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**WORKSHOP**

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**AGREEMENT**

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English version

## European Guide to good Practice in Knowledge Management - Part 1: Knowledge Management Framework

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## Foreword

This European Guide to Good Practice in Knowledge Management (KM) has been prepared by a Project Team reporting to the CEN Workshop on Knowledge Management in the period September 2002 till September 2003. The decision to produce this Guide in the form of a CEN Workshop Agreement was taken at the Workshop's Kick-Off meeting on 2003-06-24.

### ***Reason for this guide***

This guide aims to:

- (a) Provide European readers with a practical introduction to mainstream thinking in KM;
- (b) Give an indication of some of the emerging new thinking in KM;
- (c) Stimulate interested readers to join an ongoing public discussion about KM, which will be facilitated through the European Commission's KM portal at <http://www.knowledgeboard.com/>

The authors have therefore produced:

- (a) A discussion document to help readers develop their plans for getting started in KM;
- (b) A synthesis of good KM practices from around Europe – from the private and public sectors and from academia;
- (c) A reflection of their own experiences in KM;
- (d) An indication of some of the new thinking in this fast evolving field.

### ***A fast track through this guide***

The guide comprises five main booklets<sup>1</sup>, published each as a CWA part, each of which can be read separately, although we would strongly recommend readers to consider these booklets as one integrated good practice guide, which can perhaps be best read in the following order:

- 1. KM Framework**, which sets the overall context for KM at both the organizational and personal level; (CWA 14924-1)
- 2. Culture and KM**, which explains to readers how to create the right cultural environment for introducing KM; (CWA 14924-2)
- 3. Implementing KM in Small and Medium-Sized Enterprises (SMEs)**, which provides a project management methodology to help SMEs (and other organizations) get started in KM; (CWA 14924-3)
- 4. Measuring KM**, which helps organizations assess their progress in KM; (CWA 14924-4)
- 5. KM Terminology**, which summarizes the key KM terms and concepts that readers will find useful when navigating through the guide. (CWA 14924-5)

These documents are therefore intended for employees, managers, directors or anyone else involved in a KM programme, within or between European organizations. The documents combine both desk and primary research and also offer a comparison of different models and case studies.

The document has been approved by a wide range of interests, representing the Knowledge Management community. The list of experts who formally supported the CWA's contents may be obtained from the CEN/ISSS Secretariat.

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<sup>1</sup> Please see Annex A for the detailed terms of reference for each Work Item of this project.

# Introduction

## ***Why KM?***

As organizations strive to improve their business performance and capacity for innovation, their attention is increasingly focused on how they manage knowledge.

Experience has shown that **successful KM implementations in business settings prioritize attention on soft issues - including human and cultural aspects, personal motivations, change management methodologies, new and improved business processes enabling multidisciplinary knowledge sharing, communication and collaboration - and see technology as an enabler.**

**Despite this, most efforts so far at addressing the challenge of KM in business environments have typically taken a "technology-push" approach, concentrating major effort on putting in place IT tools that will "solve the knowledge creation, sharing and reuse problem".**

Given this, it has been the objective of this guide to investigate those soft areas related to KM which can be the subject of common approaches, good practice identification or standardization initiatives, and to situate and describe these in the wider organizational context. **The overall intention has been to provide meaningful and useful guidelines to companies, and notably SMEs (see below), as to how they might align their organizations culturally and socially to take advantage of the opportunities of knowledge sharing within and beyond their organizational boundaries.**

These guidelines therefore take the form of a European Guide to Good Practice in KM which describes how to implement KM successfully within an organization, and lists the benefits awaiting those organizations that are able to do it. Through its soft, culturally focused approach, the guide aims to add value to other more technology-focussed initiatives underway within companies and standardization bodies. The overall result will be a greater complementary benefit for European companies, large and small.

In short we have aimed to identify and develop good practices which can be applied to all types of European businesses, including SMEs, to ensure that these organizations can be assisted as they seek to put in place the cultural, human and environmental ecology necessary to take full advantage of their collective knowledge as they do business in the knowledge economy.

## ***Why KM in SMEs?***

Owners and managers of SMEs differ in what they term success. Survival and continuity, profit, return on capital employed, numbers of employees and customers, pride in product, skills and service, employment for family members, and enjoyable work life, are frequently mentioned criteria.

Knowledge will tend to play a more significant role whenever change, innovation and growth are being pursued in a competitive and complex field. Some identified KM routes to success have been through the following:

- Being adaptive to the business environment you are in
- Having a special group of customers; we may learn a lot from leading customers and from companies with a good innovation record
- Sticking to a small niche that others do not want to contest
- Benefiting from local monopolistic circumstances
- Addressing inertia/lack of information among the customer base
- Creating a stable technology infrastructure over a long period of time
- Maximizing the profitability of the activity
- Capable management with a good development process supporting them
- Loyal and capable workforce
- Being responsive to customers' needs and requirements.

For the SME these simple steps can provide substantial benefit:

Although extended knowledge locations and flows are obvious in larger organizations, why is a KM approach especially important in the SME? Reasons are as follows:

- Knowledge in SMEs tends to be tacit/informal/not recorded
- Know-how in SMEs may not be valued as highly as it might be
- Lack of know-how may be hard to talk about in SMEs
- Short-term approaches to knowledge gaps may work sufficiently to make change appear unnecessary
- Know-how in an SME may easily be lost or fragmented when the owner sells the business or retires.

