AS 5037—2005

Knowledge management - a guide

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Australian Standard™

Knowledge management – a guide

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Preface

This Standard was prepared by Standards Australia Committee MB-007, Knowledge Management to supersede AS 5037(Int)—2003.

The objectives of this Standard are to:

- provide an easy-to-read, non-prescriptive guide on knowledge management;
- help individuals and organisations deepen their understanding of knowledge management concepts;
- assist organisations to understand the environment best suited for enabling knowledge activities; and
- offer a scalable and flexible framework for designing, planning, implementing and assessing knowledge interventions that respond to an organisation's environment and state of readiness.

The Standard has been developed for professionals who have either recently encountered knowledge management or who are looking for further guidance.

This revision incorporates insights gained as a result of feedback and consultation on the Interim Standard, which was issued in February 2003. The Committee acknowledges the many Australian and international knowledge management practitioners who commented on the Interim Standard. All suggestions received were considered and many of them have been incorporated into this Standard.

The major changes in this revision are:

- an increased emphasis on how to understand whether an organisation is ready to adopt and/or expand knowledge management activities;
- a recognition that organisations are knowledge ecosystems – a complex set of relationships existing between people, process, technology and content;
- detailed guidance on how to implement the Standard within the context of an organisation's environment; and
- emerging issues and trends in knowledge management.

The implementation of knowledge management is context dependent and the field is continuing to evolve. This Standard identifies some of the major trends currently emerging.

The knowledge management field has adopted its own language and metaphors and many of these are used in this Standard.

Breakout boxes containing guidance, stories from practice and key learnings are provided throughout the Standard to enhance an understanding of concepts discussed.

A different style and language has been used in this Standard when compared to other Australian Standards. This is due to the objectives of this Standard and the need to reflect the knowledge management area of practice.

Contents

Foreword

The transition into the knowledge era means that knowledge has become the major asset and capability for contemporary organisations.

Organisations face a hyper-connected, competitive and constantly shifting environment. Within this environment, Australia has witnessed many changes over the last forty years, including deregulation, microeconomic reform, increased globalisation and the rise of computerisation. The knowledge-based services sector is now a key driver of national wealth. There is growing recognition that knowledge and the ability of an organisation to learn, innovate and adapt contributes significantly towards organisational strength and survival. Knowledge and related intangibles are increasingly viewed as fundamental to organisational success, whether in the public, private or not-for-profit sectors.

To understand and deal with these changes, knowledge management promises deeper insights into an organisation as a knowledge ecosystem, together with greater impact on how the organisation responds to, innovates and learns from aspects of its environment. Knowledge management recognises the uniqueness of organisations in terms of strategic intent, context, capability and culture.

Knowledge management has emerged from a variety of other disciplines. Its foundations lie in the management of explicit knowledge including information, documents and records as well as the management of tacit knowledge including networks, skills transfer and learning. Its strength lies in its power to combine the organisational elements of people, process, technology and content into a coherent approach to address gaps in organisational capability.

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1 Scope and general

1.1 Scope

This Standard provides guidance on what knowledge management is and how it may be implemented using a flexible framework. The Committee encourages organisations to develop their own shared understanding and/or definitions that are suitable and applicable to their context. This Standard can be used by any individual, community or organisation that requires an understanding of knowledge management and its implementation.

1.2 Referenced documents

The following documents are referred to in the body of this Standard:

AS 5090	*Work process analysis for record keeping*
AS ISO 15489.1	*Records management, Part 1: General*
AS ISO 15489.2	*Records management, Part 2: Guidelines*
HB 189	*Knowledge management terminology and readings – An Australian Guide*
BS PD 7502	*Guide to measurements in knowledge management*
ISO 2788	*Documentation; guidelines for the establishment and development of monolingual thesauri*

Additional references are provided in Appendix C.

1.3 Definitions

For the purposes of this Standard the following definitions apply.

1.3.1 Data

Any manifestation in the environment, which may include symbolic representations that, in combination, may form the basis of information.

1.3.2 Enablers

Specific tools, techniques and activities through which knowledge management is implemented in an operational environment.

Enablers can help remedy weaknesses in an organisation's knowledge environment and also strengthen existing knowledge capabilities.

1.3.3 Information

Data in a context to which meaning has been attributed.

1.3.4 Knowledge

A body of understanding and skills that is constructed by people and increased through interaction with other people and with information.

The literature is replete with many contested definitions of knowledge. There is no single agreed definition of knowledge or one unifying theory of knowledge management.

Knowledge has many facets:

- It can be highly personal and subconsciously understood. Knowledge resides in a person’s mind and may include aspects of culture or ‘ways of doing things’ (often referred to as tacit knowledge).
- It can be recorded as information in a document, image, film clip or some other medium.
- It can be considered as a component of an organisation's asset base.

1.3.5 Knowledge ecosystem

An ecosystem is characterised by dynamic relationships; connected networks; internal process, content and technology. An ecosystem does not follow a traditional hierarchical model. A knowledge ecosystem uses this complex environment to share, build on and apply knowledge.

1.3.6 Knowledge intervention

The use of enablers, either individually or collectively, to implement knowledge management.

NOTE: Knowledge interventions are also referred to as knowledge activities.

1.3.7 Knowledge management

A trans-disciplinary approach to improving organisational outcomes and learning, through maximising the use of knowledge. It involves the design, implementation and review of social and technological activities and processes to improve the creating, sharing, and applying or using of knowledge.

Knowledge management is concerned with innovation and sharing behaviours, managing complexity and ambiguity through knowledge networks and connections, exploring smart processes, and deploying people-centric technologies.

1.3.8 Organisation

A group, team, business unit, department, community, government, charity, sports club, or any other for-profit or not-for-profit collective or network that may take part in knowledge management. An organisation exists so that a human system can achieve, collectively, more complicated tasks and knowledge-based activities.

2 Introducing the concepts

2.1 Introduction

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Organisations are being challenged on how best to leverage their people and knowledge resources in an increasingly complex world.

Examples of such challenges are:

- An established organisation exposed to major structural change or reform and searching for new ways to adapt operationally and innovate.
- An existing organisation with well-networked members but hindered by low levels of knowledge sharing.
- A domestic organisation looking to operate internationally and faced with strong regional competition.
- A new organisation with highly knowledgeable staff that lack trust or cohesive networks between them.
- A mature organisation facing major demographic change and seeking to retain its corporate memory.
- An existing organisation with a well-developed culture of knowledge sharing and well-networked team members looking to raise their performance to the next level.

Organisations that foster efficient knowledge networks and connections, explore processes and deploy people-centric technology have started to manage the complexity and ambiguity that permeates the knowledge ecosystem. This ecosystem is characterised by the pathways and connections between people, process, technology and content, which results in a rich web of relationships and interactions.

2.2 Using this Standard

This Standard will walk you through the steps and implementation options for knowledge management to suit the unique requirements of your organisation's context, capabilities and readiness. It describes a range of enablers (tools, techniques and activities) that can be used to implement knowledge management. Any organisation or individual can benefit from the approach outlined in this Standard.

Any or all of the following may influence an organisation's receptivity to knowledge management:

- strategic intent, business aims and competitive positioning;
- culture;
- external environment;
- innovativeness;
- ability to adapt and respond to a constantly shifting business environment; and
- existing information infrastructure.

These factors, among others, will be discussed throughout the Standard. An understanding of these factors will assist you in tailoring knowledge initiatives to suit a particular context and environment.

This Standard has adopted a knowledge ecosystem model. A knowledge ecosystem is characterised by dynamic relationships; connected networks; and internal process, content and technology. An ecosystem does not follow a traditional hierarchical model.

An understanding of this model will provide your organisation with the sensitivity to realise that knowledge flows within these networks, pathways and relationships.

The key feature of this Standard is the suggested Map/Build/Operationalise cycle outlined in Sections 3 – 5. This cycle provides a generic, scaleable approach to incremental knowledge interventions.

Section 6 introduces you to enablers – tools, techniques and activities used in knowledge interventions to implement knowledge management.

Measuring and evaluating the effectiveness of knowledge management remains an unsettled area. Section 7 will provide you with an overview of the different points of focus you can employ to 'take the pulse' of knowledge activities or interventions.

In Section 8, some of the theoretical underpinnings of knowledge management are discussed, along with an exploration of potential trends appearing on the horizon. Complexity theory is acknowledged as having an increasing influence on the organisational environment, along with cultural issues and smarter technology e.g. intelligent search engines, collaboration tools etc. This Section is not an exhaustive analysis of future trends nor is it intended to outline 'set in stone' predictions. Rather, it is intended to spark your thinking.

Appendix A provides information about areas of practice related to knowledge management.

Appendix B provides examples of job descriptions for knowledge management roles that can be customised to the requirements of your organisation.

International standards bodies, Governments, global organisations and professional associations have all explored the concept of knowledge management. The Committee referred to these various publications during the development of this Standard. A sample list of publications and pronouncements on knowledge management topics from both Australia and internationally is included in Appendix C.

The outline in Figure 1 assists you in navigating this Standard.

Introducing

Sections 1 and 2

The organisation as a knowledge ecosystem

	Mapping	**Building**	**Operationalising**
	Section 3	*Section 4*	*Section 5*
Summary	Mapping context and culture	Building experiences and linkages	Operationalising initiatives and capabilities
Indicative activities	Organisational analysis Understanding the existing and desired ecosystems Assessing the elements – people, process, technology and content Using the continuum of the knowledge ecosystem	Pilots and prototypes Encouraging experimentation Developing a knowledge plan Setting up a knowledge management team Building skills and knowledge literacy Ensuring a mandate Communicating knowledge interventions	Coordinating knowledge activities Strengthening and modifying existing enablers Possible recruitment of specialist staff (Appendix B) Capitalising on branding and continuing communications Champions develop own knowledge interventions Competencies and skills continue to develop Development of success indicators
Indicative enablers Section 6 **and related areas of practice** Appendix A	Knowledge auditing Knowledge mapping Information auditing Social network analysis Business process mapping	Play theory Communities of Practice Storytelling Learning and development Knowledge champions Mentoring and coaching Change management Business process redesign Technologies for communication and knowledge sharing Information management Risk management Records management	Communities and networks Narrative management Physical environment Rewards and recognition Technologies for discovery and creation Technologies for managing repositories Project management Competitive intelligence
Outcomes	Understanding of the knowledge ecosystem Setting priorities for knowledge and critical actions for building and operationalising knowledge management	Translating mapping into actions Understanding what works and what doesn't Streamlining pilots Deeper understanding of culture and implementing change Proven ways to innovate	Extending and expanding the learnings from the Building phase Scaleable and sustainable knowledge activities

Evaluating and measuring

Section 7

Measuring success of knowledge management via targeting selected behaviours, evaluating initiatives and/or identifying changes in intellectual capital

Reflecting

Section 8

Appendix C

Issues and trends – complexity, technology, working in a global culture, creative economy and sustainability

Further references are in Appendix C

FIGURE 1 OUTLINE OF THIS STANDARD

2.3 The knowledge lens

Implementing knowledge management involves looking at the organisation through the 'knowledge lens'. There are many ways to ‘look at’ an organisation and its environment.

FROM PRACTICE…

The Managing Director of a large firm has just resigned. This event can be viewed from a number of perspectives (or ‘lenses’).

- Technology lens – Confirm finish date and ensure that all passwords and system accesses are restricted.
- Finance lens – Prepare final pay and ensure cash level is sufficient for payment.
- Human resources lens – Consider exit interview and prepare recruiting process for replacement.

Knowledge lens – A potential ‘knowledge loss’ and/or acquisition of new knowledge with the replacement and an opportunity to learn from the departing staff member.

The ‘knowledge lens’ is an expanded and holistic way of viewing an organisation by considering all the components of the ecosystem and the knowledge needed to achieve strategic intent. By applying the ‘knowledge lens’ to these components, we can view them from a different perspective. Further, we can see actual and potential links and relationships that perhaps were not previously evident.

2.4 The organisation as a knowledge ecosystem

In the knowledge era, an organisation can be considered an ecosystem that consists of a complex set of interactions between people, process, technology and content. In this ecosystem, there is a path from information to knowledge to value, through use by individuals or groups of individuals. Unlike the industrial management model of people behaving as commodities in a command and control environment, the knowledge-enabled organisation considers people and their knowledge as a primary asset.

The ecosystem within an organisation can be viewed through the knowledge lens. Figure 2 shows the knowledge ecosystem.

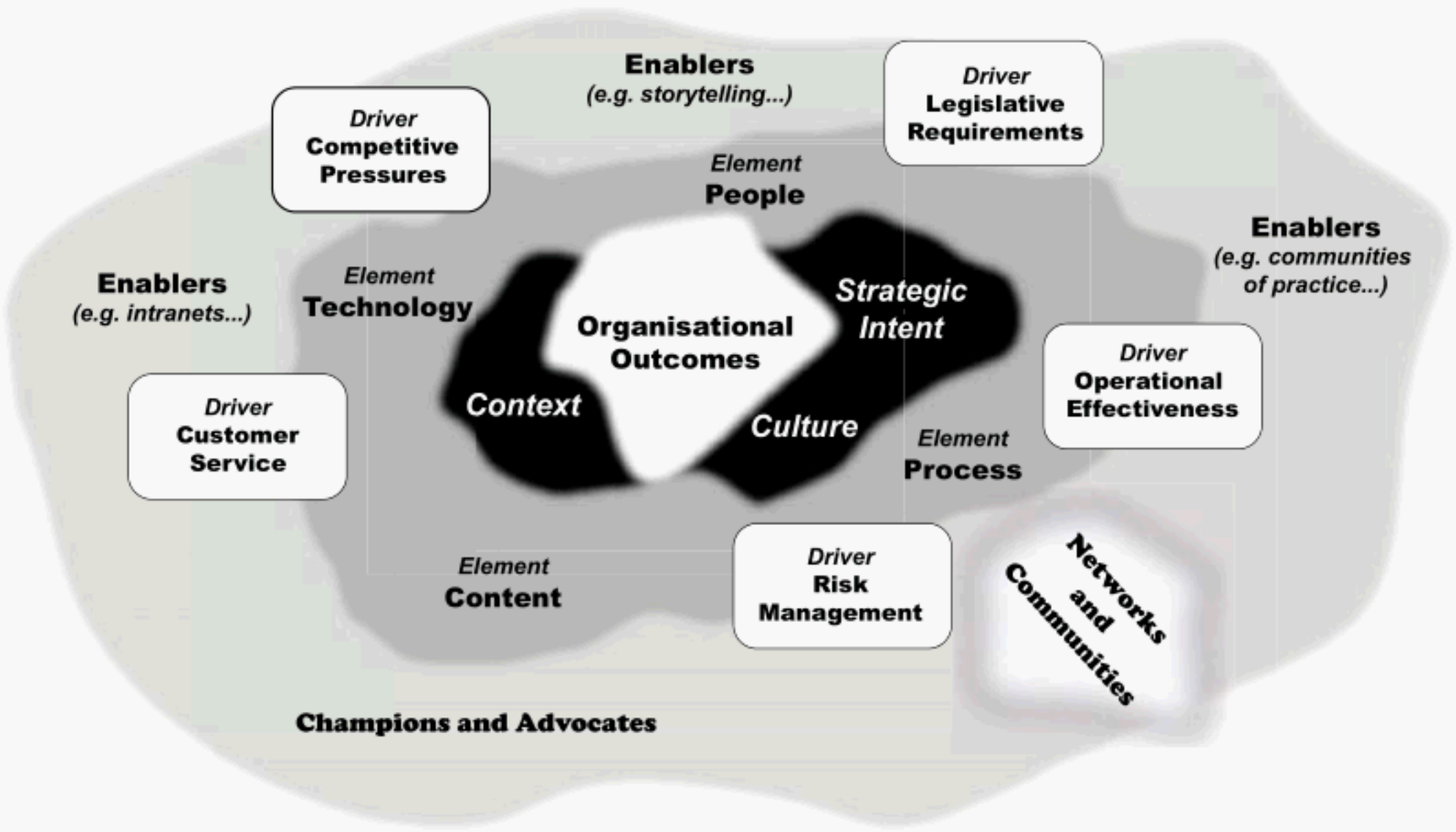


FIGURE 2 THE KNOWLEDGE ECOSYSTEM

The core of the knowledge ecosystem is organisational outcomes. These outcomes flow from the contextual environment (culture and strategic intent) and the manner in which an organisation operates within the external environment. A major aim of knowledge management is to stimulate and enhance collective organisational skills and competencies. Working within a knowledge ecosystem first requires a deep understanding of why knowledge management should be implemented and where in the organisation the initiative should start.

