

Knowledge Management

A Guide to Good Practice



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**Knowledge Management:
A guide to good practice**

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Foreword

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Acknowledgement is given to the members of a specially constituted panel, KME/1 Knowledge Management, who were consulted in the development of this guide.

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Reason for this guide

This guide aims to provide its readers with a practical introduction to mainstream thinking in the field of Knowledge Management (KM), as well as providing an indication of some of the emerging new thinking in KM, and to stimulate interested readers to join a public discussion on KM. The authors⁽¹⁾ have therefore produced:

- a) a discussion document which will help readers develop their own plans for getting started in KM;
- b) a synthesis of good KM practices from around the world – from commerce and 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 four main chapters and a number of supporting annexes:

- **1. Why should organisations care about KM?** This chapter sets the overall context for the rapid growth in interest in KM globally, focusing upon the emergence of the so-called “knowledge economy” and of the increasing recognition, both within organisations and by the financial markets, of the value of intellectual capital/intangible assets. Examines the KM challenges that organisations – large and small, and across industry sectors – are facing.
- **2. How should organisations approach KM?** This chapter looks at the range of specific KM activities that organisations might undertake. Such activities could include: setting a direction for a KM programme; creating an organisational culture favourable to KM; measuring and rewarding success in KM; capturing, sharing and maintaining knowledge; assigning KM roles and sustaining momentum in KM programmes.
- **3. Benefits anticipated from investing in KM.** This chapter identifies some of the benefits that organisations might expect from investing in KM, in terms of: better services/products for their clients; faster generation and application of ideas and innovation; access to good practices; improved access to external intelligence and internal networks of expertise; enhanced ability to deliver continuous learning; greater (cultural and linguistic) geographic reach; reduced loss of knowledge through staff turnover etc.
- **4. Moving towards a deeper understanding of KM.** This chapter shows readers how to deepen their understanding of KM, by examining emerging KM trends, media and educational opportunities etc.
- **Annexes.** The annexes A–E provide some sample KM self-assessment tools, examine the links between KM and other organisational functions and management disciplines and point the interested reader towards further KM reading materials.

This guide also includes:

- a) a *Glossary and Index*, which introduce the key KM terms that readers will encounter in the text and point to the principal sections in which each term appears;
- b) a short *in brief* summary at the end of each section (see boxes marked );
- c) close to 100 real-life *examples of KM good practice* (see boxes marked ) , with practical ideas from organisations that are already creating value through KM;
- d) extensive *supporting notes and references*.

Future BSI guides covering KM

Readers should also note that this broad introductory guide to KM good practice is intended to be the first in a series of KM-related guides from BSI. Subsequent guides are likely to focus in depth both on emerging practices and on established sub-sectors of KM – topics are likely to include Communities of Practice, Content Management, knowledge sharing and innovation, and Intellectual Capital Management. This guide may also serve as the first milestone on the way towards an eventual British Standard on KM. BSI will also be providing a framework for feedback, ideas and questions relating to this guide. Readers who would like to get involved with further KM projects should contact BSI at knowledge@bsi-global.com.

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Glossary and Index

Listed below are the key KM-related terms that readers will encounter in this guide, along with an index of the principal sections in which they will find reference to these terms:

Business Intelligence: The gathering, analysing, storing and distribution of information, and the ability to employ collaborative work tools and ways of trying to measure the impact of technology on a business. It also involves a number of data mining, modelling, and forecasting tools (see [3.2.2.1](#), [E1](#)).

Chief Knowledge Officer (CKO): Person who articulates and champions the KM vision, provides the organisational leadership to implement and sustain KM, and is the ultimate focal point for knowledge creation, sharing, and application (see [1.2.1](#), [2.2.1](#), [2.6.2](#)).

Communities of Practice (CoPs): People interlinked in a communication or knowledge network because of their shared responsibility for a subject area. CoPs continually emerge and dissolve, and their membership, processes, and knowledge continually change and evolve: they help transform tacit knowledge into explicit knowledge and help promote cross-disciplinary communications. CoPs often differ from other communities of interest in that CoP members don't just join for the content, but join because they value community participation, and see it as a more effective and fulfilling way to learn, share and innovate (see [1.2.3](#), [1.4.1.1](#), [2.1.4.1](#), [2.2.5](#), [2.3.3.2](#), [3.2.3.1](#), [3.5.6](#), [B2](#), [C4](#), [D](#), [E1](#)).

Content Architecture: Method of cataloguing and tagging information or knowledge in a consistent way and with consistent language, so that this information can be moved around and between organisations seamlessly (see [2.4.4](#), [2.6.4](#)).

Content Help Desks: Often the first point of contact for users needing assistance with content. The role of a Content Help Desk is to enable staff to become more information literate and conversant with the tools available to them on their desktop. Experience has shown that users are much more likely to use the tools and information correctly if they are supported through initial use.

Content Management: Process of selecting, capturing, categorising, indexing, and storing both explicit and tacit information in ways that promote its reuse (see [2.4.1](#), [2.4.2](#), [2.4.3.1](#), [2.4.3.6](#), [2.6.4](#), [4.1.2](#)).

Culture: The business or functional environment in which people try to realise both their professional and personal aspirations. Increasingly, a successful knowledge sharing culture is one of transformation, in which everyone exhibits the behaviours and characteristics that successful change demands. Behaviours that are already deeply ingrained and those that are aspirations vary across all countries, practices, and people (see [1.1.2](#), [1.2.3](#), [2.1.1](#), [2.1.3](#), [2.2.1](#), [2.2.2.3](#), [2.2.3](#), [2.2.4](#), [2.3.1](#), [2.3.2.3](#), [2.7.2](#), [3.2.5](#), [3.5.5](#), [A3](#), [C2](#)).

Customer Capital: The depth (penetration), width (coverage), attachment (loyalty), and profitability of a client base or franchise (see [1.3.1](#)).

Data: Facts, statistics, that can, frequently, be analysed to provide information.

Data Mining: Technique for analysing data in very large databases. Analysis of data can reveal trends and patterns that can be used to improve business processes (see [C1](#)).

Document: A record, or the capturing of an event or knowledge so that the information will not be lost. A document is usually written, but it can also be made with graphics, photographs, and sound. A document usually adheres to a convention or specified requirement based on similar or previous documents. A document can also be put into an electronic form and stored in a computer as files (see [2.1.4.1](#), [2.1.4.2](#), [2.1.6.1](#), [2.2.3](#), [2.2.5](#), [2.6.1](#), [2.6.4](#), [C1](#), [C3](#), [D](#)).

Document Management: Management of the document lifecycles or the “document enabling” of business processes that demand the tight integration of these services. In this arena, documents that usually require considerable collaboration during their creation, as well as ongoing maintenance (see [2.1.4.2](#), [4.1.1](#)).

E-business: Large-scale transformation of business processes, made possible by improved electronic (especially web-based) information systems (see [1.1.1](#), [1.3.2.1](#), [1.4.1](#), [1.4.2](#), [2.6.4](#), [4.4.4](#), [B](#)).

E-commerce: Automating of transaction processes, often meaning economy for vendor but also increased pressure to deliver customer service (see [1.3.2.1](#), [3.5.2](#)).

Electronic Mail, Calendaring, and Scheduling: Fundamental toolkits for KM, which are increasingly built upon the corporate IT infrastructure: includes messaging and combining of e-mail utilities with products for calendar, meeting, and resource co-ordination. The tools for rapid exchange of knowledge based on common document formats and directories have removed many technical barriers to sharing knowledge (see 1.4.3, 2.5.3.2, C2).

Explicit Knowledge: Relates to what is already “known” – i.e. it is knowledge that has been communicated and documented, for example in databases. Explicit knowledge can be expressed in words and numbers and shared via documents, specifications, manuals, etc. (see 1.4.3, 2.1.4.2, 2.1.6.1, 2.6.1).

Extranet: Website which goes between a company and other companies or people, but which is a closed community, accessible only to people with a password and the right access capabilities (see 1.4.1.1, 2.6.4, 2.6.5.1, 3.2.4, 3.5.4).

Harvesting: The objectives of a knowledge harvester are knowledge capture (especially tacit knowledge) and documentation of lessons learned (see 2.6.3).

Human Capital: The capabilities of the individuals required to provide solutions to customers – made up of attributes (personal predisposition), competencies (skills and knowledge), attitude and mind-sets (customer focus) (see 1.3.2, 1.3.2.1, 2.3.2.3, 3.3.3, A4, B1, C4).

Information: Data that adds value to an understanding of a subject and can enhance knowledge (for some people, the concept of “misinformation” helps to clarify the distinction between data and information).