# 1 What, why and how to use?

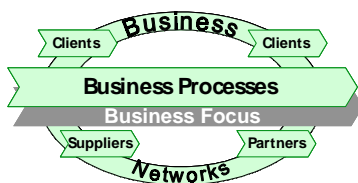
This European KM Framework<sup>2</sup> is designed to promote a common European understanding of KM, show the value of the emerging KM approach and help organizations towards its successful implementation. The Framework is based on empirical research and practical experience in this field from all over Europe and the rest of the world. The Framework addresses the most relevant elements of a KM approach and aims to serve as a point of inspiration and as a reference basis for all types of organizations aiming to improve their performance through dealing with knowledge in a better way. The Framework should be considered as a starting point for developing, if appropriate, an organization-specific framework that serves best the needs of a particular organization's KM approach.

In order to describe the core knowledge processes, we first give a working definition of knowledge and KM (see also the booklet on KM Terminology, in part 5 of the CWA 14924):

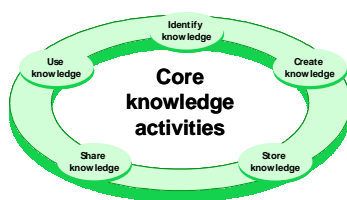
“**Knowledge** is the combination of data and information, to which is added expert opinion, skills and experience, to result in a valuable asset which can be used to aid decision making. Knowledge may be explicit and/or tacit, individual and/or collective.”<sup>3</sup>

“**Knowledge Management** is the management of activities and processes for leveraging knowledge to enhance competitiveness through better use and creation of individual and collective knowledge resources.”

The KM Framework considers three layers as most important for KM:



a) The **business focus** should be in the centre of any KM initiative and represents the value-adding processes of an organization, which may typically include strategy development, product/service innovation and development, manufacturing and service delivery, sales and customer support. These processes represent the organizational context in which critical knowledge, such as knowledge about products and services, customers or technology is created and applied. Furthermore, these processes are now becoming more and more *inter-organizational*, as organizations operate in business networks with suppliers, partners and clients.

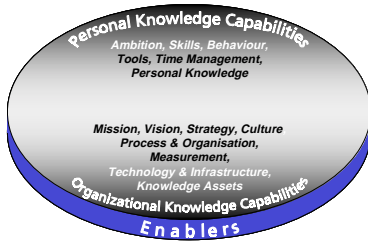


b) Five core knowledge activities have been identified as most widely used by organizations in Europe: identify, create, store, share and use. These represent the second layer of the framework by forming an integrated process. These activities are typically performed in support of the wider business processes. Their integration and performance within an organization have to be supported by the right KM methods and tools.

<sup>2</sup> Definition of Framework: “The KM Framework relates the various components of Knowledge Management (processes, activities and enablers) to each other. It provides a schematic picture of how these various aspects depend on each other and it helps to position KM projects/activities.”

<sup>3</sup> In a broader understanding knowledge could be described in terms of Information, Experience, Skills and Attitude (I.ESA)

- c) The enablers represent the third layer and comprise two main categories, called personal and organizational knowledge capabilities, which complement each other. These capabilities should be seen as the enablers for the knowledge activities outlined above.



Personal knowledge includes those capabilities such as ambition, skills, behaviour, experience, tools and time management which have to be developed at the personal and group level in order to generate improvements from knowledge handling.

Organizational knowledge capabilities are those that leaders have to establish in order to facilitate effective knowledge handling within the value-adding processes, by both internal stakeholders (such as managers and employees) and external partners (such as suppliers and clients). These capabilities include the mission, vision and strategy, the design of processes and organizational structures, measurement, understanding of the culture, the use of technology and infrastructure, as well as the development of the collectively available knowledge of an organization – i.e. its so-called “knowledge assets”.

