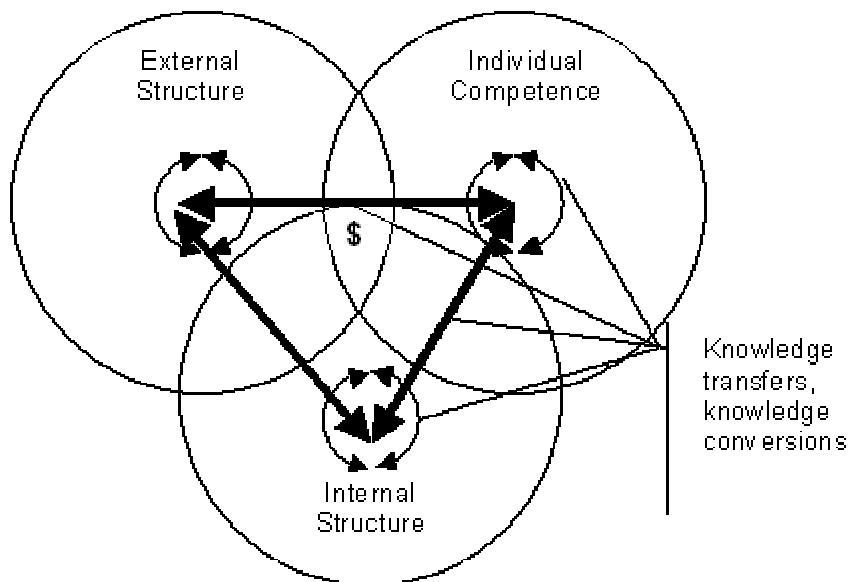


## Ten Ways to Leverage Knowledge for Creating Value

In contrast to tangible goods, which tend to depreciate in value when they are used, knowledge grows when used and depreciates when not used. Building up competence in a language or a sport requires huge investments in training and managerial competence takes a long time on-the-job to learn. If one stops speaking the language it gradually dissipates.



**Figure 3 The Firm from a Knowledge-based Perspective**<sup>[3]</sup>

The manufacturing and transportation of physical goods from suppliers, via a factory to a buyer gave us the concept of the Value Chain. If we instead understand the organisation as creating value from knowledge together with its customers the Value Chain collapses and the relationship should better be seen as a Value Network (Allee, 2000); an interaction between people in different roles and relationships who create both intangible value (knowledge, ideas, feedback, etc) and tangible \$-value.

In contrast to the Value Chain the intangible value in a Value Network grows each time a transfer takes place because knowledge does not physically leave the creator as a consequence of a transfer. The knowledge I learn from you adds to my knowledge, but it does not leave you. Thus, from an organisational viewpoint the knowledge has effectively doubled. Given the ideal context it is no exaggeration to state that *knowledge shared is knowledge doubled*.

From an individual's point-of-view the perspective however, can be different. For him or her knowledge shared may be opportunity lost, if the effect of the sharing becomes lost career opportunities, extra work and no recognition. Fear of dismissal or competition are commonly cited reasons, why individuals do not share what they know or what they create. Given the actual context in many organisations the sad fact is that for the individual *knowledge shared is opportunity lost*.

