



Knowledge Management Strategies in Australia. Technical Report 1/2001

Preliminary results of the survey of the Knowledge Management uptake in Australian companies

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Printed version 2002

ISBN 0-7326-2191-7

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Executive Summary

The School of Information Management & Systems (SIMS) through the Strategic Monash University Research Fund initiated and successfully produced a Technical Report (1/2001) on Knowledge Management Strategies in Australia. This report compiles the preliminary results of the survey of the Knowledge Management uptake in Australian companies.

This report is structured as an introduction, a methodology description and seven main sections. It provides the results of the analysis of the survey conducted (through a questionnaire) to gather data on the current business understanding of the concept of Knowledge Management in the corporate environment in Australia.

The report:

- Contains the analysis of demographic information based on both organisational and individual data by State, Industry sector, company size (including number of employees, age, position and education level attained).
- Provides a description of the respondents understanding of Knowledge Management and the sources of their information.
- Deals with sources of information and analyses the location and importance of knowledge within organisations.
- Provides an overview on Knowledge Management initiatives, the management of knowledge as a corporate asset and the organisational investment in knowledge. It also includes a cross tabulation of views about knowledge and technology.
- Examines the cultural aspects of Knowledge Management reflecting the outlook of the organisation and the outcomes of the strategies or perspectives pursued.
- Analyses organisational issues and related obstacles key to the use of Knowledge Management.

The report provides an overview of the status of Knowledge Management and associated Knowledge Management practices in the Corporate Australian business environment.

Introduction

Individual knowledge, collective knowledge and the pursuit of knowledge are not concepts that are new or viewed as a new management fad. The 21st Century presents us with a proliferation of knowledge sources and resources that can overwhelm. The need to manage knowledge is therefore an imperative that has grown at all levels of existence.

This technical report presents the preliminary analysis of a survey measuring the current business understanding of the concept of Knowledge Management and of its uptake trends in the Australian corporate environment. Knowledge Management has been discussed widely in the daily press, the business press, professional journals, between work associates, on the Internet, at and at conferences as a tool for the management of the transfer of knowledge in Australian organisations over the last five years. Despite the coverage given to the subject in these forums little research has been conducted on the overall application patterns of this management tool.

The target population of this survey report is the Top 1000 Australian organisations as measured by turnover and published in the BRW annually, in this instance as at November 2000. This list includes 'blue-chip' companies, medium enterprises, government bodies and tertiary educational institutions. The research seeks to examine and measure current views, awareness, and KM strategies thus reviewing the present conditions in this organisational group in Australia.

The research in this report is descriptive in nature and represents the status of the views and activities relating to Knowledge Management and of its uptake trends in the Australian corporate environment between March and July of 2001. No attempt is made in this report to compare the findings to similar or complementary studies. The purpose of the report is to present the preliminary findings as clearly as possible. The data presented will be used as a component in further exploratory, comparative and explanatory studies.

This project was initiated and supervised by Assoc. Prof. Frada Burstein, School of Information Management & Systems, Monash University in the writing of this report.

Funding for this project has been partly furnished by the Strategic Monash University Research Fund.

Methodology

The questionnaire was developed to gather data measuring the current business understanding of the concept of Knowledge Management and of its uptake trends in the Australian corporate environment by senior executives in Australia. The survey instrument being used in this project has been adapted from the instrument that was developed in 1998 by the School of Management, University of Cranfield, U.K¹.

A senior executive is defined as a manager who is either the Chief Executive Officer (CEO), a manager who reports directly to the CEO or a manager who reports through one line manager to the CEO. A CIO is the Chief Information Officer, a CKO is the Chief Knowledge Officer, the director of HR is the Director of Human Resources. In each organisation survey questionnaires were addressed to the Chief Executive Officer, the Chief Information Officer and the Director of Human Resources.

The study uses a population of 1000 organisations comprising 'blue chip' companies, medium sized enterprises, government bodies and tertiary educational institutions. This sample was chosen because organisations this size have the greatest need to implement Knowledge Management strategies, and have the greatest capacity and resources to do so. They are also in the position of reaping the greatest benefit from the effective implementation of a Knowledge Management strategy. A total of 3000 survey questionnaires were mailed. These organisations were identified using a list purchased from a commercial list provider. The survey was accompanied by an explanatory cover letter and reply paid envelope. The explanatory cover letter allowed the delegation of the task of completing the survey to another company officer. Provision was made in the questionnaire for "Other – please specify" to complete and return the responses.

One of the major problems of a mail survey is that response rates can be low and the sample cannot be reasonably argued to represent the population. The external validity of such research is therefore low. Due to the method of subject recruitment this sample cannot be said to be representative of all Australian organisations or of the opinion of all Australian senior executives. However as this information is taken from an anonymous group of respondents it can be said to indicate an openness of opinions expressed. This openness – and in some cases obviously frank honesty in textual responses – provides indicative trend data in an understanding of the current approach to Knowledge Management in Australia at this time.

It is worth noting that representation of responses by state in an industry sectoral break down closely reflects the possible responses by industry sector of the target population. The total numbers by state

¹ Permission has been sought and received from the project leader, Cranfield School of Management – IS Research Centre, to make reasonable academic use of the survey instrument in this research.

also closely reflects the possible responses by state of the target population.

The survey questionnaire was mailed to the named positions of these company officers. Of the target population, eleven organisations responded that they were unable to participate due to time constraints or due to organisational policy. Of the target population, 35 organisations were returned to sender do to incorrect address details supplied by the commercial list vendor. Therefore of a target population of 1000 rendered a response rate of 16.02%. This set of senior executives forms the sample for the statistical analysis in this report.

The survey instruments were coded so that the researcher was able to identify the organisation that had completed the questionnaire. This facilitated the examination of data by state, size of the enterprise, number of employees and revenue information (where available). The questionnaire was divided into seven sections and was timed to take approximately 20 minutes to complete.

The sections comprised:

1. Demographic information - both organisational and individual
2. Knowledge Management definitions
3. Relevance of knowledge issues
4. The exploitation of knowledge
5. The management of knowledge as an asset
6. Cultural aspects of knowledge management
7. Knowledge use in the future and obstacles to its management

In replying to the questions and statements the respondents were required in some questions to tick appropriate responses using attitude questions in the questionnaire. This allowed executives to rank their agreement to a statement relative to positive and negative endpoints of a five- point Likert scale. One question required the respondents to rank their top five preferences from a greater number of options. Other questions were multiple choice questions of four or more variables phrased with a single choice option and an "other - please specify" possibility. De Vaus (1990) notes that the Likert method is user-oriented and with a careful selection of questions is a good indicator of opinion. However the analysis must be taking into account the possibility of the acquiescent response set where the respondent may develop a pattern of agreeing with all the items.

The respondent was also asked to add text where required to questions in the last section this forms the basis for thematic analysis. These textual responses have been evaluated for thematic content using a qualitative analysis method.

The questionnaires were encoded, entered into a computer and then analysed using software application SPSS 10.0 for Windows. In this report where the term "average" is used it refers to the arithmetic mean.

In this report the term median is used to refer to the statistical middle point of the responses data set. Two types of percentages are calculated in this report. In the first type, "percent of sample", categories in the tables are mutually exclusive and the percentages will sum to 100%. In the second type, "percentage of respondents", subjects were able to select multiple responses. In this case the categories are not mutually exclusive and will not sum to 100%. Where no indication of percentage type is made, the statistic refers to the percentage of the sample.

Organisational demographics

The first section of the survey examined demographic information.

Of the 153 organisations surveyed, 29% were from Victoria and Tasmania, 51% were from NSW and the ACT, 9% were from the Northern Territory and Queensland, 5% were from South Australia and 6% were from Western Australia. (Figure 1, Table 1)

Table 1 Distribution of organisations by State

State	% Rounded
TAS & VIC	29
NSW & ACT	51
NT & QLD	9
SA	5
WA	6

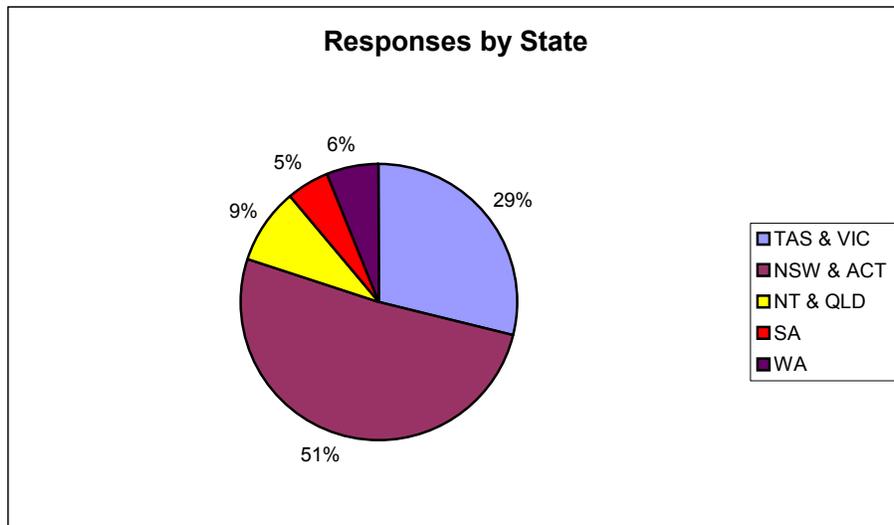


Figure 1 Distribution of organisations by State

A comparative table and diagram (Table 2, Diagram 2) show the possible responses by state of the target organisational population of 1000 entities and is measured against the actual survey population figure of 15.3% response rate received. This suggests that the state-based distribution of respondent organisations closely reflects the distribution of all organisations on a state by state basis, with slight under representation in NSW & ACT and slight over representation in all other states.

Table 2 Distribution of organisations within States: possible and actual

	Possible of 1000	Actual of total response
TAS & VIC	29%	32.5%
NSW & ACT	51%	39%
NT & QLD	9%	12%
SA	5%	8.5%
WA	6%	8%

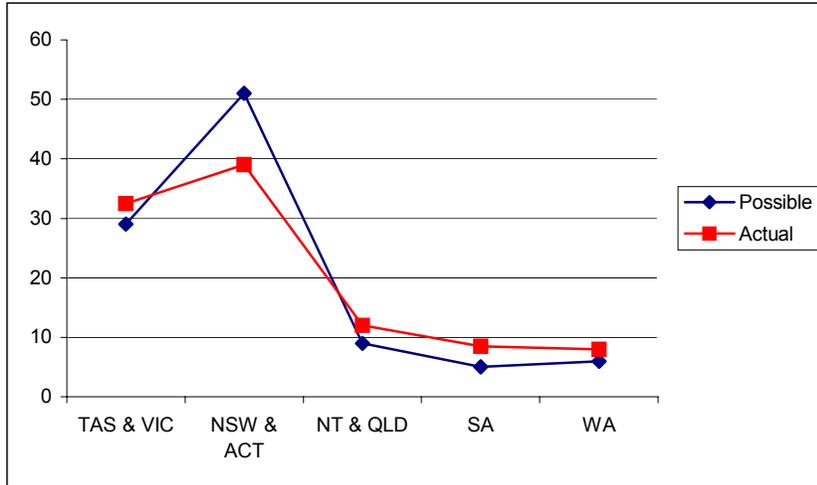


Figure 2 Distribution of organisations within States: population distribution and actual return rate distribution shown as a percentage

The following table shows total number of employees of respondent companies where that data is available. Of the 153 respondents, data is available on 128 companies. Table 3 shows the largest respondent organisation had 52840 employees, the smallest had 12 employees. The main company had 3230 employees; the median point of the sample was a respondent organisation of 1299 employees. This indicates a skewed distribution of company size with a few very large companies.