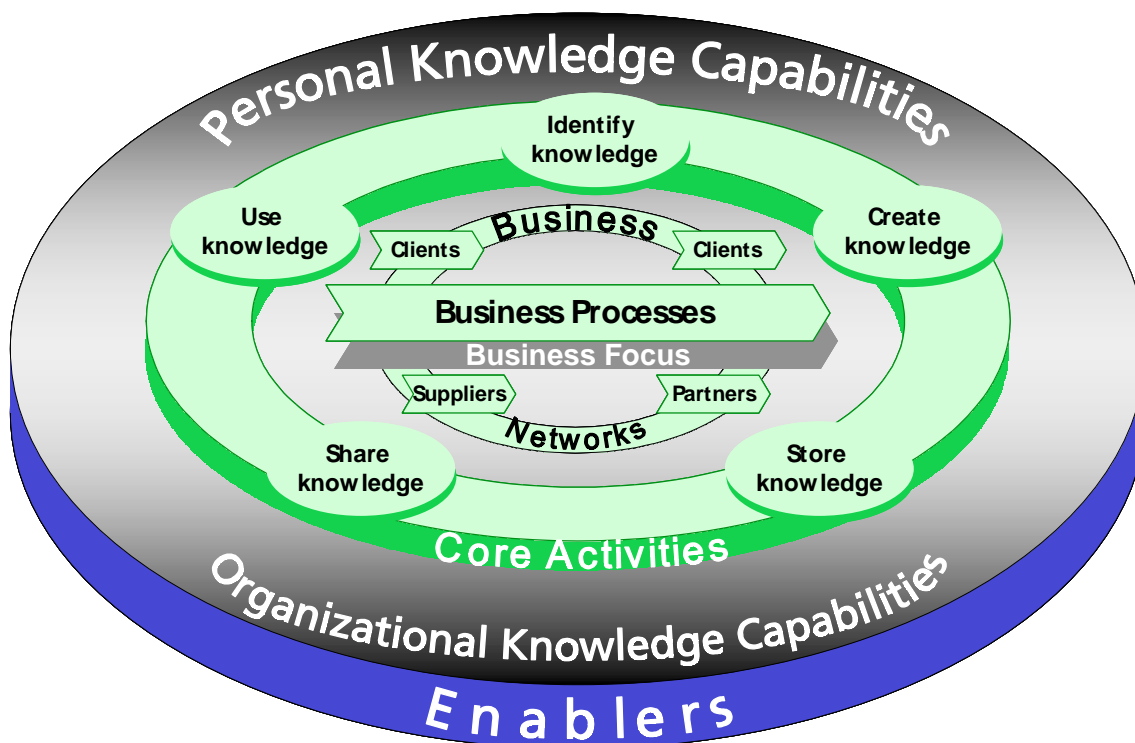


Figure 1: Knowledge Management Framework: A European Perspective

**How can this European KM Framework be used in practice?** We invite organizations interested in KM, and their KM project leaders and KM project teams to use the Framework as a basis for their initial discussions about KM. **If the Framework helps an organization achieve a common understanding of KM, align and focus its actions, identify what KM aspects are relevant to that organization, understand what is the right combination of these aspects, which processes should be tackled and how to develop KM both an organizational and individual level - then it has value.**

To achieve this shared understanding within the KM project team and the management team is among the first steps of the change management process that an organization will typically have to undergo when trying

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to become a more “knowledge-conscious organization”. The Framework can act as a checklist to ensure nothing is overlooked, while also helping to minimize complexity by eliminating aspects that are less relevant.

If your own discussions lead to the refinement or creation of a different framework that you consider better, please let us know, as we would really like to get feedback from readers.



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## 2 Core value-adding processes

The primary objective of any organization is to deliver a product and/or service to its customers or, in the case of a governmental organization, to its citizens. In order to fulfil this task, the managers and employees of the organization already use their personal know-how, the knowledge of the organization, the knowledge of their suppliers, partners and clients, through a process of interacting and collaborating. Using knowledge is therefore nothing new in itself. A KM initiative should simply build upon and improve these existing activities and should aim to make all stakeholders more aware of the role of knowledge in the processes that they are part of.

Products and services are developed, produced and delivered to customers through the so-called value-adding processes of the organization. Of course, in addition to these primary processes, we can also identify activities related to the development and implementation of a strategy, the financial and administrative processes, human resource (HR) processes etc. These processes represent the organizational context in which knowledge is applied, such as innovation and product development in an automobile supplier company, service delivery in a bank or customer support in a software company. According to these specific value-adding processes, different knowledge approaches are required and different methods and tools used by the employees to fulfil their tasks. In addition to supporting the improvement of the core processes of an organization, KM methods can also be applied within its supporting processes: competence management is one such example from the HR arena; developing best practice databases to capture and exchange knowledge about optimum procedures throughout the organization is another example from the area of continuous improvement processes; methods for intellectual property management (e.g. patents, copyrights) is a further example from the area of management of financial and non-financial assets.

Furthermore, such processes are not necessarily limited to organizational borders. Small and medium sized enterprises (SMEs) in particular are increasingly building networks to supply their products, to share their resources and to learn from each other. Long-term partnerships are established in order to develop new products and services that a single organization could not cope with alone. Therefore partners and suppliers, as well as clients, should often be involved within the scope

### 3 Core knowledge activities

KM activities can be described in relation to many different disciplines and approaches, but almost all focus on some basic knowledge activities (often also called the “knowledge life cycle”, or the “knowledge value chain”). The difference typically comes in the naming and number of activities and the importance and level of detail assigned to each activity.

Empirical research, practical experiences and the analysis of more than 150 KM frameworks worldwide have shown that the following areas are, in most cases, the most important to address:

1. describe how knowledge is used;
2. raise awareness about the required KM activities,
3. reduce complexity; and
4. design a KM solution.

The five core knowledge activities are:

- a) **Identify** knowledge: This is a crucial and strategic step. People and organizations are encouraged to think about what they want to achieve and the knowledge that is required to make it happen. It should include an analysis of what existing knowledge is already available and what knowledge is lacking (so-called “gap analysis”). This applies on the organizational level for strategic knowledge needs and on the personal level for the daily search for required knowledge and information. The identification of existing knowledge is essential for supporting decision taking. Helpful reference points for this exercise are customer requirements, outcomes from value-adding processes and the process steps themselves. In order to encourage the reuse of existing knowledge, this identification step should often be performed before creating new knowledge. Methods and tools that support this step include: e.g. systematic search strategies, brainstorming, mapping techniques and (customer) feedback.
- b) **Create** (new) knowledge: There are many ways to create new knowledge. At the personal and team level, it is often as a result of social interaction, i.e. through training, learning by doing, joint problem solving or brainstorming. At the departmental or organizational level, innovation processes are typically aimed at creating new knowledge for products and services while improvement activities focus on internal processes and procedures. Creation can take place within the research & development function, through the establishment of expert groups, such as so-called Communities of Practice (CoPs), by the recruitment of experts and by buying another company. Always people have to bring in their existing expertise their explicit and tacit knowledge, in order to create new knowledge. However, new solutions and other great ideas are often not recorded for reuse or learning. It is therefore critical to examine how best to store such knowledge.
- c) **Store** knowledge: In order to build up knowledge assets (so-called “knowledge capital” and “knowledge bases”), knowledge needs to be embedded within an organization. Much knowledge is ‘stored’ in people’s brains and will often remain there as so-called “tacit knowledge”. Furthermore, knowledge can be ‘stored’ in team or organizational routines, without even having been explicitly described (e.g. as successful sports teams show us). As long as such people and teams remain accessible, one can say that their knowledge is “memorized” by the organization and available for (re)use. Another way to secure knowledge is to institutionalize it as so-called “structural capital” within the organization’s structures, processes and culture. Storing explicit knowledge depends upon some supporting activities like selecting, organizing or categorizing, as well as updating and purging old content. At least over long time periods, preserving stored knowledge looks much like applying because knowledge needs to be modified for current circumstances and changing contexts and issues. However, in order to leverage the potential of this knowledge the next activity of the core knowledge process – i.e. sharing - has to be carried out. Technical tools for storage of knowledge include: e.g. document databases, question and answer systems, narrative and expertise locators (eg Yellow Pages).

- d) **Share** knowledge: The aim of this step is to transfer knowledge to the right place, at the right time, with the right quality. This means that the knowledge arrives in the right context - i.e. where value is created. Sharing can take place in many ways. Knowledge can be added to databases or distributed via documents. This is the so-called "stock approach": people make knowledge available in such a way that other people can find it. But most knowledge can best be transferred from one person to another by direct interaction via collaboration, workshops, coaching, apprenticeships etc. This transfer of knowledge directly between people can be called the "flow approach". Methods and tools that support the sharing of knowledge include: e.g. intranets/portals, databases, collaboration, CoPs, job rotation, coaching, seminars, and training. However, if we do not accept the knowledge provided by our colleagues, partners or suppliers, we often do not achieve the ultimate aim of KM, which is the next activity in the knowledge process.
- e) **Use** knowledge: "If only we knew what we know...we would be three times more profitable!" Knowledge can only add value when it is being used in an organization. A lot of knowledge remains under-utilized, so this activity is really about making sure that all effort that is spent in the previous activities pays off. Furthermore, this activity determines the knowledge needs and should always serve as a reference point for the knowledge to be created, stored and shared. While applying knowledge we might discover some further knowledge gaps, as well as acquire new experiences which could represent new knowledge for the organization. Therefore the knowledge processes should continue with further identification and creation, in order to become an integrated KM process.

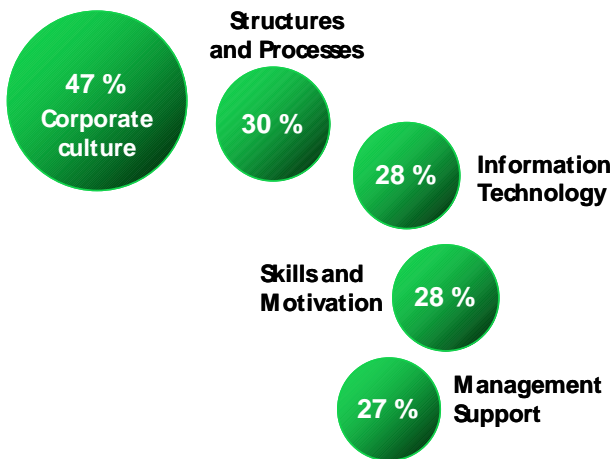
Two important requirements have to be fulfilled to achieve improvements from these core knowledge activities:

- First, the core activities have to be aligned or integrated into the organizational processes and daily tasks.
- Second, the core activities have to be carefully balanced in accordance with the specificities of each business process and organization. A KM solution should not focus only on one or two activities in isolation.

## 4 Enablers for KM

One of the most important questions for organizations interested in implementing KM is - what are the key enablers to help us be successful? Several studies have tried to identify these enablers for KM.

The following figure displays the results of one European-wide company survey<sup>4</sup> asking about the main success factors for KM initiatives. Nearly one company in two mentioned *corporate culture* as one of the main enablers for KM. Almost every third company named *structures and processes*, *information technology*, *skills and motivation* and *management support* as key success factors.



These are five main enablers that every KM initiative should address. In general, these enablers could relate to either personal knowledge capabilities or organizational knowledge capabilities, which should be complementary with one another, since a successful KM initiative has to integrate and develop both sets of capabilities. The different aspects of these sets of capabilities are described below.

### 4.1 Personal knowledge capabilities

KM is performed on a personal level by the people working within organizations. Experience from different sectors and companies shows that the following personal knowledge capabilities are usually required for a successful implementation of a KM solution:

- a) Ambition;
- b) Skills;
- c) Behaviour;
- d) Methods, Tools and Techniques;
- e) Time management;
- f) Personal knowledge.

#### 4.1.1 Ambition

Knowledge is an important and renewable resource driving quality and innovation. Developing, sharing and using this resource is necessary to achieve the objectives of the organization and the individual. Without the

<sup>4</sup> Heisig, P., Vorbeck, J. (2001)

existence or alignment of personal and collective ambition, it is difficult to motivate people to participate in the various knowledge processes. In fact, most knowledge sharing is on a voluntary basis!