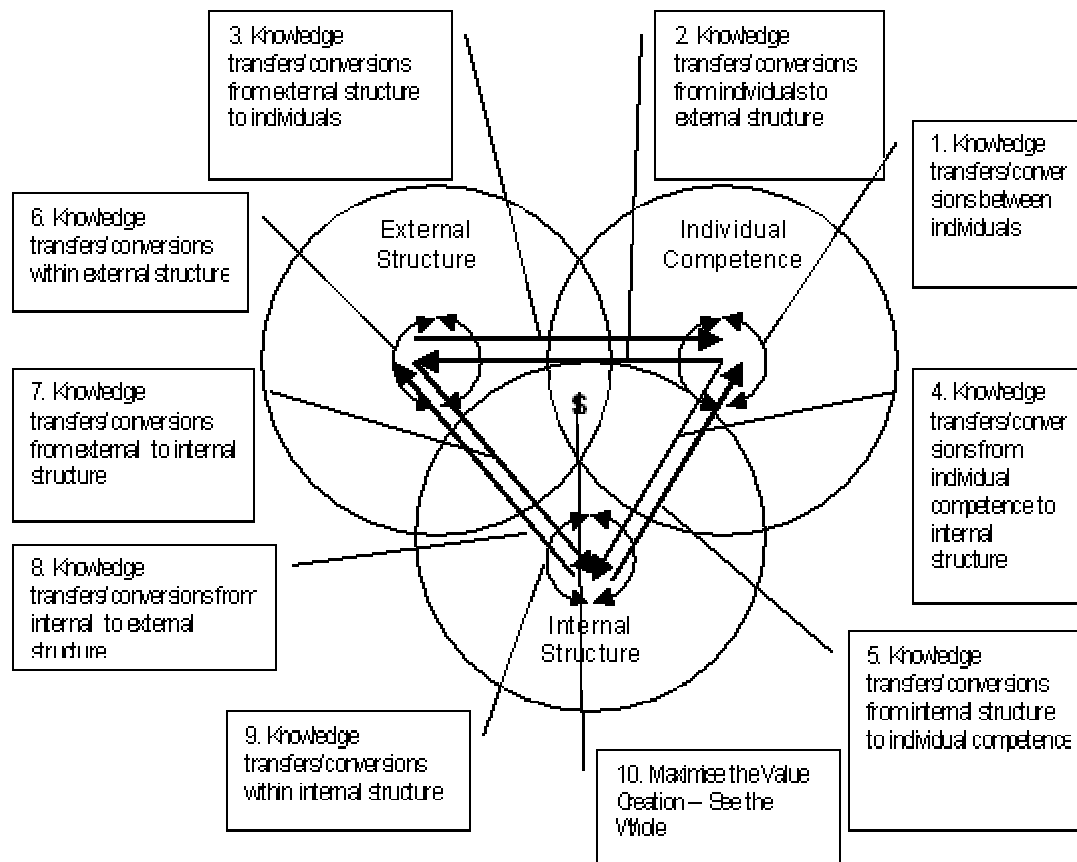
The key to value creation lies with the effectiveness of knowledge transfers and conversions. The choice of the words “transfer” and “conversion” may suggest one-directional movements of knowledge. This is not the intention. The least effective methods for knowledge transfer are one-directional as demonstrated by the well-known “Learning Pyramid” from National Training Laboratories, Maine USA. Unfortunately, on-directional methods are also the most common in working life as well as in traditional education.

Knowledge transfer between two individuals is a bi-directional process, which tends to improve competence of both and teamwork tends to be a co-creation of knowledge involving the whole team.

Moreover, transfer of competence depends on conversion from tacit to explicit and back to tacit again in an endless spiral (Nonaka & Takeuchi, 1995). However, it helps strategy formulation and action planning to distinguish directional components of the activities, hence the choice of words.

One feature of a knowledge-based theory of the firm is that it challenges existing legal paradigms and perceptions about the boundaries of an organisation. What is indeed “the organisation” if customers and suppliers are included as families of the firm as in Figure 1? When the importance is placed on how effective the value creation is in the whole system, the issue of whether an individual is a formal employee, a customer, a contractor, a supplier or a customer becomes less of an issue as long as the relationship generates value. An ex-employee can for instance be more valuable as a customer than as an employee, a fact long exploited by the professional services firms.

Given the framework of three Intangible Assets above we can distinguish nine basic knowledge transfers/conversions, which have the potential to create value for an organisation. The aim of management should be to improve the capacity-to-act of people both inside and outside the organisation.



**Figure 4. The Ten Knowledge Strategy Issues**

The ten ways to leverage knowledge are:

1. Improve knowledge flows between individuals
2. Improve knowledge flows from individuals to external structure
3. Improve knowledge flows from external structure to individuals
4. Improve knowledge flows from individual competence into internal structure
5. Improve knowledge flows from internal structure to individual competence
6. Improve knowledge flows within the external structure
7. Improve knowledge flows from external to internal structure
8. Improve knowledge flows from internal to external structure
9. Improve knowledge flows within internal structure
10. Maximise Value Creation – See the Whole

### **3.1.1 Improve Knowledge Flows Between Individual Knowledge workers**

The communication between knowledge workers within in the organisation determines what types of environments are most conducive to creativity and knowledge sharing. How willing are people to share

their ideas and what they know? Activities focused on improving the collaborative climate (see below 4) through trust building, enabling team activities, induction programs, job rotation, master/apprentice schemes, etc. should have the best effect.