Table 3 Organisational size

SIZE	Number of employees
Largest company	52840 employees
Mean company	3230 employees
Median company	1299 employees
Smallest company	12 employees

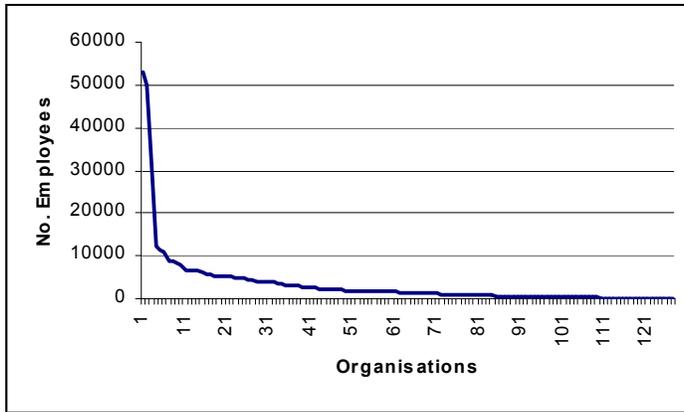


Figure 3 128 Organisations by size from available data

Of the 153 organisations surveyed the representation of organisations by industry

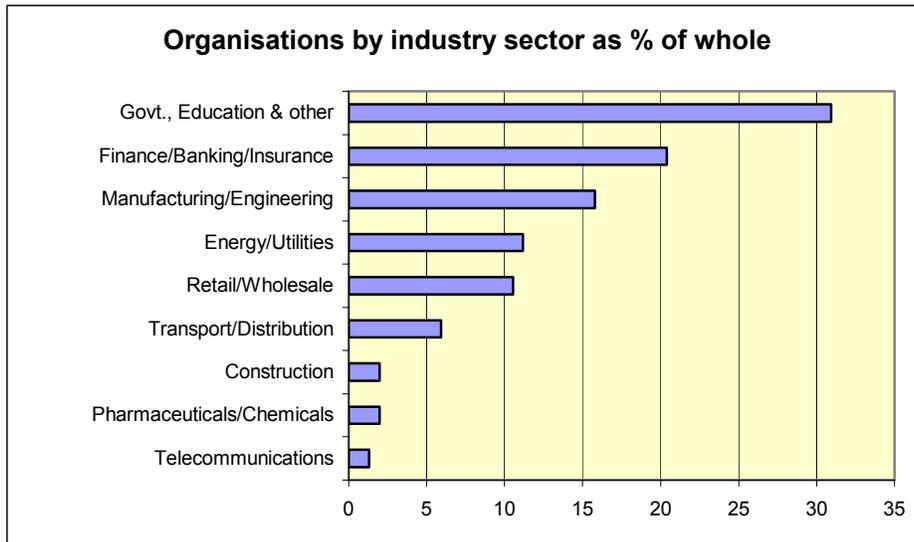


Figure 4 Industry sectors representation shown as a percentage

sectors include: Manufacturing & Engineering 16%, Pharmaceuticals & Chemicals 2%, Energy & Utilities 11%, Construction 2%, and Transport. & Distribution 6%, Telecommunications 1%, Retail & Wholesale 11%, Finance & Banking & Insurance 20%, Government & Education % other 31%.

Table 4 Distribution of returned surveys compared to population by based industry representation

	Distribution of returned surveys by industry category	Distribution of organisation population by industry categories
Manufacturing/Engineering	16%	19%
Pharmaceuticals/Chemicals	2%	7%
Energy/Utilities	11%	5%
Construction	2%	3%
Transport/Distribution	6%	4%
Telecommunications	1%	2%
Retail/Wholesale	11%	14%
Finance/Banking/Insurance	20%	13%
Government, Education and other	31%	22%
	100%	100%

The comparative table and diagram (Table 4 and Figure 4) show the distribution of returned surveys by industry category against the distribution of possible responses by industry sector of the target organisational population of 1000 entities and is measured against the actual survey population figure of 15.3% response rate received. These figures suggest that the industry sector based distribution of respondent organisations approximately reflect the distribution of all organisations on a state by state basis. There is heavier industry weighting in the Finance & Banking & Insurance and the Government & Education % other sectors. The reasons for this will form a question for further research.

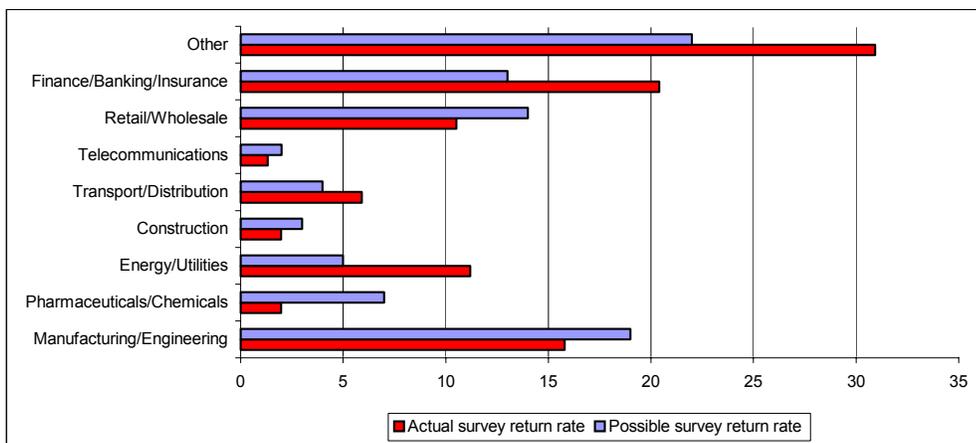


Figure 5 Possible and actual state based industry representation shown as a percentage

Survey respondent demographics.

The typical respondent to this survey can be described as being a senior executive aged between 40-49 years old, with postgraduate tertiary qualifications who has worked with their current employer for less than five years, and has held their current position for three years or fewer.

The profile of the sample shown in Table 5, the position of responsibility of the survey respondent demonstrates that this survey was considered at and a response generated by company officers at the highest levels. Chief Executive Officer's responded at a rate of 12%, Chief Information Officers and Chief Knowledge Officers responded at a rate of 26%, Managers of Human Resources at a rate of 38%. The "Other" category recorded responses by managing directors, chairmen, consultants, librarians and delegated information technology staff at a rate of 24%.

Table 5 Position of survey respondents

CEO	12%
CIO/CKO	26%
Manager of HR	38%
Other	24%

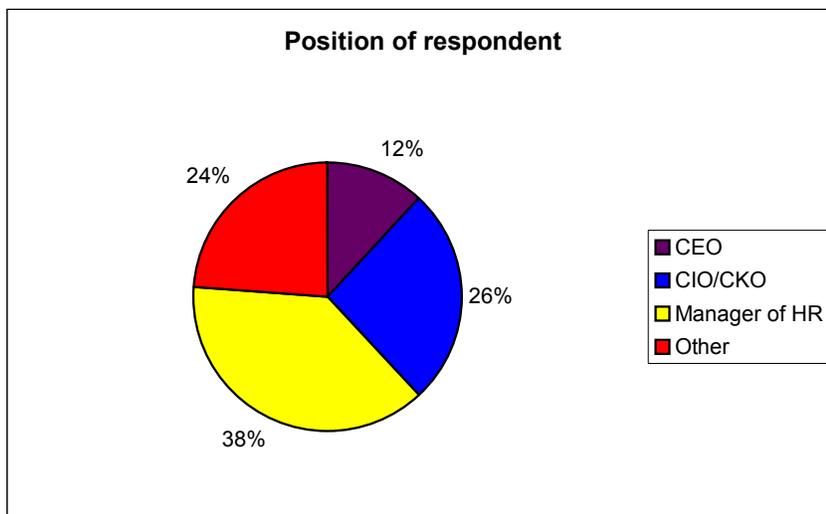


Figure 6 Position of survey respondents

Over 42% of the survey respondents were aged between 40 and 49 years. The age range distribution as illustrated in Table 6 and Figure 6 shows a higher than expected number of respondents in the 30-39 age group, and fewer than expected number of 50 and over given the senior level of responsibility of the respondent population. That is 32% of respondents were less than forty years of age while 21% of respondents were over fifty years of age.

Table 6 Age range of the survey respondents

under 30	4%
30-39	28%
40-49	42%
50-59	19%
60 or over	2%

For the purposes of graphing the minimum age was taken to be 20 years old, the maximum age was taken to be 69 years old.

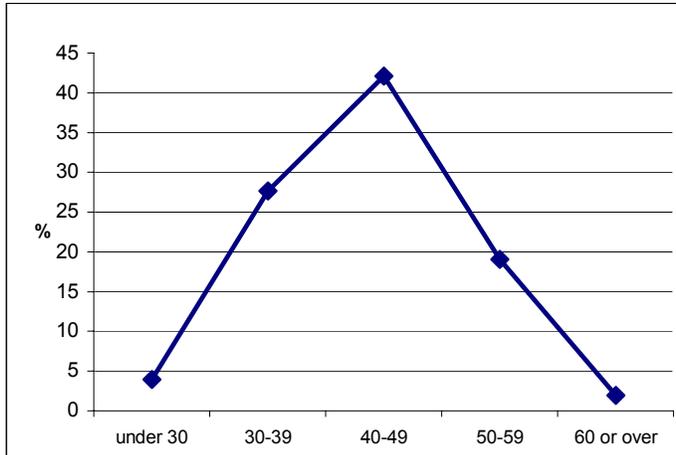


Figure 7 Age range of the survey respondents shown as a percentage

A surprising rate of 44% of respondents had been in their organisations for less than 3 years, while more than 66% of respondents had been employed their current positions for less than 3 years. This suggests a very high level of mobility at the highest levels in organisational structures in the respondent group.

Table 7 Length of time employed by organisation

Employment	
less than 3 years	44%
3 to 5 years	16%
6 to 10 years	16%
more than 10 years	23%
Total	100%

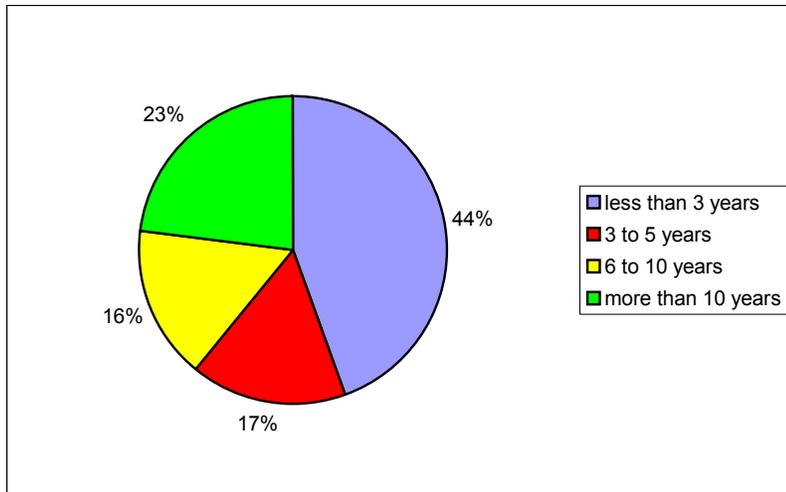


Figure 8 Length of time employed by organisation

The majority of respondents had been employed in their present position for less than three years. A further 18% had been employed in their present position for between 3 and 5 years. Only 3% had been employed in their present position for more than 10 years.

