

Leonardo da Vinci

Project: KnowMan - knowledge management for European SMEs

**SME project:  
"Employee-supported knowledge management" -  
Goals, barriers and good practice.**

- Results of the 2nd workshop in Barcelona in April 2002 and of the additional meeting in Bremen in October 2002
- First synthesis of partner contributions

Working paper 3

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## The project KnowMan

KnowMan is a pilot project funded by the European Commission's Programme "Leonardo da Vinci 2" aiming to adapt knowledge management (KM) to the special needs and capabilities of European small and medium-sized enterprises (SMEs).

The project sees itself as a small contribution to the big target of the European Union to become the most dynamic knowledge-based economic area of the world (European Council in Lisbon, 23 and 24 March 2000). One element to achieve that aim in the companies is knowledge management.

That applies also to small and medium-sized enterprises (SMEs). Innovative and customer-oriented SMEs in Europe need to translate an increasing amount of information into company knowledge, and knowledge plays an increasing part in the value generation and in competition. Knowledge management is an appropriate tool therefore. A knowledge management adapted for SMEs is to foster their existing strengths: trustful flow of knowledge between flat hierarchies.

"Employee-supported knowledge management" - that may sound redundant. It spotlights the very point where large enterprises ended up, too, after unsuccessful attempts with mainly technological KM solutions: at the human beings. SMEs often lack the money for expensive software solutions. Thus they can start here: "raising the store of experience of employees".

## Ways to the knowledge-based economy in the partner countries

Six countries participate in the project KnowMan: Belgium, Germany, Hungary, Italy, Spain, United Kingdom. The partner organisations have examined what brings the knowledge-based economy forward in their countries. The following extracts from their reports show common European, but also specific national and regional conditions and forces.

In the United Kingdom *"previous studies have identified that the growth rate of small firms is associated with approaches to KM in that they tend to*

- *specify their competitive advantages clearly*
- *exploit their superior performance to differentiate themselves from competition in niches*
- *emphasise the acquisition of detailed knowledge of external factors capable of influencing performance*
- *draw upon external sources of knowledge in product and process innovation*
- *recognise the need to invest in the continual development of employees*
- *manage the focus that they place upon transformation initiatives e.g. TQM, within a holistic framework that recognises the revenue position rather than pursue single strategies*
- *utilise clearly defined strategies and business plans to guide future activities"*

In Spain, two tendencies have been identified: Knowledge-related sectors have the strongest employment growth, and companies have increasing difficulties in winning and keeping high skilled labour. *"27.3 % of the total employment created in Spain during the past years (1994 - 2000) came from the so called new economy: ICT, including manufacturing of computers and telecommunications products; creation, edition and dissemination of knowledge including education, cultural activities and training; activities of the new economy based on the intensive use of knowledge as manufacturing of pharmaceutical products, aeronautic and space industry travel agencies and financial brokers."*

In Hungary, after the change of the political system and after the country has been discovered by international companies as a favourable location of production, now the specialised competencies of the Hungarian workforce and the basis of knowledge of the country are also increasingly being discovered, which is essential for the economic development of the country. The Hungarian development puts into effect a principle of Total Quality Management (TQM): It now complements the quality campaign of the past years through increased investments in Human Resources.

As special regional conditions the German and the British partners identified an essential economic structural change. After the decline of the heavy industry the economic reconstruction takes place mainly in the service sector and is advanced mainly by smaller companies. The government supports the development of a better basis of knowledge. The partner companies in our project consider KM as a development tool.

The Italian and the German partners point out changes in job profiles and new skill needs:

*"As far as the Italian situation is concerned, two elements can be observed. First: The rise of the company professional, as a pivotal category of knowledge workers. These experts have some characteristics in common. They have roles, not duties or positions: roles are defined in terms of minimum critical specifications which provide orientation and criteria for conduct. These company experts operate in an advanced cultural, organisational, technological and market-oriented context, which they themselves help create. Company professionals are formed by a professional structure, in other words by a system of study, careers and recognition processes. Second: The elimination of middle managers from production lines or their transformation into "integrators on professional bases" (team leaders, project leaders, program managers, coaches, animateur-formateurs, etc.) is currently the most widespread phenomenon in companies."*