It is important not to start simply at the outer ring, for example, with intranet building. Technology and content that is devoid of context will not deliver a holistic knowledge initiative. You must also consider what linkages people and processes have with content; how people use technology in the organisation; and how you can use other knowledge activities, such as storytelling, to build an adaptive and sustainable knowledge environment.

The specific components in the knowledge ecosystem include the following:

- Organisational Outcomes – objectives that focus on creating an innovative and adaptive organisation.
- Culture – the combination of an organisation's skills and competencies with the collective behaviours and values which, in total, must be understood before embarking on any knowledge intervention.

- Context and Strategic Intent – knowledge is shaped by organisational context and strategic intent. Both context and intent differ in every organisation. A knowledge intervention must be informed by this context and align with strategic intent. Ultimately, knowledge management has the ability to drive strategic intent and alter the organisational context.
- Drivers – these focus knowledge management and are an incentive for change and/or evolution within the knowledge ecosystem. Refer to Figure 4 for examples of drivers.
- Elements – the four elements are people; process; technology; and content. These elements exist in all organisations. Over-emphasising one or more elements at the expense of others may result in your knowledge interventions having less impact than an approach which sought a balance between the elements (given the context of the organisation).

  For example, the right mix of skilful people in conjunction with integrated technology, smart processes and high quality content result in a balanced knowledge management approach that supports desired organisational outcomes.
- Enablers – specific activities, tools or techniques that populate the ecosystem. How you mix and match enablers depends on organisational capability, culture, context and strategic intent. Enablers are further discussed in Section 6.
- Networks and Communities – are social configurations that are voluntary, self-organising, and sense-making entities. They adopt common practices, tools, symbols, signs, artefacts, stories and histories as they mature and evolve. Knowledge flows between people and surfaces in conversations, discussions and interactions.
- Champions and advocates – they actively promote knowledge activities, their adoption and use. They provide guidance, feedback, visibility, legitimacy and, in some cases, resources for knowledge activities to flourish and deliver results to the organisation.

There is no ‘one size fits all’ approach. Your challenge is to fully understand the context in which knowledge management is to be implemented and select a variety of enablers to stimulate and evolve the knowledge ecosystem by applying the Map/Build/Operationalise cycle that is discussed in Section 2.5.

2.5 Understanding the map/build/operationalise cycle

Now that we have viewed the organisation through a knowledge lens and explored the knowledge ecosystem, we can look at a framework for implementing knowledge interventions within the ecosystem. Figure 3 shows this framework.

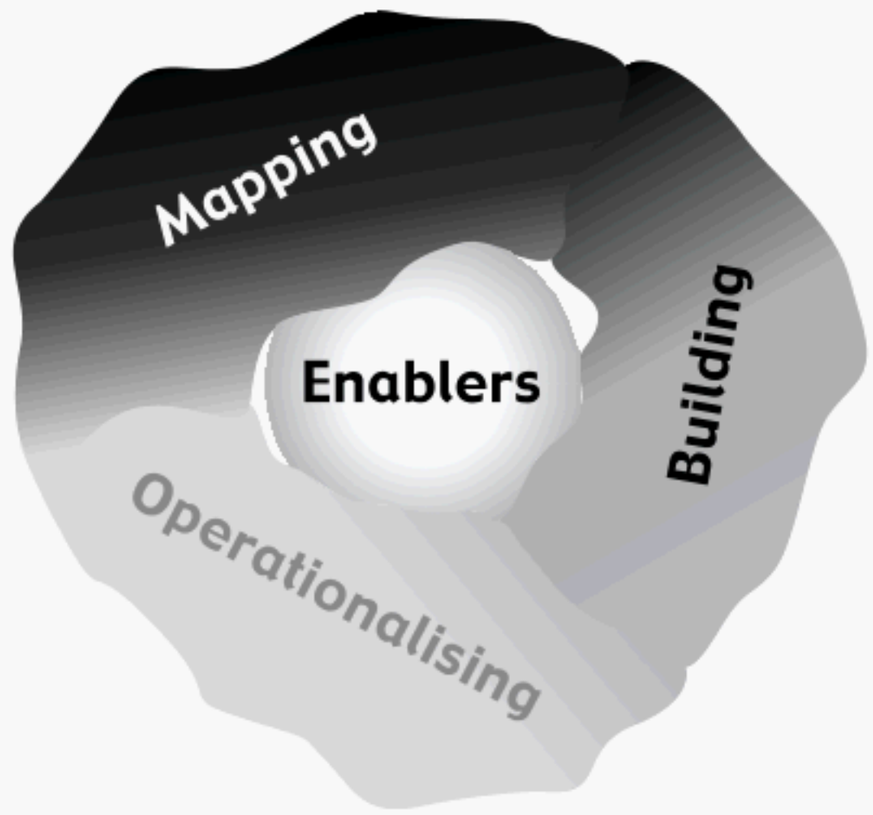


FIGURE 3 THE MAP/BUILD/OPERATIONALISE CYCLE

This framework is a non-linear, cyclical flow where each stage can be visited or revisited according to the demands and needs of your organisation. Critical to the cycle is the use of enablers to support the phases.

The phases are:

- Mapping context and culture – focuses on charting the context for knowledge management. This phase encourages you to investigate and analyse the knowledge ecosystem. Mapping context and culture is outlined in Section 3.
- Building experiences and linkages – examines how you can encourage your organisation to experiment with new ideas and pilot knowledge interventions. This phase focuses on building experience and linkages between people, process, technology and content. Building experiences and linkages is described in Section 4.
- Operationalising initiatives and capabilities – the focus in this phase shifts from experimenting and building to implementing and operationalising. Operationalising, for example, may involve moving discrete pilots out into the wider operational environment. Operationalising initiatives and capabilities is discussed in Section 5.

The centre of the cycle, as shown in Figure 3, contains the enablers that are used in all phases of the Map/Build/Operationalise cycle.

While there are varying activities and understandings required for each phase, there are common characteristics of the cycle:

- the organisation's state of knowledge readiness;
- the scaleability of the phases of the cycle;
- the building of long-term, sustainable organisational capability through understanding and responding to the knowledge ecosystem; and
- the ongoing and continuous nature of the phases.

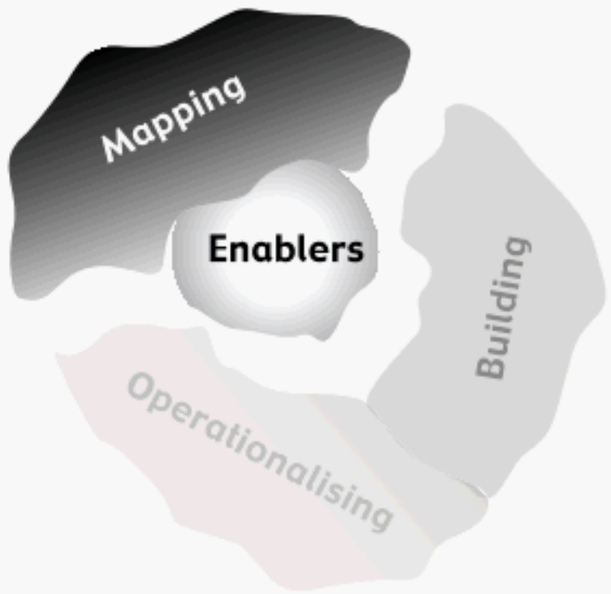
KEY LEARNINGS

(1) The knowledge lens gives new or different viewpoints of your organisation and provides the catalyst for initiating knowledge management.

(2) Organisations form part of a knowledge ecosystem – a rich web of relationships, pathways and interactions.

(3) Enablers populate the knowledge ecosystem.

(4) The map/build/operationalise cycle is a framework you can use to implement knowledge interventions.



3 Mapping context and culture

3.1 Introducing the mapping phase

The Mapping phase of the cycle focuses on charting the context for knowledge management. This phase is crucial and allows you to investigate and better understand the knowledge ecosystem. A vision for what knowledge management means for the organisation should be articulated to help drive change and generate enthusiasm among key stakeholders.

In this phase, you consider the organisation's knowledge ecosystem and ask what knowledge – in terms of people, process, technology and content – will enable it to identify knowledge gaps and achieve its strategic intent.

The Mapping phase can either scale across:

- the whole organisation /enterprise;
- a particular business process or processes, such as project or risk management; or
- a one-off intervention targeted to a specific work area.

The scope of your efforts will depend on the support for knowledge management within your organisation and the perceived need for it. The Mapping phase should reflect the likely scale of knowledge management in your organisation, for example, whether it is a whole of organisation approach or initially targeted at a particular section, branch or work area.

The challenge is to identify where to focus your short and long term efforts. There are four questions to ask and answer:

(i) Where are we and where do we want to be? Mapping starts with an understanding of the organisational context and strategic intent.

(ii) What is the current state of the knowledge ecosystem? This requires mapping and assessing the existing knowledge environment, including the organisational culture.

(iii) Where do we need the organisation to be? Following from this, what should be the desired state of the knowledge ecosystem? Does your new understanding of the knowledge ecosystem require a revision of the role of your organisation? What is the desired state of the future knowledge ecosystem?

(iv) What is the gap between the existing and desired state of the knowledge ecosystem? What is the best way to move forward?

Since knowledge management is not a 'one size fits all' proposition, the answers to these questions will differ between organisations. The Mapping phase looks at both the current and desired state of the knowledge ecosystem and helps to develop contexts for change.

3.2 How to start

The central core of the knowledge ecosystem model (see Figure 2) focuses on organisational outcomes. Understanding the context of your organisation and the nature of its environment is the first step towards building a picture of opportunities and constraints for activating knowledge.

Some of the key questions you need to explore are:

- What is the nature of the organisation? Is it public, private, community, for profit or non-profit?
- What regulatory framework impacts on your organisation? E.g. Copyright, Privacy, Intellectual Property, Corporate Governance, Records Management and Freedom of Information.
- What is the formal and informal structure? Does the organisational chart truly reflect the informal (or shadow) organisation and its relationships?
- What are the organisational value statements and ethics?
- What are the interests of partners, politicians, consumers, shareholders and other stakeholders?
- What are the identified strengths and weaknesses of competitors (both direct and indirect)?
- What are the relevant industry and political trends and developments?
- Are there alternate operational models used in the industry?
- What are the relevant political and policy influences on the sector?
- What are the effects of globalisation and technological change?

The strategic intent of the organisation helps to answer the question of 'where are we and where do we want to be' (see Section 3.1). By analysing the strategic context, you can begin to identify the relevant drivers for your knowledge efforts. Drivers act as pointers or indicators towards what knowledge should be developed or leveraged and will help guide and focus knowledge interventions.

The challenge is to seek an understanding of the implications of the strategic context for knowledge interventions. Starting points for the analysis may include:

- What is the strategic intent of the organisation, its vision, mission, goals and action plans?
- What is the organisation trying to achieve, what is the time frame and who is involved? SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) and scenario planning may be useful tools.
- How does senior management articulate strategic intent?

By understanding the organisational context and strategic intent, external pressures or drivers can be identified and understood. By viewing drivers through the 'knowledge lens', you can start to acquire knowledge about these drivers and their impact on the knowledge ecosystem, including constraints.

Figure 4 lists some examples of drivers and their implication for the organisation and the knowledge ecosystem.

Drivers	An example within an organisation	Example of the implication for the knowledge ecosystem
Competitive pressures	There is a limited understanding of the competitive marketplace to inform strategic planning	Active knowledge acquisition about competitors, both direct and indirect
Customer service	The organisation requires the highest standard of customer/ client services	Effective and coordinated flows of knowledge about customers/ clients to key operational units
Legislative requirements	Government body requires regular reporting to regulatory authority	Processes for tracking and reporting key corporate knowledge
Operational effectiveness	Evidence of fragmented business processes and duplication of effort in key processes	Analysis of the current knowledge resources and flows
Risk management	There is a planned restructure of departments	Address loss of corporate knowledge assets
Others... (relevant to your organisation)	New product design is a strategic goal for the next two years	New ideas and innovations are communicated across the organisation

FIGURE 4 DRIVERS

3.3 Existing knowledge ecosystem

Organisations can concentrate mapping efforts on the whole organisation, a work area or a business process.

By using the 'knowledge lens' and looking at people, process, technology and content, you gain a better understanding of current knowledge by exploring:

- Who knows what.
- How knowledge flows are shared.
- Where knowledge is created and who creates it.
- What knowledge is being used and who is using it.
- Why knowledge is valuable to the organisation.

When considering these questions, it is important for you to also identify aspects of organisational culture that shape thinking, behaviour and perceptions of individuals and groups.

It is useful to investigate the related areas of practice (identified in Appendix A) present in your organisation and the work they are doing. Consider their potential for leveraging the skills, initiatives and practices of these areas to support a knowledge activity.

You can use a number of different enablers to assist in answering these and related questions. The outcome of employing various tools and techniques is a snapshot of existing knowledge and how knowledge flows via relationships between people in the knowledge ecosystem.

Some of these enablers are:

- knowledge auditing;
- information auditing;
- knowledge mapping; and
- social network analysis.

Social network analysis particularly will help to surface the hidden or 'shadow' knowledge flows within your organisation. These flows will often run counter to those shown in organisational charts where knowledge and communication is usually depicted as flowing in a top-down direction. These techniques are described more fully in Section 6.

FROM PRACTICE...

An SME that designs and exports surf and leisure products wanted to better leverage its knowledge assets to create innovative new products (strategic driver is innovation).

The company, as part of the mapping phase, conducted a knowledge audit of its product design process. This identified knowledge and expertise that underpinned each stage of the process. By identifying critical knowledge gaps in the product design process, the company was able to set an agenda for its future knowledge interventions. By identifying critical knowledge, the company was able to prioritise its knowledge activities. It was further able to identify critical actions for promoting knowledge sharing; fostering innovation and knowledge creation; and improving the management of its explicit knowledge.

Considering the state of existing knowledge in your organisation will further develop your understanding of the knowledge ecosystem and identify potential cultural barriers and constraints.

3.4 Assessing the elements

Figure 5, The Continuum of the Knowledge Ecosystem, can be used as an assessment tool to further your understanding of both the existing and desired state of the knowledge ecosystem.

Looking at where an organisation is located along the four stages of the continuum – standalone, connected, networked and adaptive – helps to clarify whether an imbalance of elements exists and identifies potential areas for improvement within the ecosystem.