### 4.1.2 Skills

The skills that a person needs to perform the core knowledge processing activities efficiently are often overlooked. Some of these personal KM skills include:

- being aware of how to make tacit knowledge explicit
- encourage sharing of knowledge through the development of active listening skills – such as replaying in one’s own words what a colleague has said, in order to check if the understanding is correct
- how to communicate knowledge effectively to others
- how to structure knowledge in documents in a reader friendly manner
- how to define effective search strategies and to understand the query results adequately
- how to select and use external knowledge (e.g. content from third parties).

These personal skills could be evaluated through “knowledge skill tests” and improved through training and learning by doing. If these capabilities are actively developed (e.g. by learning and education) and encouraged, then, over time, a more “knowledge conscious behaviour” should be witnessed within both the individual and the wider organization.

### 4.1.3 Behaviour

Since knowledge is connected to people, the effective development, storing, sharing and application of knowledge is dependent on people being able and willing to do it. This means that they must be conscious of the relevance of the knowledge, the various processes and the available tools. The organization should therefore stimulate appropriate knowledge behaviours. **These behaviours can sometimes be influenced by various external measures, such as incentive schemes, awards and promotions or simple explicit acknowledgement!** But at least equally important are internal, personal drivers - people should *want* to develop and leverage knowledge assets

**Just asking simple questions like...**

- **Is there somebody else who might have knowledge that could help me further here?**
- **What did we learn in this project?**
- **With whom should we share what we learn?**

**...could have a significant impact on the way knowledge is developed, shared and used in an organization.**

For example, one powerful sharing behaviour can be simply asking for help, in order to help a person improve his or her own solution or good practice and spread it around the organization. Nevertheless, we have to make it easier for people to overcome cultural barriers to asking for help. Further factors influencing behaviour include values and beliefs of staff and the amount of control and authority within organizations versus the individual freedom for decision-making and action taking (see also chapter 2 of this CEN guide, which is about Culture in the context of KM).

#### 4.1.4 Methods, Tools and Techniques

If somebody wants to share effectively his or her knowledge, or wants to make use of existing knowledge, tools are often necessary to enable this process, although this does not always mean technical tools. For explicit knowledge, more and more information and communication tools are available, such as the internet, intranets, search tools, databases, expert locators, workflow systems, etc.

But organizations should also consider various non-technical tools such as coaching, workshops, CoPs, expert meetings and social events. **The choice of tool should be made very carefully: it should fit as seamlessly as possible into the natural way of working of the individual and the organization.** For a detailed list of KM methods and KM tools see the lists in see booklet 2 – part 2 of the CWA 14924.

#### 4.1.5 Time Management

An often-used saying related to KM is “an hour of work in the library could save you a month of work ...”. One of the largest threats to KM is that it often requires an investment that leads to better performance at some future time, in another place for possibly another person. Furthermore, documentation tasks are often perceived as non value-adding tasks. KM can therefore sometimes be seen as important, but not urgent. **Employees must be given the time and they have to learn how to manage their time efficiently. They must take the time to manage their knowledge, e.g. document their lessons learned.** They will take the time if and only if they understand why they do it: e.g. because they benefit themselves directly or indirectly, e.g. via incentives and appraisals, or they see how it will help their colleagues or the organization, by receiving positive feedback from e.g. management or colleagues.

#### 4.1.6 Personal Knowledge

Research indicates<sup>5</sup> that the pressures of knowledge-based work are increasing in modern societies. These can include the need to solve unforeseen problems, taking greater levels of personal self-responsibility and decision-making, carrying out more coordination tasks in cooperative work settings, a greater number of information processing tasks and a higher dependency on the speed of input from colleagues and clients. Combined with the decreasing “half-life” of certain knowledge the requirements for personal knowledge are increasing. KM only makes sense if knowledge is important for the job at hand and when the individual possesses and/or needs knowledge to reach his or her objectives. Therefore it is clear that in today's economy more and more organizations, managers and employees are becoming more dependent on knowledge in order to be successful.

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<sup>5</sup> Heidenreich, M. Merkmale der Wissensgesellschaft 2002

## 4.2 Organizational knowledge capabilities

Organizational knowledge capabilities describe the conditions that the leadership of an organization has to establish in order to facilitate effective knowledge use within its value-adding processes, by its managers, employees and other stakeholders.

The following organizational knowledge capabilities are typically relevant for a successful implementation of a KM solution:

- g) Mission, Vision & Strategy;
- h) Culture;
- i) Process & Organization;
- j) Measurement;
- k) Technology & Infrastructure;
- l) Knowledge Assets.

### 4.2.1 Mission, Vision & Strategy

The mission describes why an organization wants to be involved in certain activities, the vision makes explicit what it wants to be in the future, and the strategy explains how this should be accomplished. Without knowing why, what and how, it will be very difficult to link knowledge to the business objectives; in such a case, the first step in particular (knowledge identification) would have no basis and could not be completed.

Furthermore, an individual in the organization would have no guidance to help him/her to make decisions on what to do with what knowledge. The required alignment of personal and collective ambition would therefore become impossible.

