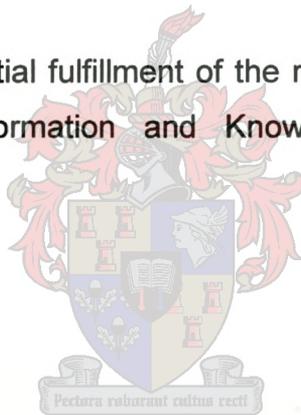*Leveraging Knowledge Management as the basis to achieve a sustainable competitive advantage in KwaZulu-Natal Legislature*

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Assignment submitted in partial fulfillment of the requirements for the degree of Master of Philosophy (Information and Knowledge Management) at the University of Stellenbosch.

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Declaration

I, undersigned, hereby declare that the work contained in this thesis is my own original work and that I have not previously submitted it at any university for a degree.

Signature   Date

Abstract

This paper was written with the intention of investigating how Knowledge Management (KM) influences an organization's competitive advantage. The objective of the research questions was to determine KM's role in a competitive advantage.

Knowledge is the critical asset of any organization whether profit or non-profit.

This paper will discuss the meaning of the competitive advantage focusing attention in a non-profit organization, which will serve as a framework for subsequent argument and the remainder of the study.

Research into KM's relation with business issues such as leadership, IT for KM, organizational structure was conducted. The objective was to determine the readiness of the institution in implementing Knowledge Management as a basis for its competitive advantage and also to determine the role of the leadership for KM and IT for KM and to propose a new agenda for the Chief Knowledge Officer.

This paper is organized around six chapters. It begins with introduction and background chapters where the research question, research setting and KM's competitive advantage are discussed.

An in-depth literature review follows in chapter two. Chapter three deals with the detailed description of the methodology followed to compile this paper. A data report and analysis in chapters four and five followed by recommendations for rolling out of KM initiative are considered. Research concludes in chapter six.

Opsomming

Hierdie studiestuk is geskryf met die bedoeling om die wyse waarop Kennisbestuur (KB) 'n organisasie se mededingende voordeel beïnvloed, te ondersoek. Die oogmerk van die navorsingsvrae was om KB se rol met betrekking tot mededingende voordeel te bepaal. Kennis is 'n belangrike bate vir enige organisasie met of sonder winsbejag.

In hierdie stuk word die betekenis van mededingende voordeel bespreek met die klem op 'n organisasie sonder winsbejag wat as raamwerk sal dien vir daaropvolgende argumente en die res van die studie. Navorsing is oor die verband tussen KB en sake-aangeleenthede soos leierskap, inligtingstegnologie (IT) en organisatoriese struktuur gedoen. Die oogmerk was om die gereedheid van die instelling te bepaal vir die implementering van KB as 'n grondslag vir sy mededingende voordeel en ook om die rol van leierskap vir KB en IT vir KB vas te stel en om 'n nuwe agenda vir die Hoof Kennisbeampte voor te stel.

Hierdie stuk bestaan uit ses hoofstukke. Dit begin met 'n inleiding en 'n hoofstuk met agtergrondinligting waar die navorsingsvrae, navorsingsomgewing en KB se mededingende voordeel bespreek word. 'n Deeglike literatuur-oorsig volg in hoofstuk twee. Hoofstuk drie handel oor 'n gedetailleerde beskrywing van die metodologie wat gevolg is om hierdie stuk te lewer. 'n Dataverslag en -ontleding word in hoofstukke vier en vyf oorweeg, gevolg deur aanbevelings vir die uitrol van 'n KB inisiatief. Die navorsingsgevolgtrekking is in hoofstuk ses vervat.

Dedication

I would like to dedicate this dissertation to my mother Mrs T.C. Mabaso,
my sister Phumla Mabaso, and my special niece Kwezi Mabaso.
Thank you very much for your support. I did it for you.

To all my friends, thank you so much for encouraging me and believing in me. I
couldn't have done it without you.

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CHAPTER 1

1. INTRODUCTION

Attention has recently focused on an organization's ability to utilize knowledge to improve business performance (Davenport, 1997; Drucker, 1998; Pfeffer, & Sutton, 1999). Knowledge Management has been debated in the fields of economy, business and leadership for quite an extensive period. Government departments are slowly joining in adopting the concept of KM.

The concept of KM needs to be well understood and the institutions need to see its benefits. Implementing KM is a huge task and it requires a proper understanding of the concept and the KM strategy that is linked up to the business strategy. The employees need not feel KM is an added function, but that it should be adopted as a philosophy that is going to help them to be more productive and make their tasks easier.

The important thing to be grasped is that the problem with understanding KM is that KM is so young and executives do not have models to use as guides. Very few government institutions have implemented KM. Those who have not implemented KM, they are a little skeptical if it will work or not.

1.1. THE OBJECTIVE OF THE STUDY

The objective of the study is to discuss and determine KM's role in a competitive advantage. Secondly, to illustrate the strength and limitations of Information Technology in leveraging KM. Finally, to propose the new agenda for the Chief Knowledge Officer (CKO).

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The study will focus on the pillars of KM or rather what people should know about KM before working on the strategy to implement it. This paper will not provide the strategy for KM but guidelines to be taken care of before the KM strategy.

1.2   REASONS FOR THE TOPIC

Legislatures and Parliament in South Africa (SA) are very complex businesses. They face more issues than commercial enterprises. Their political mandate is to develop policies and legislation. They have to ensure their provinces are properly governed and that the issues of communities – poverty, health, crime, education, etc are properly developed. This requires a multitude of skills not only from the politicians but from the people in charge of the legislature administration.

Like any other complex organization, politicians and the public require information. Information has always been an integral part of the governance of people's everyday lives (Mostert, 2002). An ancient saying 'knowledge is power' is even more applicable to the world we live in today. People of all ages have always striven to generate, accumulate and distribute information (Celik, 1994).

Knowledge has become the most strategic organizational asset, the principal basis of competitive advantage. The availability of information/ knowledge at the right time and at the right place has become a major driving force in the establishment of meaningful legislatures. Robinson (quoted in Brian 1997) argues that the "key to democracy is an effective legislature." However, he also states that "the key to an effective legislature is the knowledge and information that permit it to make informed decisions on specific issues and to play an active role in the policy-making process of the nation" (Brian, 1997).

The internet has brought about a decentralization of power. In the wired world, individuals can now make their own choices as to which authorities and information sources they will accept. This is leading to a greater democratization of knowledge, empowerment of the individual, and the potential for more informed interactions between the citizenry and legislature, including government. Moreover, since individuals now have ready access to a variety of information resources, the legislature should adopt new proactive measures to compile and disseminate information in a competitive information environment.

A citizenry that is able to seek and obtain information and knowledge from any place in the world through the internet will, in all likelihood, also expect more from the legislature. There is also the opportunity for a paradigm shift in which the legislature benefits even more from the intellectual capital of the citizenry. In knowledge economy, the intellectual capital of the citizen could become the legislature's and society's most important asset. Knowledge management principles can be the key to managing this transition and effectively creating this new interactive knowledge sharing environment.

Application of KM initiative will also be necessary if the legislature is to maintain a role as an authoritative source of useful and relevant information. With the public perceptions continuously changing due to empowering nature of communication technologies, the nature of legislature should be transformed as a result of changes technology is creating in society.

1.3   BACKGROUND TO THE LEGISLATURE

KwaZulu-Natal (KZN) is one of the nine provinces in the Republic of South Africa (RSA), and the one that is strongly positioned on the eastern

seaboard of this dynamic country. The KZN province is widely known for its perfect platform for innumerable investment opportunities because of its sound economic sector, outstanding scenery and its absorbing cultural diversity and history. It serves as a refreshing and matchless business locale with a most congenial ambiance and an enviable lifestyle in an idyllic climate. It is established as the country's most popular year-round holiday destination with an abundance of sporting and recreational amenities.

In addition, KZN is South Africa's most populous province. In the post 1994 period the province's economic performance has been impressive. The province has contributed approximately 15% to South Africa's gross domestic product. This poses a huge challenge to the politicians of this province. The politicians should work hard to ensure that the province continues to prosper and attract more investors. People should not only want to come and invest in the province but want to become citizens of the province because it is a province with good governance.