Intellectual Capital: Intangible assets of an organisation, including: knowledge of employees; data and information about processes, experts, products, customers and competitors; and intellectual property such as patents or regulatory licenses. Intellectual Capital value can sometimes be calculated as company market value minus book value. Types of Intellectual Capital include: knowledge with potential for value (ideas); intellectual property (e.g. patents); and knowledge already having value (e.g. licensed patents) (see 1.3.2, 1.4.1, 2.3.2.3, 2.6.2, 3.5.4, 4.1.2, A.4, D).

Knowledge: There are many definitions of knowledge and a 2,500-year-old history of argument on the subject. For some, knowledge is an understanding of information about a subject, which people have in their mind and which they can apply to a task or share with others. For others, it is the way we structure data into information. Knowledge is strongly associated with credibility and wisdom and implies verification.

Knowledge Assets: Knowledge relevant to an organisation’s business, including: explicit and tacit knowledge of employees, customers or business partners; data and information stored in highly-structured databases; data and information stored in less-structured databases, such as e-mail, workflow content and spreadsheets; information stored in digital and paper documents; purchased content; and public content from the Internet or other sources (see 2.1.3.2, 2.1.6.1, 2.5.1, 3.3.3, 3.5.5, A, C4).

Knowledge Audit: A formal evaluation of how and where knowledge is used in business processes. The audit identifies knowledge according to some form of agreed label within an organisation; the most common distinction is between tacit and explicit knowledge, although some practitioners are now arguing for alternatives that avoid an implication of “making tacit knowledge explicit”. Through an audit, organisations can identify and evaluate all information resources and workflows, and determine user requirements, which will vary widely, from wide access (e.g. policies and procedures) to extremely limited access (e.g. payroll information). The knowledge audit should be a rigorous process, using e.g. questionnaires, interviews, and narrative techniques (see 1.3.3, 2.1.3, 2.1.6.1, 4.4.4).

KM Environment: Combination of technology, people, organisation, processes, rewards, and culture that, together, comprise the right environment for KM (see 2.7.2).

KM Infrastructure: The people, processes, and automated systems that are required to support KM (see 1.3.3, 2.7.3).

KM Strategy: An intent to use KM methods, tools, processes, and practices to achieve business objectives by leveraging such content and processes. KM strategy should usually be aligned with corporate strategy (see 2.1.4, 2.1.5, 2.1.6.1, 2.4.1, 2.6.2, 2.7.3).

Knowledge Mapping: High level view of knowledge, which assesses the nature and quality of knowledge assets and flows. Its purpose is to identify existing knowledge resources, which can be used to identify gaps, analyse flow and determine focus areas for more detailed analysis. For some, maps are a strong change management tool and can be used to immediate benefit by making informal knowledge resources explicit (see 2.1.3.2). Others would claim that this is impossible and that a map is a representation of the location and flow of knowledge within an organisation.

Learning Histories: Sometimes called an After Action Review, a learning history is a retrospective account of significant events in an organisation's recent past, described in the voices of people who took part in them. The value of the learning history comes not so much from the document itself, but from the consultation process that is built around it – the conversations, in which people create shared meaning, deepen their understandings, and talk through possibilities for more effective action (see 2.2.5).

Personalisation: Intelligent aggregation of knowledge from various internal and external sources and automatic delivery of only the relevant content to each employee. For employees within an organisation, a “voluntary” personalisation route is usually (although not always) the most appropriate. This means that the individual employees choose themselves, the content that they wish to receive. This is determined during the set up phase, where the employees are prompted to set up their own information profile. They are alerted to the arrival of fresh information either through a browser on their PC, via e-mail or fax. If working remotely from the office, alerts can be received on mobile phones through e.g. SMS (Short Messaging Service) or on a WAP device. Management often prefers the “involuntary” personalisation route (profiling), which allows it to disseminate selected information (see 1.4.1.1, 2.5.5, 3.5.2).

Portal: Websites offering a wide range of services and content – a gateway onto the web. Portals focus on aggregating existing content (structured and unstructured) and displaying it through personalised presentation layers (see 1.1.1, 1.4.1.1, 2.2.3, 2.3.3.2, 2.7.2, 3.2.2.2, 3.2.2.3, 3.2.4, 3.5.2, 3.5.4, 4.1.1, 4.1.2, C). Portals can be sub-divided² into:

- **Megaportals:** The original portals on the Internet, those that began as search engines and rapidly evolved into megaportals. They typically address a vast section of the Internet, as opposed to a specific community of interest.
- **Vertical Portals:** Sometimes referred to as “vortals”, and narrower in scope. They serve specific communities of interest or markets. There is a vertical portal for practically every niche audience on the web, and they are often B2C (business-to-consumer) focused.
- **Business-to-Business (B2B) Portals:** Type of electronic marketplace set up to allow businesses to transact with each other. They provide a variety of e-business mechanisms (e.g. procurement, and auctioning).
- **Enterprise Information Portals:** These are portals deployed for the benefit of an individual organisation. Audiences may be internal B2E (business-to-employee), such as employees accessing human resource policies, or external B2B, such as customers, suppliers and trading partners seeking information or transactions.

Skills Inventories, Yellow Pages, and Subject Experts: Such databases contain information on “who’s who” and “who knows what” – vehicles to find expertise from people throughout the organisation who might otherwise never learn what each other knows. Expert databases, or corporate yellow pages can be extremely useful if designed and managed correctly. However, large databases created centrally are often under-utilised, while databases of expertise developed locally and expanded tend to have more success. The information is more relevant and more current, and there is a higher level of connectedness between participants (see 2.7.3, 3.1.2, 3.1.3, 4.3.1, 4.4.2, 4.4.5.2, A3, B2).

Tacit Knowledge: The personal knowledge resident within the mind, behaviour, and perceptions of individuals. Includes skills, experiences, insight, intuition, and judgement. Tacit knowledge is typically shared through discussion, stories, analogies, and person-to-person interaction – therefore, it is difficult to capture or represent in explicit form. Furthermore, tacit knowledge is deeply rooted in an individual's action and experience, as well as in the ideals, values or emotions he or she embraces. To be precise, there are two dimensions to tacit knowledge. The first is the “technical” dimension, which encompasses the kind of informal and hard-to-pin-down skills or crafts often captured in the term “know-how”. Master craftsmen or three-star chefs, for example, develop a wealth of expertise at their fingertips, after years of experience. But they often have difficulty articulating the technical or scientific principles behind what they know. Highly subjective and personal insights, intuitions, hunches, and inspirations derived from bodily experience fall into this dimension. One can also distinguish between: *private* tacit which is that knowledge embedded deep within the knower – like the skill of a juggler – and *public* tacit which is tacit knowledge which is embedded in the culture (of an organisation or any group of people) (see 2.2.5, 2.6.1, 2.6.3, 2.7.4, 3.3.3, A3).

Taxonomy: Framework for the classification and arrangement of objects (used to build a classification hierarchy) (see 2.1.6.1, 2.4.2, 2.4.3.4, 2.4.4, 2.5.4).

eXtensible Markup Language (XML): Designed especially, though not exclusively, for web documents, XML allows designers to create their own customised tags, enabling the definition, transmission, validation, and interpretation of knowledge between applications and between organisations. There are many variants of XML, such as XBRL (eXtensible Business Reporting Language), an emerging international standard around the open sharing of financial data (see [2.2.5](#), [2.5.2](#), [4.1.1](#), [C1](#)).

1 Why should organisations care about KM?

1.1 What is KM?

1.1.1 Introduction

This guide aims to answer the above question – why should organisations care about KM? It is certainly clear that an ever increasing number do care: for example, a major recent survey of 158 large organisations found that 80% already engage in KM and 96% predicted that they will do so within the next five years³, and the take-up rate of KM within small and medium-sized enterprises (SMEs) is also accelerating fast.

But why? Perhaps because, as organisations have evolved over time, the skills and experience of their owners, managers and employees have traditionally been passed down through informal processes. They have relied upon the personal relationship and proximity between the “storyteller” and the “listener”, whether through a skilled person talking to his or her apprentice or, more recently, through a gathering of colleagues around the coffee machine. In parallel, and ever since the earliest recorded writings, attempts have been made to codify knowledge in documents, whether it be the experience of tribal elders on parchments, or latterly, the experience of employees through databases, intranets and portals.

In other words, KM is not a new phenomenon. Many organisations have in fact successfully managed much of their knowledge – both through personal exchange and codification – for many years.⁴ The reason that KM is appearing formally on management agendas now is that business models have become more complicated. Organisations have moved from a world in which sharing knowledge meant sticking your head out into the corridor and shouting, to a world of multiple corridors and multiple buildings in multiple countries, and to a world in which the accelerated rate of change means that any explicit body of knowledge (such as an instruction manual) is often already out of date at the moment it has been copied, bound and distributed.

This accelerated rate of change impacts all organisations, from the smallest company through to the multinational corporation. Indeed the tiniest “cottage industry”, which might once have only served customers within a few miles of its door, can now, through the opportunities offered by e-business, serve a global client base – but this will depend on its ability to effectively share knowledge about its products, suppliers and processes to a diverse and distributed community.