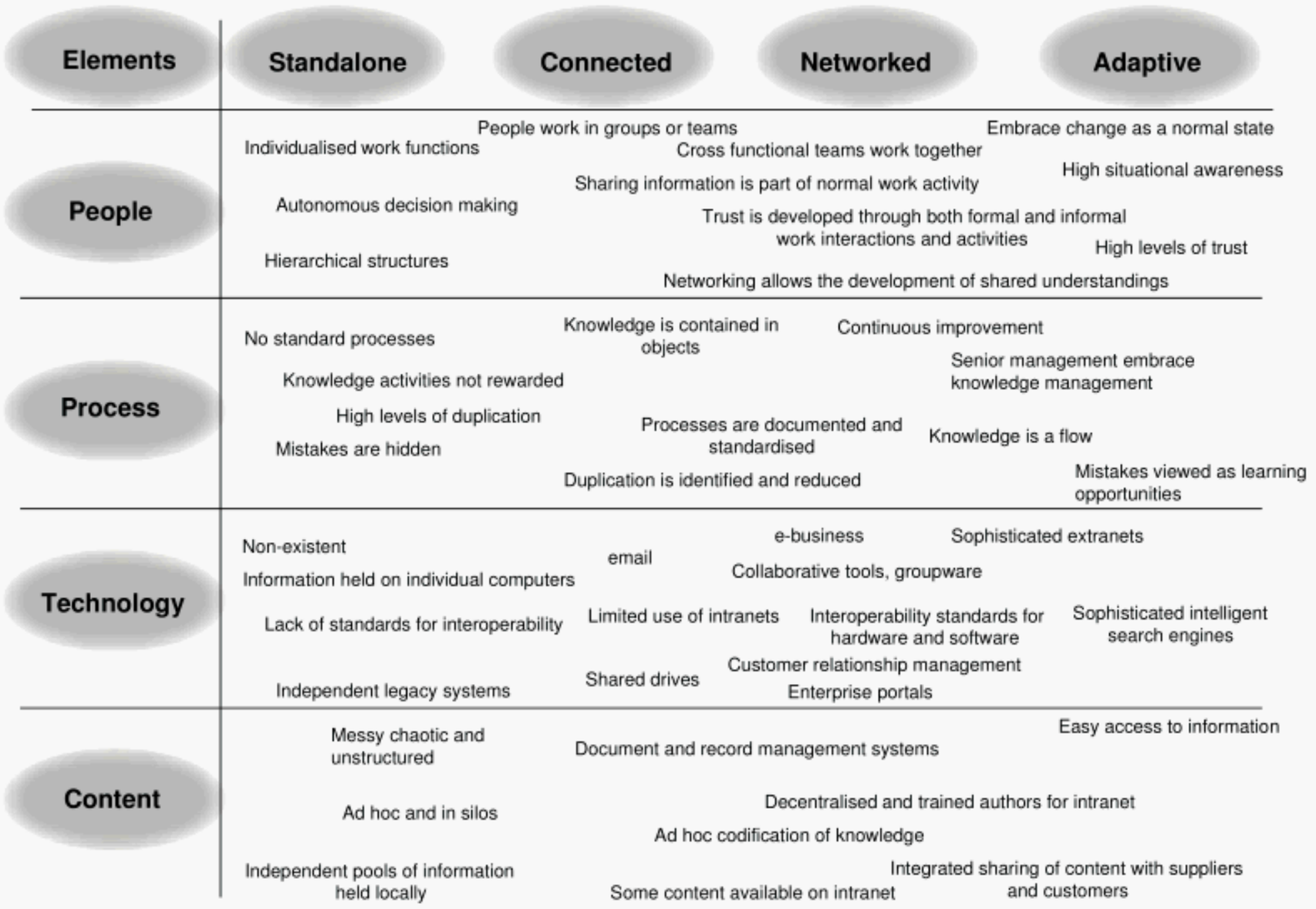


FIGURE 5 THE CONTINUUM OF THE KNOWLEDGE ECOSYSTEM

The four stages of the continuum are:

(i) Standalone

Often people work within an organisation independently and with minimal interaction. There may be small groups working together but these are not necessarily linked across the organisation. Minimal knowledge flows through or is transferred throughout the organisation.

(ii) Connected

Connections are established between teams, groups and departments and these connections foster knowledge sharing. There is limited business processing that crosses internal or external organisational boundaries. Most knowledge dissemination tends to occur in a top-down manner but some project teams have been formed.

(iii) Networked

Rich social networks have formed around particular knowledge domains or professional interests within the organisation. These networks facilitate the sharing of expertise, investigate new issues and help to create new knowledge. Networks extend beyond the organisation and may include suppliers, customers and related organisations.

(iv) Adaptive

The organisation is knowledge-aware. Structures are fluid and the organisation adapts readily to its external environment. There is strong internal capability, which is enhanced through interaction with external experts. Networks form, de-form and re-form according to their own life cycle. Individuals take responsibility for their work (including emotional commitment) and seek knowledge necessary for task fulfilment. Both work and knowledge are fully aligned to strategic intent.

Many organisations are located at different points across the four elements on the continuum. For example, technology and content could be well developed with enterprise portals (around a networked state of technology capability), but the processes and people could be less well developed. The ultimate aim should be to have an appropriate balance between the elements, depending on the context of your organisation.

The goal of knowledge management is not necessarily to achieve the characteristics of an adaptive state across all elements in the entire organisation. The effort and expense of doing this may be greater than the perceived benefits. Establishing an environment where the state of knowledge is common across the four elements may be more applicable.

Bypassing stages in the knowledge continuum, such as moving directly from connected to adaptive, is not recommended. Where an adaptive state is desired, then skills need to be developed, and processes and technologies installed in an evolutionary fashion to build sustained capability.

3.5 Mapping context and culture outcomes

The Mapping phase will provide a deeper understanding of the organisation's context and culture. It will enable you to articulate a vision for what knowledge management means for the organisation, generate enthusiasm among key stakeholders and will assist you in identifying and prioritising knowledge activities and potential interventions for building and operationalising knowledge management.

Examples of these priorities could be:

- promoting knowledge sharing;
- building connections to foster tacit knowledge;
- improving the management of explicit knowledge;
- fostering innovation and knowledge creation; and
- improving knowledge literacy.

Translating these priorities into action is covered in both Sections 4 and 5. Some actions may be:

- discrete knowledge interventions;
- an ongoing knowledge management strategy, integrated into the fabric of the organisation;

- starting a new knowledge intervention to close identified gaps (see Sections 4 and 5); or
- enhancing and better leveraging the existing knowledge environment (see Section 5).

A vision for what knowledge management means for the organisation should be articulated to help drive change and generate enthusiasm among key stakeholders.

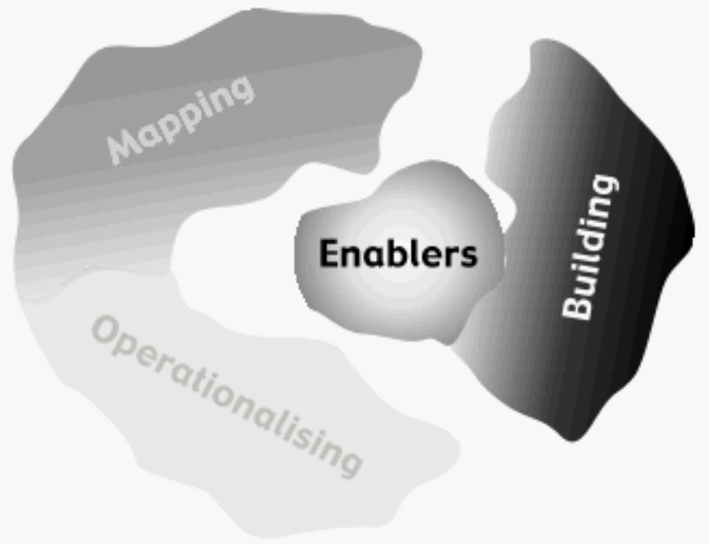
KEY LEARNINGS

(1) The Mapping phase assists in the understanding of the organisation's existing context and culture.

(2) There are appropriate enablers to support this phase.

(3) Organisations can be (or may want to be) at different stages for each element on the continuum of the knowledge ecosystem. The gap between the desired and the existing state allows knowledge priorities to be set.

(5) Achieving knowledge priorities may involve consciously shifting the organisation on the continuum of the knowledge ecosystem.



4 Building experiences and linkages

4.1 Translating mapping into action

There are many ways to introduce knowledge management into your organisation. The Mapping phase will inform your decision on the appropriate approach to take for translating identified priorities into action.

Activities for introducing knowledge management into your organisation could be:

- specific knowledge interventions, for example, identifying and seeding communities of practice;
- developing a formal knowledge management plan;
- building on existing knowledge infrastructure;
- setting up a knowledge management team;
- establishing connections with complementary areas of practice (see Appendix A);
- pilots and prototypes;
- creating knowledge champions; and
- developing innovative products, processes and services.

FROM PRACTICE…

A food and beverage manufacturing company decided to translate its priorities into action by creating a formal knowledge management strategy to guide its knowledge interventions. Included in the strategy was:

- knowledge management vision, mission and operating plan;
- budget and organisational structure for knowledge interventions;
- proposed metrics, knowledge sharing incentives and rewards;
- communications plan to promote the knowledge strategy to internal and external stakeholders; and
- plan for integrating knowledge management and organisational strategy.

4.2 Introducing the building phase

The Building phase of the map/build/operationalise cycle examines how you can encourage your organisation to be increasingly innovative, work with new ideas and pilot knowledge interventions. It is a pivotal phase for:

- taking action on the knowledge priorities identified in the Mapping phase;
- encouraging an organisation to explore and experiment;
- identifying the boundaries between what knowledge interventions work and those that do not;
- creating knowledge champions and advocates (see Sections 4.8 and 6.4); and
- using pilots and prototypes (see Section 4.5).

Pilots and prototypes are a particularly useful way to implement knowledge management and give an organisation 'permission to play' and experiment. Organisations should view building knowledge interventions within a framework that is continually creating, innovating and modifying itself. Over time, experience with knowledge activities will provide unique insights into organisational culture and structure. Experience can also provide guidance for reducing resistance to change and realising the transformative benefits of knowledge management.

4.3 Allowing knowledge management to evolve

Knowledge management can lose momentum or fail at the critical point of being translated from ideas into action.

Common reasons for under-performing knowledge interventions are:

- poor fit between the adopted elements and enablers (introduced in Section 2) and organisational culture and context;
- introducing new enablers to the organisation without laying the groundwork for their success;
- failure to leverage, collaborate or work closely with areas of related practice (see Appendix A); and
- failing to reflect the organisation's dominant culture mix in the implementation plan.

Few plans for knowledge management, whether formal or tacit, survive the shock of implementation intact. The Building phase helps to probe for opportunities, develop solutions prior to investing in a full-scale implementation and ensure that your knowledge interventions do not lose momentum or fail.

Experience from the Building phase prepares the organisation for changes to the elements and the mix of enablers.

Key areas for exploration and feedback include:

- validating the approach and assumptions in a plan for knowledge management;
- refining the balance of elements;
- exploring different options in the mix of enablers; and
- customising the implementation approach around individual enablers.

4.4 Selecting enablers

In the Mapping phase, you identified knowledge gaps and the priorities that need to be addressed. Your understandings from the Mapping phase and your awareness of the range of enablers (refer to Section 6) contribute to decisions about which enablers you will introduce and/or develop during the Building phase.

From the Mapping phase, you will also be aware of the skills, tools and techniques present in different areas of practice in the organisation. Aside from selecting new enablers, you may also partner and work with these related areas of practice to strengthen and support existing knowledge activities. See Section 6.18 and Appendix A for additional ideas.

FROM PRACTICE…

A beverage company was affected by a downturn in consumer spending in the Asian market. The previous decade saw a similar situation occur in the European market. A revised strategy for the Asian market was informed by lessons and ideas available from the company archives.

It is essential that the selected enablers be in line with the organisational context, culture and strategic intent. It is also important to maintain a balance across the four elements ensuring that knowledge gaps are addressed.

Organisational culture is a critical issue for knowledge management. Culture is an important but little understood organisational dynamic. It shapes the content of communications and the contextual environment in which work is done and knowledge is created, shared and applied.

Every organisation has a unique culture that evolves over time through cumulative interactions with wider ecosystems and relationships between people and their environment. We understand culture to mean the social and behavioural glue that binds an organisation.

In the Building phase, experimenting with knowledge interventions is a way of customising enablers to suit existing cultural nuances and ensuring that knowledge reflects the organisational context.

When you have identified what works within your organisational culture and context, you can conduct the implementation more effectively and efficiently.

FROM PRACTICE…

A specialised Government agency with an ageing workforce has completed its Mapping phase. A key priority identified was the retention and transfer of knowledge from the senior workers in the organisation. A range of enablers were considered as possible knowledge interventions:

- mentoring and coaching;
- rewards and recognition;
- communities of practice;
- narrative management; and
- intranet and records management.

The enablers selected were coordinated into a knowledge intervention that provided retiring staff with a continuing honorary position, including office facilities, in return for advice and a mentoring role supporting less experienced staff. The knowledge interventions of rewards and recognition, and mentoring were used as they were a suitable fit for the organisation's culture and context.

4.5 Prototyping and pilot projects

An effective way of securing a successful knowledge intervention is to gain experience through pilots and prototypes. Pilots provide the organisation with an opportunity to develop hands-on familiarity and confidence with enablers. Practical experience builds credibility and commitment and also broadens the organisation's capabilities by creating an internal pool of expertise.

Pilots and prototypes differ. A pilot is a discrete and manageable project that, typically, has a duration of four to six months after which its performance is evaluated.

A prototype is a small system with restricted scope and functionality built for a pilot. A prototype is often referred to as 'proof of concept'.

Both pilots and prototypes provide a means of better understanding how an enabler will fit with the organisation's culture and context.

Pilots and prototypes are exploratory, messy and untidy. They are frequently frustrating and involve significant trial and error. Successful pilots require patience, flexibility and a willingness to listen to the organisation.

You should consider seeding multiple pilots simultaneously in different teams across an organisation. This enables the organisation to quickly gain experience with a range of knowledge interventions. This experience can rapidly cascade throughout the organisation through a network of internal champions and advocates (see Sections 4.8 and 6.4).

4.6 Building organisational forms and structure

As organisations become less linear and hierarchical, there is more dependence on alternative organisational forms such as cross-functional teams and networks.

Increasingly, teams are adopting organic, adaptive forms to deliver pilots and prototypes. Their skills may sit in a loosely structured central group or be brought together as needed within a cross-functional team.

A key skill is that of the boundary spanner – a person who connects one or more networks and works outside network boundaries. The boundary spanner facilitates knowledge sharing and fosters social networks, which help the organisation to make sense of its surrounding ecosystem.

Teams and boundary spanners spur innovation and convey competitive advantage by introducing new knowledge, new interactions and new networks to the organisation.

The Building phase provides an excellent opportunity to probe new linkages between teams and boundary spanners, along with linkages between different areas of the organisation and its external stakeholders.

4.7 Communicating knowledge interventions

There is a strong link between knowledge management success and communication. By effectively communicating the benefits of knowledge activities, you build a high level of awareness and support. A well-conceived communications program can assist the development of trust, which is integral to knowledge management.

Branding your knowledge program is a good way to secure heightened interest. Brands, supported by devices such as logos, icons and themes, create emotional links and cues between a knowledge intervention and its participants. These ‘short cuts’ assist audience identification with the intervention and encourage participation. Knowledge activities typically suited to branding include intranets, portals, communities of practice and collaboration spaces.

Good brands foster performance and sustainability by humanising technology and personalising group spaces. Typical outcomes from branding trials are higher levels of awareness of knowledge initiatives and increased use of enablers.

