A Review of Knowledge Management in the Irish Civil Service

CPMR Discussion Paper 30

A Review of Knowledge Management in the Irish Civil Service

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Foreword

This paper is the thirtieth in a series undertaken by the Committee for Public Management Research. The Committee is developing a comprehensive programme of research designed to serve the needs of the future developments of the Irish public service. Committee members come from the following eight departments: Finance; Environment, Heritage and Local Government; Health and Children; Taoiseach; Transport; Communications, Marine and Natural Resources; Social and Family Affairs; Office of the Revenue Commissioners and also from Trinity College Dublin, University College Dublin and the Institute of Public Administration.

This series aims to prompt discussion and debate on topical issues of particular interest or concern. The papers may outline experience, both national and international, in dealing with a particular issue. Or they may be more conceptual in nature, prompting the development of new ideas on public management issues. They are not intended to set out any official position on the topic under scrutiny. Rather, the intention is to identify current thinking and best practice.

We would very much welcome comments on this paper and on public management research more generally. To ensure that the discussion papers and wider research programme of the Committee for Public Management Research are relevant to managers and staff, we need to hear from you. What do you think of the issues being raised? Are there other topics you would like to see researched?

Research into the problems, solutions and successes of public management processes and the way organisations can best adapt in a changing environment has much to contribute to good management, and is a vital element in the public service renewal process. The Committee for Public Management Research intends to provide a service to people working in public organisations by enhancing the knowledge base on public management issues.

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General information on the activities of the Committee for Public Management Research, including this paper and others in the series, can be found on its website: www.cpmr.gov.ie; information on Institute of Public Administration research in progress can be found at www.ipa.ie.

Executive Summary

Introduction

Knowledge management (KM) is a widely used term, but one that seems to gives rise to a degree of confusion. In part this would appear to be because there is nothing particularly new in the concept. As the OECD suggests, knowledge management is simply using established management tools (e.g. performance management, HR, new opportunities presented by information and communication technologies etc) to improve knowledge sharing within an organisation and the outside world. However, this is not to suggest that organisations should assume that knowledge management will just happen.

Some Thoughts on Knowledge Management				
What KM is:	What KM is not:			
A way of working that impacts on people and culture	Just about IT			
Something that people need to believe in and participate in	Something that can be 'done for' people by a support function			
A comprehensive and organisation-wide approach which supports business objectives	Discrete interventions			
Encompasses knowledge creation, management and sharing	Only about creating knowledge repositories			
The management of information with meaning (knowledge)	Information management (organising data, files and documents)			
Reflects the needs of the organisation and its employees	A monument to IT			
Ongoing – changing with the business	An isolated one-off project with a start and a finish			
Sponsored and led by senior management	Led by IT or Change Management			
About well thought out content management	A dumping ground for all information			
A means to an end (to achieve performance indicators)	An end in itself			
A means of supporting staff in fulfilling their roles	Another 'thing to do'			
Source: Adapted from IBM, 2004, internal publication				

Since the early 1990s, leading private sector companies have been developing procedures to guarantee effective generation, capture and dissemination of information and know-how and the promotion of knowledge sharing. Public sector organisations are typically thought to have come later to the concept of knowledge management. However, in response to ever-increasing pressure to improve efficiency and effectiveness, together with a growing awareness of the importance of sharing knowledge across government organisations to maintain a whole-of-government perspective on policy making and service delivery, knowledge management has been given greater priority.

Research overview

This study seeks to raise awareness of knowledge management and its potential to support organisations in achieving their business objectives. The research also identifies the concrete steps and cultural change required of government departments in order to more effectively use and share knowledge. The paper seeks to enhance understanding in relation to knowledge management and also to provide examples of initiatives being developed across the civil service. The challenge now for the civil service, and more specifically for individual departments and agencies, is to move beyond the level of isolated interventions to developing a comprehensive strategy and approach in relation to knowledge management. The need for this has been given further impetus by the decentralisation programme and the likelihood of significant changes in personnel for many departments.

Key learning points

Based on the evidence from the case-study organisations reviewed in this paper, a range of learning points emerge in relation to knowledge management. These points can act as a framework with which to develop specific departmental initiatives:

1. Put in the effort 'up front'

A successful knowledge management initiative is one that becomes a part of organisation culture. For this to happen, KM interventions have to reflect and support business needs and the way in which people work. Time and effort spent understanding processes and listening to staff in order to understand their needs is time well spent. The danger, if this phase is rushed, is that the responses developed reflect what IT thinks staff need rather that what they actually want. Furthermore, there is a danger of technology interventions, which should support knowledge management, becoming an end in themselves ('the white elephant' scenario).

2. Senior management support is critical

Senior management support, and the championing of the initiative by one or two key individuals is essential, both to get the project off the ground, and also to ensure it becomes embedded in organisation life and part of 'the way things are done around here'. In practical terms this means that managers may need to overcome fears which they themselves have in relation to new technology, sharing knowledge etc. It also means that they have to be seen to use the resources available and participate in initiatives like Communities of Practice (CoP) (The experience at IBM has been that a guaranteed way of getting staff committed and engaged with CoPs is to have one or two senior managers involved).

3. Establish a knowledge management team

As with anything worthwhile it will not happen without resources. The team should reflect all areas of the organisation and, while not required to be experts in the area, it is important that they are committed to the exercise. While knowledge management should never be regarded as an IT project, specialist IT experience is required in order to ensure that technological possibilities are exploited fully. Experience from the case-studies discussed in this paper suggests that it is critical that at least one senior management representative is part, though not necessarily chair, of the team. The guidance of someone with a background in the area (a professional librarian, information manager, researcher) is also very beneficial.

4. An important starting point is the carrying out of a knowedge audit

A knowledge audit is a formal evaluation of how and where knowledge is used in business processes. Through an audit, organisations can identify and evaluate the critical knowledge and information used by staff. It also helps to identify enablers and barriers to knowledge and information sharing.

It is also critical that organisations at the outset get some idea of the current situation and also the level of good will towards the concept. A framework for carrying out a knowledge audit is described in Chapter Four.

5. Develop a comprehensive approach to knowledge management, not just discrete interventions

Because knowledge management reflects a new approach to working, it has to involve a comprehensive approach. Furthermore, as indicated in particular by the private sector case-studies, it will not happen unless systems are put in place.

While organisations may need to start with one single initiative (for example, developing a knowledge repository), it needs to be explained to staff that this represents only one part of a broader agenda. A useful way of achieving this is through the development of a knowledge management strategy, setting out the specific resources, systems and priorities for an organisation, given its own unique environment and operating context.

An approach to developing a knowledge management strategy is discussed in Chapter Five. The strategy reviewed includes recommendations in relation to knowledge creation (e.g. through recruitment of staff with sought after skills or training and development), knowledge capture (i.e. how to review, edit, package and 'store' knowledge) and knowledge sharing (e.g. newsletters, discussion data-bases, communities of practice, briefings). It is the responsibility of the knowledge team to ensure that these recommendations are progressed. Further guidance in relation to these areas emerges from the two private sector companies reviewed.

6. Establish knowledge management milestones and indicators

It is important that there is some benchmark of what the organisation wishes to achieve from its knowledge management strategy. Milestones and indicators should be set in relation to specific projects or initiatives. In general, it is the responsibility of the KM team to identify these. Examples might include:

- demonstrable time-savings and improvements in the way people fulfil their tasks and responsibilities
- use of KM systems (as measured, for example, by resources most often accessed or downloaded)
- a shared sense (organisational and stakeholder) that the project is a success and represents value for money (as measured by surveys of management, staff and key stakeholders).

7. Show the benefits of knowledge management

In other words, answer the 'what's in it for me' question. This is dependent on having effectively managed steps one to six. People will very quickly engage with something if they see it as supporting what they do rather than an extra obligation.

8. Develop incentives and reward mechanisms

If staff see that KM is given a high priority by senior management they are far more likely to engage with it. However, this needs to be observed in actions as well as words. As noted above, managers taking a lead in relation to KM initiatives is one way of emphasising its importance. This can also be complemented by recognising and rewarding staff who support and contribute to knowledge management and sharing initiatives (as discussed in section 8.4).

9. Do not underestimate the cultural/behavioural challenge

Knowledge management represents a new approach to doing business and as with any change has a high risk of failure. The classic 'carrot and stick' approach is recommended. People need to be supported in learning and engaging with new practices. However, equally, knowledge management needs to be linked to appraisals and rewards.

Concluding comments

This paper has sought to enhance understanding in relation to knowledge management and also to provide examples of initiatives being developed across the public service. The challenge now for departments and agencies is to move beyond the level of isolated interventions to developing a comprehensive strategy and approach in relation to knowledge management.

1

Introduction

1.1 Background

Knowledge management (KM) is a widely used term, but one that seems to gives rise to a degree of confusion. In part this would appear to be because there is nothing particularly new in the concept, in some senses it simply represents a re-packaging of things which good organisations should do as a matter of course. The OECD (2003b) captures this idea well in suggesting that knowledge management is simply using established management tools (e.g. performance management, HR, new opportunities presented by information and communication technologies etc) to improve knowledge sharing within an organisation and the outside world.

However, this is not to suggest that organisations should assume that knowledge management will just happen. Since the early 1990s, leading private sector companies have been developing procedures to guarantee effective generation, capture and dissemination of information and know-how and the promotion of knowledge sharing.

Public sector organisations are typically thought to have come later to the concept of knowledge management. The OECD (2003b) suggests that this is in part due to a traditional environment whereby competitiveness and the 'bottom line' are afforded less priority than in the private sector. However, in response to ever-increasing pressure to improve efficiency and effectiveness, together with a growing awareness of the

importance of sharing knowledge across government organisations to maintain a whole-of-government perspective on policy making and service delivery, knowledge management has been given greater priority.

1.2 Research focus

The purpose of this study is to raise awareness of knowledge management and its potential to support organisations in achieving their business objectives. The research will also identify the concrete steps and cultural change required of government departments in order to more effectively use and share knowledge.