In the past, organisations turned traditionally to classroom-based training in order to try and improve the business “intelligence” of their employees, but now KM-enabled e-learning tools – e.g. training courses delivered and administered on-line across an intranet – play a crucial role in making learning opportunities more widely accessible.⁵ At the same time, an effective KM intranet or knowledge community can play a major role in making individual employees better informed and more effective, e.g.:

- by streamlining internal business processes for the individual (e.g. HR and other administration)
- by reducing the time and frustration involved in searching for content
- by helping new employees integrate quickly into an organisation.

1.1.2 Definitions of KM⁶

The following sample definition of KM is provided for interest only, since readers should note that as KM can impact different organisations in very different ways, attempts at a consensus definition of KM are likely to be ultimately futile:

“The capabilities by which communities within an organisation capture the knowledge that is critical to them, constantly improve it and make it available in the most effective manner to those people who need it, so that they can exploit it creatively to add value as a normal part of their work” – Royal Dutch/Shell

The key point here is that any KM definition, chosen by any organisation, should be closely aligned with the mission and business strategy of that organisation (see figure 1).

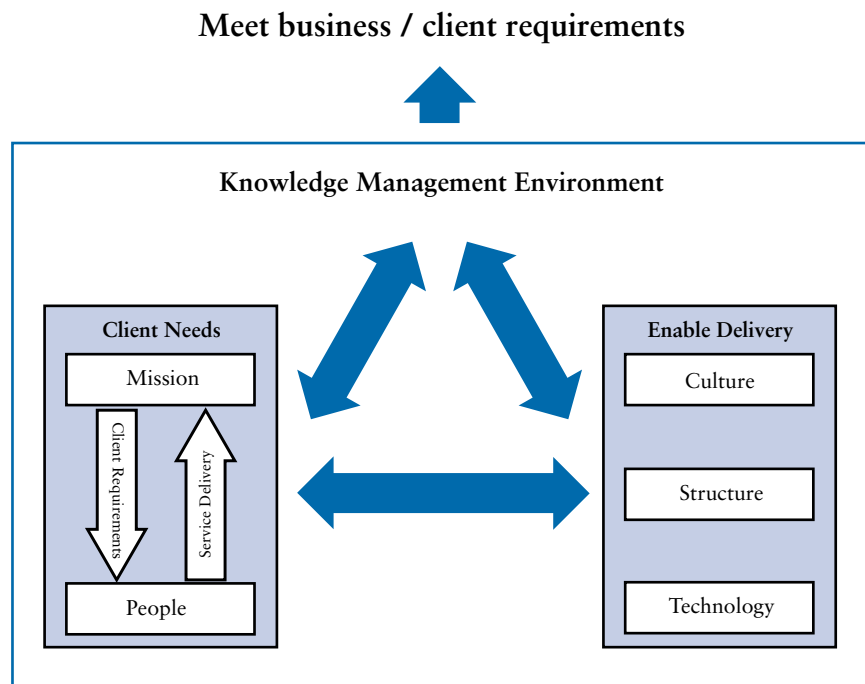


Figure 1 – An organisation's KM approach should meet its business and client requirements

There are many ways of looking at KM and organisations will need to choose between competing philosophies or approaches. Although many see knowledge as focused on people, places and things, others – including some thinkers in the field of organic approaches to KM – refute any such categorisation, on the grounds that such an approach can produce only a partial and incomplete picture of knowledge. Nevertheless, a widely accepted approach to KM is to examine it in terms of “people, process and technology” or, alternatively, “culture, structure, and technology”:

- **Culture:** Getting an organisation's culture (e.g. values and behaviours) “right” for KM is typically the most important and yet often the most difficult challenge. When embarking upon a KM programme, organisations need to consider such factors as trust, privacy, proximity to stakeholders, barriers to sharing experiences, transparency and motivation (see 2.2.3). KM is first and foremost a people issue and as the following figure 2 shows, should be aligned with an organisation's core values.⁷

Excellence**We deliver what we promise and add value beyond what is expected****Innovation.** We develop creative solutions and translate them into action.**Learning.** We continuously develop the knowledge of our business and the expertise of everyone in it.**Agility.** We are alert to change and move fast, with flexibility and decisiveness.**Teamwork****The best solutions come from working together – with colleagues and clients****Relationships.** We build productive, long-term relationships with clients and each other.**Respect.** We embrace diverse cultures, communities, and views. We actively consider the needs of individuals and WorkLife quality.**Sharing.** We readily share knowledge, experience, resources, and opportunities.**Leadership****Leadership means leading with clients, leading with people and thought leadership****Courage.** We are bold. We seize the initiative and welcome responsibility.**Vision.** We see the bigger picture, and have a clear sense of where we want to go, which inspires and motivates.**Integrity.** We are trustworthy and honourable.**Figure 2 – Knowledge sharing should be a core value⁸**

- **Structure:** In order to improve knowledge sharing, organisations may need to make changes to the way their internal business processes are structured, and sometimes they may even need to adjust the organisational structure itself.⁹ For example, if an organisation today has regional profit and loss centres, then members of the team in one regional centre may not feel any incentive to share their knowledge with team members in another regional centre, since they may not directly feel any benefit from so doing (e.g. in terms of any increased profit share).
- **Technology:** Although many vendors aggressively market their products as “KM solutions”, successful KM can rarely, if ever, be achieved by the implementation of a set of software tools alone. Yet given the increased scale of many organisations and their relationships with a growing variety of internal and external stakeholders, technology *should* be considered as a crucial enabler of KM. In any case, technology should be seen as a manifestation of culture, rather than as kind of some opposing force, since human culture has always been partly defined by its tool making capacity – i.e. by its use of technology.

In brief

- KM is not new. However, the accelerated rate of change in organisations is resulting in a need to actively “manage” knowledge.
- Organisations’ primary focus should be on developing a KM-friendly culture, which should be supported by the appropriate structure, and which may be enabled through technology.
- KM is a “business enabler” – it is not a stand-alone concept that can exist in isolation from an organisation’s wider strategy.

1.2 There is wide interest in KM in organisations around the world

“Anyone in the organisation who is not directly accountable for making a profit should be involved in creating and distributing knowledge that the company can use to make a profit” – Sir John Browne, CEO of BP

“Organisations that create, manage and share knowledge most effectively will dominate the 21st century market place”
– Ron Young, CEO of Knowledge Associates

1.2.1 Introduction

In recent years, interest in KM has taken root around the world. The idea that organisations should make better use of their knowledge – everything from methodologies and patents, to processes and information about their customers – has been gaining ground steadily since at least the early 1990s. By the millennium, KM was already firmly established on many organisational agendas.¹⁰

1.2.1.1 A very brief history of KM

KM, as a conscious discipline, would appear to be anywhere between five and 15 years old. Some believe that it was launched by Japanese academics Nonaka and Takeuchi in 1995, others by earlier pioneers such as Karl-Erik Sveiby in the late 1980s.¹¹ By the early 1990s, a growing body of academics and consultants were already talking about KM as a new business practice. KM conferences and journals started to emerge and the concept reached senior executives. By the mid-nineties, it began to be widely acknowledged that market-leading organisations’ competitive advantage no longer stemmed exclusively from control of physical assets, but also from how they used their knowledge assets, such as competencies, customer relationships, and innovations.

Managing knowledge therefore suddenly became, for a growing cadre of organisations, a mainstream business objective. New roles started to appear, such as Chief Knowledge Officer (see 2.6.2). All sorts of organisations, and particularly those in research-based industries such as pharmaceuticals, began to acknowledge KM’s value.

1.2.2 Where does KM stand today?

For some, knowledge is no less than a new currency for the new millennium – replacing traditional sources of wealth such as land and financial capital. Although such KM champions often do themselves no favours by using inflated language – such as hailing *“knowledge as the key to enshrining experiential learning”*, there are nonetheless signs that KM really is now starting to enter the organisational mainstream. For example, in a survey on the penetration of KM across different industries¹², nearly two-thirds of the 260 European business leaders interviewed said that they disagreed with the suggestion that KM is just a fad. As half the respondents were at Chief Executive Officer (CEO), chairman, or managing director level, this would indicate that KM really is finding its way onto senior management agendas.

However, sceptics do remain. For example, an annual survey measuring executive satisfaction with 25 management techniques¹³ found in both 1998 and 1999 that KM ranked at or near the bottom in every category. Indeed the very term “KM” can at times be counterproductive. For example, an executive with a leading automotive company claimed recently that *“I have no interest in knowledge management, but in knowledge use”*.¹⁴ Indeed, even among the KM faithful one can find a wide range of different views about its relative importance: some believe that the only value of KM is to help you find precisely what you want, when you want it, and nothing more, whilst others (perhaps now in the majority), believe that in the future the most valuable individuals will be those who become a source of knowledge by sharing what they have with others.