4.8 Creating champions and advocates

Another important outcome of the Building phase is the emergence of internal champions and advocates. Champions and advocates demonstrate a level of commitment at both the individual and organisational level. A champion supports, nurtures and sustains the knowledge initiative, whilst an advocate builds interest and demand for new tools and techniques throughout the organisation. Champions also pave the way for an organisational mandate for a knowledge intervention by demonstrating its tangible value and clarifying its accompanying costs, resource requirements and deployment complexity.

FROM PRACTICE…

A professional services firm has created a new management position of Director, Knowledge Management to drive innovation, business improvement and provide access to knowledge of the highest standard. The position requires skills and competencies in information management, communications, business understanding and an ability to build relationships (boundary spanning) across the company and its stakeholders. To support this initiative, selected staff across the organisation have been designated as ‘knowledge champions’.

4.9 Building organisational competencies

In the Building phase, it may be necessary to consider whether staff across the organisation have the required skills and competencies to benefit and work with the knowledge intervention. Learning and development, along with enhancing knowledge literacy, may be required.

The Building phase has the potential to develop new competencies of particular relevance to knowledge management. These include skills in fielding pilots, building and testing prototypes, inspiring and nurturing champions, developing organic teams and fostering networks. Other complementary competencies include:

- innovation and ideation;
- business process redesign;
- change management;
- coaching and mentoring; and
- influencing and negotiation.

4.10 Identifying resistance to change

It is likely that a knowledge intervention will encounter some resistance. Organisational resistance to change typically stems from fear of failure or the unknown, along with the confronting nature of learning new skills.

Identifying barriers to change is important in preparing organisations for undertaking knowledge management. Some of these barriers include:

- adding to the workload of employees;
- a lack of trust between organisational members;
- rewarding knowledge hoarding rather than knowledge sharing;
- unwillingness of individuals to be identified as knowledge experts;
- knowledge management not being seen as trans-disciplinary; and
- 'time is money' or 'not invented here' attitudes, which impede knowledge interventions.

FROM PRACTICE...

A natural resources company has made a substantial investment in a sophisticated information technology system. Senior management expects this system to provide knowledge outcomes. The Chief Knowledge Officer (CKO) has the challenge of lobbying and convincing senior management that effective knowledge management is trans-disciplinary and is based on people, process, and content, along with technology.

Overcoming resistance involves balancing the conflicting needs of traditional, highly structured, operational frameworks and the less-defined work involved in exploring and investigating new ideas and ways of working. Regularly consolidating a pilot team's learning experiences using team debriefs, workshops and after-action reviews, and feeding this back into the organisation, will assist in absorbing these new experiences.

Enablers such as change management, learning and development, storytelling, and play theory can help to lessen resistance to change. These techniques are more fully explored in Section 6.

4.11 Building experiences and linkages outcomes

The Building phase will result in new or improved enablers, capabilities and understandings. Some of these are:

- what works within the organisation's pervading culture;
- a better understanding of implementing change;
- proven ways of how to innovate;
- a deeper understanding of culture and organisational structure; and
- streamlining of pilots and improving cycle times.

The Building phase, with its emphasis on acquiring skills and experience around actioning knowledge, prepares for an ongoing program of operationalising and embedding knowledge interventions and enablers into the organisational fabric.

KEY LEARNINGS

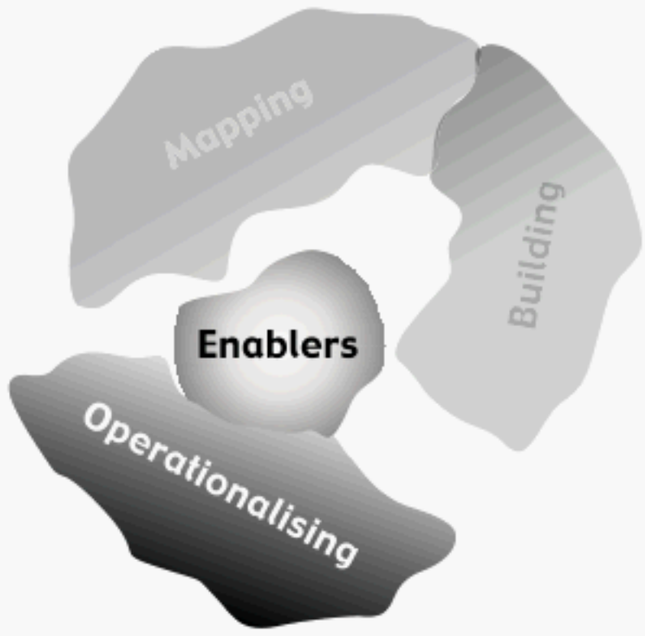
(1) You build organisational capability through experiences and linkages.

(2) In building knowledge interventions, it is important to consider communication and branding as well as establishing champions and advocates.

(3) Pilots and prototypes can help to develop familiarity and confidence with enablers and interventions.

(4) Resistance to change is inevitable, however, identifying barriers is a step towards overcoming this resistance.

(5) Organisational culture is a critical issue for knowledge management.



5 Operationalising initiatives and capabilities

5.1 Shifting the focus

The focus in Phase 3 of the Map/Build/Operationalise cycle shifts from experimenting and building to implementing and operationalising. This phase better leverages the opportunities existing within the knowledge ecosystem.

You may need to consider communicating to the organisation this 'shift in focus' from building to operationalising.

This phase of the Map/Build/Operationalise cycle draws on the experiences, expanded capabilities and linkages gained during the Building phase. It is the phase for:

- rolling out interventions already proven in the Building phase across the wider knowledge ecosystem;
- strengthening and modifying existing enablers;
- working collaboratively with related areas of practice (see Appendix A);
- coordinating knowledge interventions;
- commercialising knowledge products; and
- extending acceptance of knowledge management.

5.2 Operationalising knowledge

In the Operationalise phase, the emphasis is on 'what works' in the organisation. Any knowledge interventions previously piloted or tested need to be moved to a level where they are sustainable on a day-to-day basis and capable of being scaled across the ecosystem.

Key decisions need to be made about:

- Whether the scale of the interventions need to be reviewed. This is a strategic choice between unlocking value through an incremental approach or by targeting ‘big hits’ represented by major interventions.
- Phasing the interventions to ensure they build cohesively and complement each other (and the existing knowledge environment and enablers).
- Effective and appropriate enabler selection - establishing the optimal mix of enablers for the organisation's knowledge priorities.

There are distinct characteristics to operational environments. They are orderly, disciplined and often highly structured. Exploration and investigation are largely eliminated in order to reduce risk, manage costs and deliver replicability. The desired operational end-state is predictability, reliability and scalability across an enterprise.

Leveraging previous experience shortens adoption cycles for operational knowledge intervention. Isolated pilots are frequently raised at an operational level to form programs. Bundling skills and expertise accelerates the velocity at which experience may be transferred from one area of the organisation to another in a ‘leapfrogging’ effect.

At this point, the project management challenge de-emphasises managing complexity in favour of delivering cost-effective infrastructure, complemented by embedded change in organisational capabilities and behaviours.

You should consider the following:

- Change management: develop change management and communication plans, including cultural challenges and risks.
- Project management: develop plans, goals and timelines for discrete projects.
- Training and education: develop training and educational materials tailored to known and anticipated user needs.
- Monitoring: establish a process to gauge the ongoing effects of the intervention.

5.3 Capitalising on branding

As discussed in the Building phase in Section 4.7, effective branding plays a key role in any knowledge initiative. In the Operationalise phase, additional effective communication around the objectives, benefits and value of the initiative may be required.

Effective positioning of an intervention, together with the use of evocative imagery, remains important in an operational environment. While word of mouth endorsement remains useful in supporting the knowledge intervention, you should augment this with more formal communication methods and reporting systems.

5.4 Operational champions and mandates

Moving from the Building phase to the Operationalise phase has profound implications for the role played by champions and advocates. Rather than providing 'permission to play' (see Section 4.2), as was given in the Building phase, champions now motivate their team to participate in the knowledge intervention and adopt it as their own.

Champions and advocates play a major role in monitoring ongoing use and involvement in the intervention and in providing feedback.

The mandate for the intervention can also change in this phase. Operational mandates are frequently more formal and can take the form of charters and operating plans. Champions play a day-to-day role in nurturing and sustaining the mandate. Organisational mandates from senior management are also desirable in this phase. Advocates are a rich source of testimonials for the intervention, further strengthening the organisational mandate.

5.5 Operationalising pilots

Pilots and prototypes can also be developed further at this stage. Five conditions should be met before operationalising pilots and prototypes:

- The degree of fit between the enabler and organisational culture and context should have been clarified.
- 'Grass roots' knowledge champions and advocates should be in place.
- A clear plan for reducing resistance to change should be articulated.
- An organisational mandate (either formal or informal) should be established.
- Lessons learnt from any pilot should be actioned to guide the operationalising.

5.6 Operationalising competencies and skills

The competencies and skills developed and used in the Building phase are extended in the Operationalise phase, which requires an extended list of competencies and skills drawn from a range of disciplines:

- Change management – identifying change levers, including cultural issues and operational risks.
- Influencing and negotiating – creating demand for the intervention together with a mandate for action.
- Communication and relationship building – creating a shared understanding of the knowledge intervention.
- Technological literacy – understanding the potential limits of the role technology plays in enabling knowledge interventions.

- Project management – identifying the key knowledge dependencies and linkages.
- Financial analysis – establishing a measurement regime for knowledge management.
- Business process redesign – exploring opportunities for leveraging new or existing knowledge to change the nature of work being done.
- Facilitation – establishing an innovation climate supported by a continuous feedback system.
- Continuous learning – harnessing experience and knowledge to drive organisational change.

These competencies and skills may be blended in different ways within organisations. For example:

- Within a structured knowledge management team.
- Embedded in an existing functional unit.
- Champions, advocates and boundary spanners continuing to support knowledge interventions.

Appendix B provides an example of a role description for a senior level position and outlines the required mix of skills and competencies.

5.7 Sustainability and success

Knowledge management is an ongoing activity, not a single intervention. Knowledge connects and integrates the organisation, its focus and its functions.

Sustainability of knowledge interventions beyond the operationalising phase is important. While sustainability will be defined differently in different contexts the following examples support the ongoing viability of the knowledge ecosystem:

- Effectively communicating and diffusing new ways of 'doing things' across the organisation.
- Embedding knowledge activities within existing business practices.
- Connecting and leveraging knowledge activities across various areas of related practice, such as human resource management and competitive intelligence.
- Working with and strengthening existing related areas of practice, such as information and records management.
- Continuing skills and capabilities development.
- Maintaining champions, advocates and mandates.
- Revisiting the Mapping phase (see Section 3.3) to ensure sensitivity to the changing organisational context.
- Establishing processes and success indicators to continually monitor the knowledge initiative is essential.

5.8 Operationalising initiatives and capabilities outcomes

Success indicators for an operating environment typically take four forms:

(i) Artefact-centred indicators – can indicate success by the increased creation, capture and use of documents, video/sound files, images and web pages.

(ii) Activity-centred indicators – can indicate improvements in consulting, coaching, mentoring, facilitating and training.

(iii) Cultural or behavioural change-centred indicators – can indicate results from implementing the knowledge initiative and/or its accompanying change interventions.

(iv) Intellectual capital or intellectual property-centred indicators – can indicate improvements in performance by comparing KPIs or the shift in value of knowledge based assets.

The mix of indicators adopted will evolve over time as operational efficiencies accelerate. As with the knowledge intervention itself, implementing operational success indicators may be phased to focus the organisation's attention on specific behaviours or activities.

A detailed discussion of evaluation and measuring is contained in Section 7.

FROM PRACTICE…

A medium-sized engineering firm is three years into its Operationalise phase and has implemented a number of knowledge interventions. New organisational structures have increased horizontal interaction and there is now a lower emphasis on hierarchy.

Staff have adopted enablers such as the intranet, the document repository and communities of practice. Additionally, there is now shared vision, values and work norms on which decision-making is based. Individuals and teams have proven to be adaptive to changes within the environment.

The senior executive and staff consider these as indicators that the organisation is positively disposed to knowledge management.

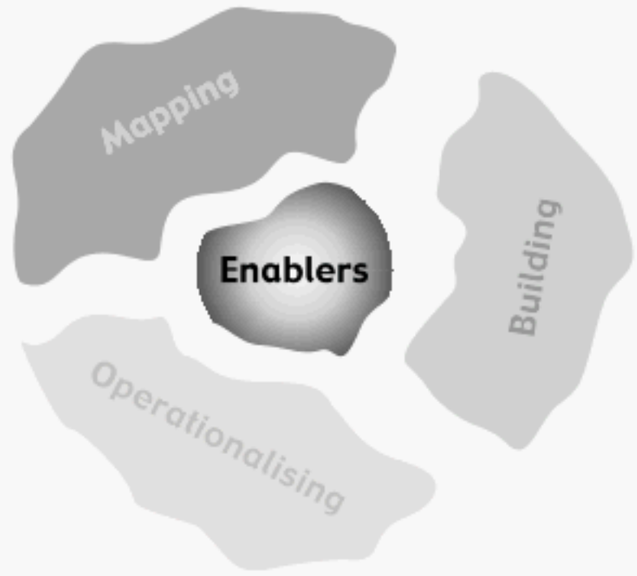
KEY LEARNINGS

(1) The Operationalise phase is about extending and expanding the learnings from the Building phase. It is about scalability and sustainability of knowledge interventions.

(2) The skills developed in the operational environment form a unique knowledge set and are fundamental to the long-term success of a knowledge intervention.

(3) You should continue to build the brand, as well as growing and developing knowledge champions, advocates and an organisational mandate.

(4) Success indicators can take four forms – artefact-centred, activity-centred, cultural or behavioural change-centred and intellectual capital or intellectual property-centred. These indicators can be used to focus the organisation on specific behaviours and activities that drive organisational performance.



6 Enablers

6.1 General

This Section will introduce you to the enablers – tools, techniques and activities used to implement knowledge management. These enablers support the phases of the Map/Build/Operationalise cycle.

An overview of each enabler is provided in this Section. You should fully understand each enabler before using them in knowledge interventions. Consider also that expertise in different enablers may be found in related areas of practice in your organisation (see Appendix A).

Enablers are viewed through the ‘knowledge lens’ (see Section 2.3), although it is acknowledged that some enablers are drawn from other disciplinary areas. This illustrates well the trans-disciplinary nature of knowledge management.

The enablers discussed in this Section are major enablers you can select to Map/Build/Operationalise knowledge management within the context of your organisation. The enablers are in alphabetical order.

6.2 After action reviews

An After Action Review (AAR) is most commonly a facilitated discussion, conducted immediately after a project or major activity and using a semi-structured format. It draws on the participants’ experience and perceptions to help identify ‘lessons’ - aspects of the event that could be changed or improved. To create a dynamic learning process, an informal AAR can also be conducted after specific phases/milestones within a project or major activity.

For AARs to be successful, an open organisational culture is required, along with willingness among participants to discuss both weaknesses and strengths. Rather than assigning blame, AARs focus on discovering what happened and why. AARs facilitate innovation by encouraging diversity of perspectives and highlighting areas where a different approach may have produced a better outcome.

6.3 Business process mapping and redesign

Knowledge management requires integrated and coordinated approaches to work, rather than the traditional compartmentalising of tasks and functions. Creating new structures and procedures that enable knowledge management requires organisations to understand and redesign their existing business processes. Specifically, knowledge management recognises that knowledge flows underpin effective performance.

Business process redesign (BPR) changes the way organisational work is done by redesigning, streamlining and simplifying business processes. It results in significant organisational and cultural change.