Table 8 Time employed in present position

less than 3 years	66%
3 - 5 years	18%
6 - 10 years	9%
more than 10 years	3%

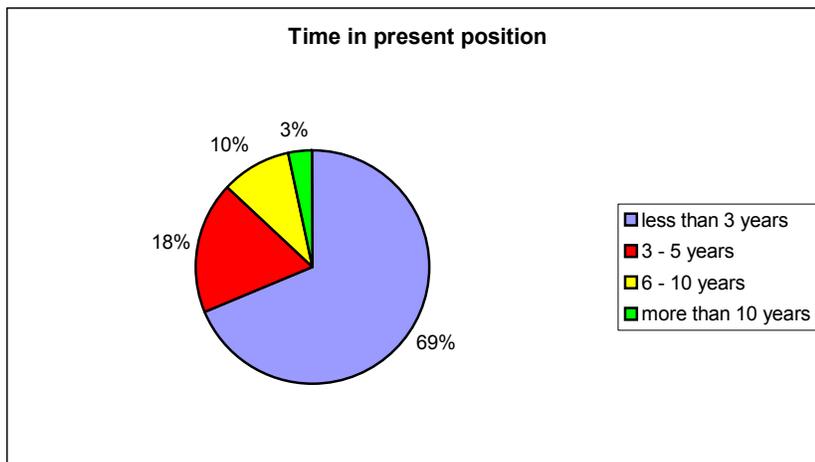


Figure 9 Time employed in present position

The highest educational qualification attained by each respondent is shown in Table 9 and Figure 9. A high proportion of the sample, 91%, reported completing a tertiary qualification, over 50% of these graduates had completed postgraduate qualifications. This indicates a respondent demographic in an environment where postgraduate education is seen as an imperative at the senior executive level and a high value is placed on knowledge.

Table 9 Educational level of respondents

Level	
High School year 12	9%
Undergraduate diploma	10%
Bachelors degree	26%
Post Graduate diploma	18%
Masters degree	32%
Doctorate	3%
Blank	3%

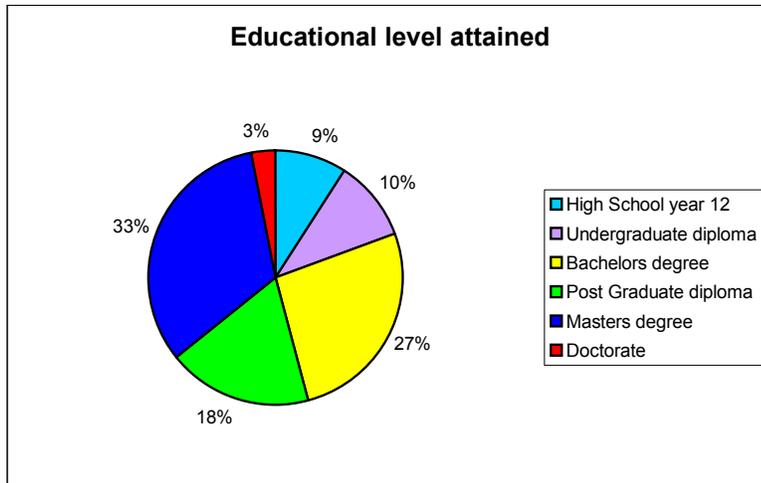


Figure 10 Educational level of respondents

The survey permitted the respondent to choose in which context they wished to complete the survey. This was done in the context of the anonymity of the return of the survey. Over 50% of the survey population aligned their personal opinions on the management of knowledge with that of their organisation. The rest of the respondents were quite evenly divided in answering on a personal or organisational basis.

Table 10 Basis of response

Basis	
On behalf of organisation	22%
Personal opinion	24%
Both personal and organisational	51%
Blank	3%

Permitting the respondent to choose context in which they wished to complete the survey, in a context of anonymous return, permitted a comfort zone that promoted a greater degree of honesty and higher response rate in responding to the survey questions. (Dillman 1978, 2001)

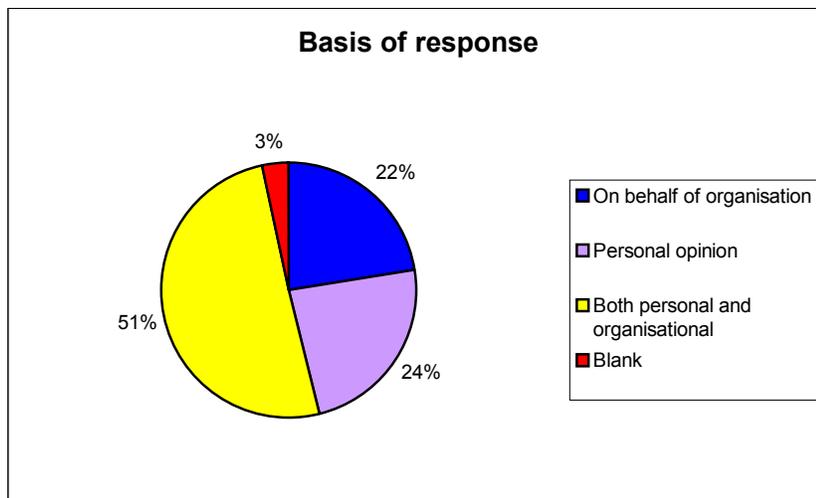


Figure 11 Basis of response

What is the management of knowledge?

The second section of the survey deals with the respondent's definition of Knowledge Management and the sources of their information.

The majority of 85% of respondents (Table 11 and Figure 11) defined Knowledge Management as being a business focussed approach comprising the collection of processes that govern the creation, dissemination and utilization of knowledge to fulfil organisational objectives.

Table 11 Definition of Knowledge Management

Definition	Response
Technological concept	6%
Business focussed approach	85%
No visible process	2%
Documents and databases	7%

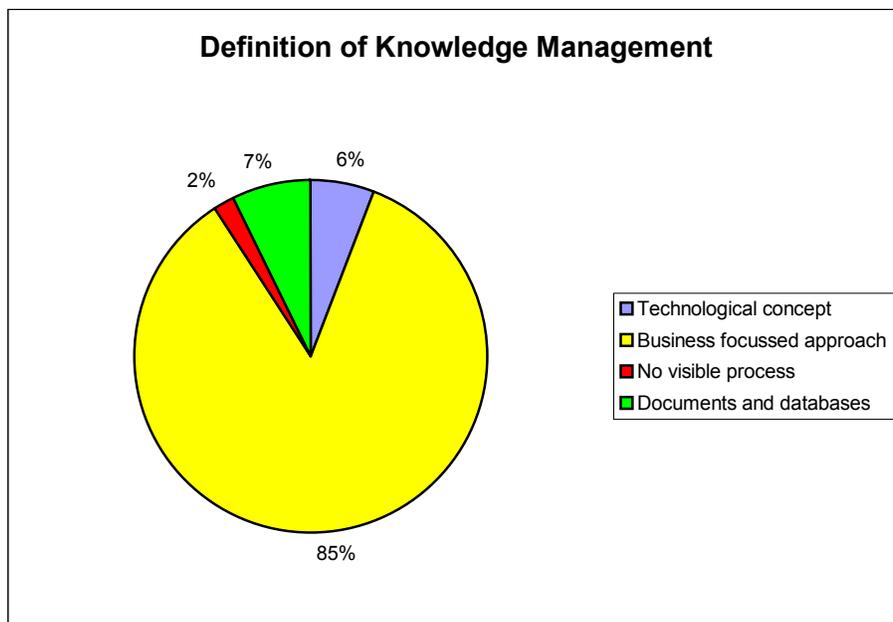


Figure 12 Definition of Knowledge Management

In Table 12 and Figure 12 the sources of information about Knowledge Management most cited were the business press, professional journals, work-associates, the Internet and conferences. Professional journals are noted by 85% of respondents as being a key source of information about this management tool. This is followed equally by conferences, the business press and the Internet cited at 56%, 57% and 56% respectively. The general mass media were of far less consideration as information sources. The impact of the presentation by various media sources on the understanding of this particular management tool is an area to be considered for further research.

Table 12 Source of information about knowledge management

Possible source	
Daily press	27%
Business press	57%
Professional journals	85%
Associates	43%
Internet	56%
Conferences	56%
TV	10%
Radio	9%

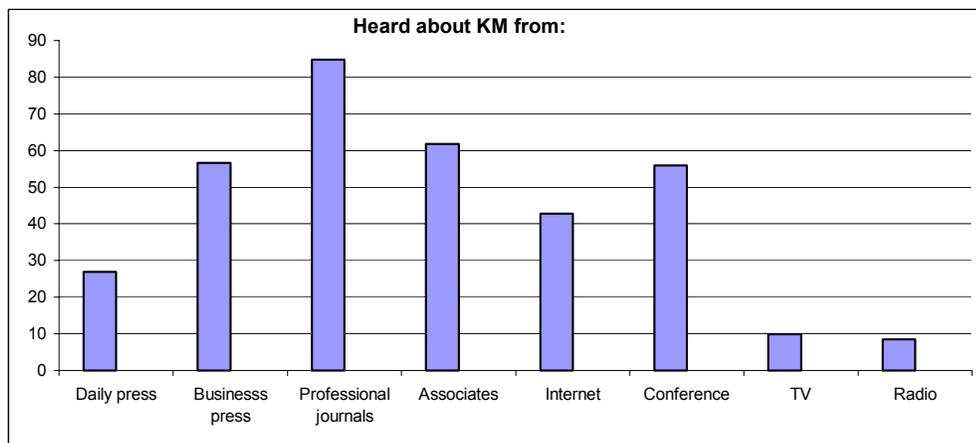


Figure 13 Source of information about Knowledge Management shown as a percentage

The exploitation of knowledge

The third section of this survey dealt with the exploitation of knowledge in the organisation.

It was found that 4 out of 5 respondents informed that 50% or more of their organisational knowledge comes from within their organisation. Beyond that almost 2 out of 3 respondents informed that 75% or more of their organisational knowledge comes from within their organisation.

Location of knowledge

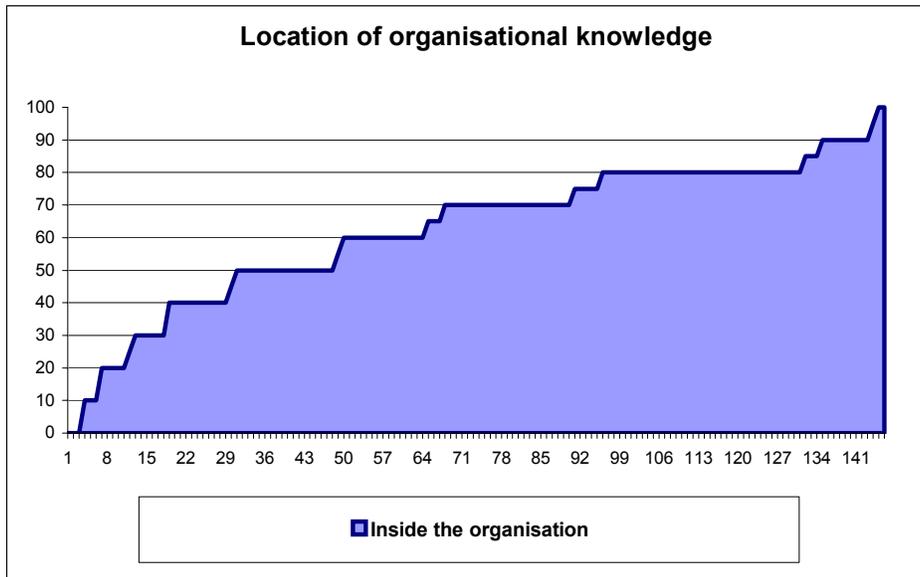


Figure 14 The location of organisational knowledge shown as a percentage

When the survey responses are examined according to industry group we see that most industries find most of their information within their companies.

Internal knowledge sources can include: internal libraries - books and journals, internal databases, known experts, best practice manuals, other staff manuals, internal yellow pages, internal summaries of lessons learned from prior projects, GroupWare and intranets.

External knowledge sources can include: experts, academics, customers, suppliers, external libraries - books and journals, expert networks - professional associations and informal networks, joint ventures with others who are expert in the required knowledge field, the acquisition of companies or key staff, external databases of information, the internet, 'Contracting out' the required knowledge and consultants i.e. 'contracting in' the required knowledge.