*"Many middle-sized companies in Germany are in a continuous reorganisation process within the framework of processes of internationalisation. High mobility of specialists and managers within the company structures and flexibility in the composition of teams are becoming common. This makes the co-operation more difficult and there is the threat of losing competence. Both are important motives for this type of companies to implement knowledge management."*

## Profile of the partner companies

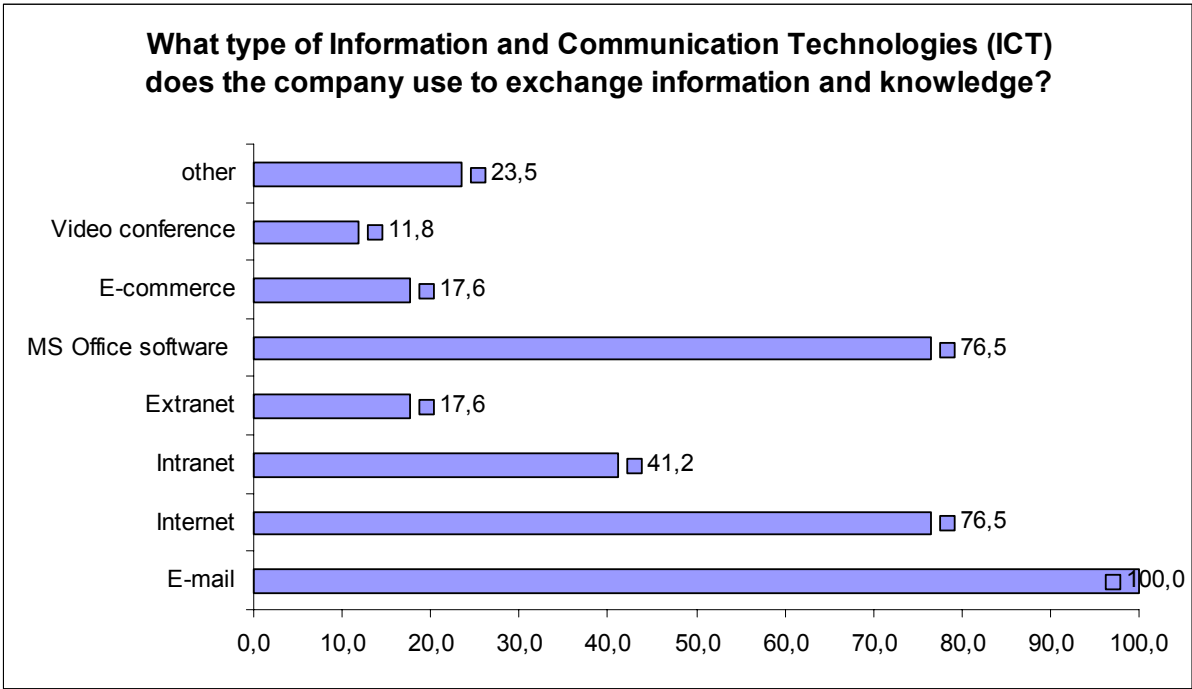
In all 6 partner countries SMEs are participating actively in the project KnowMan. They perform an important contribution as pilot companies: They test the material and tools for the introduction of knowledge management which are being developed by the partner organisations, and which are going to form a toolbox for SMEs at the end of the project.

10 partner companies are in the processing industry, 7 in commerce and services.