*Examples:* Oticon, the Danish hearing-aid manufacturer established in 1905, has re-designed whole work areas to create an atmosphere of openness, flexibility, creativity and sharing. The company emphasizes “live” interaction. Stand-up coffee bars encourage impromptu meetings, and dialogue rooms” with a table and chairs help employees relax while solving problems or sharing knowledge. Oticon even locked up elevators so there would be more “accidental” meetings in the stairwell. Even electronic mail is discouraged in favour of face-to-face communication.

### **3.1.2 Improve knowledge flows from Individuals to External Structure**

By sharing their knowledge workers enhance the reputation of the organisation. They can help the customers learn about the products, getting rid of red tape, doing job rotation with customers, holding product seminars, providing customer education, etc. In doing so they cement relationships with customers and other stakeholders and add to the professional development of the knowledge workers.

*Examples:* Consultants at McKinsey, the US based consulting firm, are encouraged to spend time on publishing their research and methods in order to build the reputation of the firm. Baxter International and produces and sells healthcare products and has extended its offering to include service to hospitals. Baxter employees now mix drugs in intravenous solutions and act as brokers for other vendors.

### **3.1.3 Improve knowledge flows from External Structure to Individuals**

Customers bring intangibles, not only money. Knowledge workers learn a lot from customer, supplier and community feedback such as ideas, new experiences, feedback and new technical knowledge. This is the counterpart of section 3.1.2 above. Organisations tend to have procedures in place that capture such knowledge (see section 3.1.7 below), but they are scattered, not measured and hence do not systematically influence strategy formulation. Activities focused on creating and maintaining good personal relationships between the organisation’s own people and the people outside the organisation should have the best effect.

*Examples:* Knowledge workers at Betz Laboratories in Trevose, Pennsylvania, frequently participates in its customers’ quality management teams in order to gain a better understanding of, and even anticipate, customer needs. This knowledge is used to develop products that will boost customer sales. Betz measures value added from this knowledge by tracking its customers’ return on investment, and its own knowledge workers receive awards for outstanding efforts to increase these returns.

### **3.1.4 Improve knowledge flows from Competence to Internal Structure**

Huge investments are currently being made in order to convert competence (often tacitly held) individual into data repositories. According to IDC worldwide KM services spending will increase at a compound annual growth rate (CAGR) of 41%, from \$2.3 billion in 2000 to \$12.7 billion in 2005, (IDC, 2001). The idea is that information in such repositories will be shared with the whole organisation.

However, this is only one of nine possible strategic activities aimed at improving knowledge worker effectiveness. To focus one's investments on databases and document handling etc. will realise only a fraction of the value compared to a more holistic approach, comprising all nine knowledge transfers/conversions.

*Example:* The key to create value from database or intranet system is not the sophistication of the technology, but the climate in the firm and the level of involvement from all agents in the system. The US chemicals manufacturer Buckman Labs is well-known for nurturing a high collaborative climate despite the fact that its 1,300 associates are spread all over the world. The company has been using electronic means for capturing experiences and information since 1987. Its new products to sales ratio went from ~25% to >35% when it began involving the customers in their intranet in 1994 (Buckman, 2001).

### **3.1.5 Improve knowledge flows from Internal Structure to Individual Competence**

This is the counterpart of 3.1.4. above. IT systems can by definition only produce information. Competence "captured in a system" becomes information which in its turn needs to be made available to other individuals in such a way that they improve their capacity to act; otherwise the investment is a waste. The key to value creation is whether the information generates competence. The key question is: How can we improve knowledge worker competence by using systems, tools and templates?

Activities focused on improving the human-computer interface of systems, action-based learning processes, simulations and interactive e-learning environments ought to be the most effective.