1.3 Proposed terms of reference

The terms of reference for this study were agreed as follows:

- 1. An examination of the literature in order to develop a fuller understanding of knowledge management in a public sector context, in particular the benefits of prioritising this area.
- 2. A review of knowledge management initiatives developed to date within the Irish civil service.
- 3. Consideration of learning to emerge from private sector organisations
- 4. The preparation of a knowledge management agenda for the civil service, indicating objectives, strategies and priorities.

1.4 Report structure

Following this introductory chapter, the structure of the report is as follows:

Chapter Two seeks to develop a comprehensive understanding of knowledge management and its benefits. In particular, the importance of developing a strategic approach to the topic is emphasised. The chapter concludes with a number of considerations in relation to the use and sharing of knowledge in a public sector context. Chapter Three reviews issues in relation to implementation and explains the role of

knowledge audits and knowledge strategies in supporting this process.

Using the example of Sustainable Energy Ireland, Chapter Four provides an example of how to carry out a knowledge audit. This is followed in Chapter Five by a review of the experiences of the Offices of the Attorney General and Chief State Solicitor and describes the process they engaged in to develop their knowledge management strategy. Chapter Six details a range of other initiatives developed across the Irish civil service and also in the UK Department of Health. Learning from the private sector is examined in Chapter Seven. Finally, Chapter Eight develops conclusions recommendations, in particular setting out guidance to public sector organisations developing an approach to knowledge management.

Understanding knowledge management

2.1 Introduction

The purpose of this chapter is to explain in greater detail what is meant by knowledge management and why it matters. This will be followed by consideration of some of the challenges with respect to its implementation in organisations. Finally, considerations in relation to its implementation in a public sector context are raised.

2.2 What is knowledge management?

Notwithstanding a certain mystique that surrounds the topic, there is nothing new in knowledge management (KM). According to the OECD (2003b, p.5), it is simply using established management tools (e.g. performance management tools, human resources and incentive tools, new information technology etc) with the objective of improving knowledge sharing within an organisation and with the outside world. However, this is not to imply that KM does not require considerable effort and change on the part of organisations. Experience has shown that developing a good knowledge management strategy systematically encompasses all of the management tools at the disposal of top management.

There are a wealth of definitions of knowledge management, including:

The management of the information, knowledge and experience available to an organisation – its creation, capture, storage, availability and utilisation – in order that organisational activities build on what is already known and extend it further (Mayo, 1998)

Knowledge management is a business philosophy. It is an emerging set of principles, processes, organisational structures and technology applications that help people share and leverage their knowledge to meet their business objectives (Scarbrough, 1999)

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, cited in Kelleher and Levene, 2001, p.15)

However, many authors (for example, Kelleher and Levene, 2001; Evans, 2000) point to the difficulty of succinctly defining the concept, suggesting that it would seem appropriate to avoid imposing a strict definition but rather regard knowledge management as a 'multi-layered, multifaceted concept' (Scarbrough et al, 1999) that 'can impact different organisations in very different ways' (Kelleher and Levine, 2001). Notwithstanding the difficulty of developing a consensus definition of knowledge management, the explanations noted above do serve to emphasise a range of key considerations in relation to KM:

• That knowledge is used and or shared is fundamental to the concept of knowledge management. Some organisations prefer the more accessible term knowledge sharing to knowledge management, which they regard as having become overly identified with information management and technology

• The objective of knowledge management is to make organisations more efficient and effective and to support them in achieving their business objectives

The distinction between information, knowledge and to a lesser extent data is important. The terms are not interchangeable. Davenport and Prusak (1998) explain the differences through the following definitions:

Data is: simple observations of states of the world

Information is: data endowed with relevance and purpose

Knowledge is: valuable information from the human mind.

However, the authors also note that in practice the three areas may be difficult to separate. In effect, what may emerge is a continuum of the three or an evolutionary approach, well represented by Skyrme and Amidon (1997, reported in Knight and Howes, 2003, p.13) as a pyramid or hierarchy.

Knowledge with insight

Knowledge Information with meaning

Information Data with context

Facts, observance, data points

Figure 2.1 The Knowledge Hierarchy

Skyrme and Amidon include wisdom in their hierarchy. They explain this by noting that the acquisition of knowledge has a higher purpose — the full integration and realisation of knowledge in an area leads to mastery.

The literature also distinguishes between different types of knowledge. Typically, five different types of knowledge are referred to. These are based on the five investigator questions: know-how, know-who, know-when, know-where, know-why and are explained as follows (Knight and Howes, 2003):

- Know-how: This may be explicitly stated in organisational procedures but in practice much of it will be found only in people's heads (tacit knowledge). The difficulty in defining know-how is precisely what makes it a source of competitive advantage because it is knowledge that cannot be easily written down or taken from its context and replicated elsewhere.
- Know-who: Assuming that significant know-how exists only in people's heads, access to the right people becomes crucial – in other words, knowing whom to ask in relation to specific problems. A 'silo' mentality in organisations, where knowledge is seen as power, reduces access to knowwho.
- Know-why: This relates to whether people know why they are doing something and encompasses the vision and culture of an organisation. This context knowledge allows individuals to go about tasks in the most appropriate way.
- Know-when: This relates to timing, knowing when to do something and when not to.
- Know-where: How well do people know where to find what they need? Knowing where to find and access information is frequently the first hurdle for many people in organisations.

David Gurteen (www.gurteen.com) has used a metaphor of making a cake to explain the difference between data, information and knowledge and also the different types of knowledge. An analysis of a cake's constituents provides data. For most purposes this is not very useful, you might not even be able to tell it's a cake. A list of ingredients (information) is more useful as it gives the data context, an experienced cook could probably make the cake. However, the recipe is

knowledge, written down, explicit knowledge, it tells you how to make the cake. An inexperienced cook however, even with the recipe, might not make a very good cake. A person though with relevant experience and skills, knowledge in their heads, tacit knowledge, would almost certainly make a good cake from the recipe. Know-who, who to ask for help, and know-why, what, for example, to do if a certain ingredient is unavailable, are also relevant.

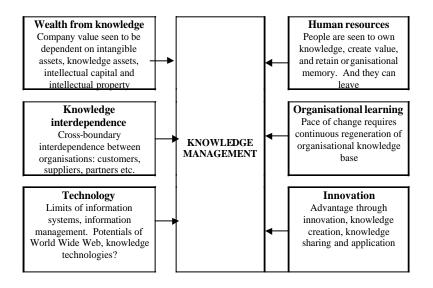
2.3 Drivers of knowledge management

As noted above, many of the activities that now come under the banner of knowledge management have been around for some time, so why has the concept emerged as so significant over the past decade. Knight and Howes (2003) and Evans (2000) suggest a range of factors:

- Increasing awareness of knowledge (intellectual capital, intellectual property, know-how), over and above other assets like land, labour and capital, as a source of competitive advantage and value in organisations.
- A growing emphasis on organisational learning and regeneration as a way of coping with the ever-increasing pace of change.
- A recognition that people own knowledge (human capital, the knowledge worker) and that this has a value has resulted in the retention of talent (or know-how) becoming a top strategic issue.
- The trend towards globalisation, which increases competition while also breaking down and blurring boundaries and creating interdependencies between organisations, customers, suppliers etc.
- The impact of technology which has opened up huge possibilities in respect of knowledge management, while at the same time adding to the challenge due to the sheer volume of information being generated and passed around ('information overload').

These and other drivers have found a common theme in knowledge management, as expressed in Figure 2.2. The related disciplines influencing knowledge management, and consequently the different perceptions that people have about the concept, have contributed to its richness. As Knight and Howes (2003) note, a human resource specialist may stress learning and reward factors, while an intellectual property lawyer may focus on the explicit capture and registration of knowledge. They each will rightly believe that they are focusing on knowledge management, yet there will also be value gained by incorporating the viewpoints from other perspectives.

Figure 2.2 Drivers of Knowledge Management



Source: Knight and Howes, 2003

2.4 The benefits of knowledge management

Increasing value, either for shareholders or stakeholders, is the basic objective of all organisations. Knowledge management matters because it is regarded as a source of increased value. Peter Drucker (cited in Evans, 2003, p.9) is credited with having said that in contemporary society the most important source of wealth is knowledge and information. Kelleher and Levene (2001, p.19) develop this point, noting that long-term success depends on an organisation's capacity to create new knowledge through a continuous process of learning and unlearning. As a result, knowledge now needs to be protected, cultivated and shared across an organisation's entire stakeholder base, whereas, until recently, success could often be based upon the knowledge of a handful of strategically positioned individuals.

Mayo (1998) suggests that in almost all organisations as much as two thirds of their value lies in intangible assets including:

- externally related or customer assets, including brands, customer relationships and reputation
- internal or structural assets, such as systems, patents, processes, culture, documented experience and knowledge
- human assets the people available to the organisation, their brains, skills and experience and how they are led and motivated.

Of these, the final category is perhaps the most valuable because it is not owned by the organisation. Mayo therefore suggests that one key to managing these assets is to transfer as much as possible of what is in the third category into the second.

As part of a Cranfield research project Breu and Smith (2002) identified a set of more specific benefits that can be expected from exploiting knowledge in organisations:

- innovation and growth
- organisation responsiveness
- customer focus
- supply network
- internal quality.

Evans (2000, p.2) identifies a similar list of what she refers to as 'strategic arguments for managing knowledge': minimising duplication of effort, reducing repeated learning curves, speeding up the rate of innovation and improving the speed and quality of customer service. Kelleher and Levene (2001, p.72) further emphasise how investing in KM can lead to more effective employees and teams through supporting organisations 'to close their "expertise-gaps" in a quick, reliable and risk-friendly way'. This situation may arise when new employees are added, old employees leave or when they are 'trying to bring the collective knowledge of the organisation to bear on issues and opportunities'.