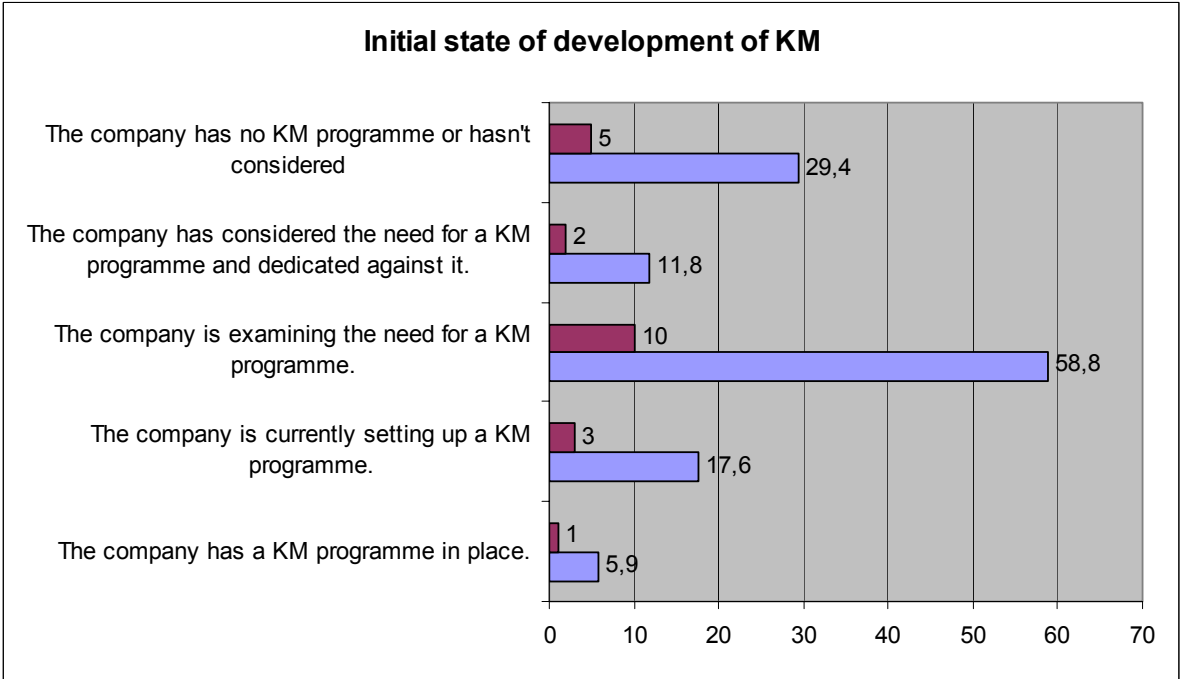
Processing industry	Commerce and service
Corrosion protection; floor coverings; services	Audit and Consulting
Electrical and Software Engineering Design & Build	Consulting
Electronic device and software for precision and quality monitoring for industrial machine	Fork-lift trucks wholesaler
Electronic devices and software for traffic and transportation automation	Furniture retailers (3 companies)
Electroplating, wet painting, powder coating	Site Surveys
High precision measuring devices and machine parts	
Indoor, outdoor & urban furniture and lamps	
Marine lighting and electronics; services	
Packaging for effervescent tablets, vials, caps with hygroscope filling, blown and injection blown bottles, PET preforms	
Vehicles for railway and urban transportation	

At the beginning of the co-operation in the project KnowMan it was analysed which state the partner companies had already achieved in their dealing with KM.

First, the focus was the information and communication technologies (ICT) which might also be used as a technical basis for KM (indication in percentage):



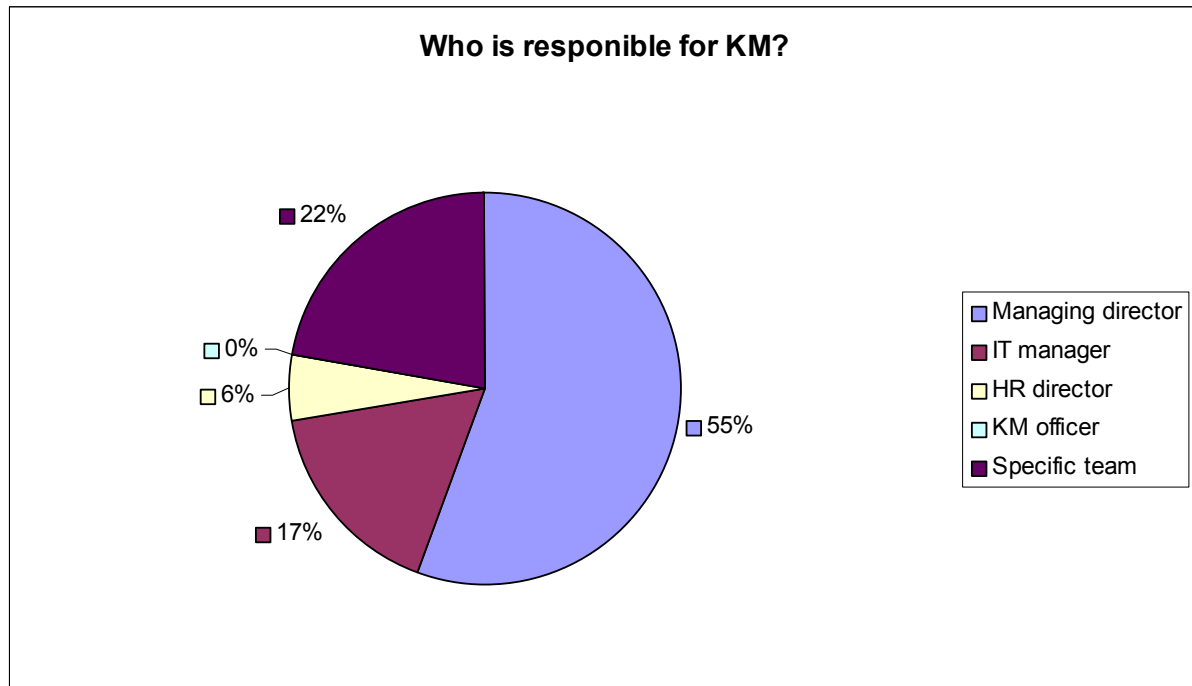
Second, the explicit dealing of the company with KM and KM programmes were identified (indications in absolute figures and in percentage)