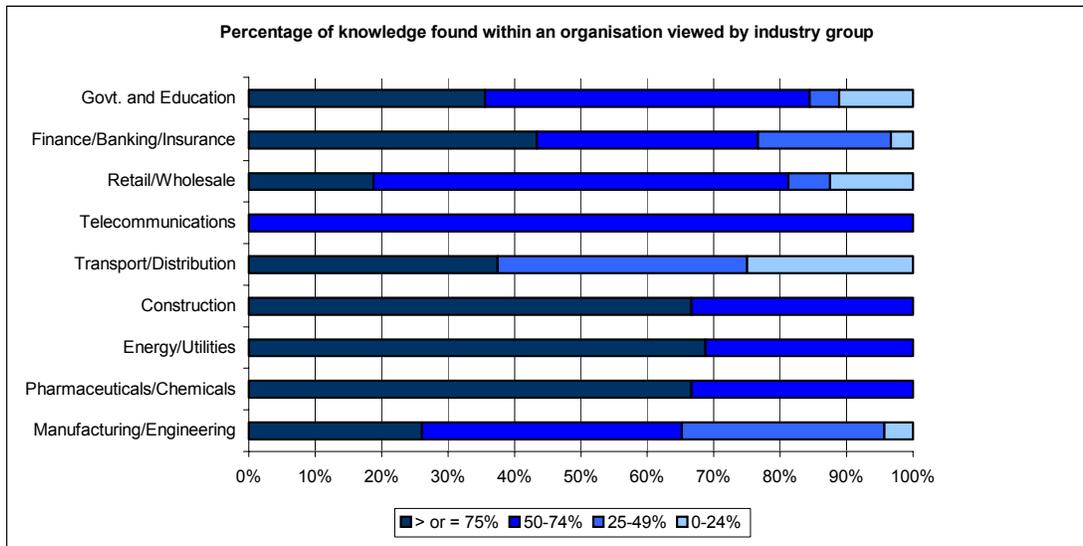


Figure 15 Percentage of knowledge found inside the organisation, viewed by industry group

Competitive advantage is cited most often as the most important factor when considering the relative significance of knowledge to the achievement of business goals. When considering all categories of high importance from those listed in the survey, competitive advantage rates again as overall highest. Knowledge is not seen as being particularly important as an instigator of change, for product development, growing revenue, in the identification of new markets or in improving market share.

Table 13 The importance of knowledge to the achievement of business goals shown as a percentage

	Ranked 1 st .	Ranked 2 nd ..	Ranked 3 rd	Ranked 4 th .	Ranked 5 th .	Total ranked in top 5
Growing revenue	2.6	9.2	7.9	9.9	12.5	42.2
Identifying new markets	3.3	7.2	7.2	5.9	5.9	29.6
Improving market share	3.9	7.9	8.6	8.6	8.6	37.5
Instigating change	5.9	9.2	11.8	15.1	6.6	49.7
Product development	5.9	9.2	11.2	9.2	12.5	48
Increasing profits	8.6	11.8	10.5	7.2	12.5	50.7
Surviving	11.2	2.0	5.3	3.9	6.6	28.9
Being more effective	12.5	11.8	8.6	9.9	11.8	44.6
Improving efficiency	13.8	15.8	12.5	11.2	7.9	61.2
Succeeding	14.5	14.5	9.2	6.6	10.5	55.3
Competitive advantage	27.0	13.8	13.2	9.9	9.9	73.7

Those factors that were not ranked by respondents are show in the column marked 'blank'. Again we find here that surviving, identifying new markets, and improving market share do not factor highly.

In particular it is of note that case study and theoretical literature describes the role of Knowledge Management as a management tool being instrumental in the transfer of knowledge that will in particular support product development, efficiencies, the identification of new market opportunities and hence growing revenue. These findings will be the subject of further research.

Importance of knowledge

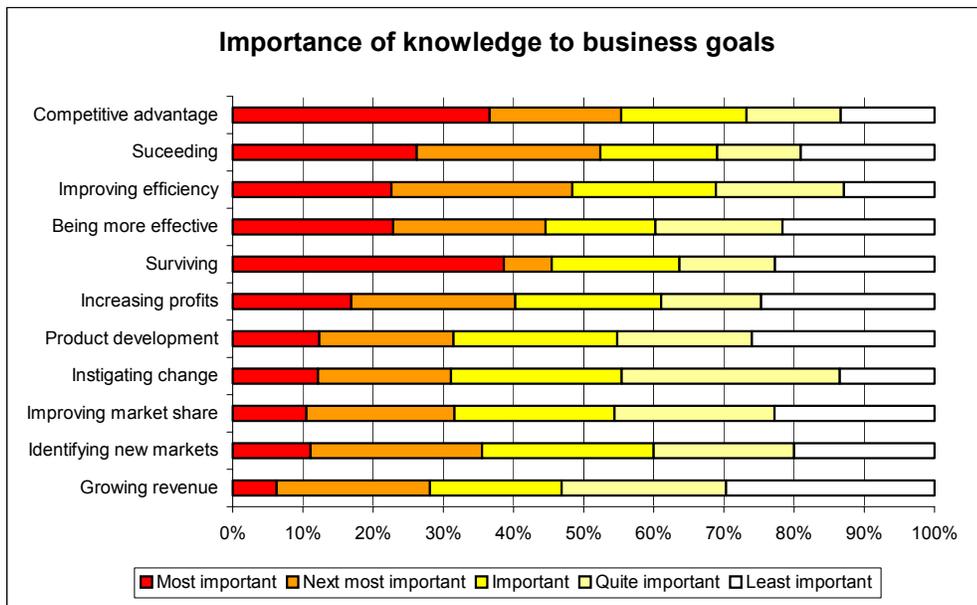


Figure 16 The importance of knowledge to the achievement of business goals

The importance of the knowledge required to meet business objectives knowledge is ranked as being important as in Table 16 above and Figure 16 below. Each variable was considered individually by respondents. What the business needs to know should be understood as the basic data or information sources, from which the organisation draws its day to day running. Beyond this factor those factors considered as very important are knowledge about customer requirements 76% and about company performance 58%. Knowledge relating to management issues is rated as important by 72% of respondents.

Basing Knowledge Management strategies solely around customer requirements or another single focus strategy is a potential inhibitor to creativity in that it inhibits looking outside the current environment to look at innovative solutions or new products. (Dixon 2000)

Respondents were asked to rate the importance of knowledge for business objectives.

Table 14 Knowledge for business objectives shown as a percentage

	Very important	Important	Unimportant	Not at all important	Unsure
What business needs to know	57	41	1		1
Competitor information	39	44	13	3	1
External regulation	37	59	4		1
Use of existing information	46	52	2		
Issues related to management	20	72	6		1
Market performance	30	53	14	1	1
Company performance	58	39	2		
Customer requirements	76	21	2		1
Applications of technology	36	59	5		

The approach to this question reveals a high regard for the importance of knowledge concretely anchored in a business context. In this question each variable was rated separately. Some variables were left blank. "Knowledge about customer requirements" was selected by 76% of respondents as being very important and a further 21% as being important. This correlates with the increased prominence predicted in the relative ranking of organisational knowledge needs for Customer Service in Table 20 and illustrated in Figure 21. All variables listed were rated above 83% in requiring an organisational knowledge base, with competitor information and market performance being least important overall.

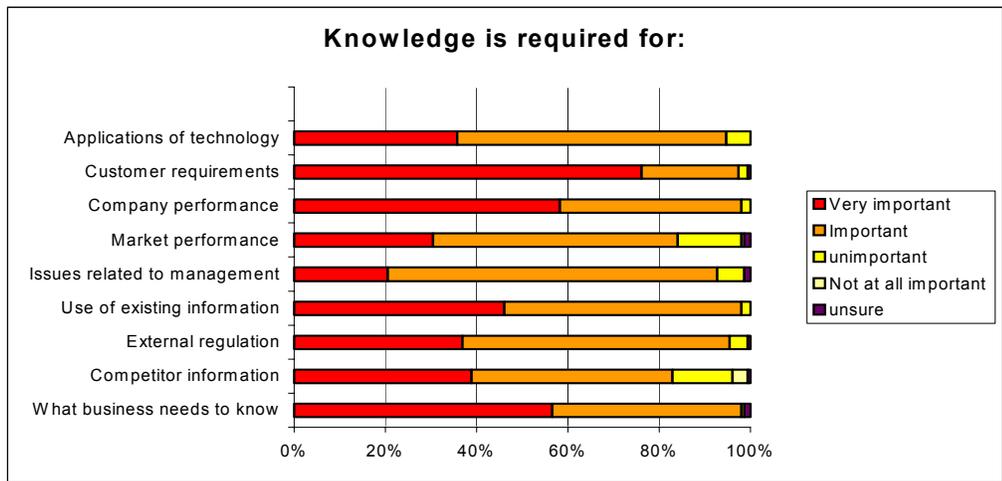


Figure 17 Knowledge for business objectives

Knowledge Management initiatives

Knowledge Management initiatives in respondent organisations in Table 15 and Figure 17 below, were most strongly shown to be the intention to manage knowledge (89%) and almost equally the belief that knowledge can be valued (77%) against an organisational demonstration of the awareness of internal knowledge resources (56%). This ranking of Knowledge Management initiatives demonstrates that organisations are substantially in the initial phases of a Knowledge Management strategy. (Prusak & Davenport 1995). The lesser acknowledgement of tracking of the reuse of knowledge in the organisation at 39%, and further to this the reuse of cross-departmental knowledge at 35% indicates that there is consideration of this need in organisations. While sharing of best practice consumes a portion of theoretical Knowledge Management literature it is not prominent (57%) as an initiative employed in the respondent organisations.

Table 15 Knowledge Management initiatives shown as a percentage

Knowledge Management initiatives	Yes	No	No idea
Plan to acquire & exploit knowledge	89	3	7
Belief knowledge can be valued	77	14	9
Display awareness of internal knowledge sources	75	22	1
Replicate knowledge creation	42	51	1
Track reuse of knowledge	39	59	3
Track reuse of cross departmental knowledge	35	61	3
Share best practice	57	39	2
Acquire skills in KM	50	46	3
Track experts	51	46	1
A unique body of knowledge	58	35	6

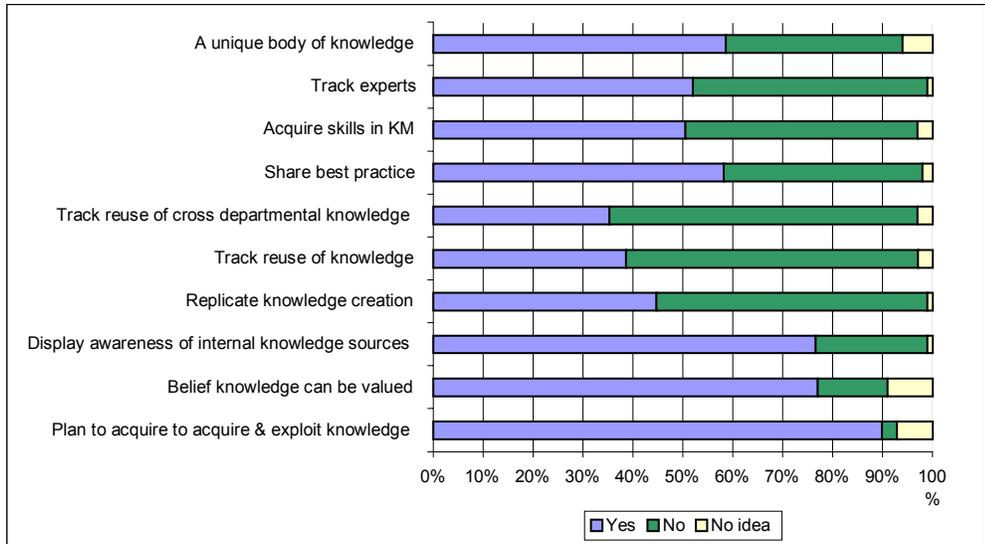


Figure 18 Knowledge Management initiatives shown as a percentage

In describing other Knowledge Management initiatives in their organisation 13% of respondents gave details that included most prominently organisational development of a centralised repository for explicit knowledge at a rate of 32%, and the development of a strategic Knowledge Management plan at a rate of 32%. Other initiatives included:

- best practice replication
- change management strategies
- the utilisation of decision support system tools
- the recognition of explicit and tacit knowledge within the organisation
- cross departmental or horizontal teams and working groups
- the development of an Intranet
- the development of a 'virtual tearoom'
- the development of an organisational 'Yellow Pages'
- the promotion of innovation

Knowledge Management leadership

Leadership is acknowledged widely as being instrumental in the effective deployment of a Knowledge Management strategy in an organisation. (Prusak & Davenport 1995, Nonaka & Takeuchi, 1995, O'Dell, Grayson & Essaides, 1998, Probst, Raub & Romhardt 2000) The survey sought to establish an indication of the source/s of organisational responsibility for knowledge management. The respondent organisations indicated leadership from their Chief Executive Officers 12% and from several directors or managers 18%.