### 4.2.2 Culture

Since most knowledge processes are on a more or less voluntary basis and knowledge is to a large degree personal, there needs to be within an organization a culture of motivation, a sense of belonging, empowerment, trust and respect before people really start to engage themselves in developing, sharing and using knowledge. It requires a culture in which people are respected, based on the knowledge they have and the way they are putting it to use for the organization. If this culture does not already exist, change management actions should be undertaken in order to shape the organizational capabilities in a way that encourages individual behavioural change towards the required behaviour for KM. (For more on Culture in the context of KM, please see booklet 2 – part 2 of the CWA 14924.)

### 4.2.3 Process & Organization

As stated above, core knowledge activities should be seen as an integral part of wider business processes. Like all other processes, this means that knowledge activities should be value-adding, clear, communicated, understood and accepted. Roles and responsibilities related to the processes and knowledge activities should also be made clear. If one doesn't do this, the risk is there that the activities will not be sustainable: other priorities will push the knowledge-related activities back and ambition levels will decrease. Furthermore, establishing some level of process management enables the organization and the individual to learn about and further optimize the knowledge activities within the processes. Some organizational structures, such as network or matrix structures might be more supportive than hierarchical structures which are backed by more rigid organizational procedures. The stock and flow approaches require different approaches for organizing the knowledge processes. In case of stock, it makes sense to implement a (simple) governance model, which tells the organization who is responsible for what part of the knowledge base. In the implementation phase one should look for the right people to act as 'knowledge owner', which means somebody who is

capable to identify, codify and maintain knowledge items and who can interact with others to answer questions and improve the quality of the assets. Since such a role should be perceived as valuable to the organization, people should also get the recognition and be rewarded for their contribution. On the other hand, in the flow approach, one should apply other instruments like coaching, CoPs, job rotation, etc. Here, it is crucial to create the circumstances in which people can meet, work together and share their ideas and experiences.

#### 4.2.4 Measurement

“What gets measured, gets managed” is a dictum often found in KM discussions. Although this may not actually be true (an alternative view holds that “If you can't manage if you can't measure, you probably can't manage!”), it is certainly true that an important enabling factor for successful KM is often to be able to define some measures that evaluate the cost-benefits of a KM solution, as well as to have some indicators to monitor the development and evolution of the solution and to support strategic decision-making about future KM activities. Research to date has indicated some value in measuring KM, but also the difficulties in measuring knowledge itself and KM activities. Many and various methods and tools for KM measurement are under development. (For more on Measurement in the context of KM, please see booklet 4 – part 4 of the CWA 14924.)

#### 4.2.5 Technology & Infrastructure

Some kind of infrastructure is normally required to support an organization's knowledge activities. Today, technological tools are becoming more and more available for capturing, distributing and finding knowledge. Particularly in organizations in which people have to communicate between different locations or across different time zones, technology is becoming a critical enabler. It requires that organizations think about their technical infrastructure, so that people can be connected to knowledge and to other people as carriers of knowledge. The technology needs to be functional, easy to use and as appropriate, standardized, so that networking can really take place. The technology can focus on supporting various aspects of the knowledge activities. Elements of the technical infrastructure could offer solutions for e.g. on-line collaboration, question and answers, expert locating, databases, search, gathering and distribution of external information, community spaces, e-learning, and process support tools.

There is also a non-technical component of the infrastructure: it can include facilities that support KM, such as dedicated meetings facilities, help desks staffed by so-called “knowledge brokers”, and office spaces designed to stimulate knowledge sharing behaviour.

#### 4.2.6 Knowledge Assets

The biggest challenge for any organization is to develop and make optimal use of the employees' knowledge (their so-called “human capital”) and that of their external stakeholders (their so-called “customer capital”) by transforming this know-how into shared knowledge assets (so-called “structural capital”). Knowledge assets are those, which remain with the company when the employees walk out through the door –such as manuals, customer databases, process descriptions, patents etc. Typically, human capital is more related to the internal or tacit component of knowledge (experience, skills, attitude) and structural capital more related to explicit information. (For more detailed descriptions see booklet 4 on Measurement – part 4 of the CWA 14924.)



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## 5 KM implementation and Change Management

As stated above, this Framework should serve as a point of reference for organizations to help them raise their own awareness about how knowledge is used, where to start with their own KM initiative and what are the most relevant aspects and enablers to be considered when embarking on a KM project (for more information on KM implementation – with a particular focus on SMEs - please see booklet 3 – part 3 of the CWA 14924).

Nevertheless, every organization has its own identity and language. Therefore, the KM Framework described in this chapter should not be taken by organizations as the only, or the best way to do KM, but merely as a well-founded basis for discussion to help them with further definition of their own specific KM framework.

While developing and implementing a KM solution, an organization will usually embark on a change management process, by attempting to change some the beliefs and behaviours of the management and the employees. The dimensions of this Framework could therefore help an organizations' KM project team to check whether all relevant factors are addressed within the implementation and change processes. Despite the long-term perspective of most change programmes, short-term improvements and so-called “quick wins” have to be achieved in order to maintain momentum and commitment on all organizational levels. (For more on change management in the context of KM, please see booklet 2 – part 2 of the CWA 14924).

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## 6 Case studies

Case studies<sup>6</sup> can be a very efficient tool for capturing experiences, describing mistakes and lessons learned and for learning and knowledge transfer. This KM Framework could serve to help in two approaches to developing case studies :

- a) As a reference structure to help managers gather information and success stories and describe the experience and lessons learned in KM in organizational practice and,
- b) as a context within which to understand and assess the KM experiences of others in their specific organizational, industrial, professional, cultural and even national context.