It could even be argued that organisations should not even worry about the term “KM” in itself, just because it is so hard to define. Indeed, it has even been said that KM is “*ridiculous, out of favour and absolutely mandatory*”.¹⁵ So, if it is “ridiculous”, why is KM nonetheless “mandatory”? Perhaps because:

- Many people are finding that they can create more value selling an hour of knowledge than selling an hour of physical time. Indeed, many service-based organisations are moving from hourly billing to value-added billing.
- Many organisations are realising how important it is to be able to make maximum use of the knowledge they possess. One of the most famous of all KM quotes is “*if only we knew what we know, we would be three times more profitable*”¹⁶, yet, all too often, people in one part of an organisation repeat work of another part, leading to increased cost and business risk.
- In the new, knowledge economy, many believe that an organisation’s knowledge is rapidly becoming its only sustainable competitive advantage, and that long-term success depends upon an organisation’s capacity to create new knowledge through a continuous process of learning and unlearning. Knowledge now needs to be protected, cultivated and shared across an organisation’s entire stakeholder base (see 3.5), whereas, until recently, success could often be based upon the knowledge of a handful of strategically positioned individuals.
- Book values are often poor indicators of organisation’s true value and in many cases this will be linked to an under valuation of their “intellectual capital”. Yet some leading organisations have been able to sustain a growth rate that outstrips their rivals’ – a feat which surely indicates investor confidence in their intangible assets.
- At the same time that organisations have started realising that knowledge, experience and learning must be harnessed and nurtured as vital assets, for perhaps the first time ever there are now the means to manage these assets systematically. Relatively recent information technology advances – such as intranets and groupware – make it possible to capture and share knowledge across a widely dispersed organisation. This combination of management sensitivity to the issue of KM and the availability of technological enablers may mean that the notion of a “learning organisation” can finally move from theory to practice.¹⁷
- Some believe that organisations can be viewed as complex “organic” systems which continually generate, elaborate, and rearrange patterns of interactions and meanings (e.g. common norms, values, world views and perceptions). Mechanisms or institutions spontaneously emerge and evolve, leading in a dynamic and sometimes unintended manner to both the creation of new individual knowledge and the codification of collective knowledge. The creation, dissemination, and utilisation of such knowledge may be understood using principles of complex adaptive systems (CAS).

1.2.3 Many organisations are already carrying out KM-related activities

So what should a given organisation actually be doing about KM today? Throughout the rest of this guide, examples are provided of organisations of all sizes that have taken steps along the KM path. Many are still at the early stages of planning a KM programme (see 2.1.2), while many others, large and small, are at various stages along the way. Yet the KM journey, for many, *will* be worth the effort, since the rewards awaiting the successfully KM-enabled organisation are enticing (see chapter 3).



In brief

- KM as a conscious management discipline is somewhere between five and 15 years old.
- The KM label is liked by some, hated by others. What matters is simply that organisations realise why “managing” their knowledge is becoming increasingly important.
- There are already many well-documented cases of successful KM, across almost all industries (see the “Good practice examples” boxes at the end of each section).



Good practice examples¹⁸

- **Chemical company:** Has embedded KM deep into its organisational culture. Goes so far as to credit its 12-year-old knowledge-sharing system with keeping the company alive.
- **Oil company/Automotive company:** KM initiatives – focused respectively around the building of Communities of Practice (see 2.2.5) and the sharing of best practices (see 3.2.5) – have reportedly resulted in savings and new revenues of more than £400m at each company.
- **Professional services firm:** Has placed knowledge squarely in the centre of its brand proposition to its clients: “People – Knowledge – Worlds.”
- **Supra-national institution:** Two examples of its extensive KM approach in action:
 - a task team leader in Yemen urgently needed to respond to a client about setting up management information systems in an education ministry. He contacted the education advisory service in the Human Development Network, which in collaboration with the relevant Community of Practice, ascertained that there was similar and relevant experience in Kenya. The material was dispatched to Yemen, so that the task manager could respond to the client within 48 hours;
 - an Indonesian official needed to know the international experience on private sector involvement in vocational training. Through the help of the Human Development Network, the relevant task team leader was able to give to the official within a short time frame a comprehensive analysis of the international experience. In both cases, relevant know-how was identified that could then be captured and entered into the knowledge base so that it was accessible by all staff. Relevant parts of the system are now becoming accessible externally, so that clients, partners, and stakeholders around the world will be able to have access to the know-how of the organisation.

1.3 What is the knowledge economy and why is it important?

“In the 21st century, financial capital will become the commodity and intellectual capital will be in short supply... Knowledge is the key” – Tony Blair, 1999

“Offer everyone...the skills and tools they need to succeed in the new knowledge-based economy.” – Romano Prodi, President of the European Commission, 2000

“Competitive advantage in the knowledge economy no longer relates purely to a product or service. It is much more dependent on the continuous acquisition of new skills by people and companies and being ahead of the competition in exploiting critical knowledge. The competitive pressures of globalisation make the task of building the Knowledge Economy an urgent one” – message from the European Round Table of Industrialists to the Stockholm European Council, March 2001

1.3.1 Introduction

In today's economy, competitive advantage results from combining different assets, such as people, money, learning, flexibility, and knowledge. In fact, many people now believe that knowledge may be more vital for sustainable success than capital, labour or land, yet paradoxically it often remains the most neglected asset.

1.3.2 The global knowledge economy

Today, one hears talk of the “new economy”, or the “knowledge economy”, throughout the world...

- **in Europe:** The EU Council in Lisbon in 2000 set itself, as its overriding goal, to make Europe the most competitive and dynamic knowledge-based economy in the world.¹⁹ In the UK, government websites proclaim that *“a knowledge economy is a successful and thriving economy that successfully harnesses its knowledge, skills and creativity in order to create high productivity business processes and high value goods and services.”*²⁰
- **in North America:** Many in the US already believe that intellectual capital and the intellectual property of ideas will become the most valuable commodities in the knowledge economy. A recent study²¹ claimed that effective management of “human capital” could improve shareholder value by up to 30%. By the year 2000, skilled jobs already represented about 65% of all jobs in the US, a figure expected to increase to 85% by 2005 (compared with only 20% in 1950). Knowledge-intensive jobs such as IT, health and business services are growing three to six times faster than economy-wide job growth.
- **in Asia²²:** Malaysian Prime Minister Dr Mahathir Mohamad stated recently²³ that *“in the pursuit of information, knowledge and wisdom, we must be prepared to face reality. We must embrace change, pursue novelty, and crave innovation. We must learn. Even harder still, we must unlearn. We must remember to forget old ways. We must force ourselves into new habits. We must build the new processes, institutions and organisations that are necessary for the Information Age.”*

1.3.2.1 Differing views on the knowledge economy

According to a recent paper²⁴, definitions of the knowledge economy vary widely:

- In the US, the new economy is associated with the rise of software, computing, media and communications companies. Not only is e-business shifting economic activity from one sector to another – from traditional retail banks to on-line banks, from traditional bookstores to on-line bookstores – but also in the process it could make markets more open to new entrants and more transparent for consumers. E-commerce could push down costs, improve productivity and make supply more responsive to demand. As a result there could be long run gains in terms of lower inflation.
- In Europe, in contrast, much prime human capital is still locked up in large organisational hierarchies or in the public sector. However, there are now signs that Europe is developing a start-up culture in which entrepreneurs create small businesses. Europeans will increasingly make their livings in the knowledge economy, in which innovation and entrepreneurship are vital to growth and employment.²⁵ Indeed, the European Round Table of Industrialists, in its March 2001 report to the EU Stockholm summit, set out specific recommendations for fast track progress to improved competitiveness through the knowledge economy.²⁶

Matter	It matters less
Space	Distance has vanished
Time	It's collapsing
People	They are the crown jewels
Growth	It's accelerated by the network
Value	It rises exponentially with market share
Efficiency	Infomediaries replace intermediaries
Markets	Buyers are gaining dramatic new power and sellers new opportunities
Transactions	It's a one on one game
Impulse	Every product is available everywhere

Source: PricewaterhouseCoopers E-Business Tech Forecast, 1999²⁷

Figure 3 – The new knowledge economy's driving principles

1.3.3 KM's role within the knowledge economy

To serve customers well and remain in business in the knowledge economy, organisations will have to reduce their cycle times, operate with lower overheads (people, inventory and facilities), shorten product development time, improve customer service, empower employees, innovate and deliver high quality products, enhance flexibility and adaptation, capture information, create knowledge, share and learn. None of this is possible without a continual focus on the creation, updating, availability, quality, and use of knowledge by all employees and teams, at work and in the marketplace. Faced with such challenges, a valuable first step for an organisation can be to try and “know what it already knows”, perhaps through an audit of its patents, copyrights, or other knowledge assets (see 4.1.2).

