

**Knowledge Management  
in the  
New Business  
Environment**

# Knowledge Management in the New Business Environment

**Dr Richard Hall  
Deputy Director (Operations)**

**a c i r r t**

**u n i v e r s i t y o f s y d n e y**

research, training & information services on the world of work

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# Preface

This project was undertaken by Dr Richard Hall of acirrt, University of Sydney and was commissioned and funded by the Australian Business Foundation.

The project was inspired by the Australian Business Foundation's call for research proposals investigating 'the new skills and capabilities essential for business leaders and managers in light of the fundamental changes underway in the broader business environment'.

In response, acirrt proposed a research project that placed knowledge and knowledge management at the forefront of the challenges being faced by Australian business and its leaders. We reasoned that the rise of knowledge management stood at the intersection of many of the most profound changes currently occurring in the global business environment, and posited that the ability of Australian firms and their managers to adapt to the new imperatives of managing knowledge more effectively would be a decisive determinant of business success in the future.

The findings of the project confirm that many of Australia's most successful firms appreciate the importance of knowledge and its management in the contemporary business environment. The initial scepticism which was associated with what might be termed 'the first wave of Knowledge Management' appears to have given way to a more sober and mature assessment of the place of knowledge and the importance of managing that knowledge for competitive success. For these organisations, knowledge management is not seen as a one-off IT initiative or a 'silver bullet' guaranteeing business success; rather the strategic management of knowledge is seen by the very best organisations as something central and critical to their day-to-day business operations.

## Acknowledgements

This project has benefited enormously from the insight and enthusiasm of the Chief Executive of the Australian Business Foundation, Ms Narelle Kennedy. Special thanks also to Ms Catharine Pruscino and Mr Jonathan Cartledge, both of the Australian Business Foundation, who each acted as project liaison officer at different times throughout the project. The project would not have been possible without the hard work and support of the project Steering Committee. All committee members read and commented on drafts of reports and sections of the final report, provided valuable feedback on emerging themes and ideas throughout the project and provided wonderful support more generally. Membership is listed at Appendix A.

Finally, thanks to all of the key informants, industry contacts, organisational managers and other project participants who selflessly gave up their valuable time to assist with the fieldwork undertaken for this project.

## About acirrt

acirrt is one of Australia's leading multi-disciplinary research organisations. Established in 1989 and based in the School of Business at the University of Sydney, the Centre is a self-funding organisation that undertakes contract research, training and the provision of information services on the world of work. As a University-based organisation, the Centre also undertakes a range of non-commercial activities to deepen knowledge and promote its diffusion. The Centre employs over 20 staff with expertise in industrial

relations, labour market analysis, human resource management, occupational health and safety and related policy areas. Since 1989 acirrt has worked successfully with a diverse range of clients and collaborators in both the private and public sectors. Details can be found at [www.acirrt.com](http://www.acirrt.com).

## About the Australian Business Foundation

The Australian Business Foundation is an independent, private sector think tank founded in 1997 and sponsored by the leading industry organisation, Australian Business Limited. It was established in response to concerns about Australia's declining position on world competitiveness benchmarks and fuelled by the urgency for fresh insights and practical intelligence to boost Australia's capabilities and global competitiveness. The Australian Business Foundation has a single mission – to conduct and disseminate ground-breaking research that advances knowledge and fosters new thinking and best practice on Australia's competitiveness, prosperity and jobs. Details of the Foundation's research can be found at [www.abfoundation.com.au](http://www.abfoundation.com.au).

Richard Hall

Sydney, 2003

# Executive Summary

## Background and rationale

The central question addressed by this project is: what is the role of knowledge and knowledge management for Australian organisations in the contemporary business environment? A secondary question concerns the role of leadership in effectively establishing and sustaining good knowledge management practices.

The dynamism and volatility of the environment in which Australian business operates can be summarised in terms of five key trends:

- Globalisation and the increasing intensity of competition.
- Changing organisational structures.
- New worker profiles, preferences and predispositions.
- Advances in information and communications technology.
- The rise of knowledge management.

Knowledge management is the cornerstone of this project because it lies at the intersection of many of the forces that characterise the new environment – it is likely to contribute decisively to competitive advantage and may well increasingly be the source of that advantage in global competition; it may help organisations respond to many of the challenges presented by changing organisational structures; it holds the promise of enabling organisations to get the most out of high talent workforces; and, of course, it relies very heavily on the effective and creative use of information and communications technology.

For these reasons, the guiding hypothesis of this project is that *organisations that manage organisational and individual knowledge well will deal best with the challenges of the new business environment.*

## Key Issues from the literature review: the links between knowledge management and business performance

Claims that Knowledge Management (KM) is critical to the performance of organisations, and that it will become increasingly critical in the future are very widespread in the literature. The link between KM and ‘the bottom line’ is almost axiomatic in the popular business literature, especially amongst those writers who are enthusiastic advocates of KM.

Despite the success stories which are also well documented in the literature, the explanation of the precise ways in which KM might contribute to the bottom line are not typically made clear. Why should we expect KM to lead to improved business performance? What are the mechanisms by which we might expect a systematic approach to knowledge to affect business performance?

One general reason for suspecting that KM might be linked to improved business performance concerns the way in which the keys to economic competitiveness have supposedly been transformed under globalisation. Globalisation is normally thought to have been associated with the greater mobility of capital, the increased transparency of market trends, product and technological developments, and the faster diffusion of inventions and new production and service provision techniques. This has meant that

traditionally critical resources – capital, raw materials, machinery, local markets, relatively low cost labour – have become relatively less important while knowledge, the capacity to innovate, problem solve, be first to market, and be flexible and nimble have all become more important. As a result, the relative value of knowledge as a strategic resource has increased under conditions of globalised capitalism.

More specifically, KM might be expected to enhance the business bottom line because of a range of increased efficiencies and savings. Hypothesised savings, increased performance or increased profitability might emerge from one or more of the following:

- Faster and more efficient problem-solving through more efficient and effective access to solutions, whether developed in-house or imported, acquired or learnt from elsewhere.
- Faster and more efficient processing of customer, client or supplier enquiries through more efficient information systems and through the adoption of best practice, standardised processes and procedures.
- Increased capacity of staff, teams and the organisation as a whole to innovate, generate new products, services, processes and techniques.

## Findings from the case studies of large successful Australian organisations

Eight organisational case studies were selected on the basis that they were identified as successful large Australian organisations, not necessarily organisations with prominent or celebrated Knowledge Management programs. The primary intent was to identify what, if anything, these successful organisations were doing in terms of the management of knowledge.

Key findings from the case studies included:

- All case study organisations were distinguished by clear strategic business objectives and a clear understanding of their competitive environment.
- Knowledge and the effective management of knowledge was seen by all organisations as critical to their competitiveness.
- These organisations tended to have a dynamic rather than a static conception of knowledge – knowledge was often seen as ‘information that can be used to act’. It must be in a form and of a kind that is accessible, relevant and ready to use.
- The key knowledge management challenges for these organisations were generally: What do we need to know? Who needs to know it? When do they need to know it?
- Successful knowledge management cannot be stand-alone – it must be supported by an appropriate ecosystem of complementary practices and processes. Those practices and processes included:
  - supportive HR policies including performance appraisal criteria that recognised knowledge management and knowledge sharing practices;
  - the use of cross-divisional teams;
  - the use of expert circles, expert networks, learning communities and communities of practice.

- Organisations tend not to brand policies and practices promoting the improved management of knowledge as “Knowledge Management”. They reasoned that knowledge management should not be seen as stand-alone, or portrayed as a ‘one-off’ initiative and that it was therefore better to simply promote knowledge management initiatives as worthwhile because of their utility and contribution to the work of individuals and the organisation, rather than because of their status as part of a “Knowledge Management” program.
- The improved management of knowledge contributes to improved business competitiveness in several ways including:
  - Allowing organisations to develop a better understanding of customer and client needs, preferences and pressures.
  - Facilitating stronger, longer-term partnership-style relationships with customers and clients.
  - Contributing to organisations’ capacity to establish and sustain their status as thought leaders.
  - Allowing organisations to drive out costs from business and production processes, improve speed and improve quality.
  - Assisting organisations to use the lessons learnt from previous jobs, projects and tasks as a means of improving their future performance.
- One of the key imperatives for many organisations is the translation of individual knowledge held by key personnel into organisational knowledge. This was being achieved through a variety of strategies including:
  - embedding routine process and procedural knowledge into standard operating procedures;
  - codifying implicit knowledge through ‘lessons learnt’ programs;
  - drawing out ‘deep’ tacit knowledge through mentoring programs.
- Organisations generate new knowledge and encourage innovation through various strategies including the provision of selective incentives and rewards. Generally these innovations tend to be proposals or ideas for new products or services, new clients, new and improved business services and new ways of using and re-using knowledge.
- Critical new knowledge is also often acquired through professional associations and international industry affiliations and standards. Formal R&D activities are relatively limited in most organisations. Nevertheless, a number of organisations had access to the international R&D facilities operated by their parent company or headquarters. The lack of formal R&D does not mean that these firms are not innovative nor concerned with both product and process innovation. Rather, process and product innovation is more often seen as part of everyday business, not identified as a separate activity or functional division.
- Organisations are strongly committed to facilitating key knowledge flows both within and beyond the organisation. Ensuring that key people and groups are in communication with other key people and groups, both within and beyond the organisation is seen as one of the prime challenges of knowledge management.

- In successful organisations knowledge management tends to be:
  - driven by business strategy;
  - predicated on efficient business processes;
  - embraced by employees; and
  - supported by HR, organisational structures and customised information technology.
- While the dividend from knowledge management investments remains difficult to measure, all organisations were confident that there was a significant pay-off associated with their knowledge management activities.

## Knowledge management in the SME sector

While KM practices are more often associated with large organisations, this study was also concerned to investigate whether the principles and practice of KM had any relevance for small to medium sized firms and organisations. The SME case studies suggest a relatively strong level of interest and a relatively high level of sophistication in the KM strategies and practices pursued by at least some SMEs.

Firms from the small to medium sized industry sector reported relatively similar knowledge management issues to those referred to by the large organisations studied. In general terms, there was a remarkable similarity in the issues, motivations, rationales and even the specific strategies reported by the SME firms as compared to the large organisations.

For example, clear business strategies were important for informing approaches to knowledge management amongst the SMEs studied.

The successful SMEs studied emerged as distinctive in the sense that they tended to be relatively agile, well integrated into international and national professional and industry associations and networks and ready to learn from customers, clients, competitors, suppliers and providers.

In general, SMEs tended to use a similar range of techniques and strategies for knowledge management as those employed by larger firms (eg: mentoring, databases for lessons learnt, standardisation of business processes) although often these were organised on a less formal basis.

The case studies demonstrate that knowledge management is as relevant for SMEs as for large organisations. Knowledge management practices need not be highly sophisticated or embedded in complex IT systems. Indeed, most of the SMEs studied achieved considerable success in the management of knowledge without investing massively in new technologies and without bringing in consultants to develop new highly sophisticated processes.

## Leadership and the management of knowledge

The project was also concerned to investigate the implications of the new imperative of managing knowledge for management in general and leadership in particular. What management skills and styles of leadership might be most appropriate for effective knowledge management? Can certain styles of leadership help stimulate innovation, the improved use of knowledge and collaborative knowledge sharing behaviours?

In general terms, there was widespread agreement amongst many of the respondents interviewed as part of this project that management support for and commitment to the management of knowledge was vital for the success of any knowledge management initiatives or practices.

When asked about the specific management or leadership qualities and characteristics that were thought to be conducive to encouraging good knowledge management practices, respondents often referred to the following:

- open and accessible management
- charismatic and inspirational leadership
- commitment to the organisation.

Both transactional and transformational leadership styles appear to be consistent with the improved management of knowledge.

Transactional management styles tend to be based on the principle of exchange – followers follow leaders who offer something in return for diligence, effort and commitment. Transactional styles might support knowledge sharing behaviour, for example, because workers might be more inclined to share where there is a direct benefit or advantage associated with sharing behaviour – such as a favourable performance review.

Transformational leadership relies on the capacity of the leader to inspire, to be considerate of the needs and interests of individual employees and offer intellectual stimulation. Again this leadership style can be linked to the preparedness of employees to innovate, share and constantly look for ways to use knowledge to add value.

More directive styles of leadership – which rely on the authority of the leader – do not seem as well suited to the encouragement of effective knowledge management. Directive styles are unlikely to make much of a contribution to stimulating staff to share knowledge, work collaboratively or contribute above and beyond traditional work role expectations.

## Knowledge management: the key challenges for Australian business leaders

In driving, sustaining and supporting knowledge management practices, business leaders face a number of significant challenges. Mirroring the larger organisational rationale for managing knowledge, senior managers need to have a very clear view of their organisation's strategic environment and goals. The recognition of the potential contribution of knowledge and knowledge management flows from that clarity of business strategic vision. Second, leaders need to be able to articulate and communicate that vision and the role of knowledge in realising that vision. Third, managers need to ensure that the organisation is able to develop and implement coherent strategies for some of the key areas of knowledge management:

- Strategies for innovation – including programs designed to stimulate the proposal of new ideas, products, services and ways of working.
- Strategies for knowledge sharing – including means of identifying key employees and instituting practices for encouraging the flow of knowledge amongst those key employees.

- Strategies for knowledge organisation – including the design and development of accessible knowledge repositories and the provision of experienced professional assistance for employees.
- Strategies for standardising business processes – including the identification of effective business processes and the embedding of those processes in routines and standard operating procedures.

## Conclusions

The picture emerging from this study is that the improved management of knowledge has a major part to play in the business success of both large and small enterprises in Australia. Knowledge management is not a technical, stand-alone activity. Rather, the imperative is to manage knowledge for better business outcomes. This is seen by successful enterprises as absolutely necessary for improved competitiveness and survival in the tough, crowded and price-sensitive markets in which they operate. The effective management of knowledge in this business environment is vital in gaining a sustained competitive advantage.