The KZN Legislature staff has to assist these politicians to carry out their political mandate by providing effective and efficient administrative support.

The province is overwhelmed with a lot of challenges such as the high levels of unemployment, the high estimated incidence of HIV/AIDS, improved poverty eradication systems, improved health systems and education system. Despite the pressure these overwhelming challenges put on the province, KZN should continue sustaining its competitive advantage.

The legislature should use knowledge as a basis for the province's competitive advantage. The legislature staff does not change as politicians

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change their portfolios and sometimes are not returned in elections. The staff tends to possess information and vast knowledge and the experience on the issues concerning different portfolio committees and the functions and services provided by the institution.

CHAPTER 2

2.   Literature Review

2.1   DEFINITION OF TERMS

2.1.1 KNOWLEDGE

Davenport defines knowledge as a 'fluid mix' of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices and norms (Hempel, 2001). Nonaka and Takeuchi (1995) suggest two main ways in which knowledge may be classified, that is tacit knowledge and explicit knowledge.

(i)   TACIT KNOWLEDGE

Tacit knowledge is knowledge which is subjective and cognitive and is often difficult to put into words. Such factors as insight, intuition, values and ideas fall into the categories. Tacit knowledge is mostly generated and stored in people's heads. It is difficult to manage and the risk of losing it because of employee churn is a very real threat to all organizations (Hempel, 2001).

(ii)   EXPLICIT KNOWLEDGE

Explicit knowledge consists of knowledge which is more objective, codified and technical in nature. The category includes such things as documents, drawings, plans and policies relating to the company and its business.

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This type of knowledge is most amenable to storage and best managed via database systems.

2.1.2 KNOWLEDGE MANAGEMENT (KM)

There are as many definitions of KM as there are people who are working on this subject. Most of them recognize that KM is a tricky subject to get to grips with. Given below are some of the most commonly used definitions:

Knowledge Management can be defined as "the acquisition, coordination, diffusion, creation, and utilization of knowledge to improve fundamental business processes. These processes exceed individual, team, departmental and organizational boundaries to include customers, partners and dealer channels (Hempel, 1998).

Davenport in Suresh (2004) gives a more comprehensive definition of KM and its implications.

'Knowledge Management is concerned with the exploitation and development of the knowledge assets of an organization with a view to furthering the organization's objectives. The knowledge to be managed includes explicit, documented knowledge and tacit, subjective knowledge. Management of this knowledge entails all the processes associated with the identification, sharing and creation of knowledge. This requires systems for the creation and maintenance of knowledge repositories, and to cultivate and facilitate the sharing of knowledge and organization learning. Organizations that succeed in knowledge management are likely to view knowledge as an asset and to develop organizational norms and values, which support the creation, and sharing o knowledge.'

KM is a new concept which is going through a maturing process; hence it is difficult to come up with a succinct definition

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From these two definitions, one can deduce that KM can be used as a tool to improve or deliver better services. KM is not a product but a process which involves many aspects. The fact of the matter is that organizations can gain tremendous advantage by applying a more structured and consciously planned KM initiative.

2.2 RELATIONSHIP BETWEEN DATA, INFORMATION AND KNOWLEDGE

The words data, information and knowledge are used interchangeably. In order to understand what is managed in KM, it is important to understand the relationships between these words. These terms are often substituted for each other without serious misunderstandings.

Data are symbols or facts such as sales figures; they are signals about the organization and human activity and have little value in itself. Data are easy to manipulate and store in repositories. Information is what data becomes when humans interpret and contextualize it. It is also the carrier we use to express and communicate knowledge in business. Information has more value than data and is more ambiguous. Knowledge is information within people's minds and it is valuable as new ideas, insights and interpretations can be applied to information in an effort to generate competitive power and value. From management perspective, employees' knowledge is difficult to administer as it is intangible. This, in turn, stimulates its flow for sharing, use/reuse and capturing it in a corporate memory relies on human motivation, an individual's ability to articulate his/her knowledge and to apply it.

In practice, it is difficult to determine when data become information and when information becomes knowledge. For practical purposes, managers

can consider data information and knowledge as points along a continuum of increasing value and human contribution, (Davenport and Marchand, 2000).

Davenport and Marchand (2000) and Stewart (1999) advocate that managers spend little energy on this debate and a lot of energy on adding value to what they have by advancing it along the continuum.

2.3   RELATIONSHIP BETWEEN INFORMATION MANAGEMENT (IM) AND KNOWLEDGE MANAGEMENT (KM)

Organizations have a tendency of failing to see or make the distinction between Information Management (IM) and Knowledge Management (KM). For the purpose of this study, the writer feels it is important to make this distinction clear.

The rationale of the relationship between IM and KM is derived from the fact that employees in organizations are constantly transforming knowledge into various forms of information such as memos, e-mails, manuals and reports while they acquire information from others to improve their knowledge (Furlong, 2001). According to Choo, IM is the key for sustaining knowledge creation and application in an organization. The perpetual regeneration of knowledge into information and subsequently into knowledge is necessary as people are not always able to share knowledge in person with others due to constrains such as time, number of people to be informed and geographical location differences (Furlong, 2001). Furlong, (2001) expands on this by stating that "KM improves IM by developing easily accessible repositories of information about knowledge. This information guides the employee to the required source of knowledge whether a document or an expert".

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Davenport and Marchand (2000), and Nonaka and Takeuchi (1995) all espouse that the most important knowledge rests in people's heads and that the human mind is the primary repository of knowledge consequently, facilitating access to it through improved IM via knowledge cartography and that employee profiling is an important part of KM. Sveiby affirms by stating that business managers need to realize that unlike information, knowledge is embedded in people and knowledge creation occurs in the process of social interaction.

Organizations exist to achieve specific objectives. Their members are encouraged to share their knowledge. KM promotes this through enhanced IM. The main considerations are where knowledge resides and how it is used/reused. What this means is that KM depends less on the amount of information than on the number of connections that link employee to knowledge and employee to information (Furlong, 2001).

2.4   KM FOR COMPETITIVE ADVANTAGE

All organizations, whether private or public, profit or non-profit, are in competitive position in relation to each other, insofar as they are competing either for customers, donors, or resources. In our knowledge-dominated era, organizations can create and sustain competitive advantage through initiation of appropriate knowledge management processes (Suresh, 2004). But what is competitive advantage anyway?

Competitive advantage can be defined as a firm, consistent earning of a higher trade of investment than competitors can muster (Grant, 1991; Schoemaker, 1990). Porter (1980) argues that competitive advantage is at the heart of a firm's performance in competitive markets.

Porter (1980) argues that there are no competitive absolutes. Porter also believes that a company becomes good at its core competencies when

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and only it has competitive advantage over its rivals (Furlong, 2001). Furlong (2001) further states that "such an advantage can lie in many specific things such as better, quality control, better technical processes, low cost of capital, integrated marketing, committed labor force and flexible production techniques".

According to the Resource-Based View (RBV) for companies to be able to attain a lasting competitive advantage they should develop unique resources in some form or another. The knowledge resources of a company would seem to be a good place to start to look for such unique resources (Zack, 1999). Barney outlines the popular RBV framework specifying the sources and conditions of competitive and sustainable advantage:

A firm possesses competitive advantage if it has resources that are rare (not passed by many firms) and valuable (that is if they permit the firm to respond effectively or efficiently to environmental conditions). Barney (1991) argues that the competitive advantage is considered sustainable if those resources are also non-imitable (that is, they cannot be easily duplicated by competitors), non-substitutable (that is, other resources cannot perform the same function) and non-transferable (that is, they cannot be acquired in the market place).

Barney (1991) argues that 'a firm is said to have a competitive advantage when it is engaging in activities that increase its efficiency or effectiveness in a way that competing firms are not, regardless of whatever strategy those other firms are in a particular firm' s industry.

Sustainable competitive advantage allows the maintenance and improvement of the enterprise's competitive position in the market. It is an

advantage that enables the business to survive against its competitors over a long period of time.