Increasingly, it seems that organisations in the knowledge economy will be judged upon their KM capabilities, in that they will all be competing for the:

- **Best talent:** In particular, new recruits will demand excellent KM infrastructures, since many are likely to be already very IT-literate and used to sharing knowledge across virtual networks before they even join the workforce.
- **Best clients:** Customers will increasingly evaluate their suppliers on the basis of how knowledge about them is solicited, collated and shared, as well as on how that they can collaborate with their suppliers.
- **Best alliance/merger partners:** A good KM infrastructure will be vital when organisations try to collaborate with or integrate new partners or suppliers quickly (see 3.5.3).

At all times, organisations should try to see through the publicity, since although the rhetoric of the knowledge economy is well established, the real challenge is knowing precisely what to do about it.²⁸ A recent study²⁹, highlighting the organisational challenges involved in generating, retaining and leveraging knowledge, revealed that even world-class, technology-intensive companies struggle in the face of such pressures. The research showed that the majority of employees interviewed reported that knowledge sharing across boundaries remains difficult (see 2.2.3). Each company in the study had a variety of initiatives in place to foster more targeted generation, sharing, and application of knowledge. However, nearly three-quarters of employees reported that knowledge was not reused across their organisation, nearly 90% saying that they did not have access to lessons learned, while well over half did not even take advantage of the electronic tools already available to them.



In brief

- Many believe that in the new economy knowledge may become more vital for sustainable business success than capital, labour or land.
- The knowledge economy is a global phenomenon, on the agendas of corporations and governments around the world.
- Many organisations already realise that they are living in new times, but are often not yet able to remove even the most basic barriers to improving knowledge sharing.



Good practice examples

- **Aerospace company:** Decided that in future it would focus more on after-market services and upgrades. It encouraged employees to gain experience with the later phases of a product's life-cycle, to gain more knowledge of the customer and to learn specific technical support skills that would be highly valued in the future. In other words, employees now knew where to focus their learning and had clear incentives for acquiring new knowledge.
- **Engineering company:** Made a commitment to provide all employees with 100 hours of formal training a year. It also offered a series of rotational programmes for its engineers that not only gave individuals a broader exposure to the company and different technical disciplines, but also provided them with a network of contacts that they could use for sharing knowledge and joint problem solving.
- **Professional services firm:** As more and more of its clients are becoming web-enabled, its tax practice is now starting to offer tax advice and consulting on-line, enabling the organisation to share its deep technical knowledge more widely and thereby target a new client base.

1.4 Organisational challenges which require a KM response

1.4.1 Introduction

The knowledge economy is subject to many forces, perhaps the most powerful of which are those collectively called “e-business”. All organisations, large and small, are facing major challenges adjusting to the new economic realities, but the good news is that many of these challenges can be tackled by adopting a KM response. For example:

- | | |
|---|---|
| <ul style="list-style-type: none"> • Challenge – develop a relevant business strategy: How can organisations more quickly bring to market, innovative products and services that reflect and anticipate customer needs? | <ul style="list-style-type: none"> • A KM response: Develop a greater understanding of customer buying behaviour patterns, knowledge of customer service and enquiry patterns, research and development results, trade secrets, competitive and market intelligence and regulatory requirements. |
| <ul style="list-style-type: none"> • Challenge – achieve operational improvements: How can organisations achieve operational effectiveness by better managing their knowledge of business processes, people, and technology systems? | <ul style="list-style-type: none"> • A KM response: Develop processes for sharing operational know-how and trade secrets, develop Communities of Practice and networks of experts, share lessons learned/war stories/organisational memory, external benchmarks and best practices and provide an environment for increased innovation. |
| <ul style="list-style-type: none"> • Challenge – improve Customer Relationship Management: How can organisations establish profitable relationships to enhance the long-term economic value of customers and create memorable customer experiences? | <ul style="list-style-type: none"> • A KM response: Improve knowledge of customer and account profitability, knowledge of customer strategy/business drivers/changes, knowledge of customer service and enquiry patterns. |
| <ul style="list-style-type: none"> • Challenge – leverage technology investments better: How can organisations get more value from their significant technology investments? | <ul style="list-style-type: none"> • A KM response: Improve knowledge of new and existing technology systems and organisational environment, knowledge/lessons learned/war stories of technology implementation, knowledge transfer and continuous improvement. |
| <ul style="list-style-type: none"> • Challenge – demonstrate stakeholder value from intellectual capital: How can organisations gain recognition of intellectual capital from the external market? | <ul style="list-style-type: none"> • A KM response: Make visible, through credible and strong communication, an organisation’s strength and investment in intellectual capital, thereby giving markets the information they require in order to value future wealth creation capabilities.³⁰ |

1.4.1.1 How can organisations actually develop these KM responses?

When addressing such challenges, a good starting point can be to use tools to hand. Although many KM programmes are frequently, and often rightly, criticised as overly focused on technology, it remains true that, when used sensibly, technology can help organisations enormously in KM. Consider, for example, changes in recent years; as recently as about 1996, most KM tools were no more than on-line filing cabinets. Whilst an over-reliance on such repositories remains one of the commonest KM mistakes, it is already possible to find many examples of organisations extracting value from more sophisticated tools that can:

- provide customised access to everything published in organisations – *e.g. portals/search tools*
- allow people to cope with the challenges posed by “information overload” – *e.g. profiling/personalisation software*
- allow virtual teams to work on products and service developments together – *e.g. synchronous collaborative work tools*
- allow leaders to communicate corporate news while it is still relevant – *e.g. intranets/instant messaging, streaming media*
- allow marketing professionals to micro-position audiences so that only relevant people are part of the communication loop – *e.g. profiling/personalisation software*
- provide a real-time forum through which virtual communities can connect and share opinions and insight – *e.g. portals/extranets/asynchronous collaborative work tools, Communities of Practice*
- provide “virtual classrooms” in which teaching happens not in classrooms but in one’s own environment – *e.g. e-learning software/synchronous collaborative work tools*
- allow an organisation and its clients to share information and perspectives in real time – *e.g. customised portals/extranets*.³¹

Any given organisation will need to decide which mix of such tools best meets its specific needs, but even the smallest may benefit from investing in some of the above. Implementing such tools need not be seen as restrictively expensive, since some of the supporting software is now available freely, and some can be licensed from, or hosted with, third parties. However, several cautions should be noted at this stage:

- a) rather than focusing on the tools in themselves, organisations should be giving serious consideration to the type of content that they wish to share through such tools, and the context in which they will use this content;
- b) whichever tools they choose, organisations may need formal or informal policies and standards to govern their usage;
- c) the theory of complex adaptive systems (see 4.4.2) suggests that organisational knowledge is an organic living entity which is ever-changing and organisations’ focus should therefore be less on technology and more on the emergent and self-organising properties of knowledge.³²

1.4.2 Client relationship challenges

As e-business is lowering barriers to entry in many industries today, new competitive threats can emerge unexpectedly. Yet many organisations continue to struggle with the most basic client relationship management challenges, and lack the tools and processes to really manage customer knowledge well. This is why many organisations are turning formally to Customer Relationship Management (CRM), a discipline that involves capturing customer information and interactions, examining them to discover useful knowledge, and then using that knowledge to manage the end-to-end customer lifecycle.

For many, CRM is an absolutely crucial consideration, since individual product managers within organisations are often unaware of corporate-wide customer relationships and can unwittingly jeopardise profits in other divisions. In such cases, coherent solutions must be applied across the entire customer relationship, regardless of who “owns” each individual product or divisional profit and loss account. This means that a co-ordinated approach to CRM is probably the only way that many organisations will be able to retain customers who might otherwise jump to other suppliers offering a more coherent proposition around price, quality, or service.

However, even within as currently fashionable an area as CRM, which, like KM, has been overrun by vendors offering technology-based solutions, success depends on more than just IT tools alone. Indeed, some of the “worst practice” KM cases in CRM come from very high-tech organisations. Many on-line retailers, for example, believed that they could get their order-fulfilment processes right first time. In reality, however, some were unable to deliver their customers’ goods on time during peak periods. Subsequent examination found that many of the problems encountered during these peak periods stemmed not from poor technology, but from poor communication and knowledge sharing *inside* the on-line retailers themselves and between the retailers and their delivery companies and other suppliers.³³

This suggests that KM and CRM must be interdependent (see also [annex B](#)), because an organisation’s best customers bring more than financial revenues – they also bring intangible revenues, ideas, competitive intelligence, feedback, referrals, etc.³⁴ (This is in addition to the fivefold cost savings organisations can often expect from developing existing clients, as opposed to acquiring new clients.) KM-focused organisations should therefore select their customers according to how much additional stakeholder value they will generate, both tangible and intangible, and should always think about how they can improve their customers’ ability to serve *their* own customers.