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# Chapter 1: Aim of the Project, Approach, Method and Structure of the Report

## Rationale for the project

This research project was commissioned by the Australian Business Foundation. The Foundation initially sought proposals for research on the topic of business leadership and learning. The approach taken by acirrt, University of Sydney was to propose research that linked issues of business leadership as well as individual and organisational learning to one of the most compelling developments in contemporary organisations – the increasing importance of effectively managing knowledge. The proposal argued that business leadership and organisational learning were now decisively influenced by the imperatives of knowledge management.

The inspiration for this project came from a recognition of the central critical importance of *knowledge* in the new business environment – knowledge, in two senses. Firstly, knowledge as the information, experiences, skills, aptitudes and orientations that managers need to have and develop to be effective managers and leaders and secondly, the vital importance of knowledge and its management to organisational effectiveness, employee productivity and business competitiveness.

The central question addressed by this project is: what is the role of knowledge and knowledge management for Australian organisations in the contemporary business environment?

As a first step toward answering this question, the project needed to develop an account of the character of the contemporary business environment.

## The contemporary business environment

The dynamism and volatility of the environment in which Australian business operates can be summarised in terms of five key trends:

### **Globalisation and the intensity of competition**

Globalisation, especially economic globalisation, has meant the increased permeability of boundaries and borders, the greater mobility of capital and labour, the faster transmission of ideas, the greater transparency of trends in production, service delivery and marketing and the far greater openness of markets, both domestic and overseas. These trends, particularly the exposure of Australian business to overseas competition and the need for Australian business to pursue overseas markets has dramatically intensified competition for most Australian businesses.

### **Changing organisational structures**

Over the past decade and a half, Australian and world business organisational forms and business models have been changing. Organisations have been downsizing, delayering and restructuring in a drive to become more lean, efficient, focused and agile.

Traditional bureaucratic hierarchies have been replaced by flatter, more flexible structures. This has affected both the internal and external relations of the organisation:

- Internal relations between staff have been transformed by the use of teams, by the removal of hierarchies and demarcations, as well as by the proliferation of new kinds of workers – contractors, consultants, casual workers, labour hire workers – all work alongside traditional, permanent employees.
- External relations have been transformed as the firm itself evolves from a large bureaucratic structure to becoming part of a larger, but more diffuse network of firms. Organisations are now more explicitly being conceived of as part of the supply and value chains where relations with providers and suppliers, partner organisations and customers become just as important as (and sometimes more important than) relations between the functional departments of the firm.

### **New worker profiles, preferences and predispositions**

The so-called ‘war for talent’ has emphasised the importance of competitive organisations striving to attract and retain highly skilled, highly motivated, in-demand workers. Those employees tend to be different from the employees sought by classic, mass-bureaucratic organisations. They are likely to be more mobile, more oriented to the acquisition of portable and marketable skills, competencies and experiences and more demanding of roles that are strategic and involved in decision making. Importantly, rather than seeing themselves simply as professionals or technicians skilled in the performance of a particular set of tasks, these workers are likely to be predisposed to continuous learning, teamwork, high work variety, collaboration with others at various levels within and beyond the organisation and the extension of their capacities and experiences to new challenges and opportunities.

### **Advances in information and communications technology (ICT)**

Advances in ICT have revolutionised the way in which organisations can gather, store, organise, access, utilise and communicate information. While ICT advances have fundamentally changed the way in which organisations operate and do business (for example through the installation of computer-based ERPs, CRM technologies, etc.) and are transforming the shape and structure of organisations (through for example e-commerce and B2B applications), they have also multiplied the potential forms of communication that can be exploited within and between organisations. Email and the internet are the now-familiar surface forms; virtual professional and business communities, discussion lists, chat rooms, on-line learning facilities, shareable databases and a variety of intranet and extranet applications are becoming increasingly critical forms of communication. More than just facilitating flexible and efficient communication and collaboration between work colleagues, these technologies offer the opportunity to further enhance the access of workers and managers to information and, most importantly, knowledge.

### **The rise of knowledge management**

Knowledge management (KM) can be defined as the creation and maintenance of a work and learning environment that ‘fosters the continuous creation, aggregation, use and re-use of both personal and organisational knowledge in the pursuit of new business value’ (Xerox 2001). Knowledge includes both explicit knowledge (often recorded in hardcopy or electronic documentation of some kind) and tacit knowledge – the ways of doing things, the experiences, impressions and lessons learnt that people carry around in

their heads. Much of the contemporary interest in KM derives, of course, from the recognition of the increasing business value of effective and efficient management of the key resource possessed by most firms – organisational knowledge. The challenge for organisations and their managers is to move from a situation where mission critical knowledge is ‘locked up’ in the minds of key personnel to one where it is recognised and rewarded as an organisational resource, available and accessible to all members of the organisation.

KM is the cornerstone of this project because it lies at the intersection of many of the forces that characterise the new environment – it is likely to contribute decisively to competitive advantage and may well increasingly be the source of that advantage in global competition; it may help organisations respond to many of the challenges presented by changing organisational structures; it holds the promise of enabling organisations to get the most out of high talent workforces; and, of course, it relies very heavily on the effective and creative use of ICT. For these reasons, the guiding hypothesis of this project is that *organisations that manage organisational and individual knowledge well will deal best with the challenges of the new business environment.*

## Imperatives for business leadership in the new environment

Knowledge management is often thought of as a technical issue – ‘how should the documentation, records and information flow in an organisation be cost-effectively managed?’ or ‘how can knowledgeable personnel be retained in the organisation?’ But the issues and problems that surround knowledge management are not always amenable to technical solutions. Knowledge has to be *managed* for organisations to prosper in the new business environment and management (and, in particular, leadership) is not simply technical.

A secondary question addressed by this research therefore concerns the potential contribution of management, and, in particular, leadership styles to effective knowledge management in the new business environment. Much has been written in recent years about leadership, however comparatively little research has been undertaken on the possible links between leadership styles and effective knowledge management.

Of particular interest here is the potential contribution of transformational leadership to knowledge management. Transformational leadership, or leadership that ‘motivates followers to ignore self-interests and work for the larger good of the organisation to achieve significant accomplishments’ (Black and Porter 2000), appears to be particularly suited to meeting the challenges of knowledge management. Transformational leadership appears to have the capacity to meet the twin goals of enhancing managerial leadership and encouraging open communication.

## Project Summary and method

The central question guiding this research concerns the role of knowledge and knowledge management for Australian organisations in the new business environment. As noted above, the secondary question concerns the role of leadership in effectively establishing and sustaining good knowledge management practices.

The research method, developed in consultation with the project Steering Committee was structured according to a number of phases.

## **Phase 1: literature review**

This phase reviewed a select literature on knowledge management, in particular focusing on the links between knowledge, knowledge management and business outcomes. The main purpose of the literature review was to identify some of the likely dimensions on which organisations might be seeking to use knowledge to achieve improved performance, productivity and business outcomes. The resultant issues paper was then circulated within the project Steering Committee for discussion and used to inform the drafting and development of the interview protocols and other instruments for the subsequent phases of the project.

## **Phase 2: case studies of large organisations**

It was determined that the most appropriate method for investigating the central research questions would be to conduct detailed case studies of a number of large Australian organisations. In consultation with the project Steering Committee, it was decided that the selection of case studies should:

- reflect organisations from a range of different industries and sectors;
- focus on successful organisations, rather than on organisations that had a particular reputation or track record in the field of knowledge management.

It was noted that case studies of famous KM firms had already been undertaken. It was also noted that as the central focus of research was on the question of the role of knowledge and knowledge management in organisations coping with the new business environment, then the unit of analysis should be the successful Australian organisation, rather than the successful KM organisation.

Organisations were identified largely through the references and recommendations of the members of the Steering Committee and their contacts. It was agreed that eight organisational case studies should be undertaken. Nine organisations were approached to participate; one organisation declined to participate on the basis that they were currently undergoing a major organisational restructure. The final eight large organisations were:

- Accenture Australia
- Wyeth Australia
- Kimberly-Clark Australia
- Corporate Express
- PA Consulting
- Business Services Group – Roads and Traffic Authority
- Baryon Pty Ltd and GPC Electronics
- AMP Henderson Global Investors

Interview protocols to guide interviews with senior managers, middle managers and employees were developed in collaboration with the Steering Committee. Drafts of interview protocols, including draft questions, were circulated to and debated by all members of the Steering Committee.

Interviews were conducted on-site with managers and other employees of the eight case study organisations between February and August 2002. Case Study reports were complemented by data and information gathered from various company documents,

reports and data sources. All case study draft reports were circulated to and commented on by representatives from the respondent organisations.

The case study reports on each of the eight organisations are in the Supplementary Volume of this report.

### **Phase 3: case studies of small to medium sized enterprises (SMEs)**

From the outset it was recognised that findings drawn from case studies of large organisations would be of potentially limited relevance to the important SME sector. In order to address this limitation, it was agreed that the project should also include less detailed case studies of a selection of SME firms. SME firms were selected from the ranks of the membership of Australian Business Limited and drawn from the industry sectors most closely corresponding to those from where the large organisations were drawn. SME respondents were sent a brief summary of the preliminary findings from the large organisational case studies as a background to the interviews. The interviews with SMEs were conducted between August and October 2002. The final eight SME case study organisations were:

- Jones Condon Chartered Accountants Insolvency Practitioners
- The ARMS Group
- TECRA International
- Planit
- ComLearnCo<sup>1</sup>
- Stoneworld
- Frontline Business Services
- Prowess Development

The case study reports on each of the eight SMEs are also contained in the Supplementary Volume of this report.

### **Phase 4: consultations with Australian business leaders**

The preliminary findings drawn from the large organisational case studies and the literature review phase of the project were presented to a number of meetings of Australian business leaders. These workshop style meetings were designed to seek verification of the preliminary findings, and identify issues specifically for Australian business leaders. Three workshop style presentations were conducted between July and September 2002.

## **Report structure**

This report is structured as follows:

- Literature review is summarised in Chapter 2.
- The findings from the case studies of large organisations are summarised in Chapter 3.

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<sup>1</sup> Not the company's real name

- The findings from the case studies of small to medium sized organisations are summarised in Chapter 4.
- The implications of the findings for Australian business leadership are also addressed in Chapter 4.
- The conclusions of the study are outlined in Chapter 5.
- The Supplementary Volume of the report contains the full reports on all of the case study organisations. Chapter 1 presents the large organisation case studies and Chapter 2 contains the reports on the SMEs. The Supplementary Volume is also available from the Australian Business Foundation website at: <http://www.abfoundation.com.au>

## Chapter 2: Literature Review and Background Issues

This chapter does not attempt to provide a comprehensive literature review of the vast literature on knowledge management. Rather, the chapter attempts to distil from the literature some of the most pertinent issues for the project related to knowledge, knowledge management and its links with business performance.

### The Knowledge Management (KM) literature

Interest in KM can partly be traced to an interest in the learning organisation (Senge 1990), although the KM literature tends to be more focused on KM as a business model, whereas research on the learning organisation has traditionally had a strong developmental flavour.

Like the learning organisation literature however, much of the KM research literature tends to be very practitioner focused, optimistic and tends to strongly advocate KM as a critical business imperative. It tends to be 'overwhelmingly optimistic and even campaigning in nature and tone' (Storey and Barnett 2000).

Most of the research on KM tends to be from the Information Technology (IT) or Information Systems (IS) perspective rather than being informed by management or organisational studies considerations, ideas and models.

How can knowledge management be analysed?

### Definitions and meanings

Definitions are important up to a point. There is little to be gained about trying to determine the *best single* definition of KM however. The point is that KM can mean different things to different stakeholders. For example, for IT it might mean new document and content management software; for R&D it might mean new opportunities for fostering creative thinking; for senior management it might mean streamlining and automating the central business processes.

*Knowledge management covers three main knowledge activities: generation, codification, and transfer... [K]nowledge is a fluid mix of contextual information, values, experiences and rules. It comes in many forms, including process knowledge (how-to), catalogue knowledge (what is) and experiential knowledge (what was). (Ruggles 1996)*

In particular there is a commonly reported tension between an IT/IS perspective on KM which emphasises data capture, mining and storage and a developmental perspective which emphasises the skills for a learning organisation, sharing and communication strategies and individual and organisational development.

Some of the most useful definitions or conceptions of KM appear to strongly link knowledge and its use with business or organisational goals:

*Knowledge management is a multi-disciplined approach to achieving organisational objectives by making the best use of knowledge – it focuses on processes such as acquiring, creating and sharing knowledge and the cultural and technical foundations that support them. The aim of knowledge management is to align the processes with organisational objectives (Standards Australia 2001)*

The conviction that KM is a business model, rather than merely a technical IT exercise or a developmental exercise is strong within the consultancy industry and this suggests one of the principal attractions for managers. “KM is the ability of an organisation to leverage collective wisdom to increase responsiveness and innovation” (the Delphi Group quoted in Xerox 2001).

## **What is Knowledge Management?**

### Binney’s KM Spectrum

In confronting the variety of meanings and conceptions of KM, Binney (2001) has argued for a ‘KM spectrum’ which identifies a range of different KM elements. Binney distinguishes:

- Transactional KM - where the knowledge is embedded in the use of the technology. For example, a customer service operator dealing with an enquiry will receive knowledge in the form of a described course of action previously taken in relation to a similar scenario.
- Analytical KM - where trends, patterns are derived from an immense amount of disparate data.
- Asset Management KM - where relatively complex knowledge is codified and where intellectual property is identified, used and protected.
- Process-based KM - where work processes, procedures and methods that have been used in the past are codified and rendered accessible.
- Developmental KM - where learning and training strategies are used to develop worker and organisational knowledge.
- Innovation/Creation KM - where environments are encouraged for cross disciplinary collaboration and innovation.

Some of the applications and processes associated with each of these dimensions of KM are shown in Figure 1.