For companies to sustain competitive advantage, they use their core competencies. Hamel and Prahalad (1990) define core competencies as being the key skills and procedures that a company develops over time and which are critical to its success. Core competencies refer to both organization and individual. These are at the heart of the organization where most of the value is added to the company's products. As such, they may be seen as the company's unique resources or Strategic Assets, in that they may enable the company to gain a competitive advantage that is sustainable.

Organization needs to support core competencies that enable the organization to provide a particular benefit to a customer and hence compete more effectively (Olson and Bolton, 2000). Itami (1987) refers to them as the organization's competitive weapon and what Stalk et al (1992) and Lawler et al (2001), quoted in Olson and Bolton (2004), consider as being the basis for competition for the future of the organization. A competence that is central to the company's operations but not exceptional in some way should not be considered as a core competence and it does not differentiate the company from any other similar companies (Hamel and Prahalad, 1990).

Within the RBV, it is suggested that companies should develop unique resources in order to gain a lasting competitive advantage. Beal (2003) maintains that the core competencies concept can be fitted into the RBV framework. Core competencies should be difficult for competitors to replicate and they should add to customer benefits.

Bukowitz and Williams (1999), and Nonaka and Takeuchi (1995) discuss how many organizations' core competencies are likely to be taken for granted. This is because tacit knowledge is the core competence for most organizations because it is personal, fixed in context and embedded in individual's paradigm (Furlong, 2001). Consequently, tacit knowledge can be hard to formulate, communicate and almost impossible to emulate outside organizational boundaries.

Koulopoulos and Frappoaolo (1999) argue that tacit knowledge plays the most important role in distinguishing organizations in terms of success. They expand on this point stating that competitors "...cannot learn and create tacit knowledge so easily; thus, the company that is able to leverage tacit knowledge, has a much more powerful tool for competitiveness at its disposal". However, it is a potential major weakness too, as it becomes embedded in the organization's culture and routine, preventing managers from recognizing the need for change and ensuring that tacit knowledge is not challenged or new competencies are not learned.

Organization cannot support all the competencies. Knowledge base requires flexibility in the ways the diverse knowledge competencies and people form diverse organizational units can be brought together to produce intellectual capitals for the organization (Stewart 1997, quoted in Olson and Bolton). This requires leadership skills and, increasingly, the ability to build flexible, multi-disciplinary teams (Bennis and Biederman, 1997).

Stewart (1997) argues that most organizations think of staff in terms of what they cost rather than what their value is to the organization's output. By thinking about staff as being central to the organization's core competencies, management is encouraged to think strategically about

staff recruitment, retention and professional development and to be alert to challenges posed by characteristics of the particular labor market (Olson and Bolton). Organizations should invest and deploy their intellectual capital to ensure they benefit form the process.

2.5   INTELLECTUAL CAPITAL

The ability and willingness to invest and deploy intellectual capital will make the difference between success and failure of KM · in the organization. The full utilization of people means attracting and motivating the best proactive workforce so that the creativity and innovation that arise from the difference enrich business solutions (Bidol et al, 1998).

Modern organization is a learning organization. Its wealth will be judged on the ability to use knowledge. Effectiveness is based on intelligence, information and ideas, such as when an organization is governed by consent and participation rather than by command. Authority is legitimized: coercion or manipulation is not necessary. People contribute because they identify themselves with the core values and purpose of the organization. They have a stake in the success of the organization. Getting commitment, not compliance, is the key (Bidol et al, 1998).

Intellectual capital is different in knowledge-intensive companies. It is not clear who owns the company, its tools, or its products. But in an age of intellectual capital, the most valuable parts of these jobs are human tasks; sensing, judging, creating, building relationships. Far from being alienated from the tools of his trade and fruit of his labor, the knowledge worker carries them between his ears.
Employees, companies, customers share joint ownership of the assets and outputs of knowledge work (Steward, 1997).

Given the fact that intellectual capital is the value of any business that wants to maintain competitive advantage in the global markets, the optimal performance of these resources is a necessity. The only way these resources will perform optimally is when they are motivated to do so. Companies which are able to attract and retain knowledge workers, will have better chances of competing in global markets. Technology and information together with the mobility of human capital, skilled people, ideas and knowledge in a global economy; and electronic communications which quicken the pace of work, all form part of the notion of intellectual capital.

2.6 KNOWLEDGE CREATION

KM that results in action depends on taping the tacit knowledge and subjective insight intuition and hunches of individual employees and making these available for testing and use by the whole organization (Borghoff and Paresch, 1998), (Brown, 1999), Bukowitz and Williams, (1999), (Davenport and Prusak, 2000), and (Quinn, Anderson and Finklestein, 1996).

The combining of tacit and explicit knowledge improves and re-uses current knowledge by developing the best practices and creating new knowledge through the revision and destruction of existing knowledge. This flow of knowledge, according to Carneiro (2000) and Agryis (1998), can result in innovative action that produces competitive advantage. The crux of the Knowledge Life-Cycle, as espoused by Borghoof and Pareschi (1998), is the knowledge that does not flow does not grow and eventually becomes obsolete. Powerful KM application will have no value without willing participants who originate a flow of knowledge; a network is therefore critical. Mass is essential for successful KM. This is not just a matter of installing IT but nurturing a knowledge sharing culture. Davenport and Prusak (1998) argue that building communities of interest is an effectual technique for

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achieving critical mass. Often management just has to identify and support these informal "self organizing groups sharing common work interest and passions, usually cutting across a company's functions and processes," (Prusak, 2000). Such a group embodies a knowledge sharing culture, resulting in a functional knowledge life cycle where knowledge is converted from tacit to explicit to tacit over again on a continuous basis.

2.7   KNOWLEDGE DISSERMINATION

Knowledge is useless unless it is transferred to the immediate job performed by the employee. It becomes even more useless if it cannot be transferred to other parts of the organization to solve problems and to energize creative new ideas.

Knowledge needs to be disseminated accurately and quickly throughout the organization to where it is needed for it to be of any use at all. Just in time access of required information leads to an extension of the individual's long-term memory and reduces the load on working memory (Mahadik, 2002).

What becomes a challenge is the knowledge application. The way employees apply knowledge is in contrast to applying information. Knowledge, like information, is of no value to business unless applied to decisions that result in competitive advantage (Furlong, 2001). KM is not created unless attention is paid to how employees apply and use their knowledge for generating new ideas for future of the business (Davenport and Marchand, 2000).

Knowledge creation, application and its use are complex issues determined by corporate culture, reward scheme, structure, strategy, skills, staff, management style, values and the design of processes for knowledge work (Furlong, 2001). The continuous conversion of knowledge into information and information into knowledge is a key element of what companies must do to develop and apply knowledge successfully. There

is no doubt that KM incorporates IM and the use of IT to acquire and map information on knowledge and connect employees to knowledge. However, "if knowledge resides primarily in people and it is people who decide to create, use and share their ideas to attain business results, then KM is as much about managing people as it about managing information and IT (Davenport and Marchand, 2000).

Socialization	Externalization
Internalization	Combination
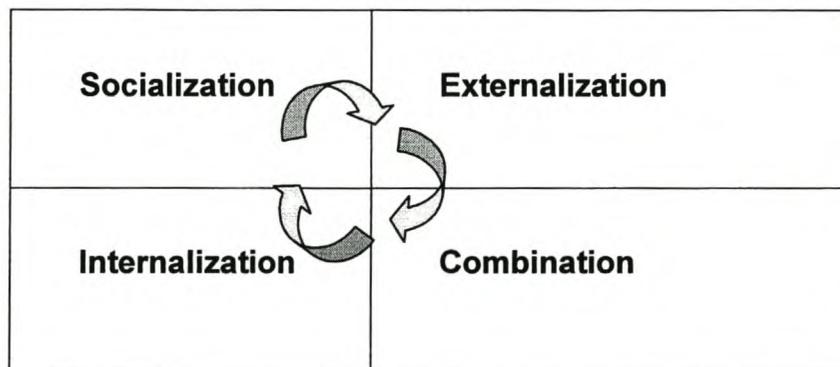
Figure 1   KNOWLEDGE CYCLE

Information is converted into knowledge through a human social process of shared understanding and sense making at both personal and organizational level. Nonaka and Takeuchi (1995) refer to this flow as the Knowledge Life-Cycle (see Figure 1 above) which hinges on the distinction between tacit knowledge and explicit knowledge. Explicit knowledge is formal knowledge that has been captured by the corporate memory. It defines the intellectual assets of an organization independently of its employees, thus it is structural knowledge (Stewart, 1999). Tacit knowledge is personal knowledge that is difficult to formulate, measure or value, consequently, management tended to ignore it in the past (Furlong, 2001). The recent interest in tacit knowledge can be explained by the fact that it is deeply rooted in action and individual commitment to specific context (Nonaka, 1991).