2.5 Barriers to change

As with any change programme, developing a new approach to knowledge management is likely to meet with resistance, which has the potential to seriously slow the programme or even cause its failure. While the extent to which this occurs can be reduced by careful preparation and communication, it is helpful to be aware of the following obstacles:

- A lack of conviction that change is needed if people are not properly informed or the purpose and benefits of change are not explained to them, they are likely to view the present situation as satisfactory and an effort to change as useless and unsatisfactory. Related to this is dislike of imposed change, people resent being treated as passive objects and having changes imposed on them about which they cannot express their views.
- A belief that knowledge relates only to certain groups or positions and therefore is a subject that most employees do not need to bother about

- An over-emphasis on technology which needs to be seen as an enabler rather than an end in itself. However, 'technophobia', where organisations are uneasy with using technology tools as a support for knowledge sharing, can be equally inhibiting
- Fear of the unknown People do not like uncertainty and may prefer an imperfect present to an unknown and uncertain future. Knowledge management requires a level of confidence within the organisation to encourage people to share and get involved. If people are uncertain about the future they are less likely to do this.
- An enduring notion that *knowledge is power* this factor can go to the heart of organisation culture where the competitive internal environment can foster knowledge hoarding
- A lack of business focus treating knowledge management as an end in itself and creating a KM programme because everyone else is or because it might pay off later. Knowledge management projects tend to be successful only if they are linked to real business issues.

Overcoming resistance in these areas is an important prerequisite to developing knowledge management. According to Knight and Howe (2003, p.240) this can be achieved if the benefits of expected change (B) are shown to outweigh the pain (P) and effort (E) involved in making the change, in other words, B>P+E.

The main variable here is the benefit. The initiative must be designed to deliver benefit on a large number of fronts and these must be identified and specifically mapped out. While little can be done about the pain, effective communication at all stages of the process can help to reduce frustration and uncertainty. Finally, the effort people may be asked to make, particularly in the early stages, may be significant; there is therefore a need for effective and realistic project management, goals and, where appropriate, rewards for contribution made.

2.6 Knowledge management in the public sector

In recent years the management of knowledge has become an important public management theme. However, as the OECD (2003a) emphasises, government organisations have different incentives, strengths and weaknesses compared to private companies in relation to the management of knowledge. On the one hand, the pressure of competitiveness and the incentives to lower costs are traditionally less important. In addition, outcomes are typically less clear and less measurable. Finally, management structures tend to be quite hierarchical which, it is suggested, provide fewer incentives for innovation and teamwork.

However, conversely, the activities of governments are frequently knowledge intensive, with the need to maintain a whole-of-government perspective an important consideration. In addition, for reasons of wider public interest, access to knowledge and transparency is critical. Finally, ageing civil servants and increased staff turnover create new challenges for the preservation of institutional memory and the training of new staff.

During 2002, the OECD conducted a major survey of knowledge management practices in the central governments of member states. The following are the broad conclusions of this research:

- KM is a core feature of the management agenda of a majority of central government organisations across member countries, and organisations are making concrete efforts to improve their KM practices.
- Cultural change is taking place, for example sharing knowledge is being equated less with loss of power.
- However, it is not clear that these changes reflect deep organisational change, in particular it is suggested that organisations might have underestimated the 'human factor' in their efforts to improve knowledge practices. KM strategies have often not been well disseminated and rewards for knowledge-sharing remain informal and limited.

- As a result, structural changes expected from better KM practices, including improved competitiveness, less 'silotype' structures and enhanced organisation learning, have not yet been achieved.
- Finally, improved KM practices come with added costs in terms of information overloads and time dedicated to activities in this area. As a result, projects need to be well designed, taking into account these important side effects on productivity and on internal governance.

Implementing knowledge management

3.1 Introduction

This chapter explains some of the approaches developed in the literature on knowledge management in relation to the implementation of successful projects in this area. In particular, the contribution of knowledge audits and knowledge strategies are emphasised. A number of supporting annexes detail some of the tools that have been developed in order to facilitate thinking in this regard.

3.2 How to approach a knowledge management initiative

Knight and Howes (2003) suggest that organisations frequently come to knowledge management because they have spotted a gap in how well the organisation does things and look to undertake or commission some work to address this. It could be a database, Intranet, discussion board or some kind of specialist software deployment. Such initiatives are often labelled as 'knowledge management' but in reality they are focused on new ways to organise information. Furthermore, big infrastructure initiatives, such as the development or improvement of the Intranet site, frequently fail in their objective of promoting internal communication and knowledge sharing. When this happens the issues are seldom technical, rather the sites are not fulfilling their potential due to employees not using them. Knight and Howes (2003, p.29) conclude that unless knowledge management interventions are 'firmly embedded into the culture and processes of organisations, and appropriate reward and motivation systems are in place, they will fail to deliver what the architects promised of them'.

A further drawback of approaching knowledge management in this way is that the solutions only address elements of the problem and in addition are overly concentrated on the provision of 'tools'. There is also the danger, if a range of unrelated responses of this nature are developed, that staff will experience 'initiative fatigue', the result of change piled on top of change in no predictable manner.

Knight and Howes suggest that an alternative, more comprehensive route into dealing with knowledge issues is to use a 'knowledge needs' approach. The 'needs' chosen by an organisation will depend to a large extent on its culture, industry sector, business activity and the particular management sector. However, some generic categories include:

- product and service knowledge the core of any organisation, the business content; always a mix of explicit and tacit (informally held) knowledge
- process knowledge how to get things done, again a mixture of explicit and tacit knowledge
- customer and supplier knowledge the emphasis can vary depending on the nature of the organisation, its customer and transaction volumes
- project knowledge in many instances organisational memory from projects may be a crucial knowledge resource, but this resource is often poorly managed. Yet learning in this regard can lower risk and generate cost savings from reusing materials and applying lessons learned
- technical or expert knowledge often the focus of knowledge management projects. The emphasis here is on tacit knowledge and the techniques which might prove effective with an expert group.

According to Knight and Howes, the advantages of a knowledge needs approach is that it begins to address some of the wider issues such as skills gaps, learning and communication which might be overlooked in addressing knowledge management in a more reactive way. It also safeguards against some of the potential pitfalls of an uncoordinated approach, for example:

- lots of local initiatives
- an illusion that knowledge can be captured and managed in isolation from the people who possess it, this leads to an over emphasis on tools, software and processes
- potential for in-fighting over areas of influence
- tight budget constraints
- a narrowly scoped business case with little opportunity to present the wider benefits
- little chance of truly leveraging knowledge to achieve solid cross-organisational benefit
- becoming overly associated with a particular stakeholder group (e.g. it is seen in an organisation as a technology thing, or a HR thing, or an IT thing).

Any of these failures, which emerge from a lack of strategic perspective, can result in KM getting the reputation of not delivering and subsequently becoming discredited.

3.3 Knowledge management audits and strategies

Implementing knowledge management is in effect a change management project. Taking a step back from the operational side and developing a plan or strategy therefore makes sound business sense. A more co-ordinated approach also builds awareness of the importance of knowledge, as a way of improving efficiency, effectiveness and innovation, at every level of the organisation.

Knight and Howes (2003) have developed a five-stage process for comprehensively defining and implementing a knowledge strategy. This is summarised in Figure 3.1.

Never rest:
realise the benefits

Project and benefit management

Implement the new reality

Define the organisation's response

Design the new reality

Figure 3.1: A Five-stage Management Delivery Framework

Source: Knight and Howes, 2003

The five stages are explained as follows:

Stage 1: Defines the pressures on the organisation and investigates the potential for leveraging knowledge in delivering corporate objectives

Stage 2: Assesses the current situation (knowledge audit), defines a vision for the role of knowledge in the future and identifies the benefits which any programme will be required to deliver

Stage 3: Design of the new order using the following enablers – leadership, process, technology and information

Stage 4: Implementation – planning the change, apportioning responsibility for the management and delivery of the initiative, determining budgets, priorities and the overall shape of the programme

Stage 5: Benefits management – ensuring that the expected benefits are being realised and identifying further opportunities for improvement.

Conducting a knowledge audit, described by Kelleher and Levene (2001, p.31) as 'a formal documented assessment of an organisation's current knowledge base', represents a useful starting point for implementing knowledge management. It helps through identifying how employees currently store, access, use and share the knowledge that they need to do their jobs. It should also uncover some of the barriers to knowledge use and transfer that might exist in the organisation and at the same time highlight examples of good practice that could be applied in other areas.

The questionnaire included at Appendix One highlights the type of questions which organisations need to reflect on in developing an approach to knowledge management, while Chapter 4 describes the process engaged in by Sustainable Energy Ireland in carrying out a knowledge audit.

The logical follow-on from a knowledge audit is to develop a strategy which fundamentally addresses the role of knowledge in the organisation and describes how it can be mobilised in support of business objectives. However, the strategy should not only be based on senior management demands, but should also reflect what other employees need. Consequently, as with many other strategies, the process involved in developing it is as critical as the final document. Some of the themes that are likely to be addressed in developing the strategy include (Kelleher and Levene, 2001):

- organisational priorities for KM
- KM vision and mission
- KM operating plan
- KM budget
- plan for KM technical infrastructure
- proposed KM organisational structure
- proposed KM metrics and proposed knowledge sharing incentives and rewards
- plans for KM training

- plans for communication of KM strategy to internal and external stakeholders
- plans for integrating KM and organisation strategy.

Ultimately the following specific initiatives may also be addressed:

- setting up channels through which employees can communicate, share information and create and share key working documents
- organise existing knowledge in the most effective way, to ensure that gaps can be identified and that it can easily be accessed
- ensure that all employees are familiar with knowledge management initiatives
- mechanisms for communicating the latest outputs from the knowledge management programme
- the identification of pilot projects to ensure early wins and measurable business gains
- identifying responsibilities in respect to the implementation programme
- suggestions with respect to the evaluation of the initiative and an identification of tools in relation to monitoring progress.