**Figure 1: KM Applications Mapped to the Elements of Binney’s KM Spectrum**

	Transactional	Analytical	Asset Management	Process	Developmental	Innovation and Creation
Knowledge Management Applications	<ul style="list-style-type: none"> <li>▪ Case Based Reasoning (CBR)</li> <li>▪ Help Desk Applications</li> <li>▪ Customer Service Applications</li> <li>▪ Order Entry Applications</li> <li>▪ Service Agent Support Applications</li> </ul>	<ul style="list-style-type: none"> <li>▪ Data Warehousing</li> <li>▪ Data Mining</li> <li>▪ Business Intelligence</li> <li>▪ Management Information Systems</li> <li>▪ Decision Support Systems</li> <li>▪ Customer Relationship Management (CRM)</li> <li>▪ <i>Competitive Intelligence</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ Intellectual Property</li> <li>▪ Document Management</li> <li>▪ Knowledge Valuation</li> <li>▪ Knowledge Repositories</li> <li>▪ <i>Content Management</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ TQM</li> <li>▪ Benchmarking</li> <li>▪ Best practices</li> <li>▪ Quality Management</li> <li>▪ Business Process (Re)Engineering</li> <li>▪ Process Improvement</li> <li>▪ Process Automation</li> <li>▪ Lessons Learned</li> <li>▪ Methodology</li> <li>▪ <i>SEI/CMM, ISO9XXX, Six Sigma</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ Skills Development</li> <li>▪ Staff Competencies</li> <li>▪ Learning</li> <li>▪ Teaching</li> <li>▪ Training</li> </ul>	<ul style="list-style-type: none"> <li>▪ Communities</li> <li>▪ Collaboration</li> <li>▪ Discussion Forums</li> <li>▪ Networking</li> <li>▪ Virtual Teams</li> <li>▪ Research and Development</li> <li>▪ <i>Multi-disciplined Teams</i></li> </ul>

Source: Binney (2001).

Binney’s categorisation of KM elements and the links between those elements and a fairly comprehensive range of concrete applications provides a useful structure for assessing and characterising the KM strategies and approaches of particular organisations.

It is also possible to hypothesise relationships between organisation type and emphasis of particular kinds of elements. The kinds of KM elements emphasised in any particular case might also be linked to particular kinds of leadership styles or demands.

### Standards Australia’s KM Framework

Frameworks provide another way of attempting to understand, interpret and characterise particular KM orientations. The Standards Australia framework is based on three stages or steps:

1. Knowledge Alignment. The role of knowledge in the organisation is established in this phase. Priorities for the ways in which KM can help add value to the organisation are settled and the business case for a KM initiative is established. A cost/benefit analysis is obviously critical to the evaluation of any KM initiative and one of the important features of this framework is its recognition that the metrics for the evaluation of any KM initiative might include ‘operational’ or ‘social’ criteria as well as ‘financial’ criteria. The framework also notes the role of intangible accounting – a broader approach to accounting that includes intangibles such as human intangibles (skills, experience, attitudes of staff), relational intangibles (reputation, goodwill, contacts, etc.) and structural intangibles (management and organisational style, routines and procedures).

2. Knowledge Processes. This phase involves an investigation of what knowledge exists internally, what knowledge must be acquired from outside or developed and generated in-house. This step involves sharing both tacit and explicit knowledge, acquiring knowledge from outside the organisation and a series of processes designed to ensure that knowledge is created through the nurturing of learning communities, ensuring the organisation is learning from experience and innovating continually.

3. Knowledge Foundations. This step is centred on ensuring that the cultural, technical and procedural foundations for KM are put in place. Cultural barriers to the introduction of a KM initiative are invariably identified in the research as being amongst the most

intractable. The implementation of KM clearly must be seen in terms of a change management process demanding a detailed change management plan. Technical and procedural foundations are also critical – although, one of the recurrent themes of research is that KM initiatives are likely to be more effective and successful where they are not dominated by the technology and are not IT-driven, but rather driven by the organisational objectives.

## Links between KM and business performance

The hypothesised link between KM and business performance (or organisational performance) is one of the critical issues for this research project. Is there evidence to support the contention that effective KM is critical to performance?

Claims that KM is critical to the performance of organisations, and that it will become increasingly critical in the future are very widespread in the literature. The link between KM and ‘the bottom line’ is almost axiomatic in the popular business literature, especially amongst those writers who are enthusiastic advocates of knowledge management.

*KM is becoming a core competence that companies must develop in order to succeed in tomorrow's dynamic global economy (Skyrme and Amidon 1998)*

*...a firm's competitive advantage depends more than anything on its knowledge (Prusack 1997)*

*...knowledge has become the most important factor in economic life (Stewart 1997)*

Other claims are based on more rigorous research and empirical investigations. The case studies commissioned by the Professional Services Division of Standards Australia, for example, ‘show that a focus on knowledge leads to demonstrable bottom-line results’ (Standards Australia 2001: 4). Some examples from the case studies are shown below:

*The Best Practice Replication Program at **Ford** is based on sharing innovations in the vehicle design process amongst 37 plants across the world. The resulting improvements in concept-to-production times have been valued at US\$1.25 billion.*

***Chase Manhattan's** Relationship Management System, which aimed to streamline managers access to customer and product data, was attributed with increasing customer calls and sales by over 25%*

***Texas Instruments** achieved increased semiconductor production rates through an incentive scheme based on world-wide yield (not individual plant performance) and a ‘not invented here but I did it anyway’ award scheme to encourage the appropriation of best practice and innovative methods. It was estimated that the program led to savings of US\$1.5 billion and increased revenues of a similar magnitude.*

Despite the success stories, the explanation of the precise ways in which KM might contribute to the bottom line are not typically made clear in the research literature. Why should we expect KM to lead to improved business performance? What are the mechanisms by which we might expect a systematic approach to knowledge to affect business performance?

First, KM might be expected to have the potential to ensure improved business performance because of the way in which economic competitiveness has been transformed under globalisation. This is a familiar story. The greater mobility of capital,

increased transparency of market trends, product and technological developments, inventions and production and service provision techniques has changed the relative value of different resources. Traditionally critical resources – capital, raw materials, machinery, local markets, relatively low cost labour – have become relatively less important while knowledge, the capacity to innovate, problem solve, be first to market, be flexible and nimble have all become more important. As a result, the relative value of knowledge as a strategic resource has increased.

More specifically, KM might be expected to enhance the business bottom line because of a range of increased efficiencies and savings. Hypothesised savings, increased performance or increased profitability might emerge from one or more of the following:

- Faster and more efficient problem-solving through more efficient and effective access to solutions, whether developed in-house or imported, acquired or learnt from elsewhere.
- Faster and more efficient processing of customer, client, or supplier enquiries through more efficient information systems and through the adoption of best practice, standardised processes and procedures.
- Increased capacity of staff, teams and the organisation as a whole to innovate, generate new products, services, processes and techniques.

Chong et al's survey of large, knowledge-intensive UK firms reveals that managers perceive the main benefits associated with KM to be improved client service, enhanced communication flow and shorter problem solving time. The percentage of managers mentioning a range of benefits is shown in Figure 2.

Despite the apparent confidence of UK managers in their conviction that KM helped business performance, Chong et al's research also suggests that relatively few organisations were able to accurately monitor the costs or benefits of their KM initiatives. About half the survey respondents were unable to even estimate where KM expenditure actually went and 71 per cent reported that they did not monitor or did not have the capacity to track operational and knowledge losses (2000: 374). Given these limitations it is likely to be impossible for most firms to accurately calculate a ROI on their KM investments.

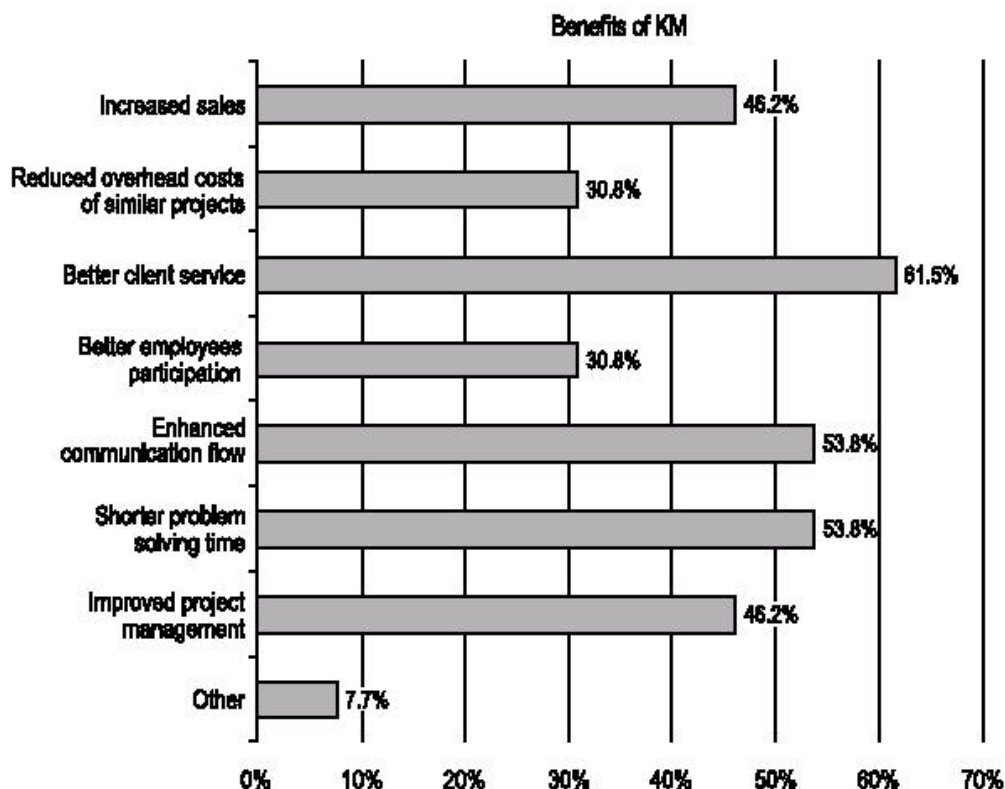
## Dimensions of success and failure

It has been claimed that KM initiatives have a high failure rate. Lucier and Torsiliera have argued that 84% of all KM programs will fail to have any significant impact and that a high proportion of programs are cut back after just two to three years (Lucier and Torsiliera quoted in Storey and Barnett 2000).

Reasons for failures or problems include (Storey and Barnett 2000):

- imprecise business objectives;
- incomplete program architecture that fails to fully harness the links between organisational change and learning;
- insufficient focus on one or two strategic business priorities;
- initial management sponsorship not sustained in the longer term.

**Figure 2: Benefits of Knowledge Management**



Source: Chong et al (2000): 372.

Storey and Barnett’s (2000) research indicates that, after the initial honeymoon period of implementation, KM initiatives often become swamped by other more pressing imperatives. At this point the KM initiative or program becomes a ‘nice to have’ rather than a mission critical transformation. This often appears to be the case because the KM approach has been grounded in the technology that is available rather than in the firm’s strategy. KM has been seen by management as an ‘add-on’ or an enhancement of current practices and procedures and KM simply means improving the efficiency of data, information, documents and, perhaps, knowledge retrieval and usage.

One of the other key themes in the research literature on the success and failure of KM initiatives concerns the pivotal role of corporate culture. As noted above in the discussion of the Standards Australia framework, cultural opposition amongst employees (and managers) is one of the key barriers to successful KM. Genuine KM clearly involves some degree of commitment to knowledge sharing, mutual support and communication. These attributes are likely to be predicated on a workplace culture that is characterised by a high degree of trust, a preparedness to seek out and proffer solutions and suggestions, a high degree of support for learning and a pro-active, self-motivated approach to problem-solving and innovation.

The critical link between culture and KM success highlights the role of leadership and its potential relationship to KM.

*Technology alone won’t make a person with expertise share it with others. Technology alone won’t get an employee who is uninterested in seeking knowledge to hop onto a keyboard and start searching or browsing. The mere presence of technology won’t create a learning organisation, a meritocracy or a knowledge-creating company (Davenport and Prusack 1998)*

Relatively little research has been conducted on the issue of management & leadership styles & approaches that might be appropriate for organisations in a contemporary era where knowledge is *the* critical resource and KM is *the* managerial imperative.

Mintzberg (1998) has argued that knowledge workers, at least, do not need empowerment from management, rather they need inspiration; they need to be 'infused with feeling and energy'. Storey and Barnett (2000) suggest that one way to do this might be through the encouragement of 'learning communities and 'communities of commitment'. Somehow this leadership style needs to be able to encourage individuals and teams to transcend the understandable individual inclination not to surrender valuable information, expertise and tacit knowledge.

But KM is not just for knowledge workers. Simply instilling a cooperative, learning culture amongst the 'symbolic analysts' of the organisation is unlikely to ensure success. Standards Australia identified a long list of potential cultural barriers within the organisation including:

- Hoarding knowledge.
- Believing that no-one in the organisation is interested in your knowledge.
- Dismissal of the value of innovations not developed in-house.
- Preference to 'reinvent the wheel' rather than seek to use others' experience.
- Rigid adherence to 'one way of doing things'.
- Management resistance to the sharing of information.
- Resistance to change.
- Autocratic leadership.
- Change fatigue.
- Technology dominates the KM process.

The success or failure of overcoming cultural obstacles and barriers is not likely to be simply determined by a management style that recognises the importance of corporate culture, values the importance of learning and creates incentives for workers to share (as important as these qualities are likely to be). Rather, the KM research literature and its emphasis on the problems of culture, appears to point to the recognition of KM initiatives as critically important change management events. To the extent that successful KM is based on successful change management, the principles of change management are instructive. Described as 'cultural management' by Standards Australia, the principles include:

- Clear articulation of the vision of KM.
- Development of a high level of trust amongst staff.
- Demonstrated commitment of management to the principles of KM.
- Good communication structures and structures that facilitate the active involvement of staff in the design of KM strategies and initiatives and projects.
- The development of a comprehensive set of incentives that reward staff for contributions to the more effective management of knowledge.
- The integration of KM as part of the routine and regular responsibilities of all staff.