2.8   ORGANIZATIONAL STRUCTURE

Organizational structure is the framework under which people operate. The framework can either be helpful or a hindrance. Within the framework lies the culture of the workplace community.

Organizational structure together with organizational culture has a lot of influence in KM initiatives. Organizational structures differ from organization to organization, depending on a number of variables such as market conditions and business processes.

To encourage networks of employees, a flat structure is always recommended as opposed to hierarchical structure.

The direct networking of employees to each other's knowledge and experience means, as Drucker, (1998), Senge, (1999), and Quinn, Anderson and Finkelstein (1996) make it clear, that the whole layers of management can be cut out of the structure. In non-networked structures, management roles serve as relays of information and controllers of resources, at times behaving as barriers to effective business process execution. The removal of these non-value adding activities should reduce bureaucracy and allow the organization to respond quickly, in a flexible fashion, to client request and market influences (Furlong, 2001).

Goh (1997) advocates that to encourage learning, the organizational structure needs to be flat and decentralized with a minimum of formalized procedures in the work environment.

Morhan and Morhan Jnr, 1995 in Goh (1997) also espouse that learning organizations have fewer controls on employees and have flat organizational structures that place work teams close to ultimate decision makers.

The reason for structuring the organization is to achieve communication efficiencies. Efficiency of knowledge integration requires economizing upon the amount of communication needed to effect integration (Zack, 1999).

2.9   ORGANIZATIONAL CULTURE

Organizational culture can be defined as "an atmosphere through which people can interact (Pretorius, 1996). It is an environment, where everyone shares the same interests with the same kind of value systems.

Organizational culture manifests itself in values and beliefs of the organization, the ethical standards and practices employed, key policies, the style, the tradition the organizations maintain, and the people's attitude and feelings towards each other and the company.

Culture plays an important role in KM initiatives. It is the duty of the leadership of the organization to shape its culture. Meyers, 1996, and Allee, 1997 (in Botha and Fouche, 2003) argue that organizational culture can support or hamper the development of effective knowledge creation and application.

Furlong (2002) argues that knowledge workers' specialized skills and intellect has a direct influence an organization's competitiveness and, subsequently, its growth. Furlong (2002) expands that, considering their strategic objectives, organizations should define the level and type of knowledge to be more important to take care of. However, without being differentiated and stimulated, knowledge may stagnate in a static relation within functional areas, despite projects being performed by multi-disciplinary teams. Thus, if KM is charged with stimulating and supporting knowledge flows in an effort to promote growth, managers should develop

the ability to identify critical knowledge workers, improve their understanding of knowledge work and improve their appreciation of how people relate to information.

Leadership needs to create a knowledge-friendly culture which is, of course, one of the more difficult things to do. Davenport, Long and Beers (1998) propose that organizational culture should have the following components with regard to knowledge:

- People have a positive orientation to knowledge - employees are bright, intellectual, curious, willing and free to explore and executives encourage their knowledge creation and use.
- People are not inhibited in sharing knowledge - they are not alienated or resentful of the company and do not fear that sharing knowledge will cost them their jobs,
- The knowledge management project fits with the existing culture.

  Managing knowledge then begins with the importance of stressing people, their work practices and formal and informal corporate culture in order to differentiate knowledge and stimulate its flow, use/re-use and creation in the quest for growth.

A culture with a positive orientation to knowledge is one that highly values learning on and off the job and one in which experience, expertise, and rapid innovation supersede hierarchy (Davenport, Long and Beers, 1998). Values in the company should create a learning environment in which all individuals are committed to excellence, and where failures and risk taking are tolerated and outside ideas are welcomed (Leornard-Barton, 1995).

2.10 PARADIGM SHIFT FOR KNOWLEDGE WORKERS

There is a need to develop and capture knowledge of the organization. All that is needed is a different mindset. The organization should be visualized as consisting of nothing else but knowledge.

The challenge that is often encountered is that, knowledge does not reside in one format only, that is explicit, but it also comes in a tacit format, which becomes hard to manage. Clearly, knowledge possessed by a person is a separator "knowledge is power"' and good education provides considerable edge (Wigg, 1996 - quoted in Helmi 2002).

Professionals are reluctant to share their knowledge. Competition amongst professional often inhibits sharing because professionals regard their professional knowledge as their "power base". Quinn et al (1996) argue that many professionals have little respect for those outside their field, even when all parties are supposedly seeking the same goal. This is a challenge for management to instill a culture of knowledge sharing. Knowledge is not created by certain people and for certain people in the organization. There needs to be a paradigm shift in the way professionals perceive themselves and the organization as a whole.

This paradigm shift should occur at a point where the organization realizes how the employees can gain from each other and how KM can be adapted for them. Therefore, KM is a paradigm which challenges and affects everyone in the organization.

2.11 THE ROLE OF LEADERSHIP IN KM

Leadership is one of the pillars of KM. According to Furlong (2001), the role of leadership is "to articulate corporate purpose, allocate resources to value creating activities and nurture a knowledge environment". As a

result, no KM initiative can be successful without the support of leadership. Leadership should develop business and operational strategies to survive in today's dynamic environment.

These strategies should determine vision and must align KM with business tactics to drive the value of KM throughout the enterprise. Focus must be placed on building executive support and KM champions. Successful implementation of KM system requires a champion or leader at or near the top of the organization.

The knowledge age requires leadership to facilitate creative environments, allowing innovation to drive the organization towards the vision. Leadership need to create a culture of sharing.

Leadership should establish business strategy, vision and goals that a diverse group of professionals can focus their collective effort on. Furlong (2001) argues that the leader must grasp the value of the organization's knowledge base and then focus this knowledge on corporate goals and objectives.

For Mandela (1994), "a leader is like a shepherd. He stays behind the flock, letting the most nimble go on ahead, whereupon the others follow, not realizing that all they are being directing from behind". From this definition a leader allows people to explore their talent, work independently, innovation, and he provides necessary support and guidance where necessary. Successful leadership believes in individuals. It gives them freedom in performing their tasks.

Communication is very important between a leader and the knowledge workers. Leadership must stimulate the knowledge sharing by removing barriers to sharing and networking (Furlong, 2001). Leadership should

create an enabling environment so that knowledge workers can constantly collaborate and share ideas with each other – seek methods and procedures, improvements, invent new products and services.

Individuals should be allowed to brainstorm, share ideas and learn from each other. Leadership should encourage people to act decisively and take initiative and risk.

Nurturing knowledge requires coaching rather than executive direction and executives have to ask the right questions regarding knowledge application rather than provide answers (Furlong, 2001).
Leadership should empower people by providing them with necessary training. Being an effective leader and empowering employees will create an organizational environment where employees are happy, productive and motivated. It will create a climate where everyday business is controlled, but employees will know the mission, vision and goals of the institution and be inspired to reach them.

Leaders must communicate their vision and empower their knowledge workers, through integrated business processes, to make supportive decisions, embracing but managing risk and adding value (http:/www.magratheasolution.co.uk/leadership and vision.htm).

(a)   TRUST
Trust is the huge issue, actually not a KM issue per se, but crucial because trust determines the level of knowledge sharing. Trust does not just happen. It arises from the way people choose to interact. Trust should be part of the culture of the organization. It should start from top management by giving trust and empowering people. Trust has to be built from bottom up (Sveiby, 1996)

(Abrams, 2001) argues that when trust is part of the culture, people are more likely to collaborate and share knowledge. When employees willingly collaborate and share across traditional boundaries, they reap rewards such as innovation and organizational efficiency (Abrams, 2001).

Prusak says that "people collaborate, talk and share knowledge with people they know and trust". Therefore, the challenge for management is to create widespread trust among co-workers in different functions and divisions so that effective knowledge sharing and collaboration can take place.