**KM case studies based on this Framework could therefore help lead to a common “KM language” and should facilitate the sharing of knowledge across organizational, industrial, professional and even national borders, thereby making the sharing of understanding about KM more widespread in Europe.**

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<sup>6</sup> Probst, G.J.B. (2002)

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## 7 Key Learning Points

In brief

- This European KM Framework should serve as a reference point and starting point for practitioners to achieve their own understanding of KM.
- The Framework focuses on the most important aspects – the business focus represented by the processes of an organization, the five core knowledge activities, and the personal and organizational capabilities as enablers – for a holistic KM solution.
- The Framework could be used as a checklist in order to perform a brief evaluation about the current dealing with knowledge and for a cross-check of KM solutions and their implementation actions.

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## 8 Where does this guide come from?

This guide has been produced by a European Project Team working in close cooperation with the members of the CEN Workshop on “Knowledge Management”, from September 2002 to September 2003. The work included nine workshops and meetings in Brussels, Amsterdam and Berlin, as well as contributions by mail to the Project Team from all over the world and under the Special Interest Group “KM standards” on [www.knowledgeboard.com](http://www.knowledgeboard.com).

More than 140 KM Frameworks from all over the world, produced by KM researchers, KM practitioners, KM consultants and associations, as well as standards bodies, have been collected, categorised and analysed in order to identify those elements and aspects which are mostly widely used in KM Frameworks. The KM Framework presented here has been revised by several KM experts and KM practitioners throughout the process. The Project Team has considered each argument seriously and tried to integrate all suggestions and answer all criticisms.

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## Annex A: Work Items as described in the CEN/ISSS Workshop Business Plan

### Work Item I - Terminology

*Scope:* One of the main challenges in KM is to define clearly the terms and concepts involved. Organizations throughout Europe, and notably SMEs, would benefit greatly from a commonly accepted set of terms and definitions for KM.

*Approach:* Numerous definitions of key terms already exist in the published literature. This work item will therefore not choose to reinvent the wheel but rather to simply repackage those existing terms and definitions that are considered most relevant to the objectives of the Workshop. The result will be a European KM Glossary comprising 30 core terms and definitions in KM, along with their related translations into other European languages. This glossary will include terms relating to all areas covered by the Workshop – from framework, through metrics and measurement, to implementation and organizational culture. The glossary will be of significant practical relevance to SMEs as they exchange views and know-how in the domain of KM.

*Deliverables:* A European KM Glossary of 30 terms and definitions in KM, with translations into official languages of the European Union and EFTA.

### Work Item II - Framework

*Scope:* Successful KM is a balancing act. While experience has shown that socio-cultural issues are often the most difficult to tackle, it is equally important to keep in mind the “bigger picture” – the wider economic, technological and structural issues facing the company as it strives to innovate faster and within which any corporate KM initiative inevitably takes place. The aim of this work item is to provide a holistic framework, capable of future evolution and adaptation, for KM implementation within and amongst organizations throughout Europe, and notably in SMEs, by referring to diverse viewpoints – for example economic, socio-technical, techno-structural and socio-organizational. The work will address issues relating to organizational performance, added value, economic and financial criteria, interactions between information systems and individuals and between information systems and the organization (missions, structure, processes and relationship networks). It will also address socio-organizational issues including legal issues, leadership, power distribution, management styles, knowledge sharing, incentive and reward systems, professional culture, ethics and values. One would hope that through consideration of such a framework, socio-culturally-driven KM efforts could be sure to achieve balanced results anchored in a rigorous and holistic analysis of the organizational context.

*Approach:* Many interesting and applicable frameworks exist in Europe and elsewhere. The focus of this work will be on identifying a framework (or set of frameworks), which is meaningful and practical to European business organizations, and notably to SMEs. This framework will provide a reference basis for decisions about the application of KM in a variety of business settings.

*Deliverables:* A European KM Framework which acts as a meaningful and practical guide to the context of KM initiatives - economic, technical, structural, socio-cultural - within the enterprise, and the interplay between these elements.



### **Work Item III - Measurement and Metrics**

*Scope:* As companies focus on knowledge as a core organizational asset, a number of critical questions are raised concerning how best to measure and track organizational performance in this new knowledge paradigm, and how best to measure the impact of KM initiatives on business. These are not trivial questions. In order to start on the KM journey, business leaders need to know how applying KM might improve company performance, and how it might lead to faster and better innovation. Once a KM initiative has been launched, it is equally important to track the impact of this initiative and to find ways to measure results.

*Approach:* Many existing KM measurement and metrics guidelines exist in Europe and elsewhere. This work item will identify a commonly agreed set of key metrics and measurements which have demonstrated their ability to assist knowledge managers and business leaders in assessing improvements in organizational performance as a result of KM. Consideration will be given to describing what to measure, and how, why and when to measure it. Emphasis will be given to measuring results but also to measuring the process by which the results are achieved. Consideration will also be given to assisting managers (notably from SMEs) in deciding what is important to measure in their specific business settings.