# Chapter 3: Summary of the Case Study Findings

## Introduction

This section summarises the findings of the case studies of large organisations reported in the Supplementary Volume of the report. The organisational case studies were selected on the basis that they were identified as successful large Australian organisations, not necessarily organisations with prominent or celebrated Knowledge Management programs. The intent was to identify what, if anything, these successful organisations were doing in terms of the management of knowledge.

This chapter focuses solely on some of the key findings from these organisational case studies. More examples and illustrations of the practices identified here are provided in greater detail in the individual case study reports in the Supplementary Volume.

## All organisations distinguished by clear strategic business objectives and a clear understanding of their competitive environment

Each and every one of the case study organisations operates in extremely competitive business environments. Very often these competitive environments are characterised by increasingly intense global competition.

Most organisations reported that the pace of change in their business environment was also constantly accelerating – new products, new technologies, new customer and client preferences, new markets and indeed, entirely new clients. For example, Baryon/GPC reported that the global electronics manufacturing market in which they operate is constantly in a state of major flux as competitors, customers, products and technologies come and go at a staggering rate.

*The global and regional market for electronic and connectivity products and services has become increasingly competitive in the past few years – widespread industry consolidation reflects the increasingly hostile environment.*

*The market environment for the Baryon companies is made even more challenging by the pace of change characteristic of the electronics and telecommunications sectors in the past few years. The entire dynamics of the industry are now prone to change every six to twelve months. Given this pace of change, key management issues tend to be strategic rather than operational – it follows that critical knowledge is, therefore, strategic information about the nature and direction of the electronics and telecommunications industries rather than operational knowledge. Whereas a quality model, for example, might have been appropriate in the past where retaining important customers was the major imperative, the key issues for the business are now likely to be what future customers will look like. Customers, even very large customers, are not necessarily going to be long term customers because they may well no longer exist in six or twelve months time.*

Organisations like Baryon need to have a clear vision of where the market is heading. Not only is this seen as essential for the survival of companies like Baryon, this industry

intelligence is also seen as a critical form of knowledge for adding value to the services provided by the company.

While the strategic business objectives for each case study firm vary depending on their industry and market position, what distinguishes these firms is the clarity of their objectives and vision.

Several organisations deliberately pursued strategies based on building the 'value-add' component of their services or products. Most reasoned that there was little future for their business in an increasingly globalising environment in trying to compete in high-volume, low-cost markets.

Virtually all organisations saw their future clearly in terms of developing niche markets and/or in developing products and services that were distinctive and high-value added for which clients and customers would be prepared to pay a premium. Invariably, the improved exploitation of knowledge was seen to play a major part in achieving those goals.

## Knowledge and the effective management of knowledge seen as critical to competitiveness

The organisations studied in this research were united in their conviction that knowledge is *the* key resource for competitiveness in the current era. What knowledge organisations possess, and more importantly, the effectiveness with which organisations can exploit that knowledge, is now more important than the traditional sources of competitive advantage – capital, equipment and infrastructure, technology, access to markets and sources of supply, and the like.

The competitive imperative of knowledge was seen to be driven by a number of forces, generally attributable to globalisation and the more open and accessible proliferation of technologies, techniques and trends.

It was commonly observed that new technologies, new products or services, new production processes or new approaches to service provision could only give firms a very temporary strategic advantage. In the global world, competitors would soon have access to the same technologies, products, services and strategies. Longer-term competitive advantage could only be achieved through the strategic exploitation of the knowledge of the organisation and its people – leveraging knowledge for competitive advantage.

The precise ways in which the case study organisations saw knowledge and the management of knowledge contributing to improved competitiveness are discussed below.

## Successful organisations have a dynamic rather than a static conception of knowledge

Leading Australian organisations no longer see knowledge and information in traditional terms - something that is gathered, stored and carefully protected either in archives or libraries or in the heads of 'knowledgeable' individuals. Rather, all the organisations studied here see knowledge as a critical and dynamic resource. Central to this conceptualisation of knowledge is the idea that to be useful, knowledge must be in a form that facilitates its timely use. Nowhere was this conception of knowledge more clearly understood than at Accenture.

*'Knowledge is information that you use to act'. According to respondents at Accenture the key to understanding the contemporary role of knowledge in businesses is to understand that it is information that can be used to act. This is in contrast to a more traditional understanding of knowledge as something that is 'stored' and 'protected' by information 'gatekeepers'. This implies that the key to knowledge management is the accessibility and timely availability of knowledge.*

*It was also recognised that:*

*The need for timely knowledge was greater than at any time in the past;*

*The sheer volume of data, information and knowledge meant that clients and users all faced the potential problem of being overwhelmed by knowledge;*

*The 'shelf life' for knowledge was continually getting shorter;*

*Users of knowledge invariably had less time to learn than was previously the case and knowledge now had to be summarised and packaged in highly accessible forms to be useful.*

In keeping with this pragmatic orientation to the conception of knowledge, these firms also tended to subscribe to fairly simple and clear conceptions of knowledge management. For example, one manager at Corporate Express defined knowledge management as 'the provision of the right information and knowledge to the right people at the right time'. On deeper analysis, the apparent simplicity of this definition is deceptive – the definition in fact points to the key knowledge management challenges that proved to be shared by all the case study organisations.

The key knowledge management challenges: What do we need to know? Who needs to know it? When do they need to know it?

As the vignette from the Accenture study extracted above suggests, in the current environment all organisations confront the possibility of being swamped by the sheer volume of information, data and knowledge that is available. In highly competitive and dynamic environments, these organisations also recognise that they cannot attempt to 'know everything'. As a result information, data and knowledge needs are identified in terms of the organisation's strategic business goals – invariably knowledge priorities are themselves defined by the organisation's broader strategy. The very different examples of Wyeth Australia and Corporate Express illustrate the point.

*Whereas, traditionally, Wyeth produced and distributed infant formula and had a very wide portfolio of prescription medications, over the past few years the company has divested itself of many of its products. Wyeth has now moved into new therapeutic areas with products such as an anti-depressant and a gastro-reflux medication as well as new vaccines and a product for rheumatoid arthritis. This has implied the need to develop new knowledge and new skills in these therapeutic areas.*

*Corporate Express's strategic goals over the past few years have been aimed at further strengthening its engagement with its customers and driving a stronger customer focus in all its operations. As a result its knowledge needs have increasingly been defined in terms of developing a better understanding of customer needs, preferences and environments.*

The effective management of knowledge is essentially about people. One of the challenges recognised by many firms studied centred on the identification of the people

with key knowledge and the people who need access to key knowledge. Many organisations recognised the challenge of identifying its most knowledgeable and experienced employees and developing strategies for ensuring that their knowledge is not lost to the organisation when they leave. In most cases these ‘national living treasures’ (as one respondent called them) were readily identified by senior managers in the organisations.

In other cases the identification of key employees was also predicated on the organisation’s strategic business goals. Where organisations were committed to the development of new products or services, for example, sales, marketing and business development managers were routinely identified as possessors of key forms of knowledge.

The third challenge recognised by all the case study organisations concerned the imperative of managing knowledge so that it was readily accessible. Many organisations saw the main rationale for knowledge management as being to ‘make it easier for people to do their jobs’. This implied that knowledge sources, repositories and facilities had to be user-friendly and high quality. At Accenture it has been recognised that the collection, categorisation and design of the content of its central knowledge repository is a critical function that needs to be undertaken by highly experienced professionals. This represents a major investment, but one which Accenture sees as vital.

*The Knowledge Xchange is the centrepiece of Accenture’s KM system. It is a collection of databases and websites accessed via a portal, that supports the sharing and using of knowledge and resources throughout the organisation.*

*The repositories include executive summaries of previous projects, key deliverables from engagements, lists of available tools and methods, profiles of subject matter experts, links to training and development courses and resources, discussion databases and external and internal research resources.*

*While the Knowledge Xchange is an extremely valuable knowledge resource for Accenture, it is apparent that its development has had to be carefully managed and resourced.*

*The Knowledge Xchange was initially driven by technology; in its first iteration it provided supporting technology and a place to gather and store information that needed to be shared across the organisation. Contributions were encouraged through the use of incentives.*

*After a number of years of growth, the company realised that it had a large but relatively unwieldy set of databases and the next phase involved a long process of editing, refining and reclassifying the knowledge on the Knowledge Xchange. Accenture now has a powerful and comprehensive knowledge tool and resource that is critical to the company’s capacity to store, manage, share and use analytical and other knowledge.*

*Analytical knowledge, or knowledge and intelligence that is drawn from the experiences of particular client assignments, is one of the most important forms of knowledge for Accenture. Whereas previously this kind of knowledge may simply have been collected and added to a relatively static database or library, Accenture now concentrates on more highly skilled and operationally experienced KM professionals interpreting, assessing and classifying this kind of knowledge. Typically these KM professionals will:*

*Interpret the material drawn from a project;*

*Assess the utility of the material for future proposals or projects (subject to client confidentiality);*

*Distil the material into an executive summary;*

*Catalogue the material appropriately;*

*Decide to act on the knowledge by, for example, developing a training course or devising some other means of promoting, sharing or communicating the knowledge.*

*In order to achieve this more developed utilisation of knowledge, Accenture now employs fewer but more highly skilled and experienced KM professionals who increasingly come from a consulting and/or industry background. Accenture has been able to use fewer staff in these roles partly because technological improvements have meant that there is less need for manual intervention. Nevertheless, it was conceded that staffing this analytical knowledge management function with experienced and relatively senior staff represented a major resource commitment by the company to knowledge management.*

Successful knowledge management cannot be 'stand-alone' - it needs to be supported by an appropriate 'ecosystem' of complementary practices and processes

Most case study organisations agreed that knowledge management cannot be seen as an independent, self-sustaining or self-contained initiative that an organisation simply implements and treats as an autonomous program. On the contrary, virtually all organisations recognised that the effective management of knowledge was something that had to permeate everything that the organisation did. The commitment to integrating knowledge management principles, considerations and practices into all the organisation's activities was not, however, simply rhetorical. All organisations revealed an ensemble of practices and policies that served to support and sustain the effective management of knowledge.

### **HR policies**

Most of the organisations reflected their commitment to the management of knowledge and the encouragement of knowledge sharing in particular in their performance management and appraisal systems. Organisations such as PA Consulting identify knowledge sharing behaviour as a key indicator in their performance appraisals of all staff.

*Performance management at PA includes routine assignment reviews conducted at the completion of each project. Individuals are appraised according to their operating capability and performance, client management capability, and openness in information sharing. In this way, assignment managers conducting these reviews are directed toward considering the information and knowledge sharing behaviours of all consultants on the team. Project review appraisal data feeds into the half yearly and annual performance appraisals for all staff, so any issues around knowledge sharing will also emerge at the more comprehensive performance appraisals. 360 degree performance appraisals are used throughout PA and knowledge sharing behaviour is one of the key dimensions on which subordinates and colleagues at an equivalent level (as well as supervisors) routinely evaluate professional staff.*

Similarly, at Accenture knowledge sharing is identified as a key performance indicator for particular key senior managers and is a performance appraisal criterion for all professional staff.

*The performance management system at Accenture operates at a number of levels to encourage knowledge sharing. First, certain key partners and associate partners (at least one for every service line) are nominated as 'capability development leads'. The job descriptions for these leads mandate that a specific portion of their time be spent on capability development. Capability development includes identifying the skills required in the service line or market unit, what training is needed, how the knowledge base and expertise of staff should be built and which subject matter experts can be brought in to advise on methods and tools. Evidently this ensures significant senior level support for knowledge management processes, knowledge sharing and associated training and development activities. Second, the performance appraisal criteria for professionals include 'developing others' and 'knowledge contribution' as key measures. These criteria are also used when assessing promotion candidates. For example, a Manager seeking promotion to Associate Partner would have to demonstrate his or her own knowledge sharing behaviours as well as illustrating how he or she had encouraged or enabled others to develop knowledge sharing skills. Under these circumstances then, Managers have a vested interest in contributing to knowledge sharing. Third, designated Knowledge Champions are evaluated according to their performance in contributing to knowledge sharing.*

Other organisations have also specified 'innovation targets' typically by specifying a target percentage of revenues or products and services that must be 'new'. For example, at Utilux, the company formerly owned by the corporate entity now known as Baryon, the main driver for innovation was the innovation rate target - 30% of all products had to have been developed within the past three years. The target of 30% new products was established as one of the four KPIs for all businesses in the group. This was further reinforced by the identification of innovation as one of the six values of the organisation.

Similarly, at AMP Henderson Global Investors, the company has an explicit corporate goal that by 2005 at least 20% of the company's revenues must come from new products or from new distribution arrangements.

### **Work organisation and the use of cross-divisional teams**

One of the most popular structural and organisational strategies favoured by these companies as a means of encouraging knowledge flows across the organisation is the use of cross-functional or cross-divisional teams. These large organisations have recognised that their traditional functional or divisional structures are not always appropriate for ensuring that product development, service or process reviews or other initiatives gain sufficient input from representatives from a wide range of functional groups. Cross-functional and cross-divisional teams are routinely used to ensure that all relevant functions participate in new initiatives and to establish knowledge flows and communication networks across the organisation. In a number of cases organisations have established key teams around specific products or services.

At Kimberly-Clark Australia Category Management Teams include representatives drawn from divisions such marketing, sales, operations, finance and human resources and meet regularly to develop strategies around specific product areas or 'categories'. The category development teams:

- develop Category Development Plans which set out goals, strategies and timelines;
- are charged with the responsibility of ensuring that their plans reflect the interests of a wide range of internal and external stakeholders;
- create the foundations for learning communities that facilitate the sharing of knowledge and information from the perspectives of the different divisions which have an interest in the particular product category.

### **Other ways of facilitating communication, networking and recognition of cross-organisational interdependencies**

Expert circles, expert networks, learning communities and communities of practice are also widely used by many of these firms as a means of creating the conditions under which staff come to know and understand the workings of other parts of the organisation. These structures help build knowledge sharing practices between functional groups and areas that might not otherwise be aware of each others' activities. They allow the insights and knowledge of key employees to be shared with others and they can also help establish networks that employees can rely on in the future.

