

General Ideas

- To achieve its goals, an organization must manage knowledge as a means of production
 - Knowledge is key to develop unique products and services
- A Balanced Scorecard and a Knowledge Balance Sheet are the closest we come to measuring knowledge, yet
 - The ability to create, transfer and secure knowledge in a global network will be a deciding factor for companies in the future
- Self-Management is a core competency for everyone creating knowledge
 - Knowledge can only be measured indirectly through financial means.
- Knowledge Market = A platform an organization where knowledge is offered and shared
 - People show what they know
 - Others can see who know what and contact them if needed

Knowledge Management (KM)

= The effort to provide the necessary knowledge for an organization to reach the strategic and operative goals

Goals of KM:	Factors to enhance Knowledge:
• Obtain Knowledge • Develop Knowledge • Transfer Knowledge • Secure Knowledge	• Creating values to share knowledge • Leading with good example • Creating structures for knowledge creation and transfer • Creating incentives to share knowledge (money, recognition & stock options) • Introducing a knowledge market • Creating networks of people working on similar problems "Communities of Practice" • Rotating of personnel through departments

The Digital-Knowledge-Society

- Shifting demographics, the rise of digitization and globalization of competition lead to increasing importance of knowledge in companies
- In knowledge centered companies one earns reputation by sharing ones knowledge, not only by obtaining it
- Employees should lead their own learning

Core Questions for companies

1. How important is knowledge for us?
2. What are our goals around knowledge?
3. What knowledge do we have/need?
4. How do we handle knowledge as a resource?
5. How do we build the company around the knowledge?

The Knowledge-Stairs

Central areas of Knowledge

Context:	External changes that create opportunities or risks
Market:	Where and how the organization wants to compete and grow.
Customers:	Current and future customer needs
Products:	How products and services create differentiation and value.
Processes:	How work is done to ensure efficiency, quality, and improvement.
Technologies:	Which technologies and methods must be mastered and developed.
Organization:	How structures, culture, and management enable long term competitiveness.

Knowledge Stairs

= 7 Steps of knowledge in companies

The goal is to move towards competitiveness.

- Strategic Knowledge Management = planning from competitiveness backwards towards signs (moving down the stairs)
- Operational Knowledge Management = planning from basic signs towards competitiveness (moving up the stairs)

1. Signs:	Individual symbols without inherent meaning such as letters or numbers.
2. Data:	Ordered signs following rules, still without interpretation.
3. Information:	Data placed in a meaningful context to support decisions.
4. Knowledge:	Purposeful linking of information, bound to people and context.
5. Action:	Application of knowledge as observable and effective doing.
6. Competence:	Ability to act appropriately in a given situation using knowledge.
7. Competitiveness:	Organizational advantage created by core competences applied consistently.

The goals of KM in different areas of the company:

Strategy:	Embed knowledge and learning as core elements of corporate strategy.
Leadership:	Actively connect knowledge, learning, and performance through leadership practices.
Collaboration and Networks:	Enable effective internal and external collaboration aligned with organizational goals.
Knowledge Transfer and Competence Development:	Systematically develop, evaluate, and transfer employee competences.
Information and Knowledge Acquisition and Retention:	Ensure structured, accessible, and reliable information and knowledge availability.

SEICI Model for Knowledge Creation

(See The Knowledge Creating Company)

Knowledge can be implicit and explicit

Implicit:	Nonverbal, intuitive knowledge
Explicit:	Documented, sharable knowledge

Four Modes of Knowledge Conversion:

Socialization	Externalization
= Conversion From Tacit to Tacit	= Conversion From Tacit to Explicit
How to: <ul style="list-style-type: none">• Brainstorming Camps: Meetings or discussion groups with clear problems to discuss.• Engage with tacit knowledge through observation, imitation and practice.	How to: <ul style="list-style-type: none">• Articulating tacit knowledge to explicit concepts using Shapes, Metaphors, Analogies, Concepts, Hypotheses and Models
Benefits: <ul style="list-style-type: none">• Shared experiences and enhancing trust between participants.• Reorients individuals to the same direction.	Benefits: <ul style="list-style-type: none">• It sparks creativity• It gives common understanding while leaving leeway for interpretation• Helps creating concepts
Example: <ul style="list-style-type: none">• A group tasked, with developing a bread baking machine engaged with learning baking in a bakery.	Example: <ul style="list-style-type: none">• Hiroo Watanabe from Honda used the slogan "Automobile Evolution" to direct the development of their cars. They asked "if the automobile was an organism, what would it evolve into?"
Tips: <ul style="list-style-type: none">• Don't: Criticize without constructive suggestions.	Tips: <ul style="list-style-type: none">• Formulate corporate slogans like "man maximum, machine minimum" to create common direction and communicate complex visions.
Internalization	Combination
= Conversion From Explicit to Tacit	= Conversion From Explicit to Explicit
How to: <ul style="list-style-type: none">• Documentation of concepts in diagrams, documents and manuals for people to "re-experience"	How to: <ul style="list-style-type: none">• Revisit existing explicit knowledge like documents, notes and other saved media• Create new knowledge through sorting, adding, combining and categorizing.
Benefits: <ul style="list-style-type: none">• Enables people to "re-experience" of others	Benefits: <ul style="list-style-type: none">• Creation of new concepts without need to gather more information
Example: <ul style="list-style-type: none">• GE files every customer complaint in a database and makes it available for all employees to revisit and learn from	Example: <ul style="list-style-type: none">• Categorizing Customer information into groups to further personalize a service
Tips: <ul style="list-style-type: none">• Documentation is the key part of internalization	Tips: <ul style="list-style-type: none">• Naturally gather information in advance and prepare for revival

4 Criteria for Knowledge with competitive advantage

1. Creating value for the customer
2. Being scarce compared to the competition
3. Being hard to imitate
4. Being hard to substitute by other knowledge

Organizing around knowledge

A company needs to balance these concepts:

- Stability and Renewal of Concepts:
 - Employees need to know what changes and what not
- Collaboration and Competition:
 - If collaboration increases customer value and competitiveness, it is to prefer. Otherwise competition is better.

The 4 Dimensions of organizations

• Companies mostly lag the 4th dimension of knowledge

Hierarchy/ Function:	Putting people with different knowledge and skills together in an organization.
Processes:	Bundling knowledge towards customer value.
Projects:	Bundling knowledge to solve problems towards a project goal
Knowledge:	Creating cross-functional knowledge through building a unified language.

The Entrepreneurial Corporation

= Building knowledge with focus on its market value

- It consists of
 - 3 Roles (Entrepreneurs, Coaches and Managers)
 - 3 Processes (Entrepreneurial, Integration and Renewal)

Entrepreneurial process	Integration process	Renewal process
Entrepreneurs at the front	Create and pursue opportunities. Initiate and drive new ideas	Share knowledge and resources through collaboration. Maintain energy and engagement from the bottom up.
Coaches (senior level)	Evaluate, develop, and support initiatives.	Connect and integrate knowledge and resources across units. Create and preserve organizational flexibility.
Top management	Define strategic goals, priorities, and guiding vision.	Develop and anchor shared values. Balance short term results with long term ambition.

Hypertext Organizations

(see The Knowledge Creating Company)

= a non-hierarchical structure for self-organized knowledge creation

3 levels:	
Business system level	Run the day to day operational business and ensure efficiency and stability.
Project team level	Create new knowledge through cross functional, temporary project teams.
Knowledge base level	Recontextualize and make created knowledge available across the organization.

The human side of knowledge

Augmentation

= supporting work through smart systems

5 Strategies for Augmentation

Step forward	Outgating and advancing intelligent systems
Step up	Outgating routine tasks to intelligent systems
Step in	Supervising and training intelligent systems
Step aside	Leveraging human emotional and social intelligence
Step narrowly	Deep specialization in non-automatable riches

Roles in a knowledge Company

Knowledge practitioners	Execute professional tasks and continuously build domain specific expertise.
Knowledge engineers and entrepreneurs	Bundle practitioner knowledge and translate market needs into customer solutions.
Visionsaries and context designers	Identify market opportunities and create knowledge enabling conditions and direction.
Information brokers and infrastructure managers	Develop, manage, and improve information and communication infrastructure.
Support staff	Provide operational support and shape the organization's image toward customers.

Middle-up-down-Management

(see The Knowledge Creating Company)

= middle managers play the central role in organizational knowledge creation

- Senior leadership defines a vision or ambition.
- Middle managers translate it into concrete concepts, narratives, and solutions.
- Front line employees implement the concepts.
- Middle managers translate and integrate
- They lead the knowledge towards customer value

Comparison of management approaches:

Approach	Main driver	Core logic
Top down	Top management	Strategy and instructions flow from leadership to employees.
Bottom up	Front line employees	Ideas emerge from practice and move upward organically.
Middle up	Middle management	Vision comes from the top, knowledge from the bottom, integration happens in the middle.