Not surprising is the fact that more than half the companies are just checking their need for KM. To get support is a motive to co-operate in the project KnowMan. The companies which had already opted against a KM programme in an earlier decision-making round had mainly opted against an ICT solution but not on principle against

KM. Other companies are already operating or implementing an ICT solution for SMEs, but they are interested in an additional critical checking of their programmes and in improvements through the co-operation in the project

An insight into the organisational and cultural pre-conditions for KM is given by the answers to the following question:



It can surely be considered typical for SMEs that the leading manager in more than half the participating companies is also responsible for KM. But that has probably also to do with the fact that a starting situation had been analysed. That is likely to be the case because in none of the companies a knowledge officer had been appointed. In that phase it is really particularly necessary that KM is supported by the senior management. From the point of view of the KM philosophy it is encouraging that already in the second place a specific team had been mentioned which is responsible for KM in the company.

## Goals

Organisations always have to decide on their KM aims individually. The examples from partner companies in the project KnowMan described here, are not to be seen as representative aims - the number of participating companies is too little for that - or even as normative aims for SMEs. They are aims which the partner companies had set on the starting point of their KM projects. But they are to stimulate other SMEs to consider whether they have similar needs, too.

In some cases the already implemented ICT is the starting point of new, knowledge-oriented targets of the company. KM is implemented to better utilise the potentials of

ICT. The companies want to depart from a mere data administration and communication technology. Knowledge and experiences of the employees and their organisations are explicitly and reliably to be made available and protected against being forgotten.

A repeatedly mentioned aim of KM is the support of personnel development, particularly the integration of new employees in the organisation and in the staff. Reliably documented organisational knowledge and clear addresses of where it is available is the basis for tailored hiring training and it supports the familiarisation in the new job.

Some companies want to use skill profiles of the employees in a new way and have identified the need to improve them. Skill profiles are not only to be useful for the companies in searching for new employees on the labour market but also for the representation of the competencies of the company, e.g. before customers. These companies identified KM as a solution for this purpose.

A similar aim is indicated by the companies which want to professionalise their personnel policy through KM, to make use of more extensive skill profiles for their training planning and personnel development and use them for the team formation.

Companies within a radical modernisation flux have, on the one hand, to secure informal knowledge about traditional technologies and customer-supplier relationships and, on the other hand, promote the modernisation of the technological equipment through adequate training. They identify KM as an appropriate tool for these goals.

## **Barriers**

The eminent importance of knowledge for the success of the company is not questioned anymore. Nevertheless, the implementation of systematic knowledge management meets with barriers. Examples are found also in the partner companies. If knowledge culture is really to work, such barriers must be addressed openly.

Roughly, the barriers can be attributed to two types. First, KM requires expenditure without the immediate possibility for managers to book and show measurable returns. Second, KM requires a very critical self-assessment of organisations and individuals and the open exchange about competencies and knowledge gaps.