*Examples:* IKEA, the Swedish furniture company, uses customised simulations for speeding up the learning of its warehouse employees.

### **3.1.6 Improve knowledge flows within the External Structure**

What do the customers tell each other about the services/products of a supplier? How are the products used? The conversations among the constituencies can have an enormous impact on a success of a company. The company can support the competence growth of customers and influence how competence is transferred also between the stakeholders in the external structure.

Activities focused on partnering and alliances, improving the image of the organisation and the brand equity of its products and services; improving the quality of the offering; conducting product seminars and alumni programs.

*Examples:* Danish biomedical producer Novo actively engages in building local communities to improve the image of its products in its local community. Book publisher Berrett-Koehler runs seminars for its book buyers featuring its authors as speakers. Norwegian hospital Lovisenberg taps into the knowledge of its old patients by letting them meet new patients. This reduces fear and medical staff report lower drug consumption and savings on nurses' and doctors' time.

### **3.1.7 Improve knowledge flows from External to Internal Structure**

How can competence from the customers, suppliers and other stakeholders improve the organisation's systems, tools & processes and products? Activities range from empowering support staff to generate knowledge from customer complaints to R&D alliances.

*Example:* Frito-Lay, the US potato chips maker provides an interesting case of product differentiation of a commodity. The company uses its sales force to collect data about their customers. The data are analysed and fed back to their sales people empowering them with superior customer knowledge and competitive intelligence. Frito-Lay representatives not only use the information themselves, but they also give it away for "free" provided the shop buys their potato chips rather than their competitors'.

### **3.1.8 Improve knowledge flows from Internal to External Structure**

How can the organisation's systems, tools & processes and products improve the competence of the customers, suppliers and other stakeholders? This is the counterpart of 3.1.7. above. Activities bypass the demands on knowledge worker capacity by using the organisation's systems to service the customer, extranets, product tracking, help desks, e-business, etc.

*Examples:* Ernst & Young has created a tax and legal database, "Ernie", which allows its clients to tap into the data sources used also by its own consultants.

Ritz Carlton, the hotel chain renowned for its service, has installed a customer information database with global access. All staff are required to fill in cards with information from every personal encounter with a guest. These data plus guest profiles are stored and made available to staff in order to ensure personal treatment of all guests.

### **3.1.9 Improve knowledge flows within Internal Structure**

The internal structure is the supporting backbone of the knowledge workers. Activities focused on streamlining databases, building integrated IT systems, improving the office layout, etc. should have the highest impact.

*Example:* Again, this is a field dominated by Enterprise Systems and other company-wide IT solutions. KnowledgeCurve, PricewaterhouseCooper's intranet, integrates several thousands of databases previously held individually or locally.

### **3.1.10 Maximise Value Creation – See the Whole**

The nine Improve knowledge flows have the potential to exist in all organisations. However, they tend not to be coordinated, because management lack the full perspective that a knowledge-based theory may give them. Most organisations also have legacy systems and cultures that block the leverage. Therefore many of good initiatives go to waste or neutralize each other and hamper knowledge worker development.

Investment in a sophisticated IT system for information sharing is for instance a waste of money if the organisation's climate is highly competitive – only junk will be shared. Reward systems that encourage individual competition will effectively block efforts to enhance knowledge sharing. Lack of standards and poor taxonomies reduce the value of document handling systems. A program for knowledge sharing with customers is neutralised by red tape protecting commercial secrets. Efforts to use ex-employees for building marketing relationships are useless if people leave the firm alienated or alumni programs are delegated to the administrative function. Data repositories do not improve individuals' capacity to act unless the databases are made highly interactive.

## **3.2 Implications for Professional Development**

The following educational efforts aimed at teaching knowledge workers and managers should be most effective:

Methods for effective person-to-person knowledge transfer and trust building.

Methods for creating a learning experience for customer delivery.

Methods for measuring knowledge flows from customers.

Methods to help reduce the risk of rifts between management and knowledge workers.

Methods for building simulations.

Methods for quality assurance of knowledge work.

Methods for transferring tacitly held expertise into templates and "expert systems".

Education efforts involving knowledge business simulations for both managers and knowledge workers helping them "see the whole".