Most substantially the responses indicate that the responsibility is either “everyone’s” 24% or that no formal role exists 31%.

It can be suggested that where the responsibility belongs to everyone but there is no direct leadership, that the ongoing development of a strategy will be severely compromised.

Table 16 Organisational responsibility for knowledge management

Position of person who has the responsibility	Percentage
CEO	12%
Chief Knowledge Officer	7%
Director or senior manager	3%
Several directors or managers	18%
A department or function	3%
No formal role exists	31%
Everyone's job	24%
Blank	1%
Total	100%

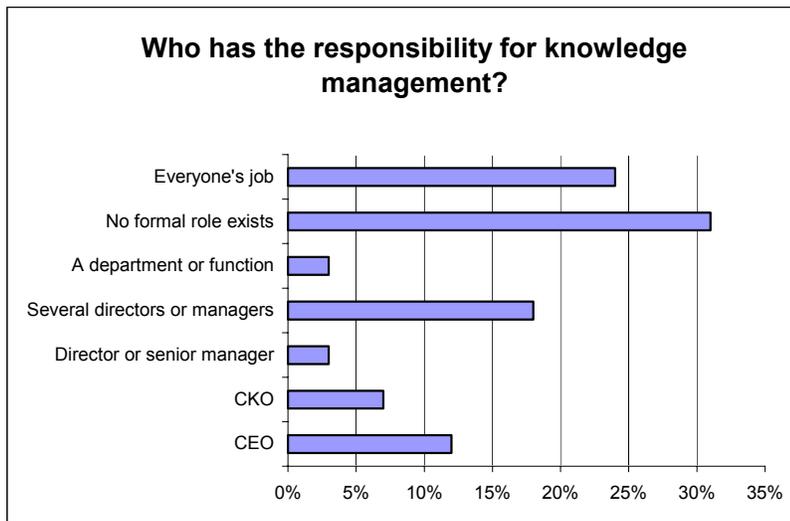


Figure 19 Organisational responsibility for Knowledge Management shown as a percentage

Table 17 Role of Knowledge Management task

Role of task	% Acknowledged
Define route map for knowledge management	23%
Gather knowledge	33%
Use knowledge	19%
Learn from knowledge	24%
Disseminate knowledge	34%
Ensure knowledge is being used	20%

Where there is a defined Knowledge Management task it is most commonly to gather in the knowledge (in 34%) of organisations and to disseminate the knowledge (in 33 %) of organisations. Defining a strategy or route map to transfer knowledge in the organisation 23% and learning from the knowledge within the organisation are of lesser prominence at 24%.

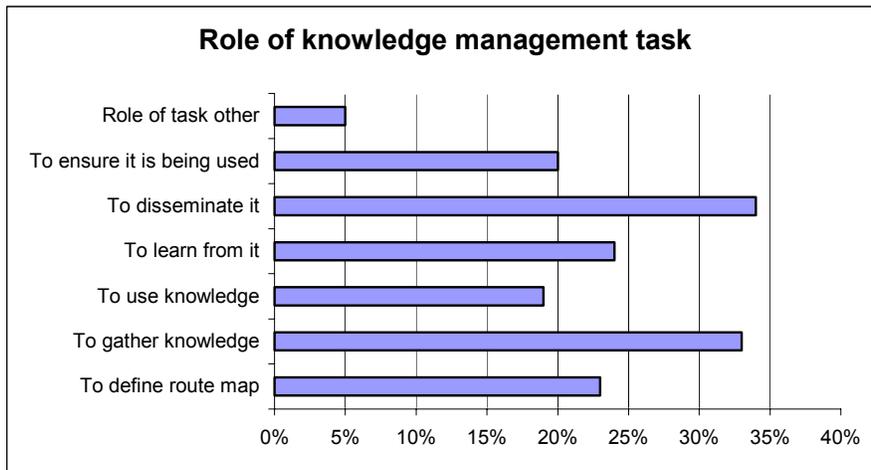


Figure 20 Role of Knowledge Management task

Where the role of the Knowledge Management task is to disseminate knowledge, organisations

	Yes	No
Do you display awareness of internal knowledge sources	45%	7%
Do you seem to replicate knowledge creation	20%	29%
Do you have the means to track reuse of knowledge	26%	26%
Do you have mechanisms for sharing best practice	35%	16%

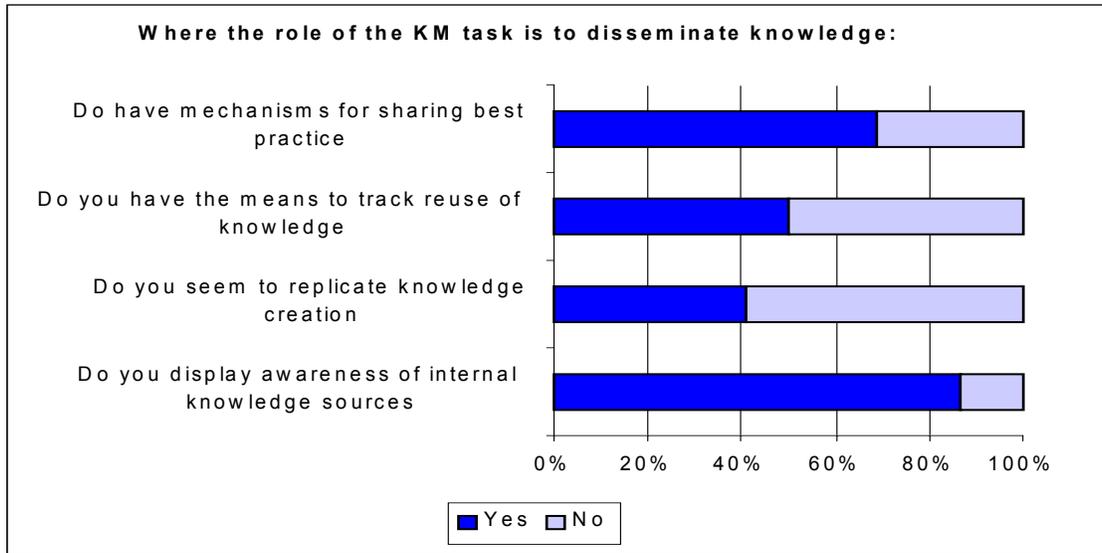


Figure 21 Where the task of the KM task is to disseminate knowledge, what mechanisms are employed?

Organisations indicated that they employ some formal mechanisms for managing knowledge. There are projects not identified as Knowledge Management initiatives but actively pursued as a means of capitalizing on corporate intellectual capital. There are established mechanisms to capture knowledge in some or all areas of organisations in 81% of organisations. The most absolute of these measures are the protection of knowledge utilising patenting mechanisms and also the selling or licensing of knowledge to other businesses. These measures can be easily quantified as return on investment (RIO) by organisations and can be the impetus for many to go ahead with a Knowledge Management strategy.

Table 18 Mechanisms for managing knowledge

	All areas	Some areas	None	Don't know
Mechanisms to capture	12%	69%	18%	0
Protect knowledge (eg patents)	16%	54%	22%	5%
Make knowledge available	13%	72%	13%	0
Sell knowledge to other businesses (eg. Licensing)	3%	36%	52%	5%

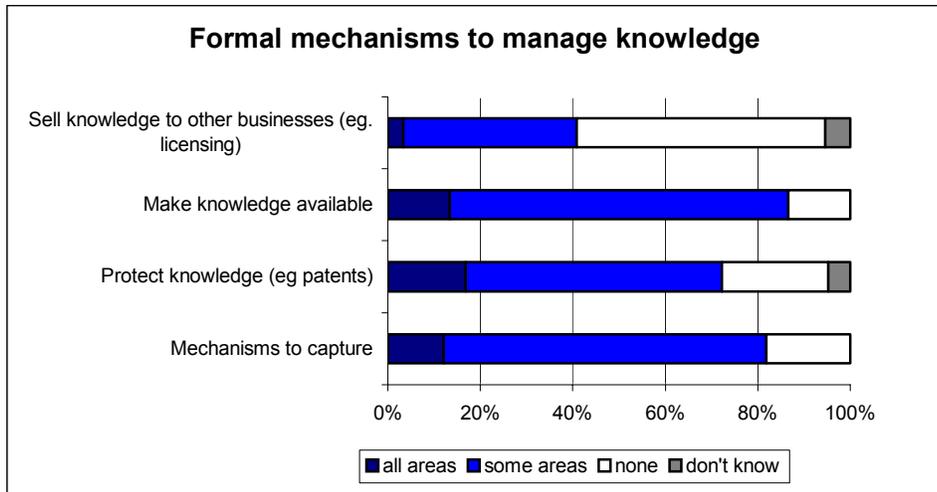


Figure 22 Mechanisms for managing knowledge

The fifth section in the survey deals with the management of knowledge as an asset.

Ranking the importance of organisational knowledge now against predictions demonstrates the high percentage response rate and awareness of areas that knowledge plays an important strategic role.

There is a drop in the relative placement in 2001 of Information Systems and Information Technology from second place to fourth place in importance in 2006. Conversely the role of knowledge in customer service rises from third place in 2001 to second place in 2006. This suggests the assumption that information technology is seen as being a tool that all staff will be competent using in five years time compared to the current requirement for IT training. The most marked increase in importance is the relationship of organisational knowledge to customer service. This increased from 79% importance to 88% relative importance possibly reflecting the current trend for customer relationship management (CRM).

Table 19 Relative ranking of organisational knowledge needs

	RANK NOW - 2001	RANK IN 5 YEARS - 2006
Corporate planning	1	1
IS IT	2	4
Customer Service	3	2
Marketing	4	5
HR Personnel	5	3
Finance	6	6
Research and Devt	7	7
Sales	8	8
Manufacturing / Service operations	9	9
Distribution	10	10

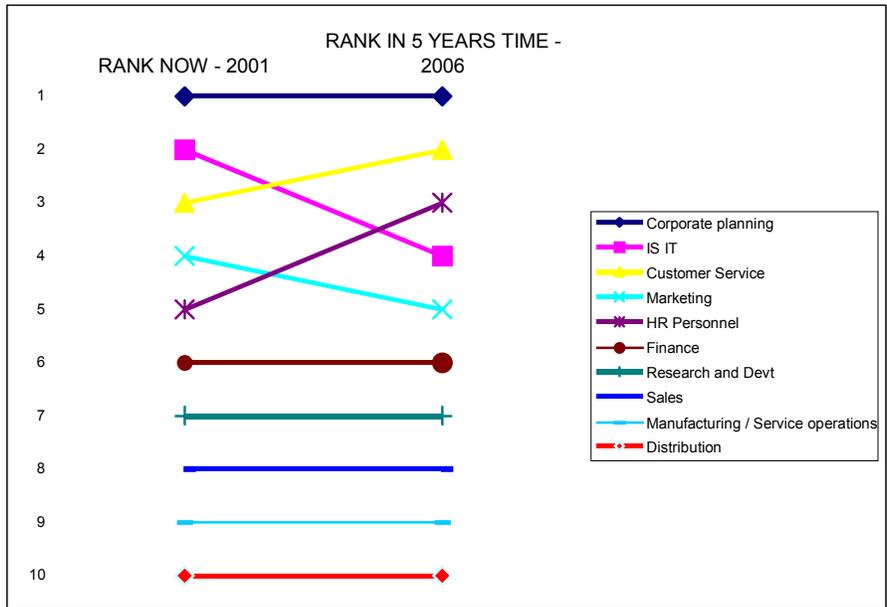


Figure 23 Relative ranking of organisational knowledge needs over the next 5 years

Organisational investment in knowledge

Organisations report in 61% of cases, an increase in knowledge workers in the last five years. While 21% believe that their figures remain the same, only 11% report a decrease in knowledge workers in their workplace. This indicates the growing need to management the intellectual capital generated by a growing knowledge work base. It also reflects the trend of Australian organisations away from traditional blue-collar industries towards a more knowledge based economy.