For most organisations establishing the infrastructure or framework for knowledge sharing and learning communities is relatively easy; more challenging is the development of the means of actually encouraging heavily-committed employees to contribute to those communities. In most cases successful arrangements were driven by strong incentives delivered through the performance appraisal system and a recognition that knowledge sharing must be seen by employees as a 'two-way process' – employees need to see that they can get something out of the network, community or collaborative process as the quid pro quo for their participation. Accenture, for example, utilises its technology, the KX databases and the logic of reciprocity to draw employees into expert networks.

*KM has had significant success in developing networks or experts within Accenture to ensure that the company maintains a high profile in thought leadership. Whenever a new area of practice is identified, KM sets about establishing an expert network. Expert networks are built up through two methods. First, a KM professional in the area might begin assembling a network through information provided by partners in different locations working in different parts of the business. KM might then organise a series of conference calls to establish the network. As the work of the network matures, KM will organise regular datacasts on the relevant topic, whereby staff are invited to dial in and listen to on-line discussions amongst the members of the expert circle. Secondly, Accenture uses the discussion databases on the Knowledge Xchange to establish and encourage expert networks and develop them into communities of practice. Anyone accessing one of the discussion databases on the Knowledge Xchange is first required to complete a personal contact sheet, which, amongst other things, asks the person to specify their areas of expertise or interest. When any question is posted on any of the discussion databases the contributor is forced to classify the query into an appropriate category or categories before it can be viewed. The question, once posted, is then automatically sent via direct email to all relevant experts.*

## Organisations tend not to brand policies and practices promoting the improved management of knowledge as “Knowledge Management”

Respondents from a number of the case study organisations observed that it was, from their experience, potentially counter-productive to identify initiatives as “Knowledge Management” initiatives. They reasoned that knowledge management should not be seen as stand-alone, or portrayed as a ‘one-off’ initiative and that it was therefore better to simply promote knowledge management initiatives as worthwhile because of their utility and contribution to the work of individuals and the organisation, rather than because of their status as part of a “Knowledge Management” program.

To a degree this sentiment appears to reflect the recognition that “Knowledge Management” is often regarded with some scepticism and even cynicism by many employees. Some employees are inclined to see Knowledge Management as simply the latest management fad, which will, hopefully, pass with time. According to one manager at AMP Henderson Global Investors:

*If you get out and say ‘this is knowledge management’ people just cringe...just because there is such a misconception... developing a document repository and saying ‘that’s knowledge management’; It’s given the concept a bad image.*

## The improved management of knowledge contributes to improved business competitiveness in several ways

No one single business case or rationale for knowledge management emerges from the case studies. Rather, the cases reveal that improving the use and management of knowledge can contribute to enhanced business competitiveness in a wide variety of ways.

### **A better understanding of customers and clients**

Successful organisations are increasingly using their knowledge and their employees’ knowledge of customers and clients to enhance their level of service to clients, to gain insights into emerging and future trends in their markets and to design products and services that add value. As noted above, most of the case study organisations see their future in providing high value-added services and products to clients – distinctive products and services that no-one else in their market is able to provide. In order to design, develop and deliver these products and services, these organisations need to have a very sophisticated understanding of the needs, preferences and operating environments of their current and potential clients and customers.

The irony is that this kind of knowledge is typically already within the organisation. The key is to identify where that knowledge resides and to develop structures, processes and policies for harnessing that knowledge, making it accessible and using it to enhance service levels and product decisions. Knowledge of customers and clients, and knowledge of their businesses, enables many of these companies to present genuine solutions to clients rather than just standard products and services. Being able to develop customised solutions effectively and efficiently demands that these companies understand their customers and clients businesses just as well as they do.

Despite their relatively modest size in the context of the global electronics industry, the Baryon companies (including the former Utilux Australia and New Zealand) were able

to leverage their knowledge of the industry and their appreciation of the competitive environments faced by their clients and customers to outsmart their larger and even more globalised competitors. Knowledge management here was the key to being smarter.

*Because of their knowledge and their use of knowledge, the Baryon companies can present to their customers more than just an informed global perspective on trends and future developments. Baryon's global experience and involvement provides it with a strong knowledge of global supply chains. In this way Baryon is able to offer its customers improved integration into those global supply chains by communicating their understanding of (upstream) design solutions and possibilities and (downstream) market trends. This has the effect of emphasising to Baryon's customers that the company is more innovative, more informed and more integrated into the global supply chains that structure the global electronic and communications product industries.*

### **Using knowledge to build strong, long-term relationships with customers and clients**

Knowledge of customers, clients, supply chains, markets and industry trends provides the key ingredient for many of the successful firms in their strategies to develop longer-term, more profitable relationships with their clients and customers. Building stronger, longer-term relationships with customers not only helps companies retain those customers and their confidence, it also provides those companies with ready access to the knowledge possessed by those customers. In turn, this knowledge can then be used to design and develop more solutions that are better customised to the needs of individual clients and more readily sold at a premium.

Many organisations noted that their customers and clients were becoming more knowledgeable and more demanding. In many cases clients were demanding a partnership relationship with them rather than a traditional contractual relationship. As a result, companies were expected to share ideas, profits and risks with clients, to collaborate in the development of solutions and, of course, to share their knowledge to mutual business advantage.

In some cases organisations were using their own knowledge management expertise and the principles of knowledge management to build stronger and more enduring relationships with clients. While this might be expected amongst professional services firms, for example, the phenomenon was also apparent in 'higher-volume' companies such as Corporate Express (CE).

*In 1999 CE developed and launched a new initiative to achieve this value-added service for its clients – Strategic Procurement Analysis (SPA). SPA is a proprietary program developed by CE that maps a customer's current procurement processes and costs and identifies opportunities for improved efficiencies and lower costs for customers. The SPA program also provides suggestions for implementing re-engineered procurement processes and new product choices that will realise savings for customers. SPA is conducted by CE's business analysts in conjunction with a customer's procurement or finance team. The SPA process involves:*

*Defining and reviewing the customer business' strategic procurement goals;*

*Collection of data on the customer's procurement process and activities;*

*Analysis of process and estimation of transaction process costs;*

*Product audit which identifies potential savings through choice of alternative products;*

*Recommendations which may include using internet ordering, just-in-time delivery, single source supply reporting and vendor performance measurement;*

*Savings summary which details the total savings target, new and old costs.*  
*As a KM tool SPA is an example of using customer information, and the company's experience and expertise in procurement, as a means of analysing part of the customer's business. In turn that analysis leads to recommendations for using CE's products and services more cost effectively.*

### **Knowledge used to establish and maintain thought leadership status**

A surprising number of the case study organisations reported that one of the most important contributions of knowledge management was to their status in the market place as 'thought leaders'. Many noted that their customers and clients expected the company to have 'a position and a perspective' on a wide variety of issues pertaining to their business. These organisations were convinced that clients remained faithful in part because they regarded the company as one which could be trusted to have a well-informed perspective and well-developed insights which could be relied upon.

In turn these companies were able to use their status as thought leaders to educate clients. To take one example, AMP Henderson Global Investors sees its reputation as a thought leader in the field of investment markets as critical to its capacity to provide strategic advice that will be accepted by its clients. AMP Henderson tries to encourage clients to take a longer term view of performance. The performance of any investment fund is bound to be cyclical, although clients accustomed to bull markets and positive investment conditions are prone to forget this fundamental truth of investment. In order to persuade clients to take a view beyond the current (or the next) downturn, AMP Henderson sees thought leadership as vital. Client retention, especially in challenging investment phases, is seen to be decisively influenced by the company's capacity to educate clients and end-users. AMP Henderson relies on its knowledge base and the knowledge of its teams to present to clients an authoritative voice that enables the company to educate clients persuasively and manage their expectations effectively.

### **Using knowledge to drive out costs from business and production processes, improve speed and improve quality**

Knowledge is not only used to drive innovation and new products and services. Knowledge is also used by the case study firms to continually improve the efficiency of business processes.

For the two manufacturers in the case study sample (GPC Electronics and Kimberly-Clark Australia) for example, data on production processes is continually used to review and refine production techniques as a way of increasing productivity. Kimberly-Clark Australia effectively exploits the knowledge that can be drawn from the experiences of the production plants owned by its parent company (KCC) all around the world.

*By benchmarking their performance against other KCC mills across the world, KCA mills have been able to significantly improve their production efficiency. The benchmarking of KCA's tissue converting plants (which manufacture facial tissues, paper towel and toilet paper) commenced in 1997. A KCA plant is able to benchmark its performance against 180 corresponding KCC plants around the world. In addition to facilitating knowledge sharing about best practice methods and specific solutions, the benchmarking initiative has also led to a number of cultural changes. One Operations Manager noted that prior to the program commencement in 1997 there was a general belief that plant performance was pretty good. The benchmarking highlighted the extent to which it was possible to improve efficiency. He also noted that the process had led to a new level of transparency in production data and information: standardised performance data was now available to plants across the world and to all employees as well.*

In other cases, best practice production methods and techniques are embedded into production processes through automation and standardisation. For example, Corporate Express (CE) has used state-of-the-art warehousing technologies to improve the efficiency of its operations.

*In its warehousing operations, CE is moving toward increasingly automated warehousing and logistics systems to cut back on the amount of analysis that is required on the shopfloor. Technology is transforming warehousing work at CE (as in many other companies). Traditionally, warehouse workers relied on their sometimes tacit knowledge of stock location, proximity and quantities to most efficiently fulfil orders. In their most advanced warehouses CE uses warehouse and distribution management systems based on barcode scanners and 'pick-to-light' and 'pick-to-voice' technologies to automate aspects of the order filling process. As this system directs store workers to the appropriate aisle and position, and then directs them to take a specific number of articles, some of the discretion and opportunity for error and inefficiency is removed from the process. Obviously this has significant implications for quality and speed – the system can deliver optimal efficiency and eliminate the need for quality checking.*

### Using knowledge to save time

'The need for speed' was one of the most commonly noted imperatives of the contemporary business environment for these firms. Many of the organisations face pressure to constantly reduce the time it takes to get new products or services to market, or the time it takes to deliver solutions, complete projects or satisfy orders. Here, again, the adept use of knowledge appears to make a major contribution.

The principal way in which effective knowledge management practices can make a direct contribution to speed and efficiency is through the systematic re-use of previous techniques, methods, approaches, bodies of knowledge and experience. Here organisations use the knowledge of their own previous experiences to avoid 're-inventing the wheel' and complete projects as quickly as possible. This kind of analytical knowledge was systematically gathered, catalogued and organised for use by all of the case study firms.

At Accenture, for example, extensive details on previous projects are catalogued, indexed and stored on the company's global system of databases, the KX.

*The repositories include executive summaries of previous projects, key deliverables from engagements, lists of available tools and methods, profiles of subject matter experts, links to training and development courses and resources, discussion databases and external and internal research resources. One of the key ways in which Accenture ensures that the lessons learnt in previous projects are easily accessible to project teams is through the use of the Methodology Finder. The Methodology Finder provides enquirers with a single point of access to the full range of resources, methods and tools that are available for any particular or general project problem. (The Methodology Finder includes access to external sources of information available through the Internet). In this way, project leads and team members can quickly access the knowledge derived from the previous experiences of partners and other team leads and members.*

While not all organisations have systems as elaborate and sophisticated as that operated by Accenture, all have developed methods of accessing and using valuable analytical knowledge. For example, the comparatively small GPC Electronics seeks to capture the lessons that can be learnt from every new product manufactured so that pitfalls and problems can be avoided next time.

*GPC systematically gathers and interprets data and knowledge in the process of developing and introducing new products for customers. The key point for information analysis and knowledge sharing here will normally occur at the end of the 'new product introduction (NPI) phase'. This is normally conducted as a formal review and 'lessons learnt' sessions and reports after the first few batches of a new product have been completed and any design or process issues have been solved. These reviews will involve project team members, relevant engineers, the GM operations and, potentially, other senior managers. The focus of the sessions is on reviewing successes and failures and drawing out the lessons that can be learnt from the experience and applied to future projects. Outcomes might involve, for example, the inclusion of a process or procedure in a 'template' – the template might take the form of a fact sheet or checklist of issues to think about at the start of a new project.*

### **Translating individual knowledge into organisational knowledge**

Ultimately, all knowledge resides in the minds of individuals. The ability of organisations to exploit that knowledge is dependent on those organisations retaining those individuals or retaining their knowledge. Most of the organisations studied were strongly committed to employee retention and maintaining low levels of turnover especially amongst key employee groups. Good knowledge management practices were seen by many organisations to make a significant contribution to keeping key staff.

Organisations indicated that their ability to retain staff was enhanced by their status as thought leaders in the market, by their reputation for having high quality clients, by their use of state-of-the-art technologies and work processes, by the opportunities they provided for staff development and by their preparedness to reward and recognise innovative thinking. In this way, then, employee retention and knowledge management were seen to constitute important elements in a virtuous circle.

It was widely recognised amongst the case study organisations, however, that knowledge management was about much more than just working to retain knowledgeable employees. The organisations revealed a variety of strategies for converting individual knowledge into organisational knowledge. The case studies suggest that different strategies are appropriate for different forms of knowledge.

### **Embedding routine process and procedural knowledge into standard operating procedures**

Where employees possessed knowledge of relatively routine business processes, methods, techniques and 'ways of doing things', most organisations attempted to systematise and document that knowledge converting it into standard operating procedures. Most of the large organisations studied already had well developed standard operating procedures. Where employees suggested better ways of undertaking routine procedures however, these were typically built into reviews of those procedures.