Abrams (2001) provides the following recommendations for managers:
(i) Encourage interaction across boundaries. Getting people to communicate across the usual departmental or divisional lines will help reduce uncertainty employees generally feel about the behavior of people outside.
(ii) Develop and nurture positive norms and styles of behaviors across the organization.
(iii) Commit to transparency of process. Lack of information is a major reason for mistrust between individuals and the larger organization or among people from different divisions. Information about how decisions are made and how work is done foster trust.

Trust is dependent on trustworthy people. When employees genuinely know they come first, the result is trust in the organization and love for their leaders (Baker and Baker, 2001). Covey (1997) writes that "trust is the highest form of motivation. Trust determines the quality of the relationship between people. Violating trust is one of the fastest ways to reduce organizational effectiveness".

Trust supports KM by giving people confidence to propose new ideas and recognize their contribution when these ideas succeed. In contrast, lack of trust encourages workers to hoard knowledge that could help a company to reach its peak potential (Baker and Baker, 2001). People need to trust each other and also trust leadership to be able to share freely their knowledge. To be able to achieve this high trust, organizational leadership should be able to act in an ethical and consistent manner. Leadership must act with integrity and in a consistent and cohesive manner (Handerson, 1995).

(b) MOTIVATION

Humans are not machines that just require maintenance; psychologically, they are beings that need stimulation. They are highly emotional. They deal with material things with logic and emotions. Their knowledge-sharing altitude affects the performance of the company. If this attitude has to be enhanced, management should start appreciating their views and opinion and then work on appreciating the individual (Mahadik). Motivation for the knowledge worker of today is essential. The type of motivational drives can be described in general by Maslow's hierarchy of needs, in terms of self-esteem and self-actualization levels according to Herzberg's theory of motivational factors. According to Herzberg's theory (Becker, 1985), the group factors that are responsible for work satisfaction are:

- o The type and content of work: Is the work repetitive and boring or is it creative and innovative? Is the work easy or difficult?
- o Recognition for good work: Is achievement acknowledged by management, co-workers, client/customers, or general public?
- o Responsibility: Is the responsibility and authority related to the job?
- o Growth and development in skill. Is there a growth possibility for the person's skills and knowledge? Are there career opportunities?

An analysis of driving forces and requirements that these factors activate indicated that personal growth and self-actualization are the key to work satisfaction and motivation.

2.12   ORGANIZATIONAL LEARNING

Learning is an integral part of KM. Tapping the tacit knowledge of individual employees and making it available for the whole organization is important for KM initiative. Nonaka (1991) argues that making tacit knowledge available to others is the central activity for a knowledge creating company. Argyris (1991) believes that the successful articulation of tacit knowledge and the creation of new knowledge depend on the ability to escape "Single Loop Learning" and deploy "Double Loop Learning" on individual and organizational level. Argyris (1991) espouses that "Double Loop Learning" moves beyond appropriateness of pre-planned actions. An example of "Single Loop Learning" is the use of a particular tool to perform a repetitive function that quickly wears the tool out, resulting in the technician replacing the tool. If "Double Loop Learning" were applied, the technician would ask, "Why does this function have to be performed?" or "Why does this particular design of tool have to be used?". And then explore whether or not the activity could be eliminated or some other more robust tool could be used economically. Argyris challenges the common assumption that getting employees to learn and share knowledge is a matter of motivation alone and that when people have the right attitude and commitment, learning and sharing automatically follow. He contends that incentive schemes and organizational structures designed to create commitment and motivation do not effect employees' cognitive programming.

Effective "Double Loop Learning" is a reflection on how employees and managers think "…that is the cognitive rules or reasoning they use to

design and implement their actions" (Argyris, 1991). This cognitive programming is the aggregate of a lifetime of experience environmental influence and education.

Furlong (2001) claims that the first step towards "Double Loop Learning" is to teach senior managers how to reason about their behavior in more productive and effective ways. Argyris (1991) argues that any educational program designed for managers should be connected to real business issues. He offers one simple approach, having participants produce a case study concerning a current business issue they are facing. The case becomes the focal point of a group analysis and discussion of issues that have not been addressed before. "Double Loop Learning" requires employees to question the relevance of past experience and its appropriateness in current and future situations. It means learning that produces radical behavior changes in the value chain, resulting in innovative actions and processes that increase competitiveness. Efforts at double loop learning should be augmented with Leonard and Strauss's Creative Abrasion and Nonaka and Takeuchi's Spiral of Knowledge' as diverse views, figurative language and models of concepts facilitate the social process of articulating tacit knowledge into public information, permitting its internalization.

Gavin (1993) and Senge (1999) advocate that opening boundaries across the value network is a necessary requirement in order to stimulate the flow of knowledge for innovative purposes.

They espouse that an organization possessing a variety of cognitive and communication styles will not benefit from them if they are contained by functional departmental boundaries, political in-fighting, excessive internal competition and a culture that does not value learning and knowledge sharing.

The learning organization focuses on team learning through the exchange of tacit knowledge between employees that network with each other and with clients. This approach, according to Garvin and Senge, facilitates the flow of knowledge and develops a team knowledge that is less susceptible to loss via exit of employees. The objective of learning organization is to increase competitiveness via vigilant environmental awareness and innovation through critical evaluation of corporate paradigms.

2.13   KNOWLEDGE WORKER SUPPORT

A knowledge worker is someone who primarily works with information and abstract concepts. Knowledge workers employ their knowledge to solve problems and create solutions. Their activities include those of rapidly growing knowledge workforce with positions for everyday level workers, middle level knowledge workers and senior level jobs. All these level knowledge workers employ their know-how to add value to operations, products and service.

These knowledge workers would include executives, legal staff, researchers, administrative staff, data processing/information system personnel and most other office workers. Reid and Barrington (1999) argue that they are updating continually questioning what has previously been accepted, continually redefining old problems, sensing new problems and continually searching for the better solution.
Borghoff and Pareschi (1998) agree with this perception of the knowledge worker, maintaining that knowledge work is about making sense of information.

The environment, in which knowledge workers perform, has been described by Kidd (1994) to exhibit several distinctions from the traditional white-collar environment. Managers should be cognizant of these qualifications. They are paraphrased below:

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- o Knowledge workers are changed by the information in their environment and they in turn seek to influence others through knowledge.
- o Diversity and *ad hoc* behavior patterns are common in knowledge work. New information is sought out, used/reused, shared/filtered in opportunistic ways. This is not procedural but dependent on the changing context of the worker's activities or projects.
- o Knowledge workers' communication networks vary in terms of the medium used, types of information transmitted and patterns of communication across professional functions. Communication networks are fluid as teams typically form and disband within days. Much of the knowledge exchange is embedded in documents, e-mails and CDs.

Human resource development specialists and managers have to recognize, support and develop knowledge workers attributes, as they are one of the most important assets in many organizations. In order to develop the knowledge worker's value creating potential, managers need to adopt a KM philosophy that places a strong emphasis on the human dimension based on the knowledge worker's requirement for information and their innovative efforts (Davenport and Marchand, 2000).

This KM philosophy should also distinguish between different levels of knowledge and identify which knowledge is important to the organization.

Knowledge workers should be encouraged to take calculated risks, deal with uncertainty and to innovate. Such environment requires a shared leadership style in a non-hierarchical organization. Leaders should provide useful feedback to employees and teams so that this helps them to identify problems and opportunities.

Every contribution from the employees should be appreciated and publicized not just to satisfy the contribution but to inspire the colleagues. A lot of fun should be brought to knowledge workers' aspect of KM, so that they do not feel their tasks are difficult to perform. For instance, communiqués in the form of e-mails should be utilized to the maximum extent to promote KM activities as well as announce the contributions and availability of information etc.

People should be encouraged and rewarded for their contributions to KM. Palanianppan (2001) advocates that the performance appraisal procedure should ideally take care of evaluating staff based on the extent to which they are involved in knowledge-sharing/contribution/initiatives. This will translate into an improved work/training/compensation structure of the staff and thus keep the employees motivated.