Business process mapping is used to analyse business processes – or how an organisation gets its work done. It involves identifying processes for mapping, gathering information from process owners, mapping objectives, tasks, owners, information and knowledge flows, risks and success measures, and analysing inefficiencies, gaps and constraints. By understanding the actual processes in place, an organisation can identify the gap between intended and desired processes.

From a knowledge management perspective, focusing on business processes can provide insights into opportunities to better use knowledge for direct support of important business outcomes. Analysing how information and knowledge could best support each stage of the business process is the unique contribution of knowledge management.

A starting point for analysing work processes is AS 5090.

FROM PRACTICE…

A global leader in the fast moving consumer goods sector realised it lacked effective insights into its competitors. It mapped its current approach, investigated industry leading practice and conducted a series of ‘visioning' workshops to construct an effective, sustainable business intelligence function.

6.4 Champions and advocates

Adopting knowledge management within an organisation requires the active and ongoing support of champions and advocates. These roles guide the building of experience and customising solutions to reflect the organisation's culture. Champions and advocates are a critical success factor in implementing the cultural, organisational and technical change required by knowledge management.

Knowledge management requires individual champions and team advocates with a diverse range of skills, attributes, capabilities and passion to manage and motivate change. These include an understanding of the organisation, strong personal credibility and the desire to foster change. Champions and advocates occupy both formal and informal leadership roles within an organisation.

6.5 Change management

Actively managing a change intervention can range from small iterative changes that form part of a larger change, to guiding teams at multiple levels across an organisation. Whatever its scale, change management focuses on the social and cultural aspects of an organisation.

Change management involves several social processes including creating a committed leadership, demonstrating problems and showing solutions, empowering employees, creating a social base for change, project management, and process-based team formation.

Knowledge-based change interventions are used to implement the behavioural shifts in organisational culture, redefining work practices to leverage operational knowledge and introduce knowledge infrastructure such as intranets, online spaces for communities of practice and databases. The change process involves scoping the parameters of the change initiative, identifying associated cultural challenges and risks, and developing an effective implementation plan. Change management requires skill in identifying the needs and benefits of change, transferring ownership of the change, developing ideas, recognising obstacles, harnessing the organisation's emotional intelligence, problem-solving and influencing the change.

6.6 Content management

Content management provides a foundation for knowledge management in organisations. It is concerned with managing organisational knowledge captured in documents and information objects through creation or acquisition, to dissemination, sharing, updating, use and re-use. Content can be acquired internally or externally and contained in print, electronic or digital documents. It may include data, email, electronic discussions, presentations, reports, policies and procedures, manuals, documentation, web publishing or other content forms.

It is increasingly associated with content management systems that dynamically manage the content and make it available on intranets, extranets and the Internet. Ultimately, content management focuses on managing the disparate flows of content and processes within an organisation, ensuring timely access to accurate and relevant knowledge.

6.7 Communities of interest (CoINs)

Communities of interest (or CoINs) are groups of people who share knowledge and experience around a common interest. A community of interest is often broader in scope than a community of practice and may have members who join simply to learn. These communities may exist inside and outside organisations e.g. hobby, professional standards, benchmarking groups etc.

For further discussion see Section 6.22.

6.8 Communities of practice (CoP)

Communities of practice are groups of people who develop shared expertise or interest in a knowledge domain. CoPs are sometimes referred to as knowledge networks. For further discussion see Section 6.22.

FROM PRACTICE…

A Government agency has multiple functional units that handle the needs of a range of industry sectors. Communities of practice have been formed across these functional units to allow professionals to share practice and expertise around the various industry sectors. The main argument for supporting the development of CoPs within this agency was a belief that personal relationships would lead to a collective responsibility to develop knowledge and shared understanding.

6.9 Critical incident technique

The Critical Incident Technique (CIT) is a research method that directs participants to reflect on significant examples of a particular phenomenon. Using the CIT brings the researcher close to direct observation of the incident of interest, while avoiding the problems associated with direct observation.

The CIT can be used to understand the organisational challenges to which knowledge management may respond. It focuses on stories and interpretations of significant organisational events, with an emphasis on the knowledge flows and processes that facilitate or inhibit desired outcomes.

6.10 Document management

Document management is a process for managing the life cycle of a document, from its creation, through to version control, publication, organisation, storage, retrieval, retention and disposal. It is closely aligned with content management (managing the dynamic aspects of objects) and records management (management of corporate records that document and act as evidence of business activities). Recently, document management has evolved from the management of paper documents to electronic and multimedia objects that combine text, image and audio.

Document management can facilitate knowledge sharing by providing a single reference point for working, collaborating and commenting on the most recent version of a document. Over time, the practice of version control and archiving documents records the evolution of ideas and can capture knowledge that can be adapted and re-used.

6.11 Environmental scanning

Environmental scanning is the acquiring and using of information about events, trends and relationships in an organisation's external environment. These processes identify threats and opportunities, as well as external forces of change. The knowledge gained is used for competitive advantage and has input into short term and strategic planning. The ability of an organisation to adapt to its external environment constitutes a primary mode of organisational learning.

FROM PRACTICE...

A biotechnology company maintains its competitive edge by actively scanning the external environment. The specialist competitive intelligence unit monitors patents databases, allowing knowledge of trends and patterns in the industry to be used within the company.

6.12 Information auditing

Generically, an information audit is a technique for systematically identifying, evaluating and managing organisational information resources and services. There is no single methodology for undertaking an information audit. Some methods concentrate on information resources and take the form of an inventory, while others may consider information needs, behaviours, use and flows.

The information audit can include an analysis of both information from within the organisation and information between an organisation and its external environment.

The audit results can be descriptive, identifying gaps, duplications and inefficiencies, or analytical, assessing the costs of information against its value to the organisation.

The strategic role of the information audit is to establish the extent to which information is contributing to the organisation's objectives and provide guidelines for effective information management.

Information auditing can be considered complementary to knowledge auditing (see Section 6.13).

6.13 Knowledge auditing

Knowledge auditing is a useful tool for understanding an organisation's knowledge ecosystem. It can help you to better understand the knowledge structure, use, flows, assets and resources within an organisation and to evaluate their alignment to organisational objectives.

Typically, knowledge auditing investigates the flow of tacit knowledge, expertise and skills of staff and stakeholders and the culture and communities of an organisation. Like information auditing, which concentrates on explicit knowledge, there is no recognised methodology for knowledge auditing.

Knowledge auditing may include needs analysis, information, communication and competency audits, applying quantitative and qualitative research techniques. The results can provide an analysis of knowledge use and practice throughout the whole organisation or within specific areas. A measure and critical evaluation of the knowledge identified can be used as an internal benchmark for the resulting knowledge intervention.

GUIDANCE

Sample questions you could ask when knowledge auditing.

People

- Does the current culture reward knowledge sharing or knowledge hoarding?
- Are workers skilled knowledge users and creators?

Process

- How is knowledge currently stored, organised and shared?
- Do current work processes support the capture of explicit knowledge?
- Do work processes include opportunities to share tacit knowledge?
- What regulatory requirements will affect knowledge management? This may include privacy requirements, freedom of information, intellectual property, security or any legislation with information management requirements.

Technology

- What systems are in place to support knowledge management, for example workflow, intranets, electronic records and document management, accessible and usable information systems?
- Where is explicit knowledge located and how is it structured?

Content

- What knowledge does the organisation need?
- What knowledge is critical for the business outcomes?

FROM PRACTICE...

A small agency within a large government department, as part of a knowledge audit, wanted to determine how best to discover and share specialist knowledge within the agency, with the wider department and with the external professional community.

As expected, according to the audit, technology-enabled sources including the intranet, databases and email alerting systems were used by staff to access routine information.

However, the audit uncovered evidence that face-to-face encounters in the form of regularly scheduled meetings, workshops and informal chats were still the primary medium for the exchange of new ideas and 'lessons' for most people. Consequently, more emphasis was given to supporting these low-cost activities.

6.14 Knowledge literacy

To fully participate in an organisation, an individual requires a range of literacy skills beginning with basic literacy (the ability to read and comprehend), technology/ computer literacy (the ability to use the tools) and information literacy (the ability to find and use information).

The challenges of a knowledge-focused organisation may require additional skills, attitudes and mind sets that could be labelled knowledge literacy.

Knowledge literacy might include:

- Skills such as those for storytelling, participating in strategic conversations, engaging with content, documenting processes and mentoring.
- Attitudes such as openness to new ideas and willingness to share knowledge.
- Abilities such as assimilation of new knowledge into existing knowledge frameworks and effective participation in cross-functional teams.

Organisations implementing knowledge initiatives should be aware of the demands these initiatives might make on individuals and plan training and learning activities as appropriate.

6.15 Knowledge mapping

Knowledge mapping provides a visual representation of knowledge processes, sources, assets, flows, gaps and barriers across and within an organisation.

There is no standard approach to knowledge mapping. The technique is tailored to the knowledge environment of an organisation and generally focuses on people, expertise, communication, relationships, business processes, systems, products and documents.

Information gathering techniques include:

- observation;
- contextual enquiry;
- interviews, focus groups and discussion;
- process tracking; and
- questionnaires and surveys.

Knowledge mapping charts expertise; the links between people across an organisation; and identifies knowledge gaps. By making organisational knowledge visible, a knowledge map supports improvements and changes to the way knowledge is used, shared and transferred.

6.16 Leadership

Traditional leadership defines an organisation's sense of identity and its core values. In a knowledge context, leadership strives for shared meaning, open dialogue and collaborative action. Increasingly, leadership's role is changing from managing 'things' to coaching the organisation in managing complexity, networks and its relationships. Markets are dynamic, complex systems, particularly in a 'connected' society. Knowledge creation is a key driver of innovation. Leaders foster the knowledge creation needed to create new capabilities by helping their organisation to make sense of networks.

6.17 Learning and development

A pivotal aspect of successful knowledge management is the role of learning and development within organisations. The human resource development (HRD) domain may hold a valuable key to achieving organisational change, as well as growing individual, team and organisational capabilities. A new role for HRD includes managing intellectual capital and developing human capital within the organisation.

This requires broadening traditional HRD approaches to focus more heavily on developing themes and creating environments conducive to learning, as well as to the acquiring, sharing and disseminating of knowledge within organisations. This includes creating and sustaining learning environments, nurturing communities of practice or social networks, and recognising the nexus between learning, knowing and doing, particularly within the specific organisational work context.

The HRD function is well positioned to ensure the success of knowledge management initiatives that are directed at capturing, using and re-using employees' knowledge. Talent management includes the ongoing development of staff skills and knowledge to ensure talent retention.

FROM PRACTICE…

An IT company ensures that when recruiting staff all candidates have the competencies of knowledge building and sharing, as well as high order technical skills. Once employed by the company, staff are encouraged to switch between technical and project management roles in order to gain knowledge about the company and its operations.

6.18 Leveraging information repositories

Information repositories allow collections of content to be organised and accessed in a consistent manner in, for example, libraries or resource centres. These repositories can either be hardcopy collections or digital (see Section 6.34). They may hold the actual assets or the metadata that describes, refers or links to the asset, for example, author, date of publication and title.

Information repositories should at the very minimum provide mechanisms for submitting and requesting content from the repository (i.e. the leveraging aspect). Other services may include search, subscription, content integration, validation, version control, check-in and check-out. Information repositories are also known as content repositories.

Information repository patterns and usage, along with metadata tags, can assist in identifying insights that can be leveraged for organisational advantage.

FROM PRACTICE…

An insurance claims unit has an established records management protocol and system. This system currently provides comprehensive details of all transactions and business of the company. By tracking patterns and trends in these transactions for six months the company was able to:

- identify potential areas of fraud;
- set new premium rates; and
- provide feedback to Government on motor vehicle accident patterns.

This resulted in an ongoing program of creating and using knowledge, which leveraged the existing records management infrastructure.

6.19 Meetings and 'share fairs'

Meetings - a traditional organisational tool - can be used to support knowledge management. Effective meetings, either virtual or face-to-face, can facilitate the sharing of knowledge, where both explicit and tacit knowledge may be exchanged. It is important to consider the goals of a meeting and the inclusion of participants to support these goals. For example, cross-team meetings can foster innovation, or time can be made in regular team meetings for the sharing of lessons observed from previous experience. Insights from meetings can help build a bank of relevant explicit knowledge.

A special purpose meeting, often referred to as a ‘share fair’, can be used to focus on sharing knowledge about a particular project, expertise or function within the organisation. Share fairs can range from a one-off, short meeting to a series of ongoing meetings. In some organisations the term ‘brown bag lunch’ is used.

6.20 Mentoring and coaching

Mentoring involves creating a learning relationship, with the mentor acting as a coach and role model. Coaching is a planned one-to-one instruction, where a work situation is turned into a learning opportunity.

Mentoring and coaching contribute to knowledge management by facilitating the transfer of expertise and tacit knowledge from experts to less experienced or less knowledgeable staff. Organisations also prevent knowledge loss by using coaching and mentoring programs to retain staff and develop opportunities for advancement.

FROM PRACTICE…

Mentoring

A consulting firm appoints mentors with experience to support large projects. This allows less-experienced consultants to be added to the team and enable them to learn more quickly.

Coaching

An Engineering Department in a University was concerned with the number of senior staff about to retire, taking a vast amount of knowledge with them. Due to falling student enrolments it was unlikely that these senior positions would be filled, leaving a group of promising but inexperienced academics to carry on. Each retiring academic was offered a continuing honorary position so they could continue an active association with their Department and pass on knowledge to less experienced staff. They were given continuing office facilities in return for advice and a mentoring role.

6.21 Narrative management

Narratives act as a vehicle for communicating aspects of an organisation's history, culture and context. Narratives convey knowledge relating to organisational contexts and practice through social interaction and are considered valuable repositories for knowledge in organisations. Generating and exchanging narratives can foster shared perspectives among members of work communities.

Using narrative is a novel way of understanding how knowledge is constructed and used by organisations. Additionally, knowledge can be stimulated through story. Narratives can help an organisation make sense of itself and its experiences. Narrative management gathers and collates anecdotes - short stories that describe events of importance and build organisational culture. The narrative management process collects, organises and stores content from deconstructed stories for retrieval and dissemination in intranets, libraries, multimedia and other documents. It uses the narrative elements of plot, themes, emotion and archetypes to describe the anecdotes.

Narrative management also involves understanding the means by which narratives can be leveraged to assist the processes of creating, transforming and mobilising knowledge within organisations.

6.22 Networks and communities

Networks and communities are social configurations. They are voluntary, self-organising, sense-making entities, which adopt common practices, tools, symbols, signs, artefacts, stories and histories as they mature and evolve. Rich conversation, discussions and interactions, which take place within networks and communities, allow knowledge to flow and surface.

As networks and communities evolve, trust is built up and interpersonal relationships are established or strengthened. Common identity and obligation to the group becomes a distinguishing success factor.

A number of organisational and individual benefits flow from networks and communities. New employees can be inducted quickly and gain access to organisational knowledge and experts. Knowledge reuse is increased by sharing experience within networks and communities; experts are quickly identified; and new ideas can be tested and shared from many and varied perspectives.

Organisational networks and communities can also extend beyond organisational boundaries when members connect with external groups or individuals and return to their organisational community with new knowledge or a contrasting viewpoint. This interaction helps to expand the existing shared knowledge base of a network or community, as well as providing opportunities to probe and test new knowledge being introduced.

6.23 Physical environment

Some organisations facilitate the social nature of work through designing the work environment as a space for collegiate knowledge sharing and creation. Spaces are configured into culturally encouraging working environments.

Lunch rooms, ‘hot spot’ corridors or coffee stations provide social spaces that allow ideas to surface from casual contact and encourage conversations among different groups of people within the organisation. Within workspaces, seating staff identified as knowledge experts, information gatekeepers or 'pulse takers' at key interaction points can stimulate communication and collaboration.