## **Codifying implicit knowledge through 'lessons learnt' programs**

Implicit knowledge, or superficial tacit knowledge, is the knowledge acquired by an individual or team in the course of dealing with a particular project, problem, client or issue. Implicit knowledge tends not to be technical or factual knowledge that is readily codifiable, but tends to be 'softer' knowledge that is customarily called on by workers when making judgements. While this type of knowledge is virtually impossible to codify out of context, it is possible to document it in the context of specific cases or examples. As a result, most organisations attempted to capture the (successful) judgements and evaluations made by employees in the context of documenting previous experiences. In this sense then most organisations saw this form of knowledge as bound up in analytical knowledge.

*AMP Henderson's Lessons Learnt program was based on the analysis of case studies of particular activities (such as an instance of new product development or an acquisition) which were compiled to identify what was done well, what was not done well and what the company needed to do about it. Discussion groups were then established, normally of 12-15 selected people participating in a forum to discuss and evaluate the project case. These group meetings were designed to operate in an atmosphere of high trust so that the people who were involved in the project were able to be frank and honest in their observations and evaluation. One of the most tangible outcomes of the discussion group was the snapshot of the key lessons learnt from the case study. This accessible summary was then lodged on the Source for access by all staff.*

A number of organisations reported that accessing implicit knowledge acquired by staff in the course of their experiences normally required a meeting or workshop where key staff involved in a particular project or assignment were able to explain the reasons for their decisions, the considerations that were taken into account, the alternative courses of action that were contemplated and their evaluation of the outcomes. A number of organisations were experimenting with various techniques, such as story-telling, as a means of trying to expose some of the more subtle dimensions to the experiences of particular teams and workers.

## **Drawing out deep tacit knowledge through mentoring programs**

Deep tacit knowledge, such as implicit know-how and the bases for complex and subtle judgements that might be made by experienced employees in the course of their work, is impossible to codify and difficult to document even in context. Most of the organisations recognised the value of this knowledge borne of experience. They relied on mentoring programs as the principal means of trying to ensure that this knowledge could be effectively passed on to others in the organisation. The Business Services Group (BSG) of the RTA, for example, faces a major challenge in attempting to retain within the organisation the extensive deep tacit knowledge possessed by many of its very experienced staff who are approaching retirement. As a result, the BSG is developing a mentoring program whereby the individuals concerned will work with younger employees designated to move into those positions over an extended transition period.

## Successful organisations are generating new knowledge and encouraging innovation through selective incentives and rewards

A number of the case study organisations are seeking to stimulate innovation by offering incentives to some (or in other cases) all employees for the suggestion and development of new products and services, marketing approaches, business process improvements and other innovations. For example, at PA when a specific idea or approach leads to the winning of new work, the contribution is explicitly recognised and attributed a value as part of the sales attribution process. In the early phase of stimulating KM, AMP Henderson developed an R&D Web which included a facility for staff to propose new ideas.

*The R&D Web was a knowledge repository developed as part of the Source and designed to stimulate knowledge sharing practices. The R&D Web contained new ideas gathered from around the business. A dedicated team was originally set up to examine ideas as they were submitted by staff from around the business. Ideas tended to be categorised under three rubrics –*

*‘business efficiency ideas’ that related to some method of business process improvement that enabled the company to take costs out of processes;*

*‘thought leadership ideas’ that identified topics and emerging issues on which the company needed to develop a position for clients;*

*‘product ideas’ that proposed the development new investment products.*

*The best ideas under those categories were identified by the team and were taken forward for further development and implementation. A larger team of information specialists, project leaders and approximately 15 staff drawn from operations, HR, IT and investment managers then assessed the suggestions and identified ideas to undergo further development. Staff contributing the best new ideas to the R&D Web were rewarded with cash awards.*

*The R&D web was very successful in heightening the profile of innovation within the company. Once that goal was achieved, and it was felt that innovative practices were integrated across the business as a whole, the dedicated team supporting the R&D web was dismantled. The development and promotion of innovative ideas is now seen as part of the responsibilities of each team and group in the business.*

## New knowledge is often acquired through professional associations and international industry affiliations and standards

A number of organisations rely on accessing new knowledge, information about standards, benchmark data and competitive insights through their participation in (often international) standards associations, consortia, benchmarking groups, industry bodies and professional associations. This seems to be a particularly common characteristic of firms oriented toward the strategic management of knowledge – a willingness to utilise relatively accessible opportunities for the acquisition of external information and intelligence. The RTA BSG, for example, is a member of a 12-member National Shared Services Benchmarking Consortium constituted by large Australian and multinational corporations with major shared services responsibilities. Wyeth Australia consults with the medical and health advisory boards that have been established around particular

areas of medical practice and has, on occasions, assisted in the establishment of advisory boards. GPC Electronics relies on its association with the international Surface Mount and Circuit Board Association – the organisation provides teaching and training resources and offers international standards, qualified instructors and hosts workshops and forums.

### Limited R&D in most organisations, but innovation is more common

Few of the case study firms had significant domestic R&D programs whether for corporate, financial, global, market or industrial reasons. Nevertheless, this did not mean that these organisations did not undertake activities devoted to the development of both process and product innovations. Rather, the dedication of resources exclusively to foundational research was generally limited. Some of the larger, global organisations were exceptions. Accenture Australia, for example, is able to draw on the knowledge developed at a number of specialist Accenture facilities including the technology innovation area in Palo Alto, California and the Institute for Strategic Change in Boston, Mass. Kimberly-Clark Australia can draw on the resources of its parent (Kimberly-Clark) – including the global corporation's facility in Neenah, Wisconsin - as well as their own local R&D activities. Wyeth Australia has recently commenced clinical trials of products being considered for the Australian market as well as drawing on the research findings of its US parent.

### Organisations are committed to facilitating key knowledge flows within and beyond the organisation

One of the most prominent challenges confronted by the cases is the facilitation and support of knowledge flows amongst key personnel and between staff and critical external parties – customers, clients, suppliers, partners and competitors. 'Key personnel' tend to be 'boundary spanners' whether formally charged with KM responsibilities or not. For example, these people may be sales and marketing staff in contact with key clients or customers, senior managers with professional, industrial or business development experience and other senior managers with extensive operational knowledge. These horizontal knowledge relationships are typically facilitated by organisations through the use of cross-divisional teams, as well as various networks for information and knowledge exchange.

The other form of knowledge flow characteristic of these organisations (in addition to traditional lines of authority and accountability) is top-down – the management teams of all the case study organisations were enthusiastic communicators with their staff. Particular emphasis was typically given to providing regular briefings, updates, datacasts and meetings where staff are kept informed of the strategic and business position of the organisation, its key strategic objectives and the role of staff in the achievement of those goals.

### Knowledge sharing is typically transactional, cultural and developmental

Just as knowledge management generally requires the support of appropriate HR policies and other institutional and organisational resources, so too knowledge sharing behaviours need to be stimulated, nurtured and rewarded within these organisations.

While all organisations saw themselves as having cultures that encouraged the sharing of knowledge – open and collaborative, team-oriented – the causes and origins of those cultural characteristics were inevitably difficult to isolate. Most respondents simply commented that sharing and collaboration were an essential part of the identity of the organisation. The culture of the organisation was also often seen to be related to the leadership styles favoured by management – senior management was often described as ‘committed’, ‘open and accessible’ and ‘passionate’ about the better use of knowledge.

Many organisations’ approach to the stimulation of knowledge sharing behaviours recognised the reciprocal and transactional nature of sharing. Methods of encouraging contributions to knowledge exchanges, databases and repositories, for example, usually relied on providing something to the contributor – access to knowledge and resources, an opportunity to save time, a positive performance evaluation. Knowledge sharing practices were most successful where the benefit to employees was demonstrable.

Knowledge sharing initiatives pursued by organisations were also developmental in the sense that they focussed on developing key employees through training, exposure to new networks, mentoring programs and learning communities. At Kimberly-Clark for example, knowledge management development is an important part of the company’s management development program.

*In 2002 KCA launched its Mt Eliza In-house Management Development Program developed by KCA in conjunction with the Mt Eliza Business School. The program provides a structured business administration education and training course covering all levels of qualifications from Graduate Certificate through to MBA. One of the key ways in which the Management Development Program is making a contribution to the knowledge development and sharing practices in KCA is through the work of the course’s syndicate teams. All participants in the program work in a syndicate team which is made up of employees drawn from various divisions and sites of the organisation. Each syndicate team is set a specific work problem that relates specifically to KCA. The teams work on their problems as a team and develop a solution which has a direct practical application to KCA. This syndicate team approach has a number of major benefits:*

*Real KCA problems are addressed and solved by the syndicate teams; the ROI is measured by estimating the value of the solution against the investment in the training.*

*The program enables KCA to directly capture all the immediate benefits of the training; whereas KCA had previously found that its staff undertaking MBAs or management training would share their experiences and knowledge with students from other organisations, knowledge is now retained and used within KCA.*

*The work of the syndicates is based on knowledge sharing practices.*

*The functioning of the syndicate teams makes a major contribution to the development of knowledge flows and networks that can then be relied on by employees when future problems, issues and tasks arise.*

*Participation in team problem solving tasks helps employees understand the impact of their decisions and their work on other parts of the business thereby contributing to a better understanding of the ‘big picture’ of KCA.*

The how of knowledge management: driven by business strategy, predicated on efficient business processes, embraced by employees and supported by HR, organisational structures and customised information technology

The achievement of strategic organisational objectives is widely seen as the one and only rationale for managing knowledge. In many cases the organisations studied had undergone significant and deliberate re-organisation of work processes, structures and accountabilities – effectively forms of business process re-engineering – often managed as part of a change initiative or strategic realignment, prior to the concerted development of new knowledge management initiatives. Evidently, and as has often been observed, the management of culture and of the attitudes, expectations and behaviours of people is critical. Many of the organisations devote significant resources to the stimulation and encouragement of knowledge sharing in particular.

Despite the fact that all the organisations rejected IT-driven models of knowledge management, information technology was, naturally enough, critical for all cases.

The central IT structure for knowledge management for most organisations is an open knowledge site or series of databases that provide organisational information, information on policies and procedures, details of previous projects, assignments, research and evaluations, links to a range of internal and external knowledge resources and various mechanisms for collaboration and knowledge exchange. Information and data transfer and access is also often facilitated by ERPs and/or MRPs. Most knowledge management systems used by the organisations are highly customised and have generally developed incrementally rather than been implemented as a comprehensive and complete system.

What distinguishes these organisations is their relegation of the role of IT systems behind the prior and more fundamental issues of strategic goals, business process efficiency, cultural and organisational adaptation and design and the promotion of knowledge sharing behaviours. In this sense, IT follows rather than leads the development of KM strategy in these organisations.

The KM dividend remains difficult to measure but organisations are confident of the pay-off

All the organisations studied reported an intention to continue and (often) intensify their knowledge management strategies. Organisations claimed a wide range of positive outcomes associated with their initiatives to date: increasing and high levels of staff satisfaction, increased productivity, improved quality, reduced turnover and strong growth. Generally these organisations saw KM as a vital ingredient to improved performance. Some also saw it as a necessity for survival.

Despite this confidence in the results of KM, none of the organisations was able to report a reliable ROI for their KM strategies. Many organisations evaluated their initiatives and some had specific techniques for estimating the value of KM practices. Accenture for example undertakes a 'value-gap' analysis for all its KM activities. Corporate Express sees the value of its goodwill as indicative of the value of its knowledge assets. AMP Hendersons estimates an innovation index which measures the extent to which its staff are using new approaches and products and doing new things in their work. While evaluative techniques vary,

all the organisations could point to demonstrable outcomes attributable to their knowledge management activities. For some of the most impressive and dynamic performers, such as Baryon/ GPC, life without KM is unthinkable:

*At the most general level, knowledge management has been central to the survival and prosperity of Utilux and now Baryon. Innovation is often seen as the key to competitiveness; however the Baryon case demonstrates that KM is critical to innovation. In order to survive, Utilux needed to grow; in order to grow it needed to be innovative; and in order to be innovative it had to manage its knowledge, particularly its industry knowledge, effectively.*

## Chapter 4: The Implications for Leadership and for the SME Sector

While the principal focus of the research project was on the approach to the management of knowledge characteristic of some of Australia's leading organisations and the ways in which knowledge management is contributing to competitiveness, the project was also concerned to investigate two related issues: the relevance of knowledge management to the small to medium sized enterprise (SME) sector; and, secondly the implications of the findings from the research for leadership and management in Australian organisations.

### The management of knowledge in the SME sector

This section reports some of the key findings from the case studies of eight SME firms reported in detail in the Supplementary Volume of this report. The eight SME case studies were recruited from the ranks of the membership of Australian Business Limited (ABL). Initially, industry sectors that were similar to the industry sectors of the large organisational case studies were identified. SMEs were defined as organisations with at least 20 but fewer than 50 employees. SMEs from within the relevant industry sectors were then contacted by ABL staff until 8 organisations were recruited. A significant number of SMEs declined to participate. While the reasons given typically related to time and resource constraints, it is also likely that a number of SMEs declined to participate because they felt they did relatively little in the field of knowledge management. The SMEs that did agree to participate may therefore tend to be those that have a greater degree of confidence in their own knowledge management efforts. In this sense then the case study firms cannot be seen as representative of the SME sector. Nevertheless, the case study SMEs demonstrate that knowledge management activities are not beyond the reach of small to medium sized enterprises.

The SME case study organisations were:

- Jones Condon Chartered Accountants Insolvency Practitioners
- The ARMS Group
- TECRA International
- Planit
- ComLearnCo
- Stoneworld
- Frontline Business Services
- Prowess Development

### **The issues around knowledge and knowledge management for the SME firms are relatively similar to those reported by the large organisational case studies**

In general terms there was a remarkable similarity in the issues, motivations, rationales and even the specific strategies reported by the SME firms as compared to the large organisations.

Typically the SMEs reported that:

- knowledge was the key to their future competitiveness;
- customer and client knowledge was especially vital;
- ensuring that the knowledge of key people in the organisation was effectively shared was one of the most important goals of KM.