2.14 ROLE OF THE CHIEF KNOWLEDGE OFFICER (CKO)

If the company or organization decides to use KM as its basis for competitive advantage, it will obviously need someone to drive the process. KM initiative is not a project for a single person, but it needs someone who will ensure that the KM program is implemented.

The Chief Knowledge Officer (CKO) is a recent phenomenon created by organizations to lead and promote the KM initiative and to help manage a unique organizational asset, namely, intellectual capital (IC). The CKO concept is rooted in the realization that enterprises can no longer expect that the products and services that made them successful in the industrial age will keep them viable in the future (Herschel and Nemati, 2000). The challenges and pressures of a rapidly changing global and knowledge-based economy make tacit and explicit knowledge vital to the organizations. Therefore, the CKO position has emerged as a top

management position comprising of leadership and change management. These pioneering individuals have been given the unenviable task of channeling an enterprise's knowledge into initiatives that are expected to become a source of competitive advantage (Bontis, 2002). They generally provide the focus and drive required to steer KM programs through critical stages and facilitate planning and development (TFPL, 1999).

Flash (2001) maintains that there is no generic job description for the CKO, though the duties always include capturing and applying knowledge available within a corporate environment to make the business more competitive and its employees more productive. According to Gamble and Blackwell (2000), the role and responsibilities of the CKO are still evolving. Earl (1999) states that the role of the CKO is so immature that there is no job specification. Therefore, CKOs have to work out the agenda for themselves.

Tiwana (2000) rightfully mentions that "most CKOs are on a vertical learning curve about managing knowledge".
The CKO's position is so new that there is no historical model for the CKO to rely on. It is often expected of the CKO to act as an entrepreneur and to start a new KM initiative. In order to fulfill this role, he/she has to bring in new ideas, seed them and listen to other people's ideas and back them if they make sense and fit the knowledge vision (Earl and Scott, 2000). The CKO should also hold on to existing initiatives where these can add on a KM perspective. Earl (1999) in his study of 20 CKOs in North America identified the following characteristics to be possessed by a CKO: an evangelist, technologist, environmentalist, change agent, entrepreneur and a cheer leader.

As an evangelist, the major challenge for the CKO is to convince the two distinct groups (management and knowledge workers who will actually

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use knowledge as part of their work) about the value of KM. Therefore, it is expected of the CKO to create an awareness of KM and to actively promote KM, its adoption and use. This involves creating a common understanding of what KM is, encouraging and supporting people, and lobbying for resources (Morris, Meed, and Svensen, 1996). As an evangelist, CKO must promote organizational culture that facilitates knowledge sharing and organizational learning (Neilson, 2002).

As a technologist the CKO is, according a Tiwana (2000), responsible for *inter alia:*

- The creation of enterprise-wide skills and knowledge directories.
- Creation of channels for exchange of documents and other codified forms of explicit knowledge.
- Development and implementation of the intranet.
- Support of group and collaborative work through collaborative technology tools and policies.
- Development and implementation of tools for collaborative problems solving.
- Building of repositories to store, for example, "lesson learned".
- Enabling tacit knowledge transfer by means of tools, for example video conferencing.

The CKO also plays a role of an environmentalist, that is being responsible for the creation of an environment that stimulates and facilitates either arranged or chance discussions/conversations or the development of events and processes that encourage more deliberate knowledge creation and exchange. These may include:
- The design of spaces, such as designing offices and relaxation areas or acquiring or furnishing retreats and learning centers.

- o Bringing together communities with common interest who rarely interact with each other.
- o Building relationships with related leaders in human resources, information technology, the library, research and development, etc.
- o Developing incentives to encourage knowledge sharing.
- o Recognizing and promoting knowledge contributors who share knowledge across the organization.

CKOs are designers of knowledge directories, knowledge-based systems, knowledge-intensive business and management processes, knowledge exchange events, knowledge-sharing physical spaces, and knowledge protection policies (Earl, 1999). Linking with the role of environmentalist, the CKO has to radically redesign performance measurement and executive appraisal system to break down incentives centered on the individual, and visibly encourages collective knowledge development and sharing (Earl, 1999).

Gamble and Blackwell (2001) see the CKO as the facilitator of the knowledge-based enterprise. Therefore, the primary role of the CKO is to enable, not control KM (Tiwana, 2000). In order to achieve this, the CKO works with and through people and enlists sponsors, champions and doers and supports clients in inventing, crafting and implementing their own ideas. As a facilitator, he identifies knowledge requirements in order to know what is needed by the enterprise and what the tools are that can help him/her to do the job effectively. The CKO also facilitates the development of learning and knowledge sharing (Snyman, 2001).

According to Earl and Scott (2000), the CKO is seen as the latest change agent, following those who led Total Quality Management (TQM), Business Process Reengineering (BPR), and other similar initiatives. The

CKO reads the enterprise's appetite for change and appreciates how to connect to and work along with other change initiatives. According to Tiwana (2001) CKO activities as change agent can include:

- o Changing the corporate culture from that of defensive knowledge hoarding to knowledge-sharing.
- o Removing technical and socio-cultural barriers to knowledge sharing, transfer, use, and distribution.
- o Aligning local knowledge creation activities in individual departments and teams with the long-term strategic knowledge vision of the enterprise.

The main aim of the CKO as change agent is to persuade individuals and groups to accept and internalize the CKO's view that KM matters and can yield a significant improvement of organizational performance. It is the role of change agent that stimulates the idea that the position of CKO will not be a permanent position with an established function.

In order to fulfill these roles, the CKO must possess certain knowledge and skills. Earl and Scott (2002) and TFPL (1999) discovered that CKO positions represent various educational backgrounds and wide variety of experience both inside and outside the business environment. CKOs often have several years of experience working in the current enterprise and thus know the culture of the enterprise and the key actors also know them (Earl and Scott, 2002). The most common qualification and experience required at a strategic level were a tertiary qualification (from a wide variety of disciplines, e.g. social science, economics, business, finance, etc.) and three to five years management experience at senior managerial level.

In order to fulfill the role of strategist, entrepreneur, evangelist, technologist, environmentalist, designer and change agent a variety of skills and personal attributes are required. Apart from the general

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management skills, such as leadership skills, project management skills, well-developed negotiation skills, etc., additional skills unique to the position of CKO are required.

The CKO is responsible for the intangible assets of the organization and the creation of an enabled environment that facilitates the sharing of knowledge. Therefore, it is very important that the CKO should possess certain personal attributes. Earl and Scott (2000) find that although CKOs vary, they often display similar personality traits – and those traits differentiate them as a group from other executives. Earl and Scott (2000) describe CKOs as "fun people having a fun time". They are typically bubbly and enthusiastic, yet reflective and balanced. They tend to be eclectic and pragmatic, backing any idea that made "knowledge sense" and are ready to connect to other initiatives.

Davenport (1994) provides some potential aspects of the job of the CKO. He advocates that CKO need to posses a diverse, mix of skill – very much of a hybrid manager. CKO must be good at:

- o conceptual thinking - developing the big picture, understanding the wider knowledge context and organizational strategy within it;
- o Advocacy – must articulate the knowledge agenda and actively promote it and justify it, sometimes against cynicism or even open hostility;
- o Project and people management – have to oversee a variety of activities, and therefore need to pay attention to detail and motivate the people to carry out these tasks;
- o Communications – must be excellent non-workers, communicating clearly the knowledge agenda, have a good listening skill and be sensitive to organizational opportunities and obstacles.

The CKO must be "a cheerleader and a teacher, who not only has a vision of knowledge sharing but has the authoring and savvy to make corporate culture and processes serve this end. This important qualification for such a knowledge leader is the ability to be an agent of change," (Flash, 2001).

Flash (2001) espouses that the CKO would be an expert in several areas, including training and development, information technology, legal and technical knowledge, and corporate information. It is important that this person is able to think holistically and must be able to convincingly communicate the value for KM to a skeptical audience. CKO needs to move beyond what Davenport (1997) calls "serious anecdote management" and translate qualitative benefits of KM projects into quantitative benefits to win the hearts and minds of Chief Financial Officer (CFO).

In practice, it is not easy to find such a person. Guns in Flash (2001) proposed that instead of hiring a single CKO, the overall management should create an in house knowledge management team that can adequately address all parts of the role.