1.4.3 Risk management challenges in focus

In addition to CRM and the other challenges outlined earlier, a whole host of further organisational challenges are emerging, nearly all of them relevant in a KM context. Many of these challenges are risk-related, and organisations may need to develop appropriate policies, standards, and guidelines to address them:

- **Anti-Defamation:** Organisations should ensure that their knowledge, in particular the explicit knowledge that resides in their KM systems, avoids defaming (i.e. damaging the reputation of) individuals or entities such as clients, competitors or other third parties. Of particular concern are those areas of intranets and portals which allow loosely or un-moderated interactions, such as chat rooms, bulletin boards and, of course, e-mail. Any information, comment or similar that is or could reasonably be construed as defamatory should be monitored and dealt with, where appropriate by a dedicated knowledge manager (see [2.6.3](#)).
- **Confidentiality:** Employees in all organisations should at all times treat as strictly confidential all knowledge (other than that already in the public domain) acquired in the course of providing services to clients and in the course of conducting other business. Organisations may need to develop a formal policy whereby their employees should not disclose, nor take advantage of, knowledge to which they have access as a result of their services to clients.
- **Copyright:** In the ordinary course of business, all organisations will become involved in developing, receiving and having access to materials in which copyright exists – a situation often exacerbated when such material (in particular, material purchased externally) is made available through a KM system. It is therefore vital that all employees recognise the existence and significance of copyright, in order that organisations can both protect their own rights and avoid infringing the rights of others.
- **Privacy:** Legislation in this area governs the processing (including collection, storage, transmission and use) of any data that identifies an individual subject, directly or indirectly. International privacy legislation provides restrictions upon the use of personal data. Supporting national legislation governs what data can be used and in what circumstances and also governs the transmission of information between countries (this is a crucial consideration for any organisation which is working across borders – which effectively now means any organisation with a website). Organisations should be particularly wary about activities that often fall within KM, such as measuring individuals’ usage of, and contributions to, KM systems. Any such activity undertaken without the individual’s express consent is likely to contravene legislation.
- **Quality Assurance:** Users need formal assurance to be able to trust in the knowledge they encounter – to know that it is accessible, current, of sufficient breadth and depth and meets the purpose(s) stated.
- **Security:** Any explicit attempt at knowledge sharing within an organisation, or between an organisation and its customers, runs the risk of dispersal of data to a wider, unintended audience. When this happens, policies alone will not suffice – organisations ought also to consider installing such protective measures as data encryption, digital certification of users, personal/corporate firewalls and anti-virus software to prevent content ending up with the wrong people or becoming corrupted.



In brief

- Organisations are confronting a whole range of new issues in the knowledge economy – KM can provide the solutions to many of these.
- Customer Relationship Management brings a new range of challenges for which integrating KM and CRM approaches can be helpful.
- Sharing knowledge widely also raises many risk management challenges which organisations will need to address (around such thorny issues as obtaining employees' consent before using their personal data).



Good practice examples

- **Courier:** Pioneered the use of web-based customer service. It gave customers direct access to its database, which allowed them to track the progress of packages simply by entering the billing number. At one stroke, it gave the customer better service and cut its own costs by bypassing its call centres.
- **Electronics company:** Provides 125,000 products, sourced from 3,000 manufacturers, via its website. Looked at how to save customers time and money by lowering processing costs and speeding up on-line ordering and delivery times. Website is customised for individual customers and companies and offers them self-checking orders and records past purchases in order to speed up new orders and product enquiries.
- **Hotel operator:** All employees are required to fill in cards with information from every personal encounter with a guest. These data plus all guest requirements are stored and printed out to all staff when the guest arrives again, so that each guest receives personal treatment. Allows customers not only to make reservations on-line, but also to check room rates and availability in real time. Saves money by circumventing its call centres and also increases room occupancy by providing booking services up to the last minute.
- **Multinational:** For nearly 20 years has collected all customer complaints in a database that supports telephone operators in answering customer calls. Has dealt with 1.5m potential problems and their solutions in its system.
- **Software vendor:** Very close links via Internet to opinion leaders among customers, who are encouraged to report problems which then enable it to create new generations of software at a very fast pace.

2 How should organisations approach KM?

2.1 Initial approach to KM

“An immense and ever-increasing wealth of knowledge is scattered about the world today; knowledge that would probably suffice to solve all the mighty difficulties of our age, but it is dispersed and unorganised. We need a sort of mental clearing house for the mind: a depot where knowledge and ideas are received, sorted, summarised, digested, clarified and compared” – H.G. Wells in *“The Brain: Organisation of the Modern World”*, 1940

“Cave dwellers froze to death on beds of coal. It was all around them, but they could not see it or use it. Today, we are in danger of making the same mistakes” – Arthur C. Clarke

2.1.1 Introduction

Chapter 1 focused on what KM is, what the knowledge economy is, on some of the KM-related challenges that organisations are already facing. This second chapter focuses on practical implementation issues: how an organisation that is completely new to KM might get started (2.1); how to create a culture favourable to KM (2.2), how to measure and reward progress (2.3); how to manage knowledge content systematically (2.4); how to create a KM “architecture” which will encourage the free flow of knowledge (2.5); what level of human resources to invest in KM (2.6) and how to sustain impetus in KM once under way (2.7).

It is important for any organisation to gain an understanding of the different approaches to KM that exist³⁵, because while to some extent it is possible to pick good practice examples from amongst the many methods, there are some fundamentally different approaches possible. For example, some practitioners argue that KM requires radically new ways of working and reject the conventions of management science (hypothesis-based consulting, best practices etc.) This document, however, largely reflects mainstream thinking, whilst providing some indicators to developing areas that may either contradict or be compatible with such thinking.

2.1.2 Initial approach to KM

2.1.2.1 Case 1 – KM in small and medium-sized enterprises (SMEs)

As most of the available research on KM has been focused on efforts within larger organisations, readers from SMEs might ask themselves whether they should even read on. Is it appropriate for smaller organisations to engage in KM and, indeed, do smaller organisations even have “knowledge” that they can manage? The answer is almost certainly yes, as illustrated in the following case study, which focuses on the types of knowledge an SME (in this case, a small painting and decorating business³⁶) might possess. Such knowledge could include:

1. How to get the most out of a gallon of paint (to reduce costs/increase profits, to reduce painting time).
2. How to clean brushes so that they last a long time (to reduce costs/increase profits).
3. How to encourage repeat customers (to stimulate growth).
4. How to minimise impact on people living in the house being painted (to practise good CRM, see 1.4.2 and annex B).
5. How to develop efficient painting techniques (to reduce costs/increase profits, to reduce painting time).
6. How to take advantage of new painting inventions (to offer an innovative service).
7. How to assess and respond to particular customer expectations and requirements.
8. How to learn new techniques (to increase customer satisfaction).

Suppose that this painting business hires new people on a continual basis. Although those hired might tend to be transient and have a very high rate of turnover, the owner would know that a single job could use up as much as twice the supplies of a well-run job, if knowledge about efficient painting is not transferred to the new employees before they begin their first job. In such a case, lack of knowledge transfer would translate into lower profits for a particular job. If the inefficient use of resources also extended the time required to complete a painting job, then the reduction in profits would be exacerbated. In order to transfer knowledge, the owner should therefore invest time to train new painters. This training might result in a tiny one-time loss of overall productivity, but would be repaid as soon as a trained new employee was fully operational.

The owner may have gained experience of painting efficiently over many years, but have never thought much about how to articulate that experience. For the most part, the owner would probably have explained to new workers the best methods and by so doing would have become very adept at “tacitly” transferring skills to the new employees. However, if the owner could start to document good practice methods in an instruction manual for the employees and start to motivate them to use this knowledge (perhaps by offering a share in the profits of the company), the employees might even start to work out new process improvements for themselves. The owner would then be in the position of having captured value that could be shared with other painting businesses – perhaps through a commercial training programme. The owner could also perhaps create a specialised line of products (new inventions) to help other painters be more efficient and less wasteful.

The question of whether KM is appropriate for small business should be answered by this imaginary case. Capturing, organising, and sharing the owner’s and the employees’ knowledge – tacitly at first, explicitly only in part and only later³⁷ – would lead to greater value for the business, the employees, and the customers.

Some recent research has gone further still, by starting to look at the “vulnerability” of SMEs from a KM perspective and arguing that very few SMEs really appreciate just how vulnerable their businesses are, and how much they rely on the tacit knowledge of single individuals to carry out key processes and take key decisions.³⁸

2.1.2.2 Case 2 – KM in a business start-up context

How can a start-up organisation generate profits, reduce costs and develop products? What happens when key employees leave – does their knowledge leave with them? These are the sort of things that make up the value of an organisation’s corporate knowledge. Yet this knowledge is usually unmanaged, so how much more powerful would an organisation be that, from day one, tried never to make the same mistake twice, nor to continually re-invent the wheel³⁹, that tried to make all its successes repeatable and sustainable, and could shorten the learning curve of new employees, merger and alliance partners – in short, if every decision were made in the light of the full knowledge base of the organisation?⁴⁰ Such objectives, however ambitious, are what KM tries to achieve.