The first type of barriers occur in smaller companies above all as a lack of time of the management. In medium-sized companies the experts are the cornerstones of a KM system, often hardly available, involved in different projects and changing teams, fully dropped by restructuring measures etc. Time and resource management, that leads to the search for the short-term benefit, sometimes by purchasing external solutions, and not to the long-term internal development of a KM system. In addition, cutting on the expenditure in knowledge and personnel development is always a first measure in economic bottlenecks. Due to the recession in the new economy currently scepticism is arising about internet and knowledge activities. Companies are sceptical about the benefit of KM for them and are thus reluctant to invest in the implementation of such a management system.. In contrast to that, absolutely necessary is a discussion about:

- the fact that an efficient documentation and administration of organisation knowledge can also relieve managers and specialists, secure expertise and make team formation more effective,
- the fact that the purchasing of external knowledge in the short term is not automatically the economic solution and that rash reorganisation can affect core competencies of the company,
- the fact that some disappointment about modern ICT is caused by the previous illusion that technology alone creates effective knowledge.

The barrier "overburdening of managers and specialists" has, apart from economic dimensions, also a cultural one: the "jealous" defence of sole responsibility and hierarchy. This second type of barriers occurs at the level of companies and employees. Self-critical analysis of competencies in the own company is particularly difficult where paternalism is an element of the traditional culture of the country or of the company, traditional founders of SMEs are an example. Particularly difficult for companies is a self-critical assessment of how knowledge is handled in the exchange with external people, consultants or even other companies where a competitive self-presentation is the traditional style in company culture. Unrealistic, competitive self-presentation is the consequence. Analogue barriers exist at the level of employees. The fears that expressed needs of knowledge are sanctioned as knowledge gaps, revealed competencies are taken advantage of and bring about work overburdening - these fears are poisonous for a culture of exchange and building up of knowledge. To overcome these fears is a vital task of KM.

## Good practice

A knowledge management system is a bad investment if it is put on the organisation a la mode and if it remains an alien element. A good practice is, however, to implement KM organically, i.e. as completion, improvement and further development of already maintained tools of the organisation and elements of the company culture. The pilot companies in the project provide examples for that.

For example, pilot companies from Italy and Hungary show how a good understanding of KM evolves from quality management (QM): only if companies already operate QM not only formalistically for the certificate and the external effect but in the perspective of TQM and continuing improvement. Then, an awareness already exists of the value of the process knowledge of the employees for the company where KM can start.

German and Italian companies show how KM evolves from personnel management: When companies already operate a real personnel development with employee participation, when they understand the use of a reliable skill analysis to identify training needs and to start training in a new co-operative way, when they are aware of the value of extensive skill profiles for the internal formation of efficient teams and for the representation of the competence of the company before customers, etc.. British and German companies have organised their KM projects in the project KnowMan as training of (new) managers and specialists.

The implementation of modern ICT is an incentive for good practice in KM as shown particularly by British companies. Only if a clear awareness exists that ICT cannot be more than a tool - for the knowledge in the heads of the users.

In the course of the project KnowMan some pilot companies, after giving priority to internal stocktaking and reorganisation of their knowledge base, have already started considering their external knowledge relationships. At a workshop of the British partner companies the following ideas have been developed for good practice:

- *“companies agreed they could draw on knowledge of personnel functions from previous employment which proved beneficial in training needs analysis in that it identified how new knowledge can be collected and brought into the company from outside sources regardless of size.*
- *the implementation of a knowledge management strategy through the identification of particular processes the company can identify as being in need of improved staff flexibility and process efficiency. This would be supplemented by a series of process datasheets that could be used for training the process operators.*
- *the companies recognised that they would have to update and in some cases adopt employee work records which clearly identified the job profiles / descriptions and specifications of the post, qualifications, current skills and complete training records of the post holder*
- *the micro companies could create a database of sources of external knowledge such as suppliers, professional bodies and clients and develop a structured method of providing information and monitoring of client projects to which they would have on-line access*
- *computerise key information relating to knowledge, skills and competencies of the network*
- *one SME has planned to spend ½ day per month with main supplier to promote knowledge exchange*
- *maintenance of close links with other organisations that together operate a knowledge bank for the sharing of knowledge, expertise and, occasionally, cascading training”*