Manasco (2003) argues that "whether your organization needs a CKO seems to depend on corporate culture. In some organizations the authority that this role gives is needed. In others, management champions seem to make it happen anyway
(http://www.openacademy.mindef.gov.sg/OpenAcademy/Learning%20Res ources/Knowledge%20Mgmt/Empires0797.htm).

2.15 KNOWLEDGE MANAGEMENT (KM) AND INFORMATION TECHNOLOGY (IM)

Information Technology (IT) plays an important role in facilitating KM initiative. It is important to understand from the beginning that technology supports the KM initiative, but it is people who drive IT. IT is a tool that creates an enabling environment for KM initiative. KM can take place without IT, but the initiative could be limited to the handful of people working in the same place.

According to Stewart (1999) and Hawkins (1999), the main task of technology is to aid people connecting with people. They advocate that people connecting with people across the organizational and geographic boundaries represents the real knowledge network. People learn to do things and they share their experiences via stories that are explicitly documented and captured in databases or in some other electronic format that employees can access and review for internalization, augmenting their tacit knowledge. Thus IT serves two important KM functions:

- "IT begets structural intellectual capital, which begets human capital" (Stewart, 1999).
- The software distributes captured knowledge and information to employees in a consistent format allowing them to do their jobs more effectively and efficiently (Quinn, Anderson and Finkelstein, 1996).

The second point focuses on the empowering capacity of technology. Employees that have access to information and knowledge combined with decision-making authority should make better decisions.

Both points underscore significant purpose of KM and IT "… that they exist for the sake of the knowledge worker and customer" (Stewart, 1999) and

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not for the accumulation of knowledge for its own sake. IT for KM must make employees' and customers' lives easier by supporting empowered knowledge workers.

If the characteristics of knowledge are considered integral to KM, then KM is a cultural way of operating in the market place. To enable this culture to prevail means applying IT to perform knowledge audits, map knowledge, support communities of interest, capture knowledge and manage the flow of knowledge within communities and between community boundaries (Furlong, 2001). Software can capture relevant information, map knowledge, distribute knowledge aid in the development of new knowledge, facilitate collaboration and combine available knowledge is assuming the role in KM. Such software leverages the knowledge process by facilitating a flow of explicit knowledge between the corporate memory and the employee and tacit knowledge between employees (Brown, 1991). Achieving this flow is essential for creativity and functional decision making.

Technology is an enabler for KM initiative. Human beings take central role in knowledge creation. Best tools and processes alone will not achieve a KM initiative. Any technology will fail if it does not recognize the importance of human beings. IT should be people focused. "Care must be taken to optimize the flow of information in a manner that meets the user needs not IT desires" (Riesenberger, 1998).

As Brown (1991), Drucker (1998), Stewart (1999), and Quinn, Anderson and Finkelstein (1996) make clear, the past KM and associated IT initiatives that have failed, are a result of several management misconceptions regarding knowledge work, business strategy and IT:

- o Management often neglects to align technology and KM with corporate strategy. IT and KM are only worth investing in the context of strategy.

- o Many managers have not accepted that knowledge work is fundamentally different in character from routine white collar procedures resulting in the application of technology that does not fit knowledge work processes.

- o Traditionally organizational structure and HR policy do not support the fact that knowledge work is cross-disciplinary and therefore knowledge work teams function in an *ad hoc* fashion and are completely immersed in a networked computing environment that is hindered by functional boundaries.

- o Management has focused on capturing all organizational knowledge on corporate databases. This is both impractical and impossible.

- o Too much KM is inward focused. Too little is about serving customer. Stewart believes this to be reflection of KM that is driven by HR or Information Systems.

Designing an effective IT information architecture to support KM initiative is an important management challenge. Carneiro (2000), Borghoff and Pareschi (1998), and Botkin (1999) all espouse that it is necessary to pay attention to IT architecture and implement it in accordance with the organizational functions that use knowledge and information to make decisions that realize objectives.

They, along with Ward (1995), advocate that IT systems must be comprehensive, highly integrated and that the electronic corporate memory must maximally contribute to the competitiveness of the organization. Furthermore, Boghoff and Pareschi (1998) maintain that the

KM IT architecture must improve competitive power by supporting three types of learning: individual learning, organizational learning through communication and continuous development of an electronic corporate knowledge repository.

While technology can support KM, it is not a starting point of a KM initiative. Decisions should be made based on who (people), what (knowledge) and why (business objectives). Save how (technology) for last.

(I) INFORMATION TECHNOLOGY LIMITATIONS

While IT has an exponential potential for facilitating KM initiative, it is important to bear in mind that IT has limitations. Davenport and Prusak (2000) explain that technology rarely enhances knowledge application. IT can facilitate networks and databases but it cannot determine what a user does with knowledge. Technology cannot manage how professionals apply knowledge. Managing how professionals apply knowledge requires soft tools and concepts such as Nonaka's (1991) "Spiral Knowledge", and Straus (1997) "Creative Abrasion", Argyris (1991) "Double Loop Learning" and management focus. Furthermore, according to Davenport and Prusak (2000), technology is not yet capable of creating new knowledge that is contextually related to other knowledge. Knowledge creation remains an act of individuals or groups of individuals (Furlong, 2000).

Despite the above limitations, if a positive culture exists in the organization, then technology can expand knowledge access and deliver knowledge to the right person at the right time. Davenport and Prusak's (2000) research indicates that the presence of IT networks may have a positive effect on the knowledge culture of the organization. In the right environment IT is essential for linking core business competencies in the value chain.

CHAPTER 3

3. RESEARCH METHODS

3.1 RESEARCH PHILOSOPHY

This study used phenomenology as a guide to the research approach. The view was suited to the social complexity of business and management, unlike positivism, which establishes observable parameters that seek to reduce complex and unique situations.

Phenomenology argue that social situations such as business and management settings are functions of a particular set of circumstances, therefore the product of business research should not be scientific, law-like positivists' generalization, as these generalizations lack insight into involved social situations. Furthermore, given that the organization's culture is unique and that the world of commerce constantly changing, then generalizability is not important as the circumstances of today may not be relevant in a week's or a few months' time. As a consequence, phenomenology attaches little value to generalization (Saunders, Lewis, Thornhill, 2000).

The strongest argument in favor of phenomenology is that the philosophy's flexibility facilitates the discovery of the reality of a situation or the reality behind a situation (Saunders, Lewis, and Thornhill, 2000). This is a consideration in the research of KM as it is a socio-techno environment which is highly dependent of several domains: 1) personal characteristics and experience of the knowledge worker, 2) factors affecting a knowledge worker's development and the organization's development, and 3) organizational culture. Discovering the relevant reality behind a KM initiative involving human capital and technology would be difficult for the detached, value free and highly structural positivist philosophy.

3.2   RESEARCH APPROACH

The writer saw it appropriate to use an inductive approach to research. With inductive approach, theory would follow data collection and analysis. This is practical in researching KM, as the subject is in its infancy, consequently, an overarching theory of KM has yet to merge, perhaps because the practices associated with managing knowledge have their roots in a variety of disciplines such as cognitive sciences, expert systems, organizational science, business strategy, IT groupware development and library science, to mention a few.

The inductive approach allows for the treatment of knowledge workers as humans whose behavior in a managed knowledge sharing environment is a consequence of the way they perceive their work experience, rather than as research objects whose behavior can be predicted by circumstances. Furthermore, as the inductive approach does not construct a rigid methodology, alternative explanations are not permitted by the deductive approach, however such alternative are within the limits of the highly structured deductive research design, (Saunders, Lewis, Thornhill, 2000). The flexibility of the inductive approach enables an understanding of how humans interpret their environment, facilitating the development of an explanation or explanations of complex behavior.

For this study choosing the inductive approach was appropriate as the approach is concerned with explaining why something is happening rather than what is happening. Determining how KM influences competitiveness requires an exploration of why managers and KM thinkers believe KM to be an effective corporate strategy.

Finally, the choice of using inductive approach is that "research using the inductive approach would be particularly concerned with the context in which such events were taking place " (Saunders, Lewis, Thornhill, 2000).