Table 20 Movement in knowledge workers over last five years

Movement in knowledge workers	%
Decreased	11
Grown	61
Remained the same	21
Don't know	7
Total	100

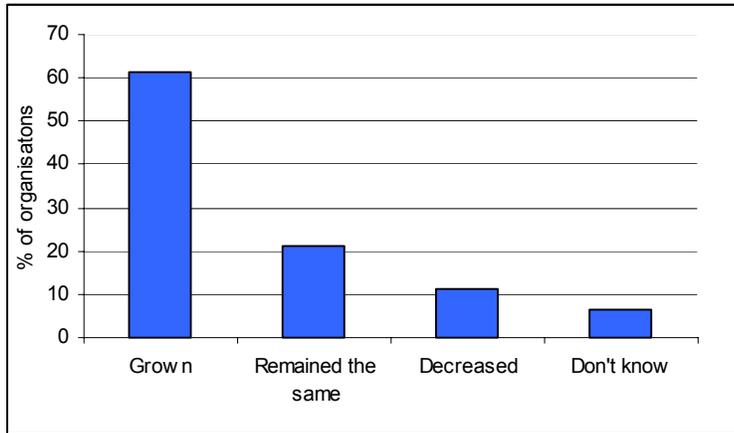


Figure 24 Rise in organisational knowledge workers over the last five years shown as a percentage

The following table shows the anticipated range of organisational investment in knowledge as a *percentage of revenue* now. 101 responded of a population of 153. It also shows the anticipated range of organisational investment in knowledge as a *percentage of revenue* in the next three years.

Table 21 Investment in knowledge as a percentage of revenue now and in three years time

	In 2001	IN 2004
Minimum	0.001	0.004
Median	1	2
Maximum	30	60
Average	3	6

The average organisational investment in knowledge is 3% of revenue for the current financial year. This is projected to double in all industry sectors, from the minimum level of 0.001% to 0.004% to the maximum expenditure level of 30% doubling to 60%.

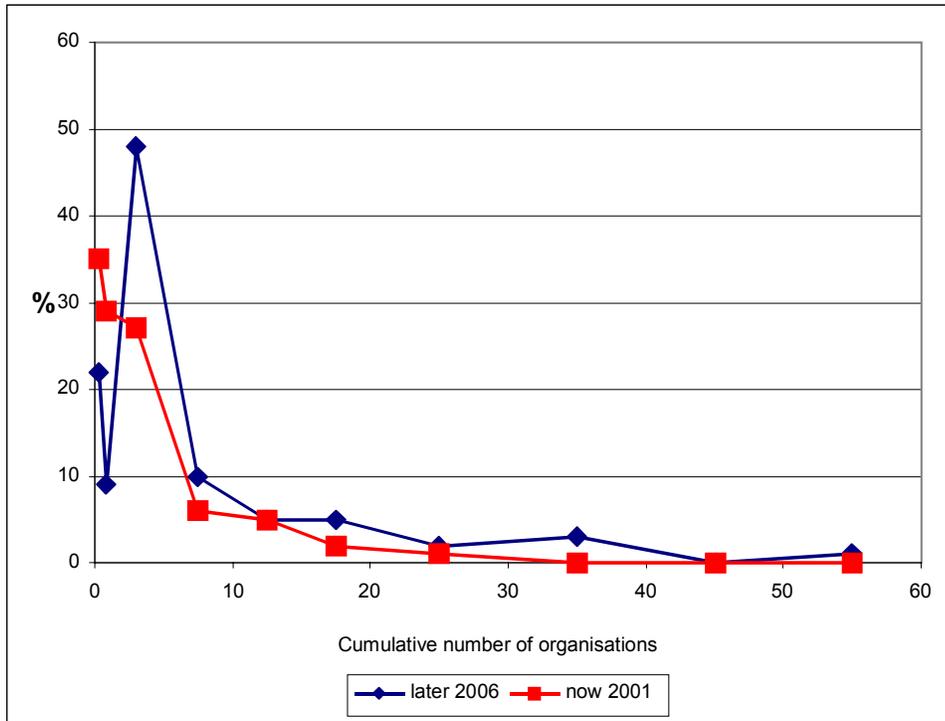


Figure 25 Investment in knowledge as a % of investment over a 4 year period

The organisational view of knowledge and its management

The organisational view of knowledge and its management is that knowledge possessed by key people should be shared (98% of respondents) but that knowledge also equates to power (86% of respondents). This implies that sharing of knowledge, while desirable, is not an easy task. Therefore the view shared by 95% of respondents is that formal systems can enhance the management of knowledge.

Correlating agreement is that organisations would be more efficient if the sum of their knowledge were manifest (79% of respondents) and that the acquisition of knowledge is easy but using it being the issue (69% of respondents). This contrasts with strong disagreement that Knowledge Management is a fad and with strong disagreement with the idea that people should only be informed on a need to know basis.

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Table 22 View of knowledge.

View	Agree or strongly agree	Disagree or strongly disagree
Knowledge is extension of information technology	44%	55%
Formal systems can enhance knowledge management	95%	4%
Most of the knowledge is in heads of certain people	75%	23%
Knowledge possessed by key people should be shared	98%	2%
Knowledge is power	86%	12%
People need to be informed on a need to know basis	14%	85%
Acquiring knowledge is easy using it is the issue	69%	27%
If we knew what we knew we would be more effective	79%	11%
Knowledge is hidden not easily identified	55	42
Knowledge Management is a fad	23	66

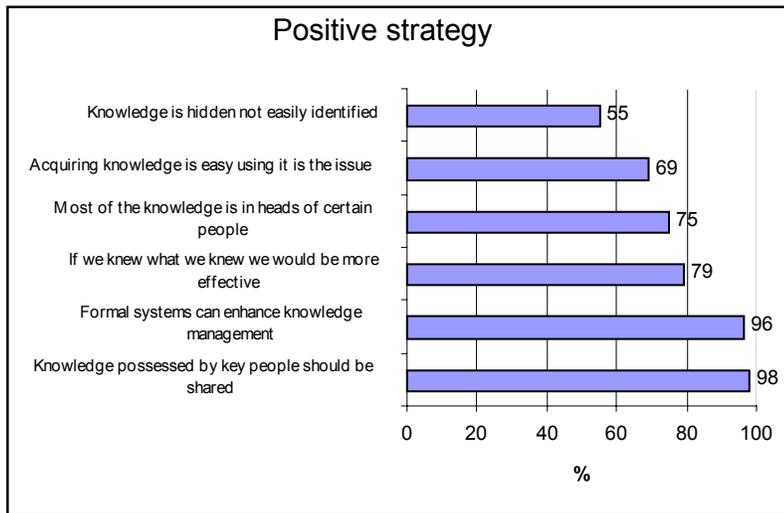


Figure 26 View of knowledge – positive strategy attitudes shown as a percentage

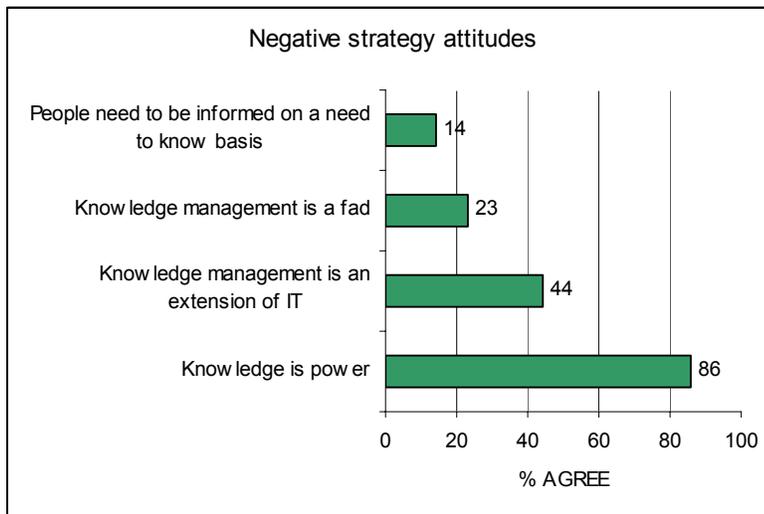


Figure 27 View of knowledge – negative strategy attitudes shown as a percentage

Cross tabulation of views about knowledge and technology

In cross-tabulating the results of the statement that the management of “knowledge is extension of information technology” against industry groups a pattern emerges that industries other than Finance, Banking & Insurance and Government, education & “other” are quite evenly divided on the issue.

Table 23 Crosstabulation: Industry groups and is KM an extension of IT

	Agree or strongly agree (count)	Disagree or strongly disagree (count)
Manufacturing/Engineering	12	12
Pharmaceutical/Chemicals	1	2
Energy/Utilities	7	9
Construction	2	1
Transport/Distribution	5	4
Telecommunications	0	2
Retail/Wholesale	9	7
Finance/Banking/Insurance	12	19
Govt., education & other	19	27

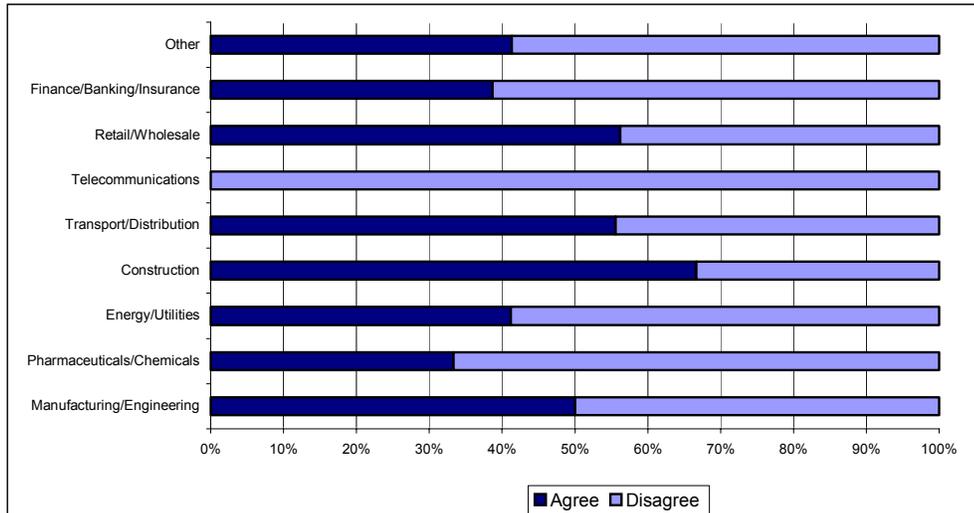


Figure 28 Crosstabulation: Industry groups and is KM an extension of IT shown as a percentage

In cross-tabulating the results of the statement that the management of “knowledge is extension of information technology” against the position of the respondent a pattern emerges that respondents opinion is quite evenly distributed regardless of their position.