FROM PRACTICE…

A financial services company installed kitchens and breakout rooms on each floor to facilitate interactions, connections and knowledge sharing.

6.24 Play theory

A crucial role for knowledge management is creating an environment and context that supports effective innovation and collaboration. This involves investigating new ways of working, new forms of collaborating and exploring alternate networks and connections. Play theory helps to create environments where teams (and leaders) can explore new tools, practice collaborative social interactions and make sense of new boundary spanning roles.

There are three primary applications for play theory:

(i) exploring our physical environment to learn how new ideas and tools operate in our own workplace;

(ii) learning to adjust to change by practicing interactions and reflecting on new experiences; and

(iii) investigating the new and the unfamiliar without penalising day-to-day team performance.

The level of formality normally associated with a pilot is reduced with play theory as the focus is on liberating the environment to open up spaces for experiencing and reflecting. Performance metrics are also de-emphasised during the familiarisation phase. This reduces the potential fear of failure often associated with participation in a pilot.

Tools and techniques under evaluation are not pre-judged when play theory is used. Realistic team participation is encouraged and allows for the full potential of the new tool or technique to be explored within the organisation's culture.

Play theory is particularly valuable for organisations searching for an effective innovation model and/or who are operating in environments characterised by complexity, ambiguity and discontinuous change. Its ability to open organisations to new experiences and ways of thinking helps to create a collaborative and exploratory environment.

6.25 Reflection

Organisations should be encouraged to actively support informal processes of review and reflection. Reflection provides time for understanding to develop on challenging new perspectives, space for social networks to heal, strengthen and rebuild, and permits the evaluation of knowledge activities to assess their performance.

Reflection primarily occurs at the individual level but can also occur at the workgroup or larger organisational level. Activities directed towards social and team-building goals may cost more in the short-term but can have long-term benefits in improving morale and the tacit transfer of knowledge between individuals within an organisation.

6.26 Rewards and recognition

Knowledge management requires motivation and commitment to changed ways of contributing and sharing organisational knowledge. One approach used to encourage desired behaviour is to reward and recognise people for knowledge-sharing work. This can be achieved through public recognition of individual and team contributions, or less public and tangible rewards such as bonuses that recognise performance and achievement. Either way, they acknowledge that people require intrinsic and extrinsic motivators.

Organisations use a variety of ways to reward and recognise knowledge sharing. In some instances, individuals who share knowledge and expertise are identified and rewarded. In other cases, team-based, organisation-wide and community based rewards are balanced with individual rewards. Rewards for participation are sometimes included in peer reviews. Another approach involves the inclusion of knowledge management metrics in individual performance appraisals.

In any of these scenarios, care needs to be taken whenever applying an incentive scheme. Potentially, incentives could have an effect of limiting knowledge sharing through the creation of a competitive climate.

FROM PRACTICE…

A telecommunications organisation includes a column in its staff newsletter in which employees nominate fellow staff as ‘people who helped me know’.

6.27 Social network analysis

Social network analysis (SNA) traces its origins to sociologists and researchers in the 1930s. The contemporary business world is starting to see the value of SNA, which maps the patterns of social interactions within an organisation and its networks.

SNA can help to visualise and measure the flows between people, groups, networks, communities, computers and servers within a business ecosystem. Often the flows, relationships and interactions are hidden and the ability to visually map patterns is increasingly important in an unpredictable world in which relationships can shift from day to day.

A challenge for organisations is to discover the connections within and between organisational networks and communities. SNA is a valuable tool which will not only surface the connections but help to discover key experts and value creators; identify organisational knowledge flows and exchanges; and find out who people really talk to when they want to find information.

It is human nature to form and seek out patterns and these patterns underpin the performance of many organisations. Analysing the patterns and connections and determining the degree of network activity can pinpoint:

- the location of major nodes (or people with the most incoming links and who may be subject matter experts or thought leaders);
- boundary spanners who connect or bridge one or more networks and often work outside the boundaries of a network (refer to Section 4.6);
- bottlenecks or blockages which impede connections and flows;
- clusters of linkages; and
- the strength of linkages between people.

GUIDANCE

Examples of questions to ask when conducting an SNA are:

- Who are the connectors? Who seem to have numerous relationships, both within and beyond the community?
- What seems to be the pattern of the connectors' direct and indirect relationships?
- How many steps or links would seem to separate people? It is a truism that we often cannot see beyond a network horizon of two – we cannot see further than the people who know those we know.
- Who seem to have the shortest paths to all others?
- Who appear to be boundary spanners?
- What types of skills do successful connectors seem to have?
- How could they help those less well-connected?

SNA is conducted by using standard social network analysis software. Social networks tend to be strongest amongst people who have a shared set of beliefs, values and behaviours and they can influence the strength of knowledge sharing within your organisation.

By strengthening the ties between employees and ensuring clusters or multiple networks are linked together, you may achieve a more tightly woven organisational knowledge fabric.

6.28 Storytelling

Storytelling is a technique used in knowledge management to open up spaces for exploring organisational depths from both a symbolic and realistic perspective. Storytelling is one component of the practice of narrative.

Organisational stories can offer different accounts and experiences around organisational history and culture. Stories form the institutional memory of an organisation and can be considered multi-authored.

Humans have a natural tendency to tell and listen to stories that transfer personal knowledge and meaning. A story can offer valuable insights into the living folklore of an organisation, its power relationships and multiple identities. Stories are used informally in many contexts to illustrate vision, values, behaviours, rules, strategies, outcomes or leading practice. Sharing of experiential stories can build trust, assist with knowledge transfer and seed the generation of new ideas.

6.29 Strategic conversations

The creation of new knowledge through strategic conversations is used to develop future organisational strategies. Strategic conversations are structured and ongoing informal discussions about issues that could influence future organisational direction. The issues generally concern imagined or likely economic, social, cultural or technological change.

A strategic conversation begins with a written analysis of the issues in order to provide a common starting point for all stakeholders. This is followed by techniques such as scenario planning or group discussions on structured questions. The ideas generated provide a basis for strategic planning. Strategic conversations can contribute to strategic planning by connecting and integrating diverse perspectives of the organisation and its environment.

6.30 Taxonomies and thesauri

Both taxonomies and thesauri support the organisation and classification of knowledge for storage, access and use.

Taxonomies can also be called classification systems. They group together similar knowledge that in turn is grouped together in ever broadening hierarchies. Taxonomies are frameworks for organising knowledge. While there are many examples of generic taxonomies and classification systems, such as the Dewey Decimal Classification System used in libraries, increasingly organisations are developing customised taxonomies to reflect their specific organisational and knowledge context.

A thesaurus is a listing of the vocabulary of a controlled set of terms selected from natural language and used to represent, in summary form, the subject of information and knowledge objects, such as documents. It is formally organised so that the prior relationships between concepts (for example ’broader’ and ‘narrower’) are made explicit. Thesauri support the indexing, classification and retrieval of content.

The benefits of classification of knowledge using either taxonomies and/or thesauri are:

- Improved knowledge indexing and /or ordering.
- Enhanced knowledge retrieval through an ability to conduct targeted searching and/or navigate complex information spaces.

- Knowledge discovery through browsing or drilling down through topics.
- Building understanding of a knowledge area through seeing related topics presented in context.
- Development of shared understandings to support the flow of knowledge both within and across organisations.

The following documents will assist in development of taxonomies and thesauri:

ISO 2788 sets out standard conventions for the development of thesauri.

AS ISO 15489.2 describes how business activity classification may be done.

6.31 Technological integration

High-quality information and communications technology infrastructure is an important enabler for knowledge management in most modern organisations. Aside from basic networks and applications, there are portals, intranets and extranets, which use Internet and web technologies to support groups of people, from entire organisation to formal work units or informal communities of practice. They provide connectivity that can support knowledge sharing inside and outside the organisation.

A portal is an interface that provides a single point of access to multiple sources of information and applications. Business or corporate portals gather and point to numerous sources of internal and external information such as multiple intranets, structured and searchable directories and databases of information, collaborative groupware tools and utilities to manage email, discussion group material, reports, memos and meeting minutes. They improve efficiency by providing employees with single login access to personalised content and shared work functions while enabling collaborative work and knowledge sharing across the organisation. Portals provide web users with a single gateway to communication facilities, data stores and software applications that consolidate, manage, analyse and distribute information.

An intranet is an isolated, internal corporate network with a web browser application that allows authorised personnel electronic access to documents, forms, and web applications. In making use of the same open systems standards and protocols as the Internet, it allows the sharing of information and knowledge within an organisation. Management of content, documents and information is necessary to ensure that information on the intranet is relevant, current, searchable, accessible and secure.

An extranet extends selected resources of an intranet outside the corporate firewall to selected groups of customers, suppliers, business partners or employees in remote locations. The extending of organisational information resources to external stakeholders means that authentication and privacy standards are critical factors in protecting information.

FROM PRACTICE…

A government department has an established intranet that provides information to staff. In the last twelve months, this intranet has been reviewed and its functionality extended. It now includes a dynamic, shared workspace where internal communities of practice share and create new knowledge. The technology supports the cultural initiatives and provides a facility to store conversations, stories and ideas. Over the next twelve months, a component of the intranet will be available as an extranet so that stakeholders can be included in the communities. The intranet is no longer just a repository but a platform for supporting knowledge creation and sharing.

6.32 Technologies for communication and knowledge sharing

Knowledge flows between people in an organisation and there is an increasing array of technologies to support these flows.

With the development of Information Communication Technology (ICT) networks and the Internet, applications have emerged that use networks to facilitate peer-to-peer communication and knowledge sharing. Applications include email, bulletin boards, chatrooms, wikis, blogs, whiteboards, audio and video conferencing and various specialised groupware applications. ICT is usually classified into four categories:

- Same time/same place – computer supported meetings, group decision support systems.
- Same time/different place – teleconferencing, internet conferencing, chat, whiteboards.
- Different time/same place – mailboxes, document version control systems.
- Different time/different place – email, bulletin boards, discussion groups, blogs, k-logs.

FROM PRACTICE…

A professional services firm established a series of web-based repositories that spanned several geographic locations for capturing and sharing leading practice and precedent material. The facility included the capability for staff to discuss and collaborate on ideas and resolve common issues. The facility allowed the organisation to respond more rapidly and consistently to client needs. This resulted in improved quality of service, as well as higher customer satisfaction and loyalty.

6.33 Technologies for discovery and creation

- Search engines – search engines provide a standard interface for full-text searching and enable access to large knowledge repositories on intranets and extranets. Commercial search engines provide a similar function for much of the unstructured information on the Internet and allow organisations to gather external, third party information.

- Data and information mining – information discovery and data mining are terms used to describe database applications that look for hidden patterns in groups of data to discover previously unknown relationships from which knowledge can be derived. Data mining applications use complex and sophisticated algorithms to discover information and may require the processing power of mainframe or supercomputers. Data mining tools are commonly applied to customer databases stored in data warehouses or data marts. Another general use is in criminal investigation.

- Intelligent agents – within a software program, agents are routines dedicated to certain tasks. Intelligent agents, which grew from expert systems and artificial intelligence research, learn from data input during the course of their performance and modify their behaviour according to user search patterns.

  Agents have been used in workflow control and automation systems for decades. A defined event is checked, or polled, at regular intervals and a specific action is undertaken. An action may be to alert a supplier that a customer has not ordered for some time and that the customer will be prompted for a repeat order. The supplier may be presented with the previous orders from the customer, together with current special offers within the customer's preferred categories.

FROM PRACTICE…

An internet service provider is looking to improve their customers' experience by recognising customers who have previously visited the site. The company used intelligent agents to build profiles for each customer based on their visit history. On subsequent site visits, the agent presents the customer with options or recommendations deduced from the customer's past behaviour.

6.34 Technologies for managing repositories

Information can exist within artefacts such as documents and organisational stores as content that has structure, organisation and meaning. Technologies that support this view are:

Databases and textbases – electronic data generated by daily operations and recorded within business applications are usually stored in highly structured database systems. Many organisations recognise that such records form part of the organisational memory. Database management systems incorporate facilities for querying, summarising, searching and browsing data content. Open architecture, supporting structured query languages, promotes the implementation of flexible, distributed systems that allow meaningful access to the organisational memory.

Organisational systems – the bulk of an organisation's business transactions are routinely processed by standard computerised applications. The applications may be dedicated subsystems or enterprise resource planning and management programs (ERPs) that process most of an organisation's transactions.

Data warehousing and data marts – business transaction systems generate enormous quantities of electronic data with the potential to provide meaningful information. Unlike organisational databases that typically store current data related to specific business functions, a data warehouse stores data that retains historical and cross-functional perspectives. Data is extracted daily from the business transaction systems and from any other relevant systems e.g. human resources and marketing.

Analytical processing tools that update and summarise data from several operational databases can provide managers with information for strategic decision-making. Whereas a data warehouse combines databases across an entire enterprise, data marts are usually smaller and focus on a particular subject or department.

FROM PRACTICE…

A utilities organisation implemented an electronic and paper records management system to classify, secure and provide access to its business documents and records. The records included quality management documentation, engineering drawings and procedures. The facility provided a single, unified point for managing corporate assets for the organisation and formed a critical part of its business and risk management strategies.

7 Evaluating and measuring

7.1 Introduction

Success indicators for the Map/Build/Operationalise cycle typically take four forms:

(i) Artefact-centred indicators – can indicate success by the increased creation, capture and use of documents, video/sound files, images and web pages.

(ii) Activity-centred indicators – can indicate improvements in consulting, coaching, mentoring, facilitating and training.

(iii) Cultural or behavioural change-centred indicators – can indicate results from implementing the knowledge initiative and/or its accompanying change interventions.

(iv) Intellectual capital or intellectual property-centred indicators – can indicate improvements in performance by comparing KPIs or the shift in value of knowledge based assets.

The mix of indicators adopted will evolve over time as the organisation's culture and context evolve. Measuring and evaluating knowledge activities may be phased to focus the organisation's attention on specific behaviours, activities or knowledge assets

Measuring and evaluating the effectiveness of knowledge management has perhaps been the least well-developed area of knowledge management to date.

Because there is no 'one size fits all' solution to knowledge management or intellectual capital evaluation or measurement, this Section provides an overview of evaluation and measurement techniques.

7.2 What to evaluate and measure

Targeting selected behaviours and interactions is a core consideration in framing a knowledge initiative and understanding organisational indicators is a key determinant of successful initiatives. Fundamental differences exist between organisations, their strategies, cultures, capabilities and governance structures. These factors ultimately shape their knowledge requirements. Close attention to the presence or absence of organisational indicators will assist with a better understanding of the maturity of the organisation, its strategic context and the prevailing knowledge environment.

Another approach to measurement is to evaluate whether knowledge initiatives have been implemented and, more importantly, to what effect. Any measures developed or adopted should assess how the initiatives or tools improve the organisation's capacity to acquire, retain and use knowledge efficiently, effectively and ethically.

A baseline performance measure can be used as a benchmark and compared with either the organisation's subsequent performance or with that of similar organisations. Establishing a performance baseline before knowledge management initiatives are undertaken allows the impact of the initiatives to be measured.

Success of knowledge management implementation can be assessed by measuring changes in the organisation’s intellectual capital. HB 189 defines the term intellectual capital as 'the potential value of various components or flows of capital in an organisation; the relationship and synergies that can augment that value; and the application of that potential to real business/organisational tasks'. Determining the general approach for measuring intellectual capital requires first establishing the context and the purpose of the assessment, which will in turn determine the approach by which it will be measured.