3.3. RESEARCH STRATEGY

The nature of the research employed exploratory strategy. Exploratory strategy is of great advantage in that it is flexible, meaning views of KM's influence on competitiveness could be changed as a result of new data that appeared during research. The two principal sources of data for the research were, (1) a literature search, and, (2) conducting a survey of senior managers and knowledge workers.

Primary data were collected through distribution of a questionnaire.Sixty questionnaires were sent out during November and December 2004. The questionnaire consisted of two sets, one for the directors and one for the knowledge workers who have access to the computers. Only 40 were returned. These questionnaires consisted of multiple choices, and open-ended questions. Scale or rating questions are often used to collect attitude and belief data therefore are suitable for explanatory research (Saunders, Lewis, Thornhill, 2000).

Secondary data was used to explain KM practitioner's behavior and how this behavior influences competitiveness (see References for sources of secondary documentary data). This data was used to identify emerging patterns in primary data, for comparisons with primary data.

A purposive non-probability sampling was used. Purposive non-probability sampling is congruent with the inductive approach and exploratory research strategy and it allows the researcher to perform a sound study on a small sample selected purposively to provide an information rich qualitative context to answer the research question and meet objectives.

3.4   LIMITATIONS OF THE STUDY

The study did not proceed without obstacles. As has been mentioned above that the response was poor also the researcher self-administered the questionnaire. The timing of sending out these questionnaires was not right since some people

were writing exams and others were already taking their holidays. The other reasons that one may put forward are the following:

(i)   The respondents were asked to fill in their names and designations in the questionnaires. The questionnaires were numbered. The possibility might be that, people did not feel comfortable to disclose their identity and their ranks.

(ii)   People do not know much about the KM concept. Since the questions requested that people identified themselves, the possibility is that they did not want to portray themselves as ignorant on the subject.

(iii)   Some questions required individuals to comment on their senior management. The respondent may be felt they would be betraying their leaders' trust.

(iv)   Senior management themselves did not respond very well. The possible reason that one may give is that leaders are not yet ready to implement KM initiative. It is not in their agenda. So, responding to the questionnaire might create the impression that they might be having an interest in undertaking an initiative. Also, with the senior management, some questions were putting them into a corner to respond with honesty to issues they are not implementing and they are not ready to change the way of doing things.

CHAPTER 4

RESEARCH ANALYSIS

The following questions were asked and the responses were given below:

Level of understanding the KM concept

12.5 % responded that they have an idea of the KM, 15% said they heard of KM but do not clearly understand and 47.5% said they never heard of it, 12,5% they are aware of KM and its benefits.

Table 2
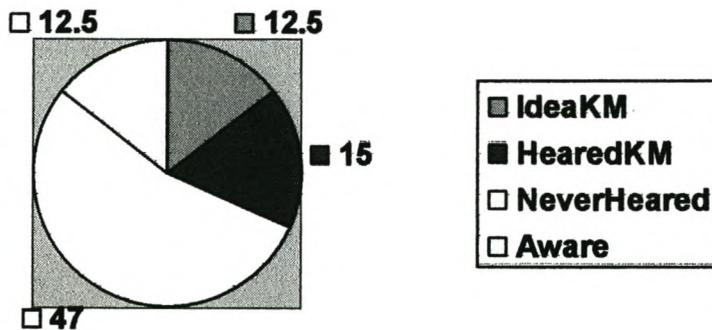
The results **Figure 2** show that there are more people who have no idea of what KM is. If the institution were to think of implementing the KM initiative, it would need to educate the employees and highlight how they can benefit from the KM initiative.

Benefits of KM

Most respondents are well aware about the potential payback that KM can achieve. 50% respondents identify KM to increase productivity, 80% reduce costs, 68% employee delivery, 30% enhance customer focus.

Figure 3

The Benifits of KM

	Increase Productivity	Reduce Cost	Employee Delivery	Enhance Cust. Focus
%age	50	80	65	45
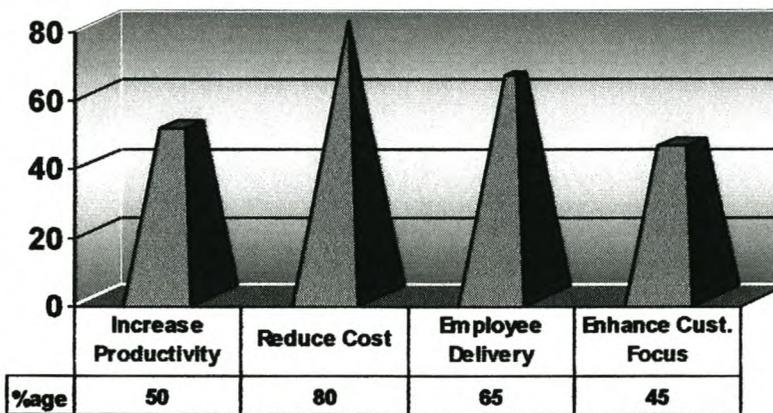
Able to share or get access to organizational

67.5% said yes, and 32.5% said no.

Current organizational culture allows you to share

20% said yes, and 80% said no.

More respondents identify culture as a barrier to sharing. This is a challenge for management because

Where do people keep information?

The respondents were asked where they kept information. The following responses were obtained:

75%   Computer hard drive

55%   Stiffy Disk

45.5%   Arch files

12.5% My head

7.5%   Home computer

Figure 4

Where do People Keep Information?
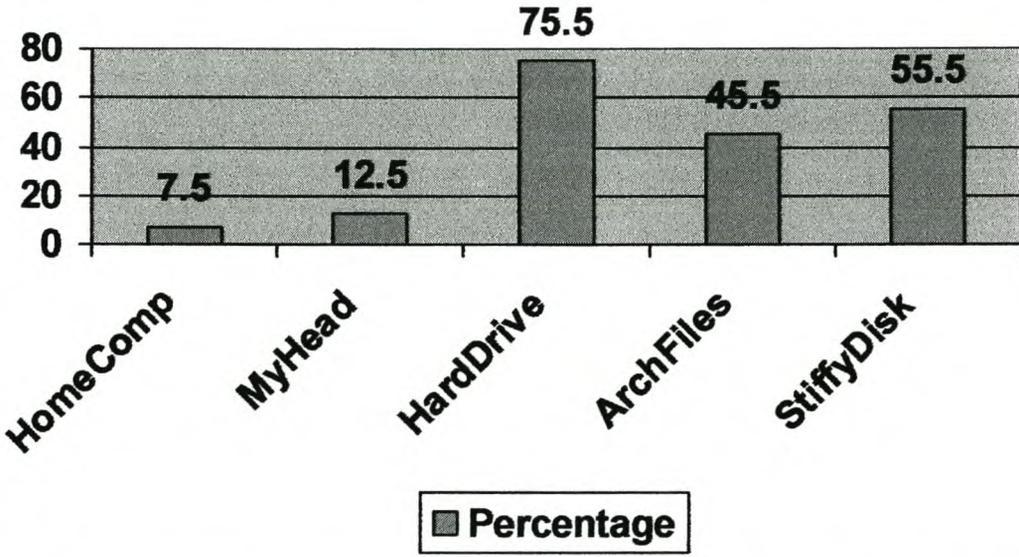
These findings in **Figure 4** show that people keep information in different places. This shows that information is scattered all over within and outside the legislature. No one knows who has what information, such that it makes it difficult for employees to get information that emanates from the legislature. This can have serious impact on service delivery. The delay in finding information result in low productivity and the progress is slow.

Information easily accessible to other colleagues when one is not around

Respondents were asked if information is easily accessible to other colleagues when not around? 85% said no and 15% said yes. Those who said yes it is probably because they are sharing the same computers and offices.

What KM initiative would be the most beneficial to Legislature

25% continuing professional development programs.

75% document management system.

There are more people who think KM will be most beneficial to document management system. Much as legislature does not have the document management system, there is possibility that KM is perceive as a repository for documents.

What would motivate legislature to implement KM initiative?

88% said information overload;

75% difficulty in capturing workers undocumented know-how;

63% loss of key personnel and their knowledge;

50% difficulties in incorporating external knowledge

Figure 5

Reasons for KM Implementation