When planning any new venture, whether it is a new product or a completely new company, one needs to ask such questions as: what knowledge will I need; what knowledge already exists; how can I acquire it and how can I create the knowledge that I cannot acquire? A natural follow-on from these questions might be – what would it look like if we followed a KM path? Let’s start by considering what sort of knowledge is necessary to complete a business plan for a new venture:

- **Defining the business need** – requires knowledge about the business, potential customers and their needs.
- **Defining what conditions make the business possible** – requires knowledge about the wider business environment (e.g. regulatory issues).
- **Defining how the business will work** – requires knowledge about product development, administration etc.
- **Defining competition** – requires knowledge of potential competitors and what it will take to enter the market.
- **Defining the financials** – requires knowledge of where the money is going to come from, how much can be charged for products or services, and how to look after the day-to-day finances.⁴¹

At the formative stages of an organisation, any loss of work (be it discussions, writings, research, financial preparations) may result in punitive cost and delays, since it would mean that the knowledge would need to be re-acquired. Even when a company is small, therefore, it should have as a primary goal the retention and management of any knowledge that it creates. For example, since each and every communication might prove to be critical, it might make sense to develop a single space in which all members can view all messages sent between team members.

Traditionally, such spaces – physical or virtual – have been expensive and time-consuming to set up, but the web can provide a good solution to this problem today. There are a significant number of websites that host (sometimes free) collaborative environments (see 3.1.2). The average start-up might do well to consider using one of these hosted, or free services to establish their initial collaborative environment, provided adequate security could be achieved, and only then move on to developing its own knowledge sharing tools.

2.1.3 The role of knowledge audits

2.1.3.1 Why carry out a knowledge audit?

For larger organisations – i.e. those that have more complex businesses than the fictional painting company – an alternative way to start out in KM could be to undertake a formal, documented assessment of their current knowledge base. Conducting a so-called “knowledge audit” would show how employees currently store, access, use, and (hopefully) share the knowledge that they need to do their jobs. It should also uncover many of the cultural barriers to knowledge use and transfer (see 2.2.3) and, at the same time, highlight good practice examples – lessons that could be applied across the organisation’s business.

A knowledge audit may focus on just one group or working practice, but it may be more effective if it covers the whole organisation, because once an audit involves everyone, it becomes much easier to find points of view which might be frequently overlooked, but which are actually critical success factors. A key part of the audit should be to assess factors that potentially inhibit or promote knowledge sharing. (Some KM thinkers and practitioners see an audit as operating at various levels – it should not only identify assets as such, but rather complex knowledge objects.)⁴²

2.1.3.2 Knowledge mapping and knowledge flows

A knowledge audit might consist of two major tasks, each of which can be done without the other. The first, often called knowledge mapping, involves locating knowledge throughout the organisation. The knowledge mapping process is relatively straightforward. It takes an inventory of what people in the organisation have written down or entered into systems, and identifies sources of information employees use that come from outside (such as libraries, websites or subscription services). Finding and organising all that data may be time-consuming, but it is not conceptually difficult. The second, more intensive category of audit task attempts to capture the patterns of knowledge flow in the organisation. This knowledge flow audit examines how people process information, since ultimately that determines how well an organisation uses and shares its knowledge. Useful tools in this area include Social Network Analysis⁴³, which maps the connectivity between key people.

So what does a knowledge audit actually look like? Effectively, it is a systematic process through which an organisation can understand its knowledge needs and current gaps. A good audit would perhaps identify:

- the knowledge within the various business units
- expertise and knowledge assets
- quick wins that could be implemented to produce immediate benefits
- the use and cost of externally-acquired information and examine how it may be used more effectively
- the use of internal resources – i.e. to see how valuable they are, and how they may be improved
- the knowledge flows and current bottlenecks within those flows.

According to one in-depth study⁴⁴ of mainstream practice, a successful audit should effectively reflect the organisation and how it works. To achieve all the objectives of the audit, to gather all the data, and to develop practical proposals, a mix of interviews, questionnaires, discussion groups, and focus groups should be used. To understand the key issues and business processes, a number of people in key positions should be interviewed. In some (but by no means all) cases, this process could be accompanied by a detailed questionnaire to all staff to draw out specific information and appropriate data.

Organic approaches tend to reject formal questionnaires and interviews as only providing access to readily memorable and easily codified knowledge, neglecting the more valuable aspects of heuristics, experience and natural talent of which people are generally unaware until stimulated. Narrative and other techniques derived from anthropology are designed to overcome the issue of people only knowing what they know when they need to know it.⁴⁵

Discussion groups should then be arranged to test conclusions, and focus groups to explore particular issues and challenges. A knowledge audit may also involve:

1. Convening a committee to champion KM and lead the implementation efforts.
2. Profiling the company's knowledge workers and its external constituents in a knowledge-value chain.
3. Breaking down individual processes to determine leverage points and identify critical content.
4. Setting goals, giving priority to knowledge projects that can meet pressing needs or produce quick wins.⁴⁶

Annex A provides a couple of sample questionnaires that organisations might wish to use to get the audit process under way, but organisations should also note that *informal* and indirect disclosure techniques can be just as valuable. Such narrative techniques⁴⁷ might include: capturing anecdotes in the field; using archetypes as a means of understanding and measuring culture, and understanding the principles around which communities self-organise (see 2.2.5).

2.1.4 Defining a KM strategy

2.1.4.1 What to include in a KM strategy

The following list shows some of the topics that an organisation might cover in a simple KM strategy:

- Organisational priorities for KM (in terms of strategy and market needs).
- KM vision and mission.
- KM operating plan (including objectives and perceived benefits).
- KM budget (and where appropriate, revenue plan).
- Plan for KM technical infrastructure.
- Proposed KM organisational structure (where appropriate).
- Plans for KM Communities of Practice.
- Proposed KM metrics and proposed knowledge sharing incentives and rewards.
- Plans for KM training.
- Plan for communication of KM strategy to internal and external stakeholders.
- Plan for integrating KM and organisational strategy.

When an organisation is first embarking upon a KM programme⁴⁸, it should try and build the following elements into its strategic planning process:

- setting up a channel through which team members can communicate, share information and create and edit key working documents in a collaborative fashion
- organising existing content in the most effective way, to ensure that knowledge can be accessed efficiently and to make it easy to identify any content gaps that may exist
- ensuring that a key group of employees is familiar with the key elements of any KM initiative, enabling them to field questions from the wider organisation and to provide support when needed
- communicating the latest outputs from the KM programme to the sponsoring/supporting community or the whole organisation
- measuring progress – KM is often difficult to measure in financial terms (see 2.3.2), but it is vital to start measuring knowledge outputs at an early stage – e.g. higher customer satisfaction, fewer product failures etc.
- creating a compelling rationale and business case for KM to senior management
- establishing pilot initiatives to achieve early wins and measurable business gains
- implementing a communications/change strategy to capture the hearts and minds of employees at large
- sometimes (but not always) appointing full-time or part-time dedicated resource to make it happen (see 2.6.3)

Organisations should also remember to develop their KM strategy, based not only upon what senior management demands, but also upon what other employees ask for too, since the whole idea is to meet the requirements of everyone⁴⁹, not just the elite few. Indeed, many of the most successful KM strategies emerge “bottom-up”, rather than “top-down”.

2.1.4.2 Aligning a product and process approach to KM

In the early days of KM, many believed that organisations should choose between two strategic alternatives when starting out, by taking either (a) a “connection path”, which focuses on KM as a social communication process (which can be enabled by technology), or (b) a “codification/collection path”, which focuses on the creation, storage and reuse of explicit knowledge in documents. However, this should not be an either/or choice – for example, the codification approach characterised by content management (see 2.4) both depends upon and can support the people networks that characterise connection.

The “connection” path – should be aligned with...

Idea: It is best to promote, motivate, encourage, nurture, or guide the process of knowing. KM is therefore primarily a social communication process – which can be improved by various aspects and tools of collaboration and co-operation.

Focus of KM strategy

- Empower and channel individual and team expertise.
- Facilitate conversations to exchange knowledge.
- Moderate emphasis on IT.
- Develop network management systems.
- Reward for sharing knowledge with others.

...the “codification” path.

Idea: Knowledge is a thing that can be located and manipulated. It is possible to capture, distribute, measure, and manage knowledge. Focuses on managing documents and their creation, storage, and reuse in IT-based systems.

Focus of KM strategy

- Connect people with reusable codified knowledge.
- Develop document management systems.
- Reward people for using and contributing to databases.
- Based on view that “content is king” and should therefore be made explicit wherever possible.

Source: adapted from original model, copyright of Knowledge Associates Ltd 2001; copyright Know-Net Consortium 2000

2.1.4.3 Aligning KM strategy with overall organisational strategy

An organisation should start by deciding the kind of value it intends to provide, and should then try and manage its knowledge resources in ways that make a difference: e.g. to serve its clients in a more co-ordinated, consistent manner; to respond to changing competitive conditions or to offer its products or services to clients more quickly, efficiently, and innovatively etc. (see chapter 3). In short, the KM strategy needs a strong link to the overall strategy of the organisation. In a recent study⁵⁰, more than 30 KM projects examined had initiatives which were growing and prospering but, tellingly, fewer than 10% were considered likely to have an important impact on the overall business strategy.

So how *can* KM be more closely linked to strategy? Assuming that an organisation already has a well-defined corporate strategy, the trick is to figure out how to support it through KM. If the organisation is driven primarily by new product development, then KM efforts should probably be devoted to managing research knowledge. However, if marketing activities are the main source of income, then the organisation should be thinking about how to manage pricing, promotion, product location, etc, or turning customer data into customer knowledge (see also 1.4 and annex B).

Some recent thinking⁵¹ even suggests that KM should not only support business strategy, but should transcend it, in the sense that knowledge strategies should enable organisations to understand how market dynamics are changing so that business strategy can be continuously adapted according to changing scenarios.

2.1.5 Aligning a KM strategy with an organisation's IT strategy

The primary role of technology within an organisation's KM strategy should be as an enabler, not as a driver. An IT strategy should not direct a business strategy, nor should it direct a KM strategy – that would be the “tail wagging the dog”.⁵² However, some strategic IT issues should certainly be taken into account when preparing a KM strategy. For example, one fundamental consideration should be the relative proximity of members of an organisation to each other, to clients and to partners. Traditional IT infrastructure has usually ring-fenced organisations, thereby making interoperability difficult. However, organisations that leverage available open technology standards now have the chance to build more open infrastructures, which can create an environment that enhances collaboration. Such an infrastructure does not need to be at the cost of reduced security, since the use of firewalls, encryption and digital certificates can still provide the security levels required.

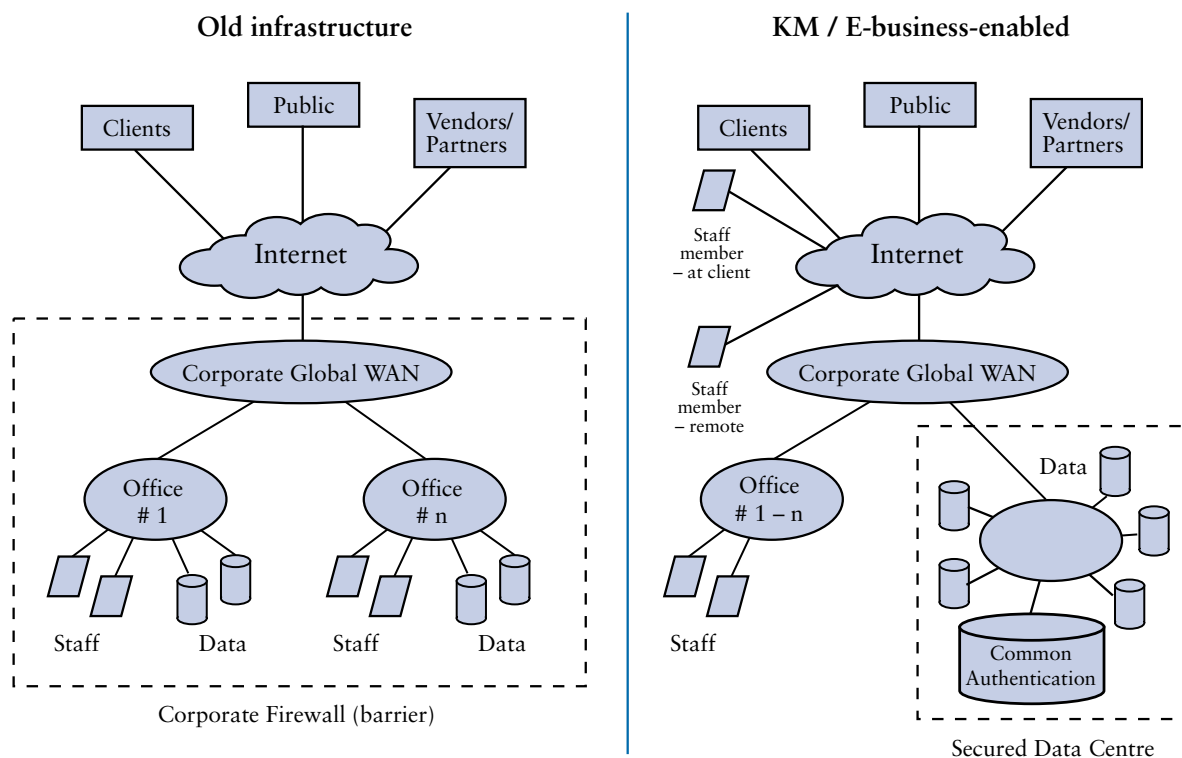


Figure 4 – A KM/E-business-enabled IT infrastructure

2.1.6 Creating standards for good KM

2.1.6.1 Early adoption of standards can be important

When an organisation tries to document its knowledge, both within its corporate boundaries and beyond, it needs to be consistent. Early development and adoption of common standards⁵³ – at the organisational, industrial and geographical level – should allow the organisation to better exploit its knowledge assets, whilst at the same time maintaining a manageable level of business risk. Such standards can prove helpful⁵⁴ in many areas, e.g.:

Branding	So that (explicit) knowledge shared has a consistent look and feel.
Risk Management	Covering such issues such privacy, client confidentiality and security of intellectual property (see 1.4.3).
Navigation	Consistent categorisation will enable content to flow in a meaningful way, and be found more easily (see 2.4.3).
Workflow	The adoption of a common data architecture will allow information to flow more easily in internal KM systems and between the organisation and its customers (see 2.4.4). ⁵⁵



In brief

- All organisations, large and small, have knowledge that they need to share amongst employees, suppliers, and customers.
- Conducting a “knowledge audit” can be a good way of getting a bird’s-eye view of the knowledge that exists within an organisation.
- Any formal attempt at defining a KM strategy should align with overall organisational strategy and not be seen as a stand-alone initiative.
- In order to make knowledge flow consistently to wherever it is most needed, organisations should adopt standards early on (around technology, data architecture, risk management etc.).



Good practice examples

- **Chemical company:** R&D department had embarked on several KM initiatives that had full management support. Despite this, the company's reuse of acquired know-how and expertise had not improved. A knowledge audit uncovered obstacles that the efforts to date had ignored, including cultural differences across geographic locations, and discrepancies in "management speak" versus "management action".
- **Construction company:** Found that its best long-term strategy was to start with a set of low-visibility initiatives, join with committed allies, get some relatively quick business results, adjust its organisational mechanisms to encourage knowledge sharing, strengthen the company's human networks, and build interest. It enjoyed considerable success with these initiatives, around such areas as: who's who database; expertise database (a skills bank); client and supplier links and market intelligence networks for gathering sector information and forecasts.
- **Financial services company:** CEO tracked best practice progress as part of an effort to spread the company's intellectual assets across its businesses. (Another leading financial services institution used intellectual asset valuation to attract investors.)
- **IT consulting firm:** Developed a new methodology for supporting the implementation of enterprise resource planning software at its clients. A senior manager inside the firm really wanted to see if they could transfer that practice to other parts of the world, so he found and worked with other people who were committed to KM, thereby starting a community focused around knowledge transfer.
- **Pharmaceutical company:** Chose a spot that was closely tied to the strategy of the business, and a driver of the company's future growth. Focused on a process that was undeniably KM-intensive, ensuring that the impact of improvements would be great.
- **Police force:** The focus here is on information and knowledge, each being a separate entity to be addressed in the most appropriate manner. It is an environment, not a system, or a piece of technology. Rather, it is a holistic enterprise-wide programme within which all employees access and use the organisation's information and knowledge.
- **Professional services firm:** Concentrated on combining various KM initiatives for maximum effect, including:
 - **Global intranet** – to improve basic access to information; then focused on sources, frequency, methods of distribution to users etc.
 - **Taxonomy development** – firm-wide "language" which reflects nature of business – facilitated transfer of explicit knowledge
 - **External sources of tacit knowledge (expertise)** – began process of creating and sustaining an external network of people with "expert knowledge" (universities, academics, consultants, market experts, alumni with long experience etc.)
 - **Focus on knowledge creation during projects** – set up team-based databases where all project documentation could be placed for access by any team member (harvesting/risk management processes then adopted to sort out highest quality content)
 - **Knowledge hubs supported by knowledge harvesters/managers** – people appointed to facilitate knowledge sharing processes as well as performing more conventional librarian duties such as maintaining and rationalising knowledge databases