SMEs tended to see the knowledge imperative in terms similar to those articulated by the larger organisations. There were, of course, some important differences though. Unsurprisingly, knowledge management practices tended to be less formal amongst the SME cases. In particular, knowledge sharing practices were typically encouraged through informal processes and good knowledge sharing behaviours were often attributed to the culture of the organisation. On the other hand, a number of the SMEs had relatively formalised knowledge management processes, particularly in connection with the development of improved business processes. Many SMEs managed knowledge to develop, document and then implement streamlined and more efficient business processes.

For example, one of the SME cases, Jones Condon Chartered Accountants Insolvency Practitioners (JC), has enjoyed considerable success through the documentation of standardised business processes in the form of Office Procedures and Technical Manuals:

*Once JC is appointed as a liquidator for a particular company, for example, detailed procedures and requirements laid down in the Corporations Act need to be followed. The procedures and requirements pertaining to particular types of insolvency cases (voluntary liquidation, deed of company arrangement, etc) are specified in the company's Technical Manuals. More routine information is contained in the Office Procedures Manual. Both the Technical and Office Procedures Manuals are electronically stored on the company's local area network and are easily accessible and searchable by all staff.*

*JC is now moving to a computerised system for the management of these technical requirements and procedures. Staff responsible for a particular matter are prompted, through their Microsoft Outlook system, when deadlines for particular steps are approaching. The system can be designed so that prompts and reminders are also issued to supervisors and managers or partners in the event that particular steps are not completed by responsible staff by specified dates.*

*In addition to the checklists and automated reminder and management system, the Technical Manuals also contain precedents and standard letters, and electronic versions of relevant forms and documents.*

### **Clear business strategy critical for informing knowledge management approach**

One of the key findings from the large organisation case studies was the centrality of business strategy for defining priorities in the management of knowledge. Most of the SMEs studied also indicated that their approach to the management of knowledge was decisively influenced by their business strategy. As might be expected, for most SMEs business strategy might not necessarily be highly developed, however in most cases SME managers reported a clear view of the strategic challenges facing their business. The two most commonly reported strategic challenges facing these organisations were:

- a) the need to continually develop new products or services that involved more value adding; and

- b) the improvement of business processes to realise improved efficiencies.

The former implied the need for better use of the information and intelligence that could be provided by customers and clients. This knowledge would then enable organisations to develop more relevant or niche products and services that would serve to differentiate the company from its competitors and offer the prospect of building longer-term relationships with customers and clients. The latter implied the need for process knowledge and data that would allow the company to identify, document and then implement best practice business processes.

### **The distinctiveness of successful SMEs: agile, networked and ready to learn**

In comparison with the large organisations, the SMEs in the sample also emerged as relatively dynamic and agile, in the sense that many SME respondents reported that they believed their organisation was able to change relatively quickly and easily compared with larger organisations. This stands to reason of course – SMEs will typically have fewer layers of management, fewer employees and fewer communication channels, and often, less elaborate procedures and processes to be followed. Generally SME managers felt that this made it easier for their organisations to change the way in which they did business, undertook tasks and managed knowledge.

A number of the SMEs were also very well networked and relied quite heavily on industry and professional networks, whether formal or informal. Many of the SMEs saw participation in these networks as a vital source of up-to-date industry information and intelligence. These networks also provided relatively inexpensive access to information, data and shared resources. For example, the credit risk management and debt collection company, The ARMS Group used its membership of the international Association of Credit and Collection Professionals to access a new management system that has revolutionised their business:

*While the ARMS Group had traditionally not systematically recorded processes and procedures, in early 2002 the Company embarked on a systematic process of introducing new internal practices and procedures. The inspiration for the re-design of the company's business processes came from the Professional Practices Management System (PPMS) designed and promoted by ACA International – The Association of Credit and Collection Professionals. The PPMS provides a framework for collection agencies to develop, implement and ensure adherence to a set of industry specific professional practices and policies. The 17 elements of the system effectively constitute a quality check list of required policies and procedures relating to all aspects of the agencies standard business processes.*

*The PPMS has been successfully used by the ARMS Group as a key resource for procedural knowledge. Once in place, the standard operating procedures implied by the PPMS have been continually reviewed and revised by the ARMS Group according to the company's own performance and evaluation. According to the manager interviewed, the introduction of the PPMS has made a big difference to the firm's performance. The system has helped the company introduce best practice procedures, eliminate duplication, and forced the company to introduce comprehensive strategic plans.*

Another distinguishing feature of the SMEs studied was their willingness to learn. Some of the best SMEs tried to see everything as a learning opportunity. One good example was provided by Frontline Business Services, a small company specialising in the printing of variable information such as bar codes, pin numbers and security labels. The

company operates a number of expensive, high tech pieces of equipment. When maintenance technicians visit the plant, the company always tries to build a training session around the maintenance work so that the company's own technicians can develop their own maintenance skills. Frontline has reaped significant savings from this strategy. While the company was originally calling on technicians to repair its Printronics lasers on average once every ten days, following the institution of the maintenance training sessions, the company had gone almost nine months without having to call out a maintenance technician for that equipment.

### **SMEs as learning organisations**

A preparedness to learn at every opportunity is clearly one of the characteristics of a learning organisation. A number of the SMEs were also characterised by well developed internal 'learning loops'. For example, as part of its new management system, the ARMS Group have developed a commitment to continuous improvement. The company introduced new reporting formats including 'stuff-up forms'. Where a collector is unable to deal satisfactorily with an account, they are required to complete a 'stuff-up form' describing the nature of the problem. The forms are then considered at regular team meetings where potential process improvements are discussed, developed and then implemented. Jones Condon has introduced a Systems Committee that is responsible for internal consultation and for monitoring and reviewing the operating and business processes laid down in the company's Technical and Office Procedures Manuals.

### **Sharing tacit knowledge through mentoring and meeting**

As with large organisations, the SMEs used a variety of strategies to try to ensure that the valuable tacit knowledge possessed by some of their most experienced staff was retained and shared in the organisation. Informal mentoring programs and regular team meetings were quite commonly used. For example, at the small IT company PlanIT every new staff member is assigned to a buddy or mentor who provides a first line of advice and assistance. At the ARMS Group telephone debt collectors attend weekly meetings where collectors discuss particular accounts and describe their various approaches to collecting and managing accounts.

### **Use of databases as repositories for lessons learnt**

A number of the SMEs adopted similar IT strategies as those used by larger organisations although, typically, on a smaller scale. Again, as with larger organisations, SMEs agreed that IT considerations should never drive approaches to the management of knowledge. However, especially amongst those SMEs that were relatively IT-enabled anyway, the creative use of existing IT systems was often important for managing knowledge. One of the clearest examples was in the way that the small software company, Prowess Development has sought to re-use software solutions it has previously developed.

*Some years ago, Prowess recognised the importance of guarding against the loss of knowledge especially as labour market conditions in the IT industry were characterised by relatively high turnover of important staff. The company also realised that in order to achieve improved efficiencies as it moved into working with new technologies, it needed to try to standardise some of its solutions to enable a quicker turnaround of work and limit the extent to which staff were constantly "reinventing the wheel".*

*In simplest terms, the knowledge management system is based on the identification of particular sets of software code that represent clever solutions to particular*

*problems. The code is then recorded and retained as a standard function or module and is added to what is referred to as the “framework” of modules.*

*The framework – effectively the knowledge repository – also includes vital context information for each module including information on the possible applications for the module, required inputs and potential outputs and other advice on the use of the module. A particular module, for example, might provide the program required for password issuing and checking that could be used as one element of part of a larger set of modules that could be designed for a particular IT security application. Using the framework, the standardised modules contained within it can be drawn on to develop and constitute a larger application.*

## **The effective management of knowledge: vital for SME success**

While the SME firms studied as part of this project cannot be taken to be representative of the SME sector more generally, the case studies highlight that improving the management of knowledge is vital for many SMEs. The rationales for knowledge management – building stronger customer and client relationships, developing product and process innovations, realising improved efficiencies in terms of quality, cost and time – mirror those that emerged from the large organisational case studies.

There is a sense in which, however, knowledge management may be even more important for SMEs than for large organisations. First, SMEs are often more vulnerable than larger organisations to the loss of key personnel. In a small organisation as few as one or two experienced personnel may hold much of the mission-critical information, knowledge and wisdom needed by the organisation. In these circumstances it is vital that the organisation has in place processes for ensuring that that knowledge is accessible to others and that opportunities for the transfer of their tacit knowledge exist.

Finally, the case studies demonstrate that knowledge management is as relevant for SMEs as for large organisations. Knowledge management practices need not be highly sophisticated or embedded in complex IT systems. Indeed most of the SMEs studied achieved considerable success in the management of knowledge without investing massively in new technologies and without bringing in consultants to develop new highly sophisticated processes.

## **Leadership and the management of knowledge**

The project was also concerned to investigate the implications of the new imperative of managing knowledge for management in general and leadership in particular. What management skills and styles of leadership might be most appropriate for effective knowledge management? Can certain styles of leadership help stimulate innovation, the improved use of knowledge and collaborative knowledge sharing behaviours?

The limited published research on the question indicates that management has a critical guiding role in knowledge management initiatives (Pan and Scarbrough 1998) and that certain leadership styles ‘characterised by participative behaviour and mutual trust and respect for subordinates’ ideas and feelings are consistent with ‘knowledge acquisition’ (Politis 2001).

In general terms, there was widespread agreement amongst many of the respondents interviewed as part of this project that management support for and commitment to the management of knowledge was vital for the success of any knowledge management initiatives or practices. In particular, it was often noted that senior management being

seen to be genuinely committed to the promotion of new ideas, knowledge sharing and collaborative and open work practices more generally was a critical ingredient to successful knowledge management.

When asked about the specific management or leadership qualities and characteristics that were thought to be conducive to encouraging good knowledge management practices, respondents often referred to the following:

### **Open and accessible management**

The large and SME case study organisations were typically characterised by relatively open and accessible management styles. As noted above, most of the large organisations in particular devoted considerable resources to communicating with their staff. The organisation's strategic predicament, its medium and longer term goals and the contribution that individual staff could make to the achievement of those goals was regularly discussed with staff. Management was also very often described as 'accessible'. Some very large organisations reported that all staff were able to directly email senior managers, including the CEO, and were guaranteed of receiving a timely response.

### **Charismatic and inspirational leadership**

A number of organisations noted that the commitment to better manage knowledge was driven from the most senior levels of management in the organisation. Very often the character and qualities of the CEO were mentioned. The main role attributed to the leadership was their capacity to inspire employees to 'go the extra mile' for the organisation, whether by suggesting new approaches, techniques or opportunities, contributing material and ideas to knowledge repositories, sharing experiences and insights with colleagues or more generally being prepared to help others at work.

Charisma is, of course, notoriously difficult to define. In terms of a capacity to inspire behaviours consistent with good knowledge management practices, however, a number of respondents referred to 'a passion for knowledge'. In part, this appears to be associated with leaders prepared to exhibit a degree of thought leadership – to 'have a position on issues' and a vision for the industry or profession as well as the organisation itself.

### **Commitment to the organisation**

The genuine engagement of individual staff with strategies for improving the management of knowledge is evidently dependent on a relatively high level of commitment to the organisation and its goals. This kind of commitment has, of course, long been recognised as critical to high levels of organisational performance (Walton 1985). While there are many elements that might be related to employee commitment, a number of respondents noted that the demonstrated commitment of senior management to the organisation was of particular importance. At a number of organisations it was apparent that employees were prepared to 'do extra things' for the organisation, in part because senior management continually demonstrated that they were prepared to 'do extra things' for employees and for the good of the organisation. On deeper investigation, this trait was also often related to a belief that senior management was genuinely committed to the organisation in the longer term. While this was more often mentioned in the context of smaller companies where the senior managers were also owners of the business, it clearly has implications for larger, publicly listed companies.

## Leadership styles and knowledge management

The leadership research literature tends to identify three general ways in which leaders can influence followers – a directive mode of influence, a transactional mode of influence and a transformational mode of influence (Aronson 2001). The directive mode of influence tends to rely on the authority and directive capacity of management, although specific styles can range from the highly autocratic to the more consensual. Transactional leadership tends to rely on the principle of an exchange between leader and follower – where a subordinate receives something in exchange for their participation or effort, for example. Transformational leadership is distinguished by a capacity to inspire employees, rather than a reliance on controlling them. It is also characterised by a charismatic style, a high degree of consideration for the needs and interests of individual employees and an emphasis on providing followers with a high level of intellectual stimulation (Politis 2001).

The evidence gathered throughout this project suggests that both transactional and transformational leadership styles may well be consistent with the improved management of knowledge. More directive styles of leadership are unlikely to make much of a contribution to stimulating staff to share knowledge, work collaboratively or contribute above and beyond traditional work role expectations.

As noted above, a number of organisational respondents attributed successful knowledge management behaviours to charismatic or inspirational leadership at the very top of the organisation. In a number of instances, the introduction of various initiatives directed toward improving the management of knowledge was seen as a change management process and leadership was seen as pivotal in transforming the culture of the organisation. Consideration of individual employees was also seen as important – individuals needed to understand how their work contributed to the achievement of organisational goals and how their knowledge (and/or their need for knowledge) was important. In large organisations, however, there are practical limits as to how far individual consideration can go. Most organisations appeared to deal with this by identifying ‘key employees’ – those employees whose knowledge or need for knowledge is strategically important for the organisation.

Most organisations cannot simply rely on transformational leadership styles (even where they exist) to ensure success in the management of knowledge, however. Elements of transactional leadership were apparent in many of the organisations studied. It was often observed that knowledge sharing, for example, had to be seen by employees as a ‘two-way street’ – employees would get something out of their participation in learning communities, communities of practice, expert circles or other collaborative or networking structures. On occasion the reward for participation or contribution was quite direct and instrumental – cash rewards for new ideas that translated into commercial opportunities, for example. In other instances, the rewards were more symbolic and intrinsic – recognition by management before one’s peers, attribution of the status of ‘expert’.