Chapter Five describes the development of a knowledge management strategy at the Offices of the Attorney General and the Chief State Solicitor.

3.4 Some overarching considerations

Much of the literature on knowledge management includes guidance in relation to the effective management of projects in this area. Knight and Howes (2003) have developed a useful summary of the points which they refer to as the 'Five Golden Rules'.

Rule 1: Be crystal clear on the expected benefits

Always have a business case that details the agreed benefits that the knowledge management initiative must deliver. Progress towards their realisation must be properly managed and measured.

Rule 2: People's behaviour must change for the long-term

People's beliefs must be affected if long-term improvements are to be achieved. You must do more than just 'build an IT system'.

Rule 3: Nothing happens without leadership

Those responsible for running the organisation must inspire and encourage all staff through the change programme, continuing on after implementation to ensure lasting change.

Rule 4: Process change leads to improved performance

Organisations need to build in new processes and routines through job redesign, to ensure knowledge capture and reuse, and to establish and reinforce desired behaviours and activities.

Rule 5: Organisational learning leads to organisational success

Organisations can only survive and prosper by learning from the business environment and putting that learning to practical use by responding to it. The capability to do this learning well is what distinguishes successful organisations.

Conducting a knowledge management audit at Sustainable Energy Ireland

4.1 Introduction

Sustainable Energy Ireland (SEI) is Ireland's national energy authority. The authority promotes and assists environmentally and economically sustainable production, supply and use of energy, in support of government policy across all sectors of the economy. There are about forty full-time staff working across five divisions (Industry, Built Environment, Sustainable Energy Services, Development Services and Customer Services).

Over the years there has been an awareness at SEI that many internal processes are data, file and document intensive, and a number of initiatives were developed in an effort to ensure a more co-ordinated approach to information management. However, there was also a recognition of the need for a more strategic approach, in particular to support change in employee attitudes and behaviours so that knowledge creation and sharing would occur as a normal part of peoples' daily work-lives.

The manner in which the organisation has evolved further highlighted the need to examine the issue of organisation knowledge. Effectively about twenty-five years old (having previously been part of Eolas/IIRS, Forbairt and subsequently Enterprise Ireland), the authority had developed at intervals, depending on the funding made available. Each of these expansions has coincided with the recruitment of new staff. Consequently, there are cohorts of employees with two, five, ten and twenty-five years experience. The extent of

organisation knowledge and know-how held by longer-serving employees came into sharp focus when one employee with twenty-five years service retired, highlighting the huge level of tacit knowledge held by a small number of key staff.

As a result, there was an increasing awareness at board level and within the management team of the imperative of addressing the broader issue of knowledge management. This was given further impetus by the inclusion of SEI in the government's decentralisation programme. The authority is scheduled to re-locate to Dundalk in 2007.

4.2 The knowledge audit

Prior to determining their policy in relation to knowledge management, SEI wished to identify core knowledge areas for the organisation and to explore current practice in respect of knowledge management and sharing. In late 2004, with the support of funding received from their parent department, Communications, Marine and Natural Resources (DCMNR), SEI requested tenders in respect of a knowledge audit. The audit was to encompass the following:

- a description of SEI's current knowledge management practices
- help in identifying areas for improvement
- proposed actions for improvement
- assistance with dissemination to DCMNR divisions and semi-state bodies.

A project steering group, with representatives from all areas of the organisation, was established to oversee the procurement process and management of the project.

The successful tenderer was a Dutch consultancy firm. In carrying out previous knowledge audits it had developed an audit instrument described as a Knowledge Management Navigator (Figure 4.1). The KM Navigator facilitated a review of the areas and activities which knowledge management should address, the people involved, appropriate interventions

and learning processes and, lastly, the identification of indicators which are essential in evaluating progress made.

Which indicators would you like to improve? Performance Which knowledge areas are involved? indicators activities? Products and Knowledge People Learning processes Which Informal people are involved? Knowledge learning processes infrastructure Which instruments, functions and tools should be implemented? Source: Courtesy of Sustainable Energy Ireland, 2005, © CIBIT Consultants, internal presentation

Figure 4.1: KM Navigator Tool at Sustainable Energy Ireland

In conducting the audit, the consultants held workshops in all areas of the organisation. Attendance was excellent, indicating a high level of awareness and goodwill towards the project. Staff were asked to identify the core knowledge areas required to perform their jobs. In respect of each of the relevant areas they were required to specifically consider the level of proficiency (ability necessary), codification (how easily accessible the knowledge was) and diffusion (how many people

had the knowledge). For each category there were four options as illustrated in Table 4.1, with employees required to indicate the current situation and also the desired position. This latter score is particularly helpful in identifying priorities, as not all knowledge areas may be as critical as others.

Table 4.1: Identifying key knowledge areas and priorities at SEI

Knowledge Area:	2004	2008
A) Proficiency Score		
1. Beginner		
2. Apprentice (has basic knowledge and can apply it under supervision)		
3. Specialist (can perform independently)		
4. National expert (is regarded as a leader in this knowledge area).		
B) Codification Score		
1. Knowledge is in the heads of our employees		
Knowledge is codified in project descriptions, stories or other forms of documentation but limited filing has been done		
3. Knowledge has been codified into structured electronic documents		
4. Knowledge has been embedded in best or good practices, which give direction to the actions of our employees.		
C) Diffusion Score		
1. Knowledge is held by a limited number of staff and is not visible to other relevant parties		
Knowledge is held by a limited number of staff and all other relevant parties know where to find them		
3. Knowledge is held by a limited number of staff and all other relevant		
parties are informed on a need-to-know basis, so that they have superficial		
knowledge		
4. Knowledge in this area is widely and pro-actively spread to all relevant parties so that all parties can act directly upon that knowledge according to their needs.		

 $\it Source$: Sustainable Energy Ireland, 2005, © CIBIT Consultants, internal presentation

A worked example of this process is shown in Table 4.2. It relates to energy policy, which was identified by one division of SEI as one of its critical knowledge areas. The scores shown reflect the division's perception of both its current standing and its desired position at end-2007 in respect of the proficiency, codification and diffusion categories described above.

Table 4.2: Identifying key knowledge areas and priorities at SEI: the example of energy policy

	Proficiency 1	Codification ²	Diffusion ³	Total ⁴	Difference	Average
Current	2.5	2.0	2.0	6.5	3.5	2,2
End 2007	3.0	3.0	4.0	10		3.3

¹The division is reasonably proficient (competent) in relation to energy policy and believes that only a marginal improvement is required.

³The diffusion score of 2.0, with a desired score of 4.0, suggests that the competence in policy matters resides in only one or two people in the division, but that it is highly desirable that most if not all staff become familiar with the area.

⁴The total and average scores give a more rounded picture about the criticality of this knowledge and also yield a snapshot across all knowledge areas in relation to where most effort is required.

 $Source\colon Sustainable \ Energy \ Ireland, 2005 \ @ \ CIBIT \ Consultants, internal working paper$

4.3 Future developments

Ultimately, the outcome of the knowledge audit, which is nearing completion at SEI, will be:

- a deeper understanding of the way knowledge management practices support primary processes and are aligned with the strategic agenda of SEI
- a categorisation of core knowledge areas, needs and priorities
- the involvement of SEI's staff in knowledge management activities
- improved quality of learning processes at SEI
- suggestions in relation to specific interventions
- an increased awareness of the importance of knowledge across the organisation, and an increased level of engagement with the topic due to all staff being involved in the process

Its ambitions in respect of codification improvements are greater (2.0 to 3.0). This will imply the deployment of processes or practices to make implicit policy knowledge explicit.

• an identification of training needs (including what the organisation needs to learn about itself).

However, SEI has also identified a series of KM milestones/indicators which highlight the wider benefits which the organisation hopes to accrue from the knowledge management initiative:

- Implementing KM will demonstrate ways of improving our 'day job'.
- We will have a system for thematically codifying all documents/data.
- There will be clarity of understanding and good governance in the implementation of the KM programme.
- The organisation's values and culture will be reinforced.
- People will gain a sense of the knowledge embedded in the organisation.
- People will gain a sense of how they can and should embed more knowledge in the organisation.
- There will be recommendations with practical steps for how to help people find things independently.
- There will be a plan for having less paper in the organisation.
- There will be a five-year development programme with an indication of the resource requirements in the areas of finance, skills and support.
- A felt need for KM will have been created within the organisation due to a recognition that knowledge management makes life easier and ensures a more efficient/effective approach to doing business.
- A shared sense (organisational and stakeholder) that the project is a success and represents good value for money will be evident.

Following the completion of the audit, an action plan was drafted and three primary projects were defined for implementation. These commenced in 2005 and will run through to the end of 2007. The projects are designed to embed within SEI the systems, processes, and procedures to systematically develop and maintain proficiency, codification and diffusion attributes on all relevant knowledge areas. The three project strands are:

- making implicit knowledge explicit
- knowledge management infrastructure
- sharing knowledge.

Developing a knowledge management strategy at the Offices of the Attorney General and the Chief State Solicitor

5.1 Introduction

The Offices of the Attorney General (AGO) and the Chief State Solicitor (CSSO) have been interested in the area of knowledge management (KM) for a number of years. For example, a legal know-how database (using Lotus Notes) was established in the AGO in the mid-1990s.

There is a particular premium on past experience, know-how and legal information management in the state's legal offices. Both Offices have a Library & Know-how unit which is managed by a qualified information professional, and both units include a Know-how Officer on their staff. The Offices' Statement of Strategy includes the objective 'to provide staff with the knowledge and information required to deliver high quality services through the provision and development of professional library, research and know-how resources and services'.

In July 2001, consultants PricewaterhouseCoopers were commissioned to develop an Information Technology Strategy. The strategy identified a number of knowledge management projects. This was followed in early 2002 by an internal report on knowledge management prepared by the AGO Information Manager and the CSSO Law Librarian. This report took account of the authors' research into how comparable legal organisations in the private and public sectors approached KM. This internal report recommended the preparation of a

knowledge management strategy prior to any investment in KM-related IT applications.