Table 24 Cross tabulation: Respondent position and Knowledge Management is an extension of IT shown as a percentage

Position	Knowledge Management is an extension of IT				
	Strongly agree	Agree	Disagree	Strongly disagree	Unsure
CEO	2	7	9		
CIO/CKO	3	12	19	7	
Manager of HR	3	25	23	6	1
Other	1	14	16	5	

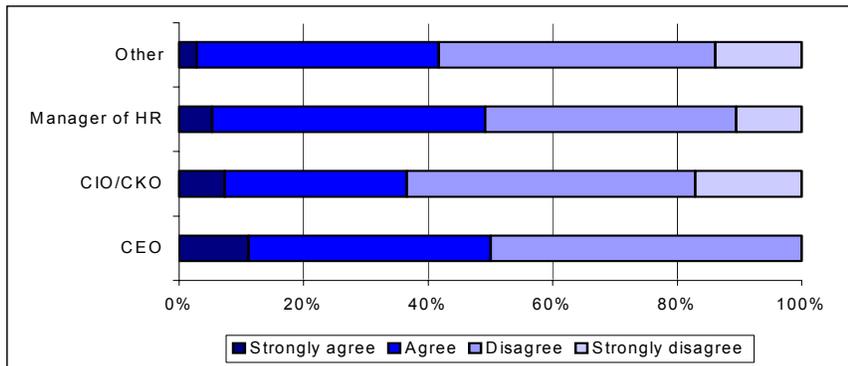


Figure 29 Cross tabulation: Respondent position and Knowledge Management is an extension of IT shown as a percentage

Table 25 Cross tabulation: Respondent time in current position and Knowledge Management is an extension of IT shown as a percentage

Time in current position	Knowledge Management is an extension of IT	
	Agree	Disagree
less than 3 years	44	55
3 - 5 years	12	16
6 - 10 years	5	9
more than 10 years	1	4
blank	5	1

An interesting pattern emerges when this statement is cross-tabulated against the period of time that the respondent has been in their current position. The cross tabulation strongly indicates that the longer that the respondent has been in his/her position the more likely they are to believe that Knowledge Management is an extended function of information technology.

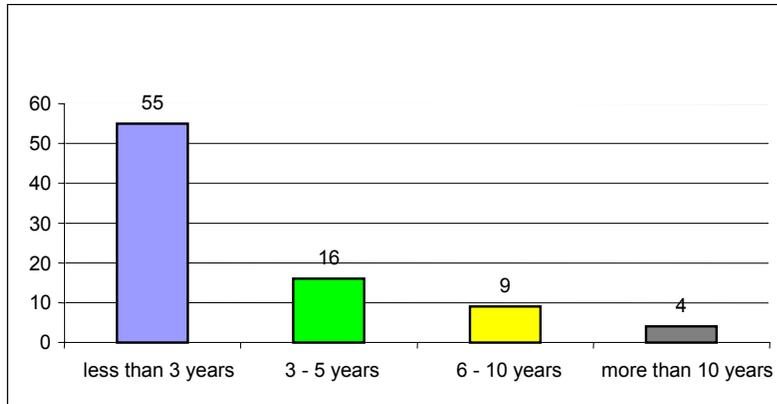


Figure 30 Cross tabulation: Respondent time in current position and Knowledge Management is an extension of IT shown as a percentage

Technology use in organisations

The most notable aspect about technology in use in organisations as reflected in the survey responses is the extensive acknowledgement of the use of online information sources, CD Roms, the Internet and Intranets by all respondents. The acknowledged use rates totalling 91% who use the Internet extensively or to a certain extent, 92% use of Intranets, 87% use of online resources and 78% use of CD Roms. Additional numbers have plans to use these resources.

This compares with the smaller number of 29% of organisations that have no plans to use or are unsure about using data warehousing, data mining or expert systems. A further 32% of organisations have no plans to use or are unsure about using search and retrieval agents. Groupware rates at a similarly small 22% as being unsure about use or having no plans to do so. These elements are often considered as part of a decision support mechanism and as facilitators of knowledge management.

It may be posited that this data may reflect the user profile and the front end of the software utilised in an organisation rather than the technological base provided.

Table 26 Technologies used shown as a percentage

	Used extensively	Used to a certain extent	Plan to use	No plans to use
Video conferencing	16	41	14	23
CD Roms	19	59	6	9
Data warehousing or data mining	20	25	25	15
Expert systems	21	26	20	15
Search and retrieval agents	21	31	14	17
Document repositories and management	25	43	17	9
Electronic bulletin boards	30	39	11	15
Groupware	39	28	9	17
Online information sources	43	46	6	3
Internet	53	39	4	1
Intranet	57	34	9	0

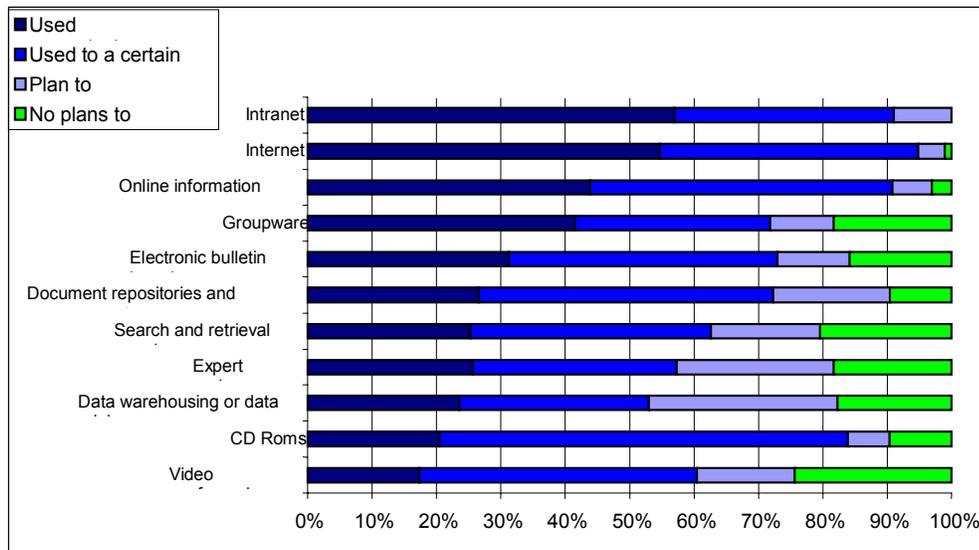


Figure 31 Technologies used shown as a percentage

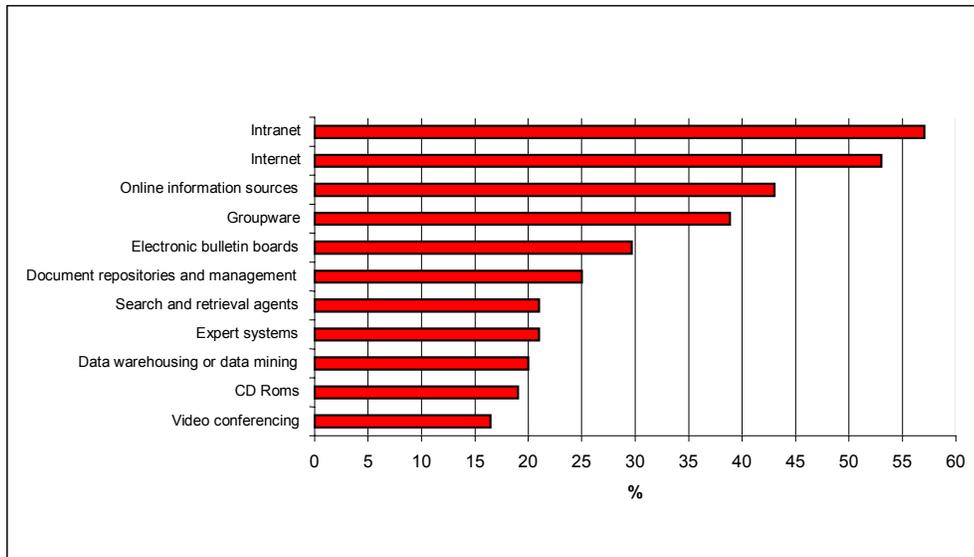


Figure 32 Technology used extensively by organisations usage shown as a percentage

Knowledge Cultures

The sixth section of the survey examined the cultural aspects of Knowledge Management

The questions asked relating to knowledge cultures reflect both the outlook of the organisation and the outcomes of the strategies or perspectives pursued. The exploitation of knowledge to its fullest potential and gaining an edge by innovation are both matters of fact about the organisations. These rates are at 50% and 60% respectively.

The other aspects of culture expressed as being evident all of the time or some of the time are: encouraging people to share (55%), rewarding people explicitly for sharing (33%), managing learning and knowledge acquisition (53%), being a learning organisation (56%) or taking responsibility for staff learning new skills (75%).

Table 27 Knowledge culture shown as a percentage

	All the time	Some of the time	Occasionally	Never	Blank
Exploits knowledge to fullest potential	5	45	41	9	0
Encourage people to share	26	49	18	6	0
Rewards people explicitly for sharing	7	26	43	22	1
Effectively manages learning and knowledge acquisition	9	44	37	11	0
Is a learning organisation	14	42	34	9	1
Takes responsibility for staff learning new skills	22	53	22	3	0
Gains edge by innovation	10	50	31	9	1

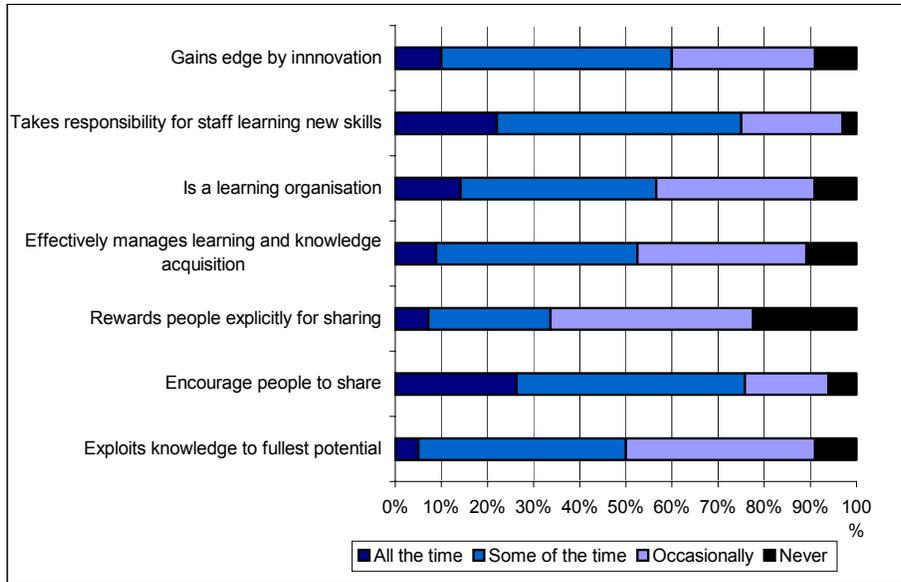


Figure 33 Knowledge culture shown as a percentage

An examination of learning activities budgets in last five years demonstrates that 75% of organisations have grown or maintained their learning activities. This corresponds with the data in the previous table showing a 75% - 25% balance in the organisations that take responsibility for learning new skills.

Table 28 Learning Activities Budget

Budgetary movement	%
Decreased	6%
Grown	46%
Remained the same	32%
Don't know	14%
Blank	2%
Total	100%

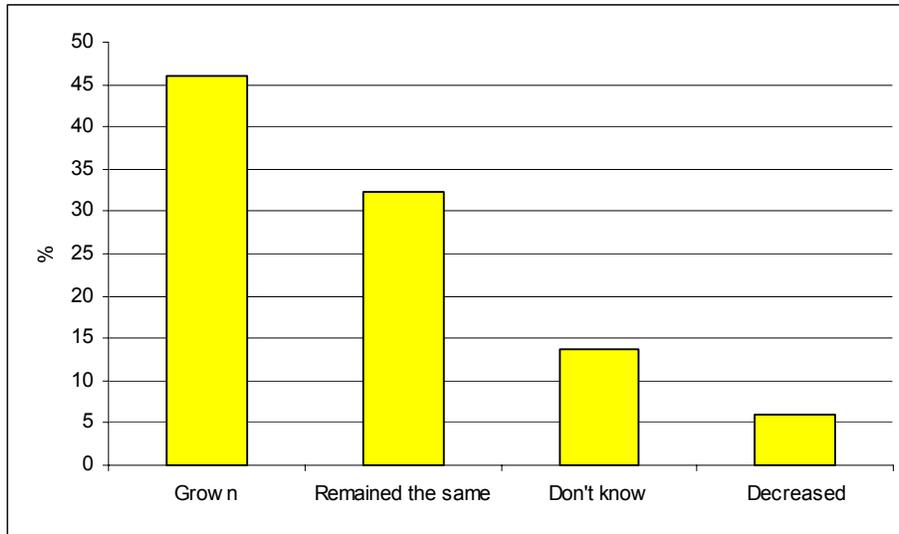


Figure 34 Learning Activities Budget in the last five years

Organisational issues key to knowledge management

The seventh section of the survey examined issues relating to knowledge use in the future and related obstacles.