Ultimately it is likely that a combination of leadership styles is most conducive to knowledge management. To take the facilitation of knowledge sharing as an example, a particular knowledge sharing initiative will often require the explicit commitment of senior management in the first instance. This will provide a critical signal to middle management and staff that the organisation is serious about knowledge sharing. Second, after the initial phase of introduction, the initiative will need to be sustained and driven through the organisation. This is where transformational leadership styles are likely to make a significant contribution – leading a general culture shift where needed and

identifying 'key employees' and securing their 'buy-in'. Thirdly, the initiative will need on-going structural support – employees will only continue to share and contribute in the longer term where they feel their effort is justified and rewarded, whether through cash rewards, positive performance evaluations or recognition. Transactional leadership styles are potentially relevant here.

### **The challenge for leaders**

In driving, sustaining and supporting knowledge management practice, leaders face a number of significant challenges. Senior managers need to have a very clear view of their organisation's strategic environment and goals. The recognition of the potential contribution of knowledge and knowledge management flows from that clarity of business strategic vision. Second, leaders need to be able to articulate and communicate that vision and the role of knowledge in realising that vision. Third, leaders need to ensure that the organisation is able to develop and implement coherent strategies for some of the key areas of knowledge management:

- Strategies for innovation – including programs designed to stimulate the proposal of new ideas, products, services and ways of working.
- Strategies for knowledge sharing – including means of identifying key employees and instituting practices for encouraging the flow of knowledge amongst those key employees.
- Strategies for knowledge organisation – including the design and development of accessible knowledge repositories and the provision of experienced professional assistance for employees.
- Strategies for standardising business processes – including the identification of effective business processes and the embedding of those processes in routines and standard operating procedures.

## Chapter 5: Conclusions

The sixteen large and SME organisations studied as part of this project are all successful organisations. Many operate in extremely competitive, global markets and most have enjoyed strong growth over the past few years. In the view of the managers interviewed from all those organisations, knowledge and the improved management of knowledge has had a major part to play in that success.

For these organisations the improved management of knowledge is not simply an 'optional extra'. Nor is it seen as just the latest management fad. For these organisations, knowledge management has become an essential way of doing business. For these organisations, knowledge management principles and practices have become integrated into business processes, behaviours and activities to the point where many do not even think of it as 'Knowledge Management'. On the contrary, these organisations tend to see '*managing knowledge for better business outcomes*' as necessary for improved competitiveness and survival in the tough, crowded markets in which they operate.

Some years after the initial wave of excitement surrounding knowledge management, successful organisations now have a very pragmatic and hard-nosed attitude to the management of knowledge. The central message is clear – don't 'do Knowledge Management' because it is fashionable, or because it has been recommended by consultants, or because the IT department is convinced it is the next big thing in systems architecture; manage knowledge for strategic business outcomes.

While the ways in which knowledge can be managed for strategic business outcomes are likely to be as diverse as the range of activities undertaken by companies, one example will suffice. Many organisations studied recognise that in the increasingly competitive global markets in which they operate, the traditional sources of competitive advantage – capital, access to the various factors of production, equipment and technology, production methods, etc - are not as durable as they once were. Sooner, rather than later, the competition will catch up. The critical resource for these organisations is knowledge – very often knowledge that is already at hand, residing in the heads of employees, managers, stakeholders, clients, customers and suppliers. The key challenge for these organisations is leveraging that knowledge for sustainable competitive advantage.

Many Australian organisations have also recognised that there is little future in the increasingly globalised world economy in trying to compete with high-volume, low-cost competitors who will often have easier access to cheaper labour. As a result, several of the organisations studied have been working to develop more high value-added products and services - products and services for which clients and customers will be prepared to pay a premium.

Knowledge (and the management of knowledge) has a key role here. Knowledge of the direction and future prospects of the relevant industry and market, knowledge of products and processes and, perhaps most importantly, knowledge of the needs, preferences and business imperatives of customers and clients are critical to the capacity of these organisations to develop new products and services and add value to existing products and services.

But knowledge is also used by these organisations in other ways – to establish or sustain their status as thought leaders; to continually find ways of improving the efficiency of

business processes through cost, quality or improved timeliness; and to ensure that the lessons of past jobs, projects and tasks are captured and used for future projects.

Managing knowledge for better business outcomes is not inexpensive. Many of the organisations have invested significant resources over many years; others have developed their practices in a more piecemeal fashion. Regardless of the approach, managing knowledge takes time and consumes scarce resources.

Despite the difficulties reported by most organisations in accurately estimating a return on their investment in knowledge management, or even the magnitude of their investment in knowledge management, all respondents were united in their confidence that the investment was worth it. All organisations could point to significant pay-offs – increased sales, higher staff satisfaction and retention, a growing client base, a high innovation rate and improved efficiencies were amongst the most common.

The challenge of managing knowledge for better business outcomes is likely to be the most important strategic challenge facing most Australian organisations in the medium-term future. It is widely believed that the opportunities for gaining competitive advantage are narrowing quickly.

Australian businesses have enjoyed increasing labour productivity rates throughout the 1990s and into the early 2000s. However, the limits to labour productivity driven through longer and more flexible hours of work and intensified work may be being reached. The more intense exploitation of knowledge is one of the most promising avenues for Australian business to improve its competitiveness and performance. And the beauty of this resource is that, in many cases, it is already residing within the organisation.

The real challenge (to paraphrase a famous quote from Jerry Junkins of Texas Instruments<sup>2</sup>) is for organisations to know what they know, and know how to use it.

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<sup>2</sup> Texas Instruments CEO Jerry Junkins reportedly said 'If only TI knew what TI knows' (Storey and Quintas 2001)

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# Appendices

## Appendix A: Project Steering Committee

Narelle Kennedy (Chair) – Chief Executive, Australian Business Foundation

Helen Bauer – Director, BLY Pty Ltd

Ron Callus – Director, acirrt, University of Sydney

Jonathan Cartledge – Research Analyst, Australian Business Foundation

Peri Elsmore – Project Manager, CRM, Australian Business Limited

Peter Janssen – Managing Director, Baryon Pty Ltd.

Colin Lee – Learning and Development Manager, Wyeth Australia

Catherine Pruscino – Research Analyst, Australian Business Foundation

Kathy Rankin – Education and Training Advisor, Australian Business Limited

Helen Simpson – Manager - Insights, Marketing and Knowledge Management, Australian Business Limited

Anthony Olovitz – Insights, Marketing and Knowledge Management, Australian Business Limited

## Appendix B: Interview Schedules for Large Organisational Case Studies

### **Senior Manager Interview Schedule**

#### ***Introduction***

Name, title, time and place of interview

Explain project, course of case study and purpose of interview

Seek permission to record

Role of CEO/ CFO/ senior manager

Length of time in organisation

Reports; in context of organisational chart

#### ***Organisation's Business Environment***

Main activities of the organisation

Size and structural position of the workplace

- Relationship of this site to organisation
- Number of staff
- Summary of major occupational/ professional groups and skills

What is the nature of the competitive environment?

How has the organisation's business environment been changing over relevant time period?

What have become determinants of success/ failure? Changes?

(Here we are interested in the ways in which knowledge – including data and information – is organised in your company to help the business perform and compete)

Could you describe the ways in which your company actively creates, shares and harnesses knowledge to improve business performance and succeed against competitors?

Probe by providing examples of:

creating knowledge – eg: research and development; participation in learning communities; acquiring knowledge from collaborators or partners.

Sharing knowledge – eg: discussion or information forums; shareable databases; help desks; informal or formal briefing sessions

Harnessing knowledge – eg: recording and reporting methods; databases for contacts, partners, networks; systems such as CRM, Management information systems, decision support systems.

In which of the following ways does the company deliberately use knowledge to further its business objectives?

- to serve and retain customers?
- to make new sales?
- to better understand the market and market trends?
- to develop new products and services?
- to beat the competition?
- to deal with suppliers or other firms?
- to plan future services or products?
- to keep employees informed of company strategies and operations?

**Why?**

(Here we are interested exploring the reasons for organising knowledge the way you do in this company)

Why does your company create, share and use knowledge in the ways described earlier? Probe by asking whether it is:

- To keep customers happy and that way, to retain their business?
- To know exactly what customers want from your products and services or how they currently use your products and services?
- To ensure that your employees can share what they know and discover with each other?
- To ensure that you learn from mistakes?
- To make sure that you don't 'reinvent the wheel' and ensure that successful methods, techniques and useful information is available for others?
- To learn from what your competitors do and outsmart them?
- To listen to your front line employees?
- To know how markets and customers behave and find out what they want so that you can shape your business offerings to meet changing or emerging needs and preferences?
- To keep up to date with technology, professional advances and new products or processes?
- To encourage experienced employees to share their know-how and 'tricks of the trade' with others?
- To go into alliances or joint ventures with other firms?
- To share information with employees about company performance and direction?

To be a good corporate citizen by staying in touch with the local community and providing information about the company and its impact?

To effectively communicate the company's business strategy so you are all pulling in the same direction?

Are there other reasons?

***How?***

(Here we are interested in exploring the actual form of these knowledge management practices in your company)

Which of the following kinds of practices do you have in the company:

Any formal KM programs?

Staff meetings; team meetings; bulletins; videos; intranet; B2E?

Meetings with unions or employee representatives?

Mentoring programs?

Market briefings?

Professional staff development sessions?

Informal sessions where staff brainstorm or exchange ideas?

Briefings on company performance?

How do you identify the key knowledge flows in the company? And how is this intelligence used to create new competitive capabilities to further the goals of the business?

***With what result?***

(Here we are interested in exploring the ways in which these practices impact on the business performance of the company and how they add value to what you do)

How have the knowledge management practices you've described resulted in better business outcomes?

What measures of business performance have improved as a result?

Have these practices added value to the firm or the firm's activities in any of the following ways:

New sales?

Improved customer satisfaction?

Increased efficiencies in production, service provision, delivery, etc?

Improved use of customer feedback for business and marketing strategy?

Better business strategy?

Competitive edge?

Reputation in the marketplace?

Larger or better customer base?

Improved market share?

How long did it take before the knowledge management activities made a positive contribution to business outcomes?

What specific elements or attributes of any of these activities have had the biggest effect on business performance?

## **KM Team Member**

Describe Team member's/ team's involvement in:

Creating knowledge for the organisation

Eg: R&D; encouragement of learning communities;

Sharing knowledge

Eg: hosting forums; using shareable databases; help desks; briefings

Harnessing knowledge

Eg: recording and reporting information; databases on contacts, clients, partners; CRM; decision support systems

Describe any formal KM programs and probe each:

What is the purpose of the program?

How does it work? How does Knowledge flow?

What is used/ needed for the operation of the program:

Technologies

Procedures

Culture

Training

How does KM fit with organisational objectives?

How does KM make a contribution to business competitiveness?

## Appendix C: Discussion Document and Interview Schedule for SME Case Studies

### **Some lessons from the knowledge management case studies of larger organisations**

*The only knowledge that is really important is knowledge that makes a direct contribution to the achievement of business strategic objectives.*

- Does this gel with your experience?
- How do you identify and decide what kind of knowledge is important for your organisation's competitiveness?
- What kind of knowledge is important for you and your organisation?

*The secret to capturing and keeping customers and clients is getting key staff to develop strong partnership-style relationships with those customers and really understanding their business as well as they do.*

- How do you find out about what your current and prospective customers and clients want?
- What do you most need to know from your customers and clients?

*The lessons that can be learnt from previous projects, contracts and experiences have to be systematically captured and recorded so that they are easily accessible by staff.*

- How do you capture information and intelligence about past projects and experiences from your staff?
- How do you know what previous experiences might be useful?
- What are the key sources of information and intelligence that ensure that you don't waste time and resources 're-inventing the wheel'?

*The biggest challenge is getting key staff to share the lessons they've learnt with other key staff.*

- How do you make sure that your most experienced people share their experiences and insights with other people in your organisation?

- How do you ensure that you don't lose the critical knowledge in the heads of your key people when they leave the organisation?

***The best way to keep up with innovations, the latest research and new industry trends is by benchmarking against international standards and participating in industry and professional associations.***

- Do you try to do the same?
- How do you find out where your industry is headed?
- How do you know if your way of doing things is the best way?

***The best way to find out about what your competition is up to and where the market is headed is to listen to customers and suppliers.***

- Do you rely on customers, clients, suppliers or other industry contacts to gather information about your competitors?
- How do you stay in touch with what is happening in your market?

***The secret to constantly improving the efficiency of processes and controlling costs in business is to continually measure performance and follow standardised processes and procedures in production, service or delivery.***

- Does this gel with your experience?
- How do you know if your business processes are as efficient as possible?
- Do you try to standardise and even automate as many processes as possible or do you rely on your staff figuring out the best way to do things?

***The best way of identifying people with critical knowledge, skills and experience is to ask the relevant manager.***

- How do you identify what skills and experience your staff have?
- How do you identify what skills and experience you think your organisation might need?

***Information and ideas about what the company is doing and where the company is going must be constantly communicated to all staff so that they can identify with the company and its aims.***

- Is it important that all your staff understand where the business is going and what the key challenges are?
- How do you communicate information and news about company developments?

***Managing knowledge seems to help some larger organisations compete by helping them:***

***Identify where the market and the industry is headed;***

***Understand and deliver what their current and potential customers want;***

***Interpret the future of their industry;***

***Achieve continuous improvements in business processes;***

***Learn from past successes and past mistakes;***

***Ensure that key people learn from other key people in the company;***

***Keep staff focussed on the main strategic objectives.***

- How can information, data and knowledge (including ‘know-how’ and ‘know-who’) be effectively managed by SMEs to improve their competitiveness?
- What do you really need to know in order for your business to continue to be competitive?
- What is it about the way you use knowledge that distinguishes you from your competitors?

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Australian Business Foundation  
140 Arthur St, North Sydney, NSW 2060

Ph: 61 2 9458 7553

Fax: 61 2 9929 0193

Email: [foundation@australianbusiness.com.au](mailto:foundation@australianbusiness.com.au)

Internet: [www.abfoundation.com.au](http://www.abfoundation.com.au)

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