Creating an sharing Knowledge

Types of knowledge goals

- Know-How: operative goals for abilities in process
- Know-Why: norms on values and behavior
- Know-What: strategic goals

Push and Pull-Systems

Push system	Knowledge is actively distributed to employees based on assumed needs. Ensure availability and standardization.
Pull system	Employees actively search for and retrieve knowledge when needed. enable self directed, situational learning.

Methods for Learning and Documentation

Working Out Loud	Work is shared openly while it is still in progress. People communicate goals, steps, problems, and insights regularly. Feedback is requested early. Learning happens continuously during work. Relationships and trust are built through visibility and reciprocity.
After Action Review	A structured reflection after an activity or project. The team clarifies what was planned, what actually happened, why it happened, and what can be improved. Reflection is factual and non judgmental. Results are translated into concrete improvements for future actions.
Lessons Learned	Experiences are reflected using five guiding questions: <ul style="list-style-type: none">• What went well?• What should be pointed out?• What went badly?• How was the cooperation?• What was missing? Each participant reflects individually first. Answers are shared in the group. All perspectives are documented. Results lead to concrete improvements or actions.

Transfer Stories for structured knowledge transfer

= a technique to transfer knowledge to new employees

1. The need for knowledge is identified and visualized in a mind map
2. Transfer-exchanges:
 - The expert and the student employees talk organically about the topic.
 - Naive questions should be asked. The expert tells a story of his experience.

Measuring and securing Knowledge

Knowledge Balance Sheet

- Knowledge is measured by financial means though the success of the business
- Vision, Strategy and Actions are defined
- Processes are built to support the human, structure and relationship capital of the company
- The success is measured and the actions are adapted to improve the processes and the "intangible" knowledge assets

Balanced Scorecard

- The vision and strategy of the business is viewed from 4 perspectives
 - Customer
 - Financial
 - Internal Processes
 - Learning and Growth
- The current situation and measures for improvement are derived and acted on

Measures to protect knowledge

Motivation	Show that the organization values the expert's knowledge and actively supports its transfer.
Recognition	Reward successful knowledge transfer through recognition, incentives, or target agreements.
Integration into work groups	Embed experienced employees into teams so knowledge is shared through daily work.
Pull principle	Ensure successors actively acquire and process the knowledge they need themselves. Do not put the burden of documentation only on the expert.
From leadership to advisory role	Gradually shift experts from leadership roles to advisory and mentoring roles.
Future orientation	Focus on knowledge needed for future tasks, not only past activities.
Integration into business processes	Anchor knowledge transfer directly in ongoing operational workflows.

Implementing Knowledge management

1. Sensitize employees and analyze knowledge gaps.
2. Devise a knowledge strategy from business strategy.
3. Create conditions that support knowledge sharing.
4. Integrate knowledge from external sources.
5. Develop employee competencies systematically.
7. Foster creativity and innovation.
8. Support learning in and from projects.
9. Integrate knowledge management into processes.
10. Create opportunities for personal knowledge exchange.
11. Structure documents and information systems.
12. Build trust and openness for sharing knowledge.

Components of the implementation and the tools used in each

Knowledge strategy	Strategic knowledge analysis or knowledge balance. Identification and communication of core competences. Competence centers for key topics. Personnel development aligned with core competences and knowledge goals.
Learning and competence development	Skill and competence management. Identification and integration of key experts. Communities of practice and peer learning. Learning in and from projects through debriefings and lessons learned. Lived error culture
Knowledge oriented culture and leadership	Idea management and continuous improvement. Working Out Loud and informal exchange formats. Cross level dialogue such as skip level meetings. Integration of knowledge sharing into performance reviews. Job rotation and team based work. Dedicated time for knowledge exchange.
Knowledge identification	Yellow Pages and employee profiles. Structured onboarding concepts. Knowledge transfer in transition situations using transfer stories, knowledge relay, and debriefing.
Information availability	Role based information structures. Pull oriented access to information. Push distribution of selected information. Intranet relaunch and decentralized data concepts. Document management systems. Wikis and blogs.

