact via Internet and via email with each other and with instructors.

Learn from Simulations and Pilot Installations

Matsushita. Japan. Launched a company wide policy in 1993 to reduce yearly working time to 1800 hours. The policy’s objective was not to reduce costs but to change the mindset of managers. Many of them were puzzled about how to implement the policy, which was at first communicated as explicit knowledge. Matsushita created a promotion office with the task to facilitate experiments with the policy for one month by working 150 hours. Through such a bodily experience, employees got to know what a 1800 hour year would be like.

IKEA, Sweden. The global furniture retail company uses a customised simulation (not computerised) of what makes the IKEA business successful to induct all new recruits.