Respondents were asked to give a textual response about those issues key to Knowledge Management in their organisation. Of the 153 respondents 69 people included text in their responses to this question in the survey.

Table 29 Issues key to knowledge management

	Count
Written	69
Blank	84
Total	153

There were a variety of elements reflected in the 45% response rate. The issue referred to most often were the co-operative cultural aspects of a Knowledge Management strategy requiring a strategy for change management 20%. The theoretical literature deals with this as a significant element in the development of any Knowledge Management endeavour. Many (14% of this set of respondents) felt keenly that the philosophy of Knowledge Management is not well understood in their organisation, and that the development of criterion for knowledge collection is a key issue for them (10%). Control of policy or organisational leadership who are not prepared to back knowledge management, the difficulties of quantifying the outputs of a Knowledge Management strategy this is in business terms. ROI or return on investment – these are all issues reflected by respondents.

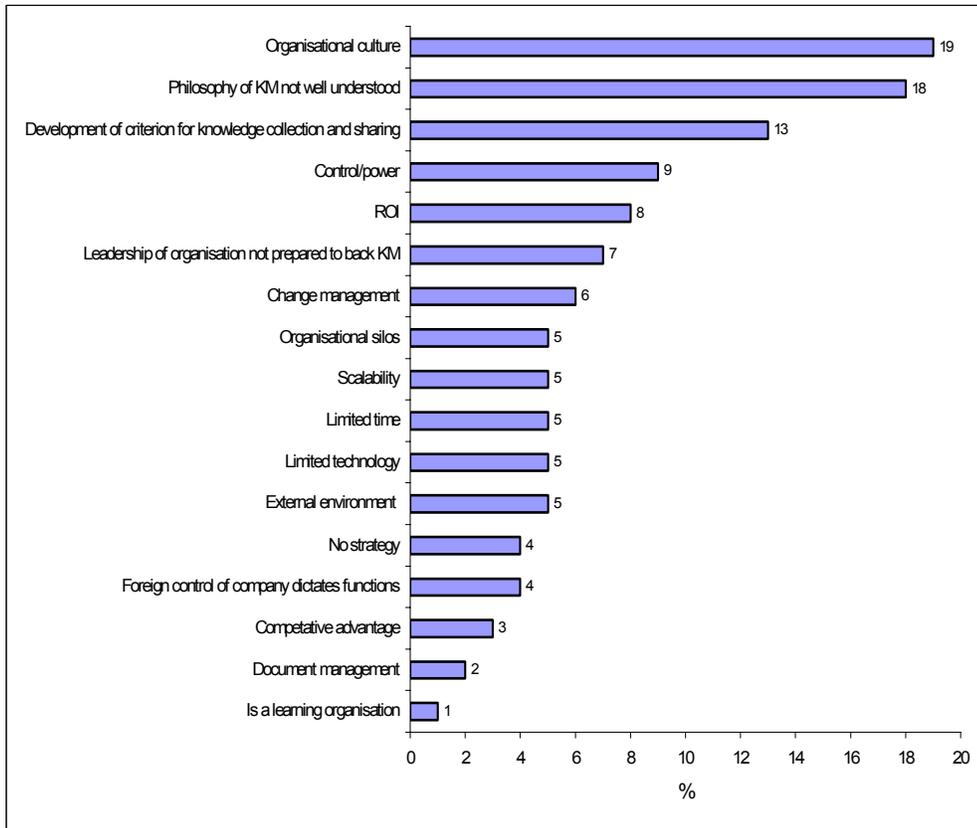


Figure 35 Issues key to Knowledge Management shown as a percentage

To a lesser extent respondents mention issues of the scalability of strategies, of limited time available for planning and implementation, limited technology availability for implementation and of situations where the foreign control of the organisation dictates functions. To a lesser extent structural silos of information that do not easily interact organisationally and the impact of the economy or external environment are all issues that affect the Knowledge Management strategies of the respondent organisations.

Obstacles

Respondents were asked to give a textual response about issues that they considered as obstacles to moving Knowledge Management forward in their organisation. Of the 153 respondents 47 people included text in their responses to this question in the survey.

Table 30 Obstacles to moving forward in knowledge use in the future.

	Count
Written response	47
Blank	106
Total	153

The greatest obstacle described by respondents in moving forward with a knowledge use strategy is the management culture of the organisation. This 31% response includes those organisations that

have a current culture of believing that they are already good at sharing knowledge, those who work within a traditional old organisation with a few key people who have the knowledge but will not share, disseminate or delegate. There are also who see the solution in change management as a remedy for the cultural obstacles but cannot effect the required changes.

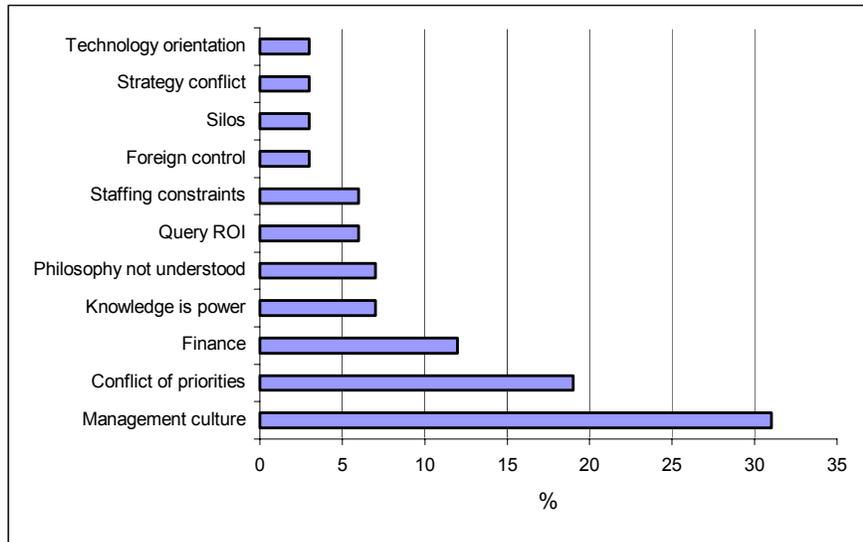


Figure 36 Obstacles to moving forward in knowledge use in the future shown as a percentage.

Another major source of difficulty described by 19% of respondents in the implementation of a Knowledge Management strategy was the ongoing conflict of priorities in organisations - ranging from mergers and acquisitions activities to prevarication about management strategies.

Financial constraints including staffing allocations to a Knowledge Management strategy affected 18% while cultural issues like the maintenance of organisational power associated with keeping knowledge to oneself was cited by 7% of respondents. Equally 7% of respondents felt that the concept or philosophy not sufficiently well understood and that this would inhibit the potential of the organisation to move forward. The issue of the intangible benefits or difficulties of measuring the return on the investment (ROI) of the management of knowledge affected 6% of organisations. The balance of the textual responses were evenly divided at 3% each in assigning: foreign control, structural information silos, conflicts in the development of strategy and the technological rather than behavioural orientation of a Knowledge Management approach in the organisation. All these were considered by the respondents to be obstacles to moving forward with knowledge use strategies in their organisations.

Conclusions

The results presented in this report give a preliminary analysis of the survey data collected for measuring the current Australian business understanding of the concept of knowledge management, and of the uptake trends of this concept in the corporate environment. The survey included respondents of various ages and educational backgrounds, from all states and territories and covered a fully representative spectrum of industry groups.

The picture illustrated by the survey respondents shows both positive and negative characteristics. Results were positive in the sense that there is a high awareness of knowledge issues, knowledge resources, and knowledge tools and of the concept of knowledge management. Some results were negative in that they show that there are still substantial obstacles to the implementation of Knowledge Management strategies.

The evidence points to a high awareness of the value of knowledge with active plans to acquire and exploit it. There is a deep belief that knowledge can be valued, however strategies to manage that knowledge are still underdeveloped in so far as might be applied to tracking and reuse of existing knowledge sources. This may be attributable to the infrequent formalisation of a central Knowledge Management role; although where one exists it is substantially concerned with the gathering, organisation and distribution of knowledge back to the organisation. Less emphasis is placed on learning from knowledge or in ensuring its reuse. The value placed on knowledge is reinforced in the high response to formal mechanisms to managing knowledge and in how highly relevant it is to overall corporate planning now and in the future.

The relationship between explicit knowledge and the technological tools utilised in managing it falls into an interesting context. The survey reveals that a prime factor in treating the concept of Knowledge Management relating only to the organisation of explicit knowledge - using Information Technology (IT) tools - is the length of time that the survey respondent has been in their current position in the organisation. That is the less time that the respondent has been in their current position in their organisation the less they view the management of knowledge as being an extension of IT. The more they stay in the position the more they see Knowledge Management as pertaining to the management of tacit not just explicit knowledge resources.

The number of knowledge workers has grown across all sectors, with an overall doubling of budgetary commitments to knowledge. This strongly demonstrates the value placed on knowledge. The question will be which techniques will continue to be applied to capture this valued resource.

Of great interest is the image rendered by the survey questions relating to knowledge cultures, to organisational issues key to Knowledge

Management and to obstacles to the effective management of knowledge. The cultural inhibitors of employee fear for jobs and their self-esteem as reinforced by knowledge power bases.

Building trust throughout a company is the key to creating a knowledge-oriented corporate culture. It is the corporate culture that nourishes a Knowledge Management programme producing a positive environment in which employees are encouraged to take risks to make decisions that are efficient, productive, and innovative.

Krogh, G. V., Ichijo, K., & Nonaka, I. (2000) describe how effective knowledge creation is dependant on the physical, virtual and emotional context on which it is manifest. They discuss the importance of the notion of reciprocity of relationships. When a relationship is felt to be reciprocal then a trust develops which can work to overcome power-based relationships. An obstacle to knowledge creation can be the inability of an individual to deal with a new situation, new event, new context or new information. Hence the need for an organisation to actively pursue the work context as a learning organisation where the individuals of that organisation are attune to learning new things. Learning implies encountering and assimilating new facts and ideas in an environment that is already structured to permit learning.

Respondents reflected what are described as of silos of knowledge in their organisations. They are referring to organisations divisional silos where two departments are doing the same function in two or more geographic locations but do not interact. The respondents are also referring to the type of silo that Long and Fahey (2000) reveal where differing cultures within an organisation act as inhibitors to the efficient sharing of knowledge. These cultures can arise from different educational backgrounds and expectations. They are often firmly rooted in the different functions of departments within an organisation. For example the subcultures of a research and development department may have a collaborative exchange mechanism where people discuss their work and naturally exchange their ideas to create a greater whole of knowledge than the sum of the parts contributed by individuals. This sharing may not be based on written exchange of ideas but rather through the social relationships among the participants. Alternatively a department subculture within the same organisation may exchange knowledge solely as rules and structures embedded in their work process.

As has been evidenced in this research, the self-reporting of the picture of the understanding of Knowledge Management and of its uptake levels in Australia at this time closely mirrors the theoretical Knowledge Management literature. As the literature uses examples of those companies that are at the cutting edge of Knowledge Management theory and description, it can be claimed that the sample evaluated is not only an accurate reflection of Australian organisations but that Knowledge Management practices in Australia are developing at similar levels. As with the rest of the world we still have some way to go in the effective sharing of organisational knowledge.

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