The most recognisable and easily measured component of intellectual capital is intellectual property (IP). Intellectual property is defined in HB 189 as 'assets, almost always explicit, which are protected by law and recognised as an asset by existing accounting practices'. The term includes patents, trademarks, copyrights, recipes, contracts and computer software.

7.3 How we evaluate and measure

7.3.1 Indicators for knowledge management

This Section briefly discusses some evaluation and assessment tools (indicators for knowledge management, benchmarking, and measurement of intellectual capital). Other tools (knowledge auditing, knowledge mapping and social network analysis) are described in Section 6. Further details about measurement tools can be found in BS PD 7502.

A particular organisation's business and activities determine the objective of the evaluation or measurement and will therefore greatly influence what tools, techniques, measures or indicators are appropriate within that context. Whatever approach is used, it should be critically reviewed at periodic intervals to ensure that it remains appropriate.

Effective creating, sharing and use of knowledge within organisations is often underpinned by recognisable individual, team and social behaviours and indicators. In many disciplines, success is demonstrated by the actual presence or absence of various indicators.

In knowledge management, certain behaviours, values, beliefs, norms, social networks and organisational stories may be compelling indicators of how knowledge is understood and valued within the organisation. The presence or absence of these organisational or behavioural indicators can provide a measure of how knowledge flows through an organisation and the value attached to knowledge processes. These indicators may provide a catalyst for intervening in the organisation to drive a cultural or behavioural change prior to launching knowledge initiatives.

Additionally, organisational and behavioural indicators provide useful clues for tailoring the knowledge management implementation to maximise its chances of successful adoption throughout the organisation. Behaviours and interactions are derived from individual traits and preferences. Accompanying these are values, beliefs, experiences, perceptions, expectations and permissions, competencies, organisational cultures and sub-cultures, community identification and affinity, group dynamics, politics, and organisational structure.

Some of the leading indicators of an organisation positively disposed to knowledge-based activities include:

- Flexible roles and accountabilities refined in light of changing circumstances.
- Outward looking culture with a strong tolerance for ambiguity. This includes openness to new knowledge, ideas and concepts, and accepting the need to learn from mistakes, valuing differences and diversity. The organisation encourages complexity and systems thinking, use of mental models and stories.
- Value is placed on building new relationships, social networks and communities. There is a strong level of trust between groups and team members.
- Sharing is expected and part of the job. Power is created through shared, socially constructed knowledge.
- The organisation values people and processes that can create useful change. There is recognition and acceptance of individual leadership, self-management and empowerment.

At the next level, indicators can be used to evaluate whether knowledge management processes have been implemented and how successfully.

7.3.2 Benchmarking

Benchmarking is a quality management technique that uses a standard reference point (or benchmark) to measure and compare organisational practices and performance against others. Knowledge management may be benchmarked with a competitor, cooperatively with a non-competitor, collaboratively with other organisations or internally amongst groups in the organisation.

Benchmarking in the knowledge organisation may focus on cultural and leadership practices; and business and technology processes that enable knowledge creation, sharing and use through learning, innovation, communication, collaboration, or information management.

Knowledge management benchmarking can identify areas for improvement, increase performance and determine excellence that acts as a 'leading practice' benchmark. It can also provide an explicit measure of the contribution and value of knowledge management to the organisation.

7.3.3 Measuring intellectual capital

There is no universally consistent or recognised model used in measuring intellectual capital. Over twenty different methods of intellectual capital measurement have been identified and the models and methodologies are still evolving. Methods used to measure intellectual capital differ from traditional accounting approaches. Intellectual capital emphasises the indirect measurement of intangibles such as perceptions, expectations, quality and innovation.

Some intangible accounting approaches used by organisations to measure intellectual capital include:

- Measuring improvements in organisational performance by comparing key performance indicators (KPIs) such as customer satisfaction on a periodic basis.
- Tracking improvements through indices of KPIs that have been weighted by their impact on organisational objectives.
- Assessing the relationship between financial transactions and human activities in order to establish a relationship between the earnings/costs and the impact of knowledge management on organisational objectives.

Organisations may also seek to value their intellectual property for financial reporting and for management purposes.

KEY LEARNINGS

(1) There are a number of approaches for measuring the success of knowledge management, including:

- targeting selected behaviours and interactions as indicators of success;
- evaluating whether initiatives have been implemented and to what effect; and
- identifying changes in intellectual capital.

(2) Consider using benchmarking to measure and compare organisational practices and performance in knowledge management against others.

(3) There is no universally consistent or recognised model for measuring intellectual capital.

8 Reflecting

8.1 Introduction

The knowledge-based economy is now a key driver of national wealth. There is growing recognition that knowledge and the ability of an organisation to learn, innovate and adapt contributes significantly towards organisational resilience and renewal. Organisations will continue to face an interconnected environment characterised by ambiguity, competition and continual change.

In dealing with these future changes, knowledge management promises deeper insights into an organisation's context and culture, together with its surrounding ecosystem. This Section reflects on six broad areas of knowledge management thought leadership:

(i) Complexity – a new way of thinking about organisations as complex adaptive systems.

(ii) Innovation – a shift is underway from knowledge management strategies that stress knowledge capture and codification to those that emphasise innovation and problem solving.

(iii) Creative economy – the emergence of creativity as a fundamental source of economic growth in a globalised marketplace is compelling organisations to refocus on fostering innovation.

(iv) Sustainability – increasingly, managers are grappling with the need to create sustainable futures by combining social, economic and environmental factors.

(v) Working in a global culture – examines the impact of culturally derived beliefs and values on knowledge management leading practice.

(vi) Technology – charts the rise of wikis, blogs and chat rooms, together with new directions in collaboration and managing content.

It begins with a look ‘back over the shoulder’ and identifies some of the developments that have informed the current state of knowledge management. Some of the issues and trends that currently, or possibly, will impact on knowledge management in the future are then outlined.

8.2 Looking back

8.2.1 Strategic alternatives in the 1990s

There is a growing awareness that knowledge management offers a distinctive way of tackling the internal and external imperatives now facing organisations. Recently, organisations have attempted to address these imperatives with focused solutions such as downsizing, cost-cutting, business process redesign, comprehensive restructures, or sophisticated technologies. Many of these solutions had limited success, as they were either ignorant of, or actively cut across, knowledge flows and content within an organisation and its stakeholders. For example, with downsizing of organisations there was accompanying loss of expertise that was perhaps not recognised initially. Similarly, the installation of sophisticated information technology, while managing information, failed to deliver the expectations of managing knowledge.

As knowledge management emerged as a discipline in the early 1990s, its rhetoric revolved around a choice between two strategic alternatives. The first, and often commonly adopted alternative, focused on the collection, storage and reuse of explicit knowledge in documents and information technology systems.

The second alternative focused on connecting people. Knowledge management was viewed as a social communication process with emphasis on tacit knowledge i.e. personal knowledge that resides within individual minds.

Today, knowledge management is not confined to these alternatives; rather it is a blending of the two within a specific organisational context and concentrates on a balance between the four elements of people, process, technology and content.

Increasingly, an intellectual capital focus is becoming widespread within organisations as they recognise the limitations of traditional financial measures.

New philosophies are now informing knowledge management and are discussed in Section 8.3.

FROM PRACTICE…

A small enterprise in the financial planning sector acts as a service provider to other small businesses and has two specific aims for implementing knowledge management. Firstly, to document ‘what we know’ so stakeholders can access it and secondly, to actively nurture the community of stakeholders and customers so that leading practice is shared effectively.

8.2.2 The nature of knowledge

It is not within the scope of this Standard to resolve the ongoing debate about the nature of knowledge. Much of knowledge is tacit and contextual, residing in social networks and interactions. It is grounded in the daily conversations and experiences of knowledge workers.

The emphasis of knowledge management has shifted from the management of knowledge to enabling contexts and environments in which it can grow and flourish. Knowledge can be articulated and codified; yet it can also remain hidden in complex social patterns and relationships.

The paradox of knowledge is that it can be considered an object as well as a flow. This paradox defines the boundary between knowledge management, information management and data management.

8.2.3 Relationship with other disciplines

Knowledge management is trans-disciplinary in nature and draws on the practices and understandings of many disciplines.

Knowledge management relates to these other disciplines in different ways, both being informed by these disciplines and, in turn, informing these disciplines. The relationship between knowledge management and these disciplines is fluid and depends on the organisational context. Appendix A outlines areas of practice that have a close relationship with knowledge management and identifies additional related approaches that could be used in conjunction with knowledge interventions.

8.3 Sensing the future

8.3.1 Complexity

It is possible to detect new philosophies informing knowledge management. The linear thinking that has permeated the way in which knowledge management and other organisational initiatives have been approached in the past is giving way to more fluid, non-linear approaches. In these approaches, it is assumed the system will emerge from complex sets of interactions within an increasingly complex environment, rather than being designed through a sequence of cause and effect relationships.

The growth in popularity of ideas drawn from the group of theories broadly known as ‘Complexity’ has given rise to a new set of views and ways of thinking about organisations and knowledge management. Increasingly, organisations are viewed as complex adaptive systems in which the observed patterns of behaviour are not predictable or repeatable. The complex behaviour of the system emerges from the interaction of diverse groupings of individuals and the relationships between these individuals in the system and broader environment.

The prevalent assumption that outcomes can be predicted is being replaced with the recognition that ongoing adaptation and change is not only the norm but also a fundamental characteristic of the organisations in which we participate.

The purpose of the system is not assumed but continuously emerges, dissipates and re-emerges in a new form as a part of the ongoing interplay between the members of the organisation and its environment.

Arguably, this way of thinking is giving rise to the adoption of newer forms of organisation, which emphasise hyperarchy over hierarchy, communities of practice and virtual teams over direct management. It also requires a shift in the worldviews of practitioners with regard to the way they perceive organisations and therefore approach the map/build/operationalise cycle.

FROM PRACTICE...

A major Australian law firm, faced with a volatile strategic environment, realised its initial knowledge management approach had reached the limit of its development potential. Rather than attempting to design precisely for an unknown future, the firm adopted an emergent knowledge management strategy focused on creating a context supporting innovation and fostering collaboration, connections and networks.

8.3.2 Innovation

Unprecedented change in the creation and application of knowledge is shifting markets from an industrial model to a complex adaptive systems model. Increasingly, innovation is emerging as a source of new economic wealth.

Innovation is an interactive and iterative process, highly dependent on social networks, personal interaction, knowledge flows and an understanding of risk. Innovation is stimulated by knowledge gathered from connections and from insights gleaned through active, vibrant networks and fluid open boundaries. Innovation grows inside relationships, from knowledge created within ongoing circles of exchange.

Knowledge management fosters innovation by creating a culture and encouraging behaviours and attitudes that nurture and support inquisitiveness and exploration with all its associated randomness, chaos and disorderliness. Knowledge management activities also assist organisations to detect signals indicating change threats and opportunities in their operating environments, while encouraging them to remain receptive to those signals as triggers for change.

The innovation process spans creative idea generation through to commercialisation or implementation of the finished concept with its associated governance, risk and financial models. By combining knowledge creation with tools, techniques and technologies designed to foster sharing and collaboration, knowledge management is accelerating the adoption rate of new ideas on content creation, new product development and enhanced client service experiences.

8.3.3 Creative economy

The economics underpinning knowledge management, as we know it, are changing. Creativity is emerging as a fundamental source of economic growth in a global marketplace. Increasingly, knowledge management will be focused around facilitating creativity – a decisive form of competitive advantage, with its subtle shifts in workplace and leisure activities.

It is expected that the economic premium placed on creativity will determine how the workplace is organised. Organisations will be compelled to revise, refine and enhance products, processes and activities. There will be a need for greater emphasis on collaboration, knowledge sharing, networks and interconnectedness through new boundary spanner type roles (see Section 4.6).

By combining knowledge creation with tools, techniques and technologies designed to foster sharing and collaboration, knowledge management is able to accelerate the adoption rate of new ideas on content creation, the development of new products and services, enhanced client service experiences and changed business models by an organisation.

This economic realignment poses profound challenges for managers and traditional knowledge management approaches. Creative capability cannot be bought and sold or turned on and off at will. Managers will need to shift from managing 'things' i.e. physical resources, objects, and people to managing complexity. In knowledge management terms, there will be a reduced emphasis on formal knowledge capture and indexing initiatives, with greater attention and resources being devoted to knowledge creation and flows.

8.3.4 Sustainability

Internationally, organisations are beginning to grapple with the paradox of sustainable development. It requires managers to create sustainable futures based on synergistically combining social, economic and environmental factors. Sustainability applies to both the economic underpinning of the global system and the organisation's ability to cope with rapid-fire change. The adoption of new organisational forms and emergent technology is changing the relationships between the enterprise and its work force, between leadership and teamwork and the social structure of organisations.

As advances in knowledge allow organisations to do more with less, knowledge management will be challenged in four dimensions:

(i) To adapt the organisation's ability to probe its ecosystem and make sense of its signals ahead of time in order to learn from the future as it emerges.

(ii) To facilitate knowledge sharing in order to diagnose the organisation's systemic health and overall performance, while fostering alignment with stakeholders.

(iii) To build on historical strengths and platforms while assisting the organisation through transition.

(iv) To assist the organisation to overcome the pull of the past by liberating its internal intelligence in order to innovate rapidly.

We may also see changes in knowledge management's operating environment as organisations adopt knowledge consortia as a vehicle to explore the cutting edge of science and technology, and exploit informal associations and alliances as communication channels to search out new ideas and concepts. This will bring the boundary spanner role (see Section 4.6) into the organisational mainstream and place increasing emphasis on knowledge creation and sustainable innovation.

8.3.5 Working in a global culture

Successful knowledge management in cross-cultural environments depends on:

- an understanding of national cultures; and
- effective intercultural communication.

National cultures are shared beliefs and values that can have a profound effect on patterns of communication and knowledge sharing. Intercultural communications is a process whereby people from different cultures create shared meanings and understandings. Understanding the cultural architecture of a setting therefore becomes an important step for communicating in the global economy.

Employee expectations are also different across cultures. Some workers are culturally motivated by remuneration packages, whilst others are motivated by status. Additionally, people from one culture may misinterpret the workplace behaviour of people from another culture. Such misplaced judgments can affect a number of organisational processes and functions, including knowledge management.

In cross-cultural settings, communication is further challenged by different attitudes toward the nature of knowledge, the social construction of knowledge and the actual communication of that knowledge. For example, while some national cultures communicate primarily using very explicit forms of communication, others communicate using implicit understanding. The cognitive dissonance created when two such national cultures meet can be considerable and, as knowledge management matures, this dissonance may become more pronounced.

National and local legal protections and regulations governing certain categories of information and property form part of an infrastructure that impacts on knowledge sharing. Privacy protection legislation, security requirements, and intellectual property asset management impose rules on information sharing within and beyond organisations.

8.3.6 Technology

Rapid technological developments continue to take place. The pervasiveness and ubiquity of these combined technologies will continue to be driven by increases in the speed and capacity of communication links, offset by cost reductions in deployment and infrastructure.

Some of these developments are:

- Significant increase of storage capacity and the implications that this may have for the indexing of information.
- The ability to store and access ever-increasing amounts of information will drive the development of new search technologies and approaches to managing information overload.
- Complex technologies such as data and information mining, data warehousing and pattern recognition.
- Wikis and blogs offer the potential of low costs and low deployment complexity in fostering knowledge sharing and collaboration across ecosystems and organisations.
- Streaming video, bulletin boards, chatrooms, and e-conferencing software are being continuously enhanced to aid collaboration.
- Existing platforms continue to rapidly evolve. We are witnessing the accelerated convergence of maturing technologies such as intranets, extranets, portals, collaboration tools and document management systems around the one repository model.
- Organisations are being enabled to manage their content more effectively by creating once and sharing seamlessly with internal and external audiences across multiple spaces.
- Technology innovation around knowledge management is driving the next generation of social network analysis software, more powerful narrative engines, intelligent agents and flexible tools.
- Wireless networking technologies will open up new opportunities for mobile knowledge workers to collect, access and share information.
- Conceptual change to the way people and organisations view the Internet as a tool for knowledge management. The Semantic Web will provide a common framework based on standardised structured vocabularies to allow data to be shared and understood across application, enterprise and community boundaries.