*Deliverables:* A Guide to KM Measurement and Metrics, comprising a set of measurements and metrics which can be considered as good practices and can be applied in European organizations both strategically and operationally. The deliverable will include a Measurement Top 10 section, which will allow knowledge managers and business leaders, notably in SMEs, to kick start their measurement activities with a subset of the most widely used and generically applicable measures. The outcome of this work item should also provide assistance to help knowledge managers and business leaders to decide what is important to their business and how to measure it.

### **Work Item IV - Implementation in European SMEs**

*Scope:* Throughout Europe, SMEs and SME communities are refocusing their activities to collaborate and compete through knowledge. This work item will assist SMEs and SME communities in identifying their readiness for KM, building the business case for KM, identifying and motivating key players, implementing KM successfully within and across their organizational boundaries and networks, and measuring the results of their efforts. The work proposed is considered vital in stimulating take-up and broad adoption of KM practices in European SMEs.

*Approach:* At a generic level, the work will identify and/or develop guidelines, checklists, questions and answers, models, methodologies and tools based on common needs. It will also attempt to identify items that are partly customisable to meet specific business requirements and needs, particularly of fast-growing companies. Work will build on currently available guides to good practice, lessons learned, problem solving histories and experiences, and input provided by SME representatives. The result will be a sound, validated, easy to understand, easy to use and step-by-step guide to successful KM implementation in diverse SME environments.

*Deliverables:* A Guide to Successful KM Implementation in SMEs comprising (but not necessarily limited to) sections on:

- European maturity grid(s) which can be used by SMEs and SME communities to position themselves with respect to their AS IS status and TO BE targets as "knowledge-based organizations"
- Generic principles, methodologies, good practices, awareness raising and training materials designed to enable SMEs to progress on their journey to successful KM
- Measurement guidelines which will enable SME managers to assess the impact of their KM journey on the organizational competitiveness, and to understand the true impact of their KM activities on their business (taking due account of the activities in work item 3)

- A technology section addressing the specific needs of SMEs in the design of the information and communication technology infrastructure of their organizations, supply chains and communities as they move forward to implement new knowledge sharing and creation opportunities for their businesses
- A set of case studies and stories reflecting experiences and lessons learned by SMEs on the KM journey.

### **Work Item V - Organizational Culture**

*Scope:* The success of any KM initiative is dependant upon an environment which motivates people to communicate, collaborate, innovate, take risks, and share and re-use knowledge. Equally important are appropriate skills, competences and behaviours. The aim of this work item is to guide people at all levels, and in all types of organizations, on how best to use themselves, and their relationships with other people, to manage knowledge well. Fundamentals like values, trust, beliefs and organizational politics dictate success or failure of KM interventions, so to add real value the KM initiative must address appropriately the existing corporate culture and sub-cultures. This means using social processes and organizational structures (including self-forming groups) that facilitate the conversion of information to knowledge, and the sharing, distribution and creation of knowledge. Other social processes like change management, managing complexity and “slow management”, communities of practice/interest, organizational learning, narrative, visioning etc. that are important in KM interventions, will also be included in the work. Finally, technology impacts on culture change and can promote or frustrate KM interventions. Therefore it is proposed to address the issue of how to use technology to drive KM effectively.

*Approach:* Organizational Culture has already been addressed in a number of fora in European and elsewhere. The work will build on existing work to identify a set of practical guidelines to help knowledge managers and business leaders to tackle the difficult organizational and cultural issues around KM. The work will, where appropriate, be populated with short case studies, stories, lessons learned and experiences that illustrate in simple language the points being made.

*Deliverables:* A Guide to Organizational Culture & KM comprising (but not necessarily limited to) sections on: Achieving buy-in by Top Management, Selling KM to the Organization, KM and Organizational Learning, Change Management in Practice, Motivating Knowledge Workers and the Organization to achieve its Objectives, Relating KM Interventions to Existing Cultures, Using Communities Effectively, Using Technology to Drive KM, Effectively, identifying and developing and improving appropriate skills, competences and behaviours.

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Readers who wish to find out more about the Culture in the context of KM are recommended to consult the following publications:

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<http://www.mgen.com/news/press/>  
<http://www.isiwebofknowledge.com/>  
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<http://www.ed.gov/>  
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<http://www.vaic-on.net>  
  
[www.technowledge.com](http://www.technowledge.com)

## Booklet 5: Glossary

Readers who wish to find out more about the terms in this booklet and further KM terms are recommended to visit the following websites:

<http://www.brint.com/km/>  
<http://www.knowledgeboard.com/community/zones/fs.html>  
[http://www.kit.nl/specials/html/km\\_glossary.asp#Top](http://www.kit.nl/specials/html/km_glossary.asp#Top)  
[http://www.knowledgepoint.com.au/starting\\_out/glossary.htm](http://www.knowledgepoint.com.au/starting_out/glossary.htm)  
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<http://www.kmtool.net/vocabulary.htm>

[http://sims.berkeley.edu/courses/is213/s99/Projects/P9/web\\_site/glossary.htm](http://sims.berkeley.edu/courses/is213/s99/Projects/P9/web_site/glossary.htm)

<http://www.cs.state.ny.us/successionplanning/workgroups/knowledgemanagement/terminology.html>

<http://www.soberit.hut.fi/wise/>

[http://www.nelh.nhs.uk/knowledge\\_management/glossary/glossary.asp](http://www.nelh.nhs.uk/knowledge_management/glossary/glossary.asp)

<http://www.intelligentkm.com/feature/06/SideBar2.shtml>

## Annex C: Acknowledgements

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