Conditions of effective Leadership for Knowledge Workers

- 1. They know what is expected of them
- 2. They have the tools to do their work
- 3. They can do what they do best, every day
- 4. They feel recognized and valued
- 5. They feel supported and encouraged to learn

Strategies for personal information management

- Regularly sort out unimportant information and delete it
- Reduce the amount of regularly incoming information
- Save information where you can find it when needed
- Define clear limits of what is too much
- Don't try to know everything and practice resilience

Competence Management

• 3 Areas of Competencies :

Professional competence:	Domain specific expertise If knowledge, customer process understanding, and operation of information systems.
Method competence:	Methods for communication, project execution, process organization, and quality management.
Social and personal competence:	Personal and interpersonal abilities communication, conflict handling, adaptability, and customer orientation.

• Steps to manage competence:

1. Define objectives:
Decide whether to define target competencies or assess existing ones.
2. Set the scope:
Choose key employee groups or roll out company wide.
3. Ensure governance:
Inform employee representatives and define data protection rules.
4. Build the competency catalog:
Structure competencies by roles, processes, and technologies.
5. Define target profiles:
Create role based target profiles in workshops.
6. Assess current profiles:
Employees self-assess their own competencies.
7. Provide IT support:
Use a system to store and process competency data.
8. Visualize competencies:
Compare target and current profiles using a competency wheel or competency matrix
9. Maintain and update:
Regularly update profiles and improve the catalog.

Incentives for Employees to share knowledge

Extrinsic:

- Money through salary, bonuses and Stock Options
- Security through pensions and credits
- Status through symbols and recognition

Intrinsic:

- Social contact through shared activities and communities
- Performance through feedback, recognition, and constructive criticism
- Self-realization through autonomy and participation
- Learning through challenging tasks
- Career growth through advancement
- Broader roles through job rotation, job enlargement, and job enrichment

- Key elements of the story are written down and visualized.
3. The captured knowledge is structured into a documentation.
Notes are combined with Documents and Hyperlinks
 4. The knowledge is performed by the inexperienced employees in a safe environment
 5. Transfer Workshops:
The knowledge is presented and taught to others with QnA session
 6. Trained Employees are regularly interviewed on how they perform and of the quality of their training

Knowledge Circle

= Creation of Knowledge follows these steps in a circle

- Determine the needed knowledge
- Assessing existing knowledge
- Obtaining necessary knowledge
- Making knowledge accessible
- Maintaining the knowledge

Determine the needed knowledge	• Create a strategy for the organization • Derive knowledge goals with relevance to the market
Assessing existing knowledge	• Periodically assessing the knowledge of employees, structure of processes and relationships between experts • Visualizing knowledge in knowledge wheels or knowledge matrices
Obtaining necessary knowledge	• Systemizing knowledge creation • Team learning, workshops, e-learning • Lessons learned to document obtained knowledge
Making knowledge accessible	• Incentives to enhance accessibility • Systematic training of employees • Mixing Push- and Pull strategies • Structured databases and platforms to distribute information
Maintaining the knowledge	• Strategy to update and maintain knowledge • Systematic usage of patents and intellectual property to protect knowledge

Conditions that enable knowledge creation

Intention	A clear vision defines what knowledge to build and guides managerial action.
Autonomy	Employees have freedom to act creatively within defined boundaries.
Instability	Existing practices are continuously questioned and rethought.
Redundancy	More information is available than required for daily operations.

Knowledge Market

Framework conditions	Knowledge is anchored in values, leadership behavior, roles, competencies, and incentive systems that reward cooperation and overall success.
Players and rules	A knowledge market is created with clear actors, measurable goals, and rules that balance supply and demand of knowledge.
Instruments and processes	Knowledge management is embedded in daily work through processes, organizational structures, media, and IT infrastructure.

- The Wissensmarkt treats knowledge like a market.
- Values define the playing field.
- People act as suppliers and users of knowledge.
- A platform shows, who offers what knowledge
- Processes and tools make knowledge usable in practice

• How a Knowledge Market works:

1. Offers and requests are written on cards.
2. Cards are placed on offer and search boards.
3. Topics are grouped and reviewed.
4. Seekers connect directly with providers.
5. Small group discussions clarify solutions.
6. Unanswered questions are collected centrally.
7. Results are documented and shared digitally.
8. Contributions are optionally rated and recognized.
9. Follow up actions are assigned.

APQC Andersen Framework

- American Productivity and Quality Center (APQC)
- System for benchmarking knowledge management

Regular information cleanup activities.