A Related areas of practice

Many organisational functions and disciplines can be considered through the knowledge management lens (see Section 2.3). In partnership with knowledge management, they can expand their contribution to organisational objectives and strategy (see Section 8.2.3). A discussion of some of the major related areas of practice follows.

A1 Competitive intelligence

Competitive intelligence is an area of practice concerned with acquiring and capturing knowledge about competitors, markets and other influences in the external environment. It involves:

- The harvesting of targeted data and information from within the organisation.
- Monitoring and scanning the external environment for influential factors and trends.
- Analysing and using this knowledge to support strategic and operational decision-making.

Competitive intelligence has well-established methodologies and techniques including observation, deduction and a range of analytical tools.

A2 Customer relationship management

The direct 'value chain' of supplier through distributor to customer is an important stakeholder relationship. The focus on relationships with customers is termed customer relationship management (CRM). CRM aims to increase the worth of an organisation by harnessing knowledge to maximise the perceived value of goods and services delivered to a customer, and minimising interaction with identified unprofitable customers.

A3 Human computer interaction

Human Computer Interaction (HCI) concerns people interacting with technology. The field of HCI looks at the design, evaluation and implementation of interactive technology so that it is easy and interesting for people to use. HCI practitioners aim to ensure that technology matches people's needs, expectations, capabilities and limitations, regardless of whether people work in groups or alone.

The following ISO standards are useful for HCI usability:

ISO 9241: Ergonomic requirements for office work with visual display terminals (VDTs)

ISO 14915: Software ergonomics for multimedia user interfaces

ISO 13407: Human-centred design processes for interactive systems

ISO/TR 18529: Ergonomics - Ergonomics of human-system interaction - Human-centred lifecycle process descriptions

A4 Human resource management

A number of frameworks and approaches attempt to articulate the relationship between Human Resource Management (HRM) and knowledge management. It has been argued that in the knowledge economy, HRM should go beyond conventional functions such as staffing, Human Resource Development (HRD), remuneration and performance management. These functions are now largely devolved, much in the same way as the administrative 'personnel management' approach of early HRM has now been made redundant by technology.

The partnership between knowledge management and HRM can provide the means by which to forge new relationships both within and outside the organisation. This involves the development and sustenance of learning environments (see Section 6.17) where knowledge creation, sharing and dissemination processes are valued.

Recruitment and staffing should be geared toward attracting those people who possess the capabilities that allow an organisation to flourish. Performance management and remuneration systems should be geared to identifying, encouraging and rewarding desirable behaviours to promote and maximise knowledge activities and strategies (see Section 6.26).

A5 Information management

Information management supports effective and efficient management of information in the service of defined user populations (e.g. organisation or societal group). It is concerned with the study and practice of processes that enable the creation, production, collection, organisation, storage, retrieval and dissemination of information resources which may be in any format and available from internal or external sources.

A6 Information systems

Information systems is a multidisciplinary field that concerns the development and use of systems that generate and manipulate information in and between organisations. Information systems are often, but not necessarily, computer-based. They can have profound effects on the availability and use of organisational information, knowledge and innovation. The creation and operation of such systems requires the sub-processes of systems analysis, design, building and management, which are bounded at the beginning by social context and at completion by social consequences.

A7 Intellectual property management

Intellectual Property (IP) comprises legally protected results or original and creative efforts. IP management is concerned with the creation, identification, management and application of IP to ensure that benefits consistent with organisational goals are achieved. For some organisations, IP commercialisation aims to produce tangible revenues, for others, the outcome may be the transfer of knowledge developed to the marketplace in order to achieve public good objectives.

A8 Market research

Like competitive intelligence, market research contributes to the organisational knowledge base by collecting and analysing current information about the external environment. It requires significant information gathering and organisation to deliver detailed, accurate and up-to-date knowledge for decision-making.

Research activities are generally concerned with understanding client and competitor behaviour, promotion and distribution, products and services, costs and pricing, and the social, economic and business environment. Primary information gathering uses techniques such as focus groups, interviews, surveys, questionnaires, observation or diaries to obtain information about customers and other stakeholders.

Secondary information can be gathered from internal information sources or third party sources such as government, industry or market research companies.

A9 Project management

Knowledge management initiatives are often implemented using a systematic project management approach. Project management involves planning, organising and managing a project to achieve defined goals. Project management has developed frameworks, tools and indicators to assist in project delivery. Examples of project tools are critical path analysis, Gantt charts and work breakdown structures.

Progress is constantly monitored and reported throughout the life of a project. Indicators, such as time to completion and number of tasks behind schedule, are used as interim performance measures. The overall measures of success are defined before project commencement and are evaluated shortly after completion. A project manager or project team coordinate human and other resources to complete the project within a given timeframe and budget.

A10 Quality management

Quality management provides tools and techniques that build quality into processes and practices that manage knowledge in an organisation. These include:

- strategic policy and planning processes;
- developing and managing of people;
- designing and improving product and service processes;
- documenting policies, procedures and processes; and
- measuring costs, performance and satisfaction.

Further information can be found in the AS/NZS ISO 9000 series of Standards. These describe features and characteristics that should be present in an organisation's documented policies and procedures to ensure systematic quality control and assurance.

From a knowledge management perspective, ensuring accuracy and consistency of codified information is one facet of effective performance. Knowledge management extends the quality focus by ensuring that people are connected to people as well as to information sources.

A11 Records management

Records Management is the field of management responsible for the efficient and systematic control of the creation, receipt, maintenance, use and disposal of records. This includes processes for capturing and maintaining evidence of and information about business activities and transactions in the form of records.

Records are generated as a result of business activities and processes. Records management uses tools such as electronic document and records management systems, record keeping metadata and taxonomies to manage records and their links to the organisational context.

Effective records management enables the sharing and transmission of business information over time and space. It supports effective decision making, enables consistency and continuity, protects the interest of the organisation and its stakeholders and helps the organisation to meet regulatory and corporate governance requirements.

The AS ISO 15489 series provides more information.

FROM PRACTICE...

Implementing a new document and records management system to ensure compliance with legal obligations, a government organisation reviewed its records management practices. To achieve some knowledge management benefits from this initiative, staff across the organisation were:

- consulted to determine suitable search interfaces and to develop taxonomies;
- trained in the retrieval of explicit knowledge;
- encouraged to use the system to identify skilled staff members with experience in different topics or projects; and
- involved in a process of flagging resources of high value.

A12 Risk management

Risk management is a continuous and repetitive process that can contribute to organisational improvement. With each cycle, risk criteria can be strengthened to achieve progressively better levels of risk management. It can be applied at many levels including strategic, operational, project, or decision-making levels or to manage specific recognised risk areas. The Australian Standard AS/NZS 4360 *Risk Management* outlines the generic processes and procedures that need to be implemented for effective risk management.

Knowledge risk can occur when hard to replace knowledge leaves an organisation through employee turnover. Knowledge risk also occurs as a result of the under-utilisation of knowledge among existing employees.

Management of knowledge risk begins with an assessment of the contextual factors associated with real or potential knowledge risk. Once risk factors have been identified, strategies to assess these factors can be developed and implemented. Workforce planning to support knowledge management and minimise knowledge risk requires a thorough understanding of an organisation's strategic capabilities and the means by which these are supported.

B Sample job descriptions

B1 Director, knowledge management

B1.1 Role and accountabilities

- Developing an overall framework that guides knowledge management and intellectual capital realisation in the organisation.
- Actively promoting the knowledge agenda within and beyond the organisation.
- Overseeing the development of the knowledge infrastructure (hard – information systems; and soft – cultural).
- Facilitating knowledge connections, coordination and communications.
- Developing a strategy/vision to transform the organisation through knowledge management.

B1.2 Characteristics

- Conceptual thinking – developing the big picture; understanding the wider knowledge context and the organisation's strategy within it.
- Advocacy – must articulate the knowledge agenda and actively promote and justify it, sometimes against cynicism or even open hostility.
- Project and people management – able to oversee a variety of activities and pay attention to detail, and motivate people to carry out tasks.
- Communications – must be excellent networkers, communicating clearly the knowledge agenda, have good listening skills and be sensitive to organisational opportunities and obstacles.

B1.3 Skills

- Technical – able to understand which technologies can contribute to capturing, storing, exploring and sharing knowledge.

- Cultural – able to create social environments that stimulate and facilitate conversations, events and processes to encourage knowledge creation, innovation and exchange.
- Value creation – able to identify and leverage the firm's intellectual capital assets.

B1.4 Example position description

Role:

Director, Knowledge Management

Mission:

- Identify knowledge and establish processes for sharing knowledge that *Knowledge Company* requires to successfully implement the company's strategic business initiatives.
- Maximise the return on investment and improve *Knowledge Company* performance from *Knowledge Company* knowledge assets, including people, processes and intellectual capital.

Responsibilities:

- Provide vision and strategic direction for *Knowledge Company*.

  e.g. Develop for *Knowledge Company* a knowledge vision, knowledge strategies and appropriate metrics that are aligned with and support the aims of *Knowledge Company's* business objectives.

- Develop a framework that guides knowledge management for *Knowledge Company.*

  e.g. Develop processes to assess and quantify current *Knowledge Company* knowledge capability versus benchmark requirements. Develop improvement programs to close knowledge gaps and build intellectual and organisational capital. Measure and track ongoing performance improvements.

- Quantify and apply *Knowledge Company's* knowledge assets to improve current and future business performance.

  e.g. Develop a process and infrastructure that allows *Knowledge Company* to capture data, information and knowledge, share knowledge within the company and re-use expertise.

- Exploit *Knowledge Company* knowledge and intellectual capital to grow the business.

  e.g. Identify existing *Knowledge Company* intellectual capital and develop a process to value Intellectual Property (IP) in line with *Knowledge Company's* commercial strategies, including patenting and licensing of IP.

Desired business outcomes:

e.g. Help improve business performance by applying knowledge assets to achieve operational efficiency gains.

Key relationships:

e.g. Is a member of the *Knowledge Company* senior leadership team.

Essential personal attributes:

- Conceptual thinking – able to understand the organisations business strategies and develop appropriate knowledge strategies to support these.
- Advocate/Communicate – able to communicate, promote and justify *Knowledge Company's* knowledge agenda and be sensitive to organisational opportunities and obstacles.
- People/Project management – able to influence change through leadership, teamwork and good interpersonal skills.
- Technology – good infrastructure technology and information systems understanding with clear vision for how these tools can be applied to deliver the knowledge management outcomes that *Knowledge Company* desires.

B2 Knowledge manager

The knowledge manager has responsibility for coordinating the knowledge sharing activities and interventions. The knowledge manager will also be involved in the identification, development and deployment of knowledge to and from stakeholders.

B2.1 Responsibilities

Create a knowledge plan, set goals and measure progress working with appropriate staff.

Proactively drive the knowledge collection process and make that knowledge available for reuse.

Actively motivate staff towards being efficient and effective users of information and expertise.

Promote and communicate key knowledge resources and keep practitioners informed about new knowledge initiatives and resources.

Provide hands-on training and support to information users.

Facilitate communication between all stakeholder groups.

Ensure that practitioners are making full use of the organisation's information resources.

Ensure appropriate knowledge bases are developed, used and maintained.

Other responsibilities may include thought leadership development and research.

B2.2 Critical success factors for a knowledge manager

- Must be passionate about knowledge management.

- Must have the personal confidence to be able to handle rejection.
- Must be part of at least one client team as this is the best way to gain acceptance by the practice and understanding of the practice.

B2.3 Characteristics of a knowledge manager

- Excellent oral and written communication skills.
- Strong networking and relationship development skills.
- Able to work at the executive level to gain sponsorship for knowledge initiatives.
- Able to foster commitment and facilitate change.
- Likes challenge and willing to perform out of 'comfort zone' and take risks.
- Be willing to go the extra mile and juggle a variety of tasks to ensure the job is completed.
- Be able to synthesise a wide range of sources of information into relevant conclusions.
- Experienced with coordinating and managing projects involving several stakeholders.
- Ability to work in an unstructured environment with minimal supervision or direction.
- Proactive in seeking solutions to issues.
- Must be able to take initiative to seek out team needs.
- Willing to accept help from others and learn continuously.

(Adapted from BEA 003—2002.)

C Knowledge management resources

C1 Sources of information

Information about a wide diversity of models and methods, both proprietary and non-proprietary, is available from a variety of sources including:

- The World Wide Web has links to sites, both commercial and open source, which provide access to theories, models and approaches.
- Academic literature and journals provide theoretical background, as well as practical application of various approaches.
- A variety of forums across Australia and internationally have input from knowledge management practitioners, academics, consultants and other interested parties with varying degrees of expertise from both the public and private sectors. These forums discuss matters relating to knowledge management and intellectual capital, including evaluation and measurement.
- Commercial consultancy in the various forms of auditing, measuring, mapping and metrics which is a rapidly growing field.

C2 Australia

SAI Global publications

BEA 001—2002, *Advanced models of knowledge management—Practical approaches for implementation*

BEA 002—2002, *An introduction to XML for knowledge managers*

BEA 003—2002, *New roles, skills and capabilities in the knowledge—focused organisation*

BEA 004—2003, *Improving knowledge management applications through user centred design*

BEA 005—2003, *Proceedings of the knowledge management Challenge 2003—Sharing the latest in thinking and practice*

HB 165—2002, *Case studies in knowledge management Vol. 1*

BEA 007—2003, *Case studies in knowledge management, Vol. 2*

BEA 011—2004, *XML Topic maps for knowledge management*

CB 025—2004, *A guide to the project management body of knowledge (PMBOK Guide)*

HB 189—2004, *Knowledge management terminology and readings —An Australian Guide*

Other agencies

Australian Bureau of Statistics. *Measuring a knowledge-based economy and society: an Australian framework* (ABS1375.0), ABS, Canberra, 2002

Australian Government Information Management Office. Knowledge management *Better practice checklist: Vol.13 Knowledge management,* 2004

http://www.agimo.gov.au/practice/delivery/checklists/knowledge

Measuring knowledge assets. CPA Australia, Melbourne, 2001

C3 International

British Standards Institute publications (UK):

PAS 2001:2001, *Knowledge management: A guide to good practice*

PD 7500:2003, *Knowledge management vocabulary*

PD 7501:2003, *Managing culture and knowledge: Guide to good practice*

PD 7502:2003, *Guide to measurements in knowledge management*

PD 7503:2003, *Introduction to knowledge management in construction*

European Committee for Standardization (CEN) publications (Europe):

CWA 14924-1:2004, *European guide to good practice in knowledge management: Knowledge management framework*

CWA 14924-2:2004, *European guide to good practice in knowledge management: Organisational culture*

CWA 14924-3:2000, *European guide to good practice in knowledge management: SME implementation*

CWA 14924-4:2004, *European guide to good practice in knowledge management: Guidelines for measuring KM*

CWA 14924-5:2004, *European guide to good practice in knowledge management: KM terminology*

Other agencies

Danish Ministry of Science Technology and Innovation 2003, *Intellectual Capital Statements – The New Guidelines*, [Online] Available at: www.vtu.dk/icaccounts

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