An inter-disciplinary steering committee, with representatives of both the AGO and CSSO, and jointly chaired by the AGO Information Manager and the CSSO Law Librarian, was established to manage this project. In 2002 a consultant was appointed to conduct an information audit and to develop the strategy with the project team. This process was completed in Spring 2003 and the Strategy was formally accepted by the joint AGO/CSSO main Management Advisory Committee.

5.2 The information audit

The information audit carried out by the external consultant was a key component in the formulation of the KM strategy. Through conducting personal interviews and focus groups with a cross-section of employees, it was possible to establish the critical knowledge and information used by staff to undertake their work and to identify gaps in the provision and sharing of that knowledge and information. The audit also identified a range of both enablers and barriers to knowledge and information sharing within the two organisations.

5.3 The strategy

The Knowledge Management Strategy 2003-2005 which followed, is based on the findings of the audit, while also incorporating existing knowledge management initiatives, key AGO/CSSO strategic reports and best practice in legal organisations. It is also aligned with the organisations' Strategy Statements.

The purpose of the KM Strategy is to provide a framework for identifying, capturing, delivering and re-using AGO/CSSO knowledge and information to enable greater work efficiency and enhance the delivery of high quality legal services. In particular the KM Strategy aims to:

• foster and develop a knowledge-sharing culture

- put in place procedures to help staff to share knowledge and information with their colleagues
- implement appropriate technology and procedures to assist staff in capturing, reusing and disseminating their knowledge and information to colleagues
- implementing procedures and appropriate technology to make the skills, subject expertise and responsibilities of staff accessible and visible to all.

In order to achieve these objectives the strategy particularly emphasises the role of people and their behaviour, noting that, if staff believe that they will benefit from sharing their knowledge, they are more likely to participate in new procedures and use the facilitating technology.

The consultants' report makes twenty recommendations to support the knowledge management strategy. Selected examples of these recommendations are outlined in Table 5.1.

In respect of each recommendation, costs, responsibility and time-lines are identified. In addition, a knowledge management framework accompanies the KM Strategy, indicating how the implementation of the strategy should be supported through HR, IT, education, training, marketing and communications.

In order to support the participation and contribution of staff to knowledge management activities, and also to address some of the potential barriers to knowledge sharing, a range of training activities is also proposed. Furthermore, the strategy refers to the importance of providing incentives to staff to share their knowledge. In this regard, it is recommended that knowledge management be considered an additional core competency in PMDS and that staff be specifically rewarded for their contribution to knowledge management initiatives through the Merit Awards Scheme.

Lastly, the strategy identifies the importance of monitoring the implementation of the recommendations. While it notes that measuring performance in relation to knowledge management is challenging, it recommends that a survey or follow-up audit

Table 5.1: AGO/CSSO Knowledge Management Strategy Recommendations

Capture and storage of knowledge and info	rmation			
Recommendation 1: The development of a taxonomy for AGO/CSSO business applications	A taxonomy is a key tool in search engines and for content management, where consistent inputting and retrieval of search			
Recommendation 2: A shared Intranet for the AGO/CSSO	terms is essential. This will act as a central point of access and storage of core up-to-date knowledge and information			
Recommendation 3: Implementation of a staff specialisms and skills locator	This will ensure that staff are aware of the subject specialisms and skills of their colleagues.			
Capture and storage of legal knowledge and				
Recommendation 4: The development of an Intranet-based shared know-how application (to replace the existing know-how database in the AGO)	To ensure increased efficiency, reduced duplication of effort and the promotion of consistency and quality in the generation of legal advice. The know-how application will facilitate the indexing, abstracting, updating and retrieval of legal know-how			
Generating and sharing knowledge and information				
Recommendation 6: The development of a joint newsletter on office developments and activities	A monthly newsletter to ensure that staff are updated on key projects, developments and activities			
Recommendation 10: Improved dissemination of information on seminars and conferences	The return on investment in training and development will be enhanced by better dissemination of learning			
Recommendation 11: Incorporation of KM in induction and training programmes	New and existing staff to be instructed on knowledge-sharing applications and more generally on the principles and benefits of KM			
Recommendation 15: Introduction of a joint legal bulletin	A monthly legal bulletin will inform staff of legal developments and could include, for example, details of new legislation, pending legislation, judgments received, books received and recent additions to the know- how application			
Recommendation 17: Generation of Legal Reference Guides to key legal topics	The Legal Reference Guides will act as an authoritative reference tool on key and emerging legal topics (e.g. group actions or asylum law)			
Recommendation 18: The introduction of legal meetings in the CSSO	Legal Issues Meetings (similar to those already in the AGO) will provide a forum for discussion			
Recommendation 19: The introduction of Communities of Practice (initially it is recommended that a pilot CoP be launched)	Communities of Practice are informal groupings of individuals who share their interest and knowledge of a particular area through a range of forums, e.g. face-to face meetings, bulletin boards, conference calls etc.			

Source: Knowledge Management Strategy, AGO and CSSO, April 2003

should be undertaken in two years time. In addition, the performance of the organisations in respect of a number of KM metrics (Table 5.2) represents a useful way of evaluating levels of KM activity.

Figure 5.2: Knowledge Management Metrics at AGO/CSSO

Know-how application

- Ranking the contribution of know-how by group/section
- Ranking of contributions by individual
- Number of times know-how was accessed

Intranet

- · Resources most often downloaded or accessed
- Total number of unique users per time period

Knowledge/Information Sharing

- Number of group/section meetings held per time period
- Number of presentations on external seminars attended by staff

Source: AGO/CSSO, 2003

5.4 Future Developments

Following the approval of the KM Strategy by the Management Advisory Committee (MAC) and IT Steering Committee, the AGO and CSSO jointly established a core team to oversee its implementation. The team is chaired by an AGO Advisory Counsel (at Assistant Secretary level) and includes a CSSO solicitor (at Assistant Secretary level) and the HR, Training, IT and Library/Know-how managers from each organisation.

The KM core team has met regularly since 2003 and the majority of the KM Strategy recommendations have been progressed. The AGO and CSSO MACs are kept informed about KM developments through regular Library & Know-how unit and KM core team briefing papers. Both MACs have also examined the link between KM and risk management. During 2005 the team will review the effectiveness of the current strategy and the requirement of producing a further strategy and/or of including knowledge management as an integral part of the Offices' next Statements of Strategy.

Other knowledge management initiatives

6.1 Introduction

The growing importance of the management of knowledge as a key management theme in public service organisations was emphasised in section 2.6. In response to this heightened awareness of both the necessity and benefit of capturing, organising and sharing knowledge in a more productive manner, a number of government organisations have developed initiatives in this area. Projects include information management, the development of Intranet sites, business process re-engineering and knowledge sharing. Even if not specifically described as knowledge management, these initiatives do come under this broad heading. This chapter describes projects being developed in the following departments:

- Communications, Marine and Natural Resources
- Justice, Equality and Law Reform
- Finance
- Revenue
- The Department of Health in the UK

6.2 Knowledge capture project in the Department of Communications, Marine and Natural Resources

The DCMNR's Business Strategy for 2003-2005 indicates that over the lifetime of the strategy it will conduct a number of pilot projects to facilitate the development of good practice

with regard to knowledge management. The announcement of decentralisation and the department's proposed move to Cavan gave further impetus to the knowledge management initiative and it was brought forward.

In order to progress projects in the area, a KM team was established in Spring 2004. Membership includes the secretary general and deputy secretary general, the head of the modernisation and change division and the head of the IT division. The objectives of the group are set out in Table 6.1

Table 6.1: Objectives of knowledge management project in DCMNR

- To devise and recommend approaches, methods, tools etc. to assist divisions and agencies where relevant in:
 - recording their business processes
 - recording of the associated documentation
 - developing a quality library (a resource whereby standardised documents/templates are stored for use throughout the organisation).
- To advise and support the Strategic Change and Modernisation Division on new or evolving roles in DCMNR in support of continuing achievement of the benefits of KM.
- To advise and support the Strategic Change and Modernisation Division in assisting DCMNR in being in the forefront in harnessing KM, by:
 - working towards the development of a culture that encourages more proactive knowledge sharing
 - devising methods of demonstrating the benefits of KM, e.g. reducing duplication of effort, capitalising on global expertise especially in engineering and technical areas.
- To advise and support the Strategic Change and Modernisation Division on the use of already existing technology initiatives and to highlight issues associated with evaluation/procurement of additional/supporting technology tools.

Source: Terms of Reference for Knowledge Management Project, DCMNR, 2004, internal working paper

In order to deliver on the objectives contained in Table 6.1, it is intended to develop a knowledge management strategy and associated action plan.

In addition, the KM team have overseen pilot projects in the energy division in Dublin and the engineering division in Cork, which were launched in Spring 2004. The projects, which are identical, focus on business processes and developing templates to capture job-related information and, in particular, knowledge that is specific to a particular division. DCMNR refer to this information as knowledge assets. The information was gathered through interviews, workshops and review meetings with the relevant divisions. An appropriate mechanism for 'storing' this knowledge, which can easily be used, searched and refined, is now being developed in conjunction with University College Cork. However, the process of identifying knowledge assets is already being rolled-out to all divisions of the department.

6.3 Knowledge sharing project in the Department of Finance

The Department of Finance (DoF) defines knowledge management as an approach to identifying, creating, capturing, managing and sharing all of an organisation's experience. In practice this is described as:

- learning from experience and sharing
- gaining insights to inform and support decisions
- finding what we need to know and using it.

The department has sought to explain what, in the context of its work, explicit and tacit knowledge encompass. This is set out in Figure 6.1:

Office Systems i.e. Word, Excel. Rules and Regulations Outlook, PowerPoint, Access Guidelines / Manuals Financial Systems i.e. MIF/IDE, Procedures **Explicit** Reports Operational Systems i.e. PORS, Knowledge Policy Payscales, e-estimates, Payroll, Precedents HRMS Organisation Chart Intranet Mission Statement POs / FOL Strategy Statement •PMDS Objectives / Business Plan Knowledge gained from experience What you know Tacit How do I (do my job)? Knowledge Why (do I do things in a certain way)? Answers to FAQs

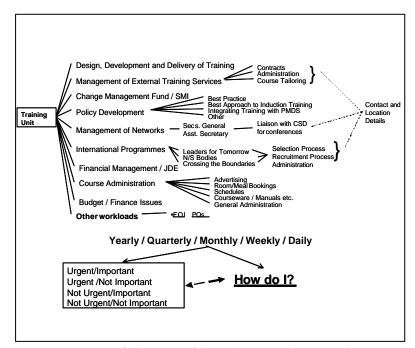
Figure 6.1: Explicit and Tacit Knowledge in the Department of Finance

Source: Department of Finance, internal PowerPoint presentation

The specific project being developed by the Centre for Management and Organisation Development in DoF relates to knowledge sharing and developing a better understanding of peoples' roles: what they do and, critically, how they do it. The intention is to develop a web-based series of links based on the department's organisation chart. The work of all units will be mapped out, with the possibility of clicking on any entry to follow up a line of enquiry. An example is shown in Figure 6.2. This enables all staff, and of particular relevance to new staff, to understand the work of the department and to identify relevant contact details. In addition, the system will provide links to relevant data and information sources and also individual role profiles which will explain what each member of staff does and how they do it. The intention in drawing up role profiles, which can be adapted from those generated for the

PMDS process, is 'to weave in' the tacit knowledge of staff, in addition to more explicit or procedural knowledge. While challenging, this can be done for example by indicating who needs to be consulted in carrying out a particular task, detailing entry points or identifying potential difficulties.

Figure 6.2: Department of Finance Knowledge Sharing Model, example of Training Unit



Source: Department of Finance, Draft, internal PowerPoint presentation

The project in DoF is still at the development stage; however, initial feedback from management and staff is positive and it is intended to finalise it in 2005.

6.4 Business process recording in the Department of Justice, Equality and Law Reform

In 1997, the Department of Justice, Equality and Law Reform (JELR) identified a need to document all its key work processes and indicate associated levels of responsibility, in order to ensure effective and efficient delivery of services. A computer-based method of recording the key work processes of the department was subsequently developed and over 3,000 work processes were mapped out and entered in a searchable format in a 'Lotus Notes' database. The Process Recording Database provided a valuable tool to be used in the effective management of divisional work.

A review of the database in 2002 revealed that there was a lack of follow-up by divisions in relation to the updating of records and in some cases that entries were no longer required in the context of improved business planning arrangements and the introduction of PMDS role profiles. The department's Management Advisory Committee decided to re-launch the database following a more detailed review. This review, which was carried out by the department's Organisation Development Unit (ODU), led to a number of changes being made to the database before it was re-launched in 2004.

The new version of the Process Recording Database is more straightforward and user-friendly than its predecessor, thereby ensuring that it is more likely to be maintained and used on an ongoing basis. In addition, there is a short but comprehensive 'Help' section. The 'Help' menu from the database home page is shown in Table 6.2.

Table 6.2: Help Menu from Process Recording Database

INTRODUCTION

Introduction

Introduction to the Process Recording Database

HOW TO USE DATABASE

Creating Documents

Creating a Work Process Record

Creating a Response Document

Deleting Documents

Deleting a Work Process Record

Deleting a Response Document

Editing Documents

Editing a Work Process Record

Editing a Response Document

Searching

Searching for Records

Technical Support

Contacting IT

Views

Different Views

Source: Department of Justice Equality and Law Reform, 2005, internal database

Process Recording Database co-ordinators were nominated at divisional level to liase with ODU in relation to the task of ensuring that all key work processes carried out in their divisions were updated and entered in the database. The ODU is also working with relevant divisions on developing work processes which are 'common' throughout the department, for example, replying to Parliamentary Questions. An example of this Work Process Record is shown in Table 6.3. It was expected that the task of inputting all key work processes in the database would be completed in 2005.

Table 6.3: Example of Work Process Record from Process Recording Database

Process Details

Function: Parliamentary Questions

Work Process: Preparing Replies to Parliamentary Questions

Division: Common

File Reference:

Process Details

- 1. Parliamentary Questions (PQs) are received by e-mail.
 - (a) All PQs have an inflexible deadline which must be adhered to.
 - (b) Replying to Dáil Questions should be treated by staff as top priority.
- **2.** On receipt of PQ check:
 - (a) that PQ is proper to the department, if not:
 - Seek transfer through the Minister's Office. If transfer is not accepted seek disallowance. (Disallowance requests should be made directly by the division to the Parliamentary Questions Office. A bald statement that the minister does not have responsibility etc. will not suffice. A reasoned decision on disallowance cannot be made without a reasoned submission.)
 - **(b)** that the question is not a repeat. The repeat rule is as follows:-
 - <u>Oral Questions</u> may be ruled out on the basis of a question(s) answered orally in the Dáil or in an adjournment reply in the preceding 4 months. The position must not have changed in the intervening period and the information now sought must have been provided on the earlier occasion;
 - Written Questions may be ruled out on the basis of any question, whether answered orally or in writing or in an adjournment reply in the previous 2 weeks. The position must not have changed in the intervening period and the information now sought must have been provided on the earlier occasion.

(Please note that for an Oral PQ to be disallowed under the repeat rule it must have been answered orally on the previous occasion. A Written PQ can be disallowed under the repeat rule if it was answered written or as an oral on the previous occasion.)

3.	If reply is to be prepared, print off PQ from the e-mail system. (Three pages should automatically print).				
4.	Cut question from page 3 of printed pages (largest text version of question) and paste onto outside of red PQ folder, under where it says – 'to be answered on'. Attach remaining 2 pages to the inside right of the folder.				
5.		Draft reply on PQ System (request contributions from other divisions if required).			
6.	Supplementary questions (in bullet point format) and briefing material must be prepared in the case of a PQ for Oral Answer that is within the top 20 (5 Priority and next 15 Orals) PQs on the Final Order Paper. This material should be attached to the inside left of the folder.				
7.	When the draft reply is approved by the relevant officer (AP level or higher) mark approved on PQ System and submit to the Secretary General's Office.				
8.	Final replies to Priority Questions (always 5) and 10-15 top orals, should be in the Secretary General's Office not later than 12 noon on the day before they are due for answer.				
	(For help on to the PQ He			o PQs electronical	ly please go
15		\bigcirc	On-going	Monthly	
r	Frequency		Daily	Quarterly	
		O	Weekly	Yearly	
		D	Fortnightly	() Other	
Further Material on Replying to PQs					
Document Type Document Title Created By Date Created Memo Important Notice from Secretary General re Replying to PQs - April 2004					

Source: Department of Justice, Equality and Law Reform, 2005, internal database

The department believes that when fully developed the Process Recording Database will have a number of benefits. It will:

- provide an accurate step by step guide to the completion of key work processes for all staff
- be a valuable resource which will allow staff to learn and follow best practice in carrying out their duties
- help staff to improve their understanding of their own work area and other work areas
- be an important training aid to help with the induction and development of staff.

Finally, the database will be of particular importance in the context of staff changes arising from the government's decentralisation programme.

6.5 Knowledge sharing initiative in the Office of the Revenue Commissioners

The approach to knowledge sharing developed to date by Revenue is linked with its Quality Customer Service and e-government initiatives. A Revenue Guide has been developed and is included on both its Intranet and Internet sites (www.revenue.ie). The guide contains detailed information for both staff and customers on taxes and duties, personal credits, exemptions and reliefs. Under each heading there is comprehensive information in respect of rates, payment, relevant documentation, legislation and reference material. For Revenue staff it represents a streamlined and easy to use approach to knowledge sharing, with information relevant to people's jobs readily accessible. In addition, individual sections have developed their own work guides which are also included on the Inter/Intranet.

6.6 Knowledge harvesting project at the UK Department of Health

In its knowledge management strategy, the UK Department of Health (DH) identified the importance of harvesting knowledge in order to document and retain experience and know-how. Two areas identified for pilot 'knowledge harvesting' projects were policy making and public inquiries.

The DH is occasionally involved in public inquiries. However, without any mechanism for capturing knowledge and experience, this is lost from one investigation to the next, As a result, staff who may not have been involved in previous inquiries are required to 'start from scratch'. As the terms of reference for the project note 'there is a need to capture the knowledge and expertise of those involved in inquiries in order to develop and maintain good practice and value for money, to ensure greater consistency in approach and assist those involved in what can be a very complex and stressful area of work'.

The project involved a series of interviews with identified staff, with the output of interviews packaged into a series of knowledge assets to accommodate varying degrees of need, from a broad overview to detailed operational advice. Emphasis was placed not just on the explicit knowledge involved in fulfilling certain tasks, but also on general experience and learning (e.g. 'entry points', issues to 'flag-up', potential pitfalls, key contacts etc.). A parallel IT project is being run by the department to prepare the system as an Intranet resource.

6.7 Conclusions

Developing effective approaches to knowledge management is increasingly becoming a pertinent issue in the Irish civil service. The challenge of understanding and communicating to colleagues what we do, why we do it and whether it can be done better is central to improving performance. The decentralisation initiative has further emphasised the urgency of developing an approach in this regard, with the government departments discussed in this chapter all set to participate in the first phase of decentralisation in 2006/07.

Knowledge management is a vast area for the civil service because knowledge underpins all that we do. To date, government departments have primarily progressed discrete initiatives in the area of information management and knowledge sharing. However, in order to ensure real benefits it is recommended that a more comprehensive approach, supported by a knowledge audit and strategy, is required.

Private sector experience of knowledge management

7.1 Introduction

As noted in chapters one and two, the private sector has been to the fore in prioritising knowledge management. This chapter presents the experiences of an international professional services company, KPMG, and a high technology multinational, IBM. Both of these firms have sought to integrate approaches to knowledge management and sharing into their standard approach to doing business.

7.2 Knowledge management at KPMG

The knowledge management project at KPMG began in the late 1990s with a project to develop an Internet site to promote and provide information about the firm. This was followed in 2000 by an awareness of the potential to use a technological solution to bring together resources and supports for staff in 155 countries. An Intranet site was developed at corporate level and subsequently individual countries were asked to develop their own resources. All employees have access to the entire network of Intranet sites.

Within KPMG Ireland, the knowledge management function is divided between Web Services, who provide the technical infrastructure, and Business Research, who access information and resources to satisfy research needs. The unit is represented at partner level by the Head of Marketing.

The Intranet, which has been referred to as 'the front-end to all the information and knowledge which KPMG holds', consists of a series of Intranet sites with relevant, targeted information for each of the core areas of the business: Tax, Audit and Advisory. In addition, there are further sub-sites for specialist business areas, for example VAT.

Each Intranet site includes a wide range of business related information potentially required by staff including relevant manuals and databases, some supported by third-party providers (e.g. EIU, Lexis Nexis), and others developed by the Business Research Unit. In the latter category is the Suggestions Database, which reflects the intellectual capital of the firm in the relevant area. There is also a CV database which contains details on partners, directors and managers worldwide. The database includes information such as key clients, networks and specialist skills and is searchable. Finally, there is a wide range of news information, for example direct access to newspaper archives, a competitors' news database and comprehensive information on clients.

Overall the Intranet site provides a huge amount of valuable material that has been appropriately packaged and provides staff with a quick and accessible means of accessing information and knowledge.

7.3 Knowledge management at IBM

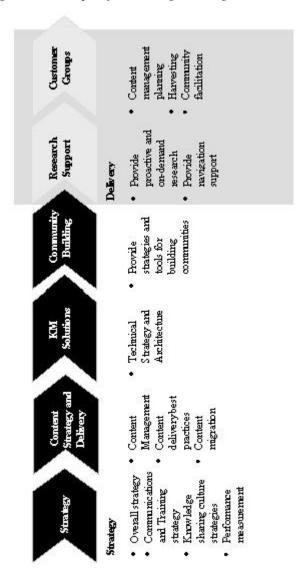
IBM is a technology multinational involved in developing hardware and software products and in training and consultancy services. IBM Ireland employs about 3,700 full-time staff in manufacturing, sales, marketing, consultancy and financial roles. Since the early 1990s, knowledge management, defined as 'making the right information and knowledge available at the right time in an actionable form' has been a core business support.

For the Business Consulting wing of IBM, a knowledge management team of approximately 100 staff co-ordinate knowledge management activities globally. Emphasis is placed on understanding business processes, how people work and what they do, in order to provide the most effective support. This high level of understanding is critical to developing knowledge management systems and supports that are relevant and therefore used. The IBM knowledge management strategy is shown in Figure 7.3.

An important aspect of the knowledge management role at IBM is the function of content management, that is, to review, edit and package knowledge for inclusion in the knowledge sharing tool, which is delivered via the corporate Intranet. Material is acquired in three ways, through keeping abreast of corporate developments and actively requesting it from relevant sources, by reviewing unsolicited material submitted to the team, and lastly by interviewing internal business experts in relation to what they do. For the latter, a specific approach has been developed by the knowledge management team to support this form of structured interviewing and to ensure, in particular, that tacit knowledge is captured. The content capture framework is shown in Figure 7.4. On average, only 10 per cent of material acquired is actually retained, thereby guaranteeing the high quality and relevance of material included on the site.

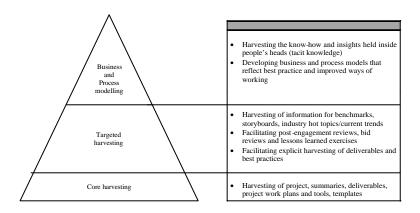
A further aspect of knowledge management at IBM is knowledge points. These are small centres located around the world, staffed by full-time researchers who understand the company's business processes and who are experts in research methods. They provide a resource for staff around the world looking to access information or know-how in relation to their job. The knowledge management team have also been active in supporting the establishment of a number of Communities of Practice across the organisation. These are groups of employees with similar business interests or responsibilities. Modern technology has been vital to these groups, in supporting the sharing of ideas and experiences. Lastly, a number of global discussion databases have been established whereby any employee can pose questions or raise ideas and receive appropriate responses and feedback.

Figure 7.1: Scope of knowledge management at IBM



Source: Courtesy of IBM Ireland, 2005, internal presentation

Figure 7.2: A segmented approach is used to content capture



Source: Courtesy of IBM Ireland, 2005, internal publication

As with most knowledge management initiatives, an ongoing challenge for the knowledge team at IBM is to convince people of the benefits of sharing knowledge and as a consequence to build it into their daily routine. In this respect senior management support and example is critical. To help ensure that this happens, a 'buddy' system was established to give managers a private opportunity to learn how to use the resources available. This is complemented by the linking of knowledge management and sharing activities to appraisals, thereby ensuring that managers are specifically asked what they have done to enhance knowledge sharing within their teams. However, ultimately the main driver of knowledge management at IBM is the promotion of the business case.

A core task for the KM team is to show the time and therefore financial savings which accrue through better information management and knowledge sharing. The KM team surveys users of the knowledge management system on an

ongoing basis, asking them to estimate the amount of work-time using the system has saved them. The number of hours saved is then extrapolated against the average cost per hour per employee, providing an indication of the 'dollar value' of having a KM system. In addition, 'success stories' are collected which demonstrate the different ways in which KM has supported the business.

Conclusions and recommendations

8.1 Introduction

This paper seeks to enhance understanding in relation to knowledge management and also to provide examples of initiatives being developed across the civil service. The challenge now for the civil service, and more specifically for individual departments and agencies, is to move beyond the level of isolated interventions to developing a comprehensive strategy and approach in relation to knowledge management. The need for this has been given further impetus by the decentralisation programme and the likelihood of significant changes in personnel for many departments. The purpose of this chapter is to summarise the findings of the paper, in particular emphasising the learning points emerging from the case-study organisations, and make recommendations for moving forward.

8.2 What is knowledge management and why it matters

Chapter Two of this paper sought to emphasise that there is nothing new in knowledge management, rather it is simply using established management tools to improve knowledge codification and sharing within the organisation. However, this is not to imply that knowledge management does not require considerable effort and cultural change on the part of organisations. In particular, in order to make a difference, there is a need to introduce a comprehensive approach to the management of organisation knowledge rather than discrete,

often technology driven, interventions. Table 8.1 emphasises what knowledge management is, by contrasting it with what it is not.

Table 8.1 Some Thoughts on Knowledge Management

What KM is:	What KM is not:
A way of working that impacts on people and culture	Just about IT
Something that people need to believe in and participate in	Something that can be 'done for' people by a support function
A comprehensive and organisation-wide approach which supports business objectives	Discrete interventions
Encompasses knowledge creation, management and sharing	Only about creating knowledge repositories
The management of information with meaning (knowledge)	Information management (organisin g data, files and documents)
Reflects the needs of the organisation and its employees	A monument to IT
Ongoing – changing with the business	An isolated one-off project with a start and a finish
Sponsored and led by senior management	Led by IT or Change Management
About well thought out content management	A dumping ground for all information
A means to an end (to achieve performance indicators)	An end in itself
A means of supporting staff in fulfilling their roles	Another 'thing to do'

Source: Adapted from IBM, 2004, internal publication

8.3 The benefits of knowledge management

Knowledge management matters because it enables organisations to be more efficient and effective. Companies like IBM have quantified the impact of knowledge management in terms of the opportunity cost of time-savings. The parallel for the public sector is that knowledge management supports the optimal use of resources, enhanced level of customer service and consequently, improved value for money. Knowledge management generates these benefits through avoiding some of the damaging habits endemic in many organisations:

• Costly mistakes are repeated because earlier ones were not recorded or analysed.

- Work is redone because people are not aware of past activities and projects or their outcomes.
- Customer relationships are damaged because knowledge is not available at the point of action.
- Good ideas and best practices are not shared, which raises overall costs.
- Only one or two key employees hold crucial knowledge.
- The organisation learns too slowly which results in delayed policy development or missed opportunities.
- Employees are frustrated because knowledge resources are not available.

8.4 Overcoming resistance

As emphasised throughout this report, one of the biggest challenges in implementing knowledge management is to convince senior management initially, and subsequently all staff, that it is worth the effort. Staff may be reluctant to engage with what they regard as a time-consuming fad, added to which they may be anxious in respect of initiatives they perceive as technology-driven. Furthermore, knowledge is frequently associated with power, something that many employees are slow to relinquish.

In order to overcome the resistance with which knowledge management is frequently met, it is critical to develop a comprehensive and strategic approach and to communicate the benefits effectively. This approach was followed in Sustaining Energy Ireland and the Offices of the Attorney General and Chief State Solicitor, described in chapters four and five above. At SEI, all staff members were invited to participate in the consultation phase and the knowledge audit was conducted at unit level. This resulted in staff acquiring an ownership of the process and an awareness that initiatives in relation to KM would impact positively on their roles. At the AGO/CSSO, the development of a strategy has ensured that knowledge management is being promoted throughout the organisation

rather than in one or two discrete interventions. As a result it is easier to communicate the benefits of changing work practices.

Lastly, the private sector examples described in Chapter Seven show how a combination of incentives/supports can enhance the integration of knowledge management practices into daily working life. Recommendations in this regard are:

- Training for all staff in relation to knowledge management practices and applications (i.e. how to use and participate in the KM activities identified for their organisation). This helps to overcome any anxiety that employees may feel in respect of a new initiative, and is beneficial as a means of communicating the benefits of KM. The experience of IBM suggests that private training and opportunities for senior managers to learn about the resources available (a 'buddy' system) is particularly useful in obtaining their support and commitment for the initiative.
- The inclusion of knowledge management in performance reviews. For staff in general this can serve as an occasion to explore opportunities for knowledge sharing, while for managers it is important to review what they are doing to encourage their staff in knowledge creation and sharing. The application of this recommendation within the civil service suggests that knowledge sharing might be incorporated as an additional core competency within PMDS and included in role profiles.
- Managers need to be asked at their appraisals what they are doing to support knowledge management activities in their areas and, if their staff are seen not to be participating in initiatives, why this is the case.
- Developing incentives and reward mechanisms to support KM initiatives is more challenging in the civil service than the private sector due to common grade and salary scales. However, there are some possibilities, for example through the merit pay scheme (e.g. designating one award annually for knowledge sharing), the input scheme (making awards to staff who make helpful suggestions in relation to

knowledge management) or through raising it as a question in promotion interviews.

8.5 Learning

Based on the evidence from the case-study organisations reviewed in this paper, a range of learning points emerge in relation to knowledge management. These points can act as a framework with which to develop a specific departmental initiative:

1. Put in the effort 'up front'

A successful knowledge management initiative is one that becomes a part of organisation culture. For this to happen, KM interventions have to reflect and support business needs and the way in which people work. Time and effort spent understanding processes and listening to staff in order to understand their needs is time well spent. The danger, if this phase is rushed, is that the responses developed reflect what IT thinks staff need rather that what they actually want. Furthermore, there is a danger of technology interventions, which should support knowledge management, becoming an end in themselves ('the white elephant' scenario).

2. Senior management support is critical

Senior management support, and the championing of the initiative by one or two key individuals is essential, both to get the project off the ground, and also to ensure it becomes embedded in organisation life and part of 'the way things are done around here'. In practical terms this means that managers may need to overcome fears which they themselves have in relation to new technology, sharing knowledge etc. It also means that they have to be seen to use the resources available and participate in initiatives like Communities of Practice (The experience at IBM has been that a guaranteed way of getting staff committed and engaged with CoPs is to have one or two senior managers involved).

3. Establish a knowledge management team

As with anything worthwhile it will not happen without resources. The team should reflect all areas of the organisation and while not required to be experts in the area, it is important that they are committed to the exercise. While knowledge management should never be regarded as an IT project, specialist IT experience is required in order to ensure that technological possibilities are exploited fully. Experience from the case-studies discussed in this paper suggests that it is critical that at least one senior management representative is part, though not necessarily chair, of the team. The guidance of someone with a background in the area (a professional librarian, information manager, researcher) is also very beneficial.

4. An important starting point is the carrying out of a knowledge audit

A knowledge audit is a formal evaluation of how and where knowledge is used in business processes. Through an audit, organisations can identify and evaluate the critical knowledge and information used by staff. It also helps to identify enablers and barriers to knowledge and information sharing.

It is also critical that organisations at the outset get some idea of the current situation and also the level of good will towards the concept. A framework for carrying out a knowledge audit is described in Chapter Four.

5. Develop a comprehensive approach to knowledge management, not just discrete interventions

Because knowledge management reflects a new approach to working, it has to involve a comprehensive approach. Furthermore, as indicated in particular by the private sector case-studies, it will not happen unless systems are put in place.

While organisations may need to start with one single initiative (for example, developing a knowledge repository), it needs to be explained to staff that this represents only one part

of a broader agenda. A useful way of achieving this is through the development of a knowledge management strategy, setting out the specific resources, systems and priorities for an organisation, given its own unique environment and operating context

An approach to developing a knowledge management strategy is discussed in Chapter Five. The strategy reviewed includes recommendations in relation to knowledge creation (e.g. through recruitment of staff with sought after skills or training and development), knowledge capture (i.e. how to review, edit, package and 'store' knowledge) and knowledge sharing (e.g. newsletters, discussion data-bases, communities of practice, briefings). It is the responsibility of the knowledge team to ensure that these recommendations are progressed. Further guidance in relation to these areas emerges from the two private sector companies reviewed.

6. Establish knowledge management milestones and indicators

It is important that there is some benchmark of what the organisation wishes to achieve from its knowledge management strategy. Milestones and indicators should be set in relation to specific projects or initiatives. In general, it is the responsibility of the KM team to identify these. Examples might include:

- demonstrable time-savings and improvements in the way people fulfil their tasks and responsibilities
- use of KM systems (as measured, for example, by resources most often accessed or downloaded)
- a shared sense (organisational and stakeholder) that the project is a success and represents value for money (as measured by surveys of management, staff and key stakeholders).

7. Show the benefits of knowledge management

In other words, answer the 'what's in it for me' question. This is dependent on having effectively managed steps one to six. People will very quickly engage with something if they see it as supporting what they do rather than an extra obligation.

8. Develop incentives and reward mechanisms

If staff see that KM is given a high priority by senior management they are far more likely to engage with it. However, this needs to be observed in actions as well as words. As noted above, managers taking a lead in relation to KM initiatives is one way of emphasising its importance. This can also be complemented by recognising and rewarding staff who support and contribute to knowledge management and sharing initiatives (as discussed in section 8.4).

9. Do not underestimate the cultural/behavioural challenge

Knowledge management represents a new approach to doing business and as with any change has a high risk of failure. The classic 'carrot and stick' approach is recommended. People need to be supported in learning and engaging with new practices. However, equally, knowledge management needs to be linked to appraisals and rewards.

8.6 Concluding comments

This paper has sought to enhance understanding in relation to knowledge management and also to provide examples of initiatives being developed across the public service. The challenge now for departments and agencies is to move beyond the level of isolated interventions to developing a comprehensive strategy and approach in relation to knowledge management. The need for this has been given further impetus by the decentralisation programme and the likelihood of significant changes in personnel for many departments. This final chapter has summarised the findings of the paper, with particular emphasis on why knowledge management matters and also providing guidance in relation to managing a knowledge management initiative.

Appendix One

An informal knowledge management quiz¹

- 1. Where have you learned the skills and knowledge that are most important to doing your job well? (rank in order, with one being the most important)
 - a) academic experience
 - b) training provided by employer or previous employer
 - c) yourself (independent research or your own experience in the job)
 - d) your colleagues
 - e) the people who use what you do (customers/internal customers)
- 2. You're part of a cross-functional geographically dispersed team working on a project of considerable importance for your organisation. Your work will be faster and better if you have easy access to all corporate data and can share information fully. However, there is a chance that sensitive information will leak. Under these circumstances, would your organisation;
 - a) err on the side of openness, running the risk of a leak
 - b) err on the side of security running the risk that the work will be slower and less complete?
- 3. Is your organisation:
 - a) dependent on a handful of richly rewarded star performers who hoard information
 - b) not over-dependent on stars, but not very good at sharing
 - c) pretty good and getting better at sharing best practice
 - d) a real team organisation, all for one and one for all, where the best performers share and sharing is rewarded?

4. Which problem best describes you:

- a) information overload: I'm buried in figures and reports, there's too much to read and too little time to digest it
- b) information shortage, I can't get the facts I need, let alone the context in which to put them in?
- 5. Do you (check all that apply)
 - a) spend a lot of time trying to locate information that you know someone in the organisation already has
 - b) find that you duplicate work that has already been done
 - c) find that people often make mistakes because they didn't check with you
 - d) feel overwhelmed with paperwork, reports and other stuff that keeps you from doing high-value or creative work
 - e) need an expert's advice, but can't find an expert?

How to score? You don't. These questions are a diagnostic tool – the basis for a discussion which should be the basis for an agenda.

¹Adapted from Kelleher and Levene, 2001

Appendix Two

Glossary of terms

Business Process Reengineering

To review an organisation's structures, business operations and resource utilisation and to make recommendations to achieve efficiencies and deliver a better service.

Communities of Practice (CoPs)

People interlinked in a communication or knowledge network (resulting in face-to-face meetings, bulletin boards, web-chat etc.) because of their shared responsibility for a subject area. CoPs may continually emerge and dissolve (indeed it is important that they do, as people quickly become frustrated if they are being obliged to commit time to something they no longer regard as important); they help transform tacit knowledge into explicit knowledge and help promote cross-disciplinary communications.

Content management

A well-defined content management process is essential to the success of any knowledge sharing system. If such a process is not in place, users of the system will probably encounter content that is not relevant to their needs, is out of date, infringes client confidentiality, or is just difficult to navigate through. More importantly, users may find that the particular content that they require has not been captured. The stages in an effective content management process are: create, capture/harvest, prepare, share, maintain and purge.

Data

Facts, statistics, that can be analysed to provide information.

Explicit knowledge

Relates to what is already known, i.e. it is knowledge that has been communicated and documented. Explicit knowledge can be shared via documents, specifications, manuals etc.

Information

Data that adds value to an understanding of a subject and can enhance knowledge.

Knowledge assets

Knowledge relevant to an organisation's business, including explicit and tacit knowledge of employees, customers or business partners.

Knowledge audit

A formal evaluation of how and where knowledge is used in business processes.

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 and determine areas of focus for more detailed analysis.

Tacit knowledge

The personal knowledge resident within the mind, behaviour and perceptions of individuals. Includes skills, experiences, insights, intuition and judgment.

Taxonomies

A structured set of categories for the classification and arrangement of knowledge.

There is no point in investing in the creation and maintenance of content unless users can find it. One method of

helping users find the content that they require is navigation, the process through which content is clustered into meaningful categories and sub-categories. To enable such clustering of content from different contributors demands a common set of allowable values for categorisation. This so-called 'taxonomy' should be meaningful to all users who wish to access the content.

In creating a taxonomy it is important to gain an understanding of how information is generated and used within the organisation, learning to anticipate how users are likely to attempt to find things and gain knowledge of the many ways in which users associate information and form them into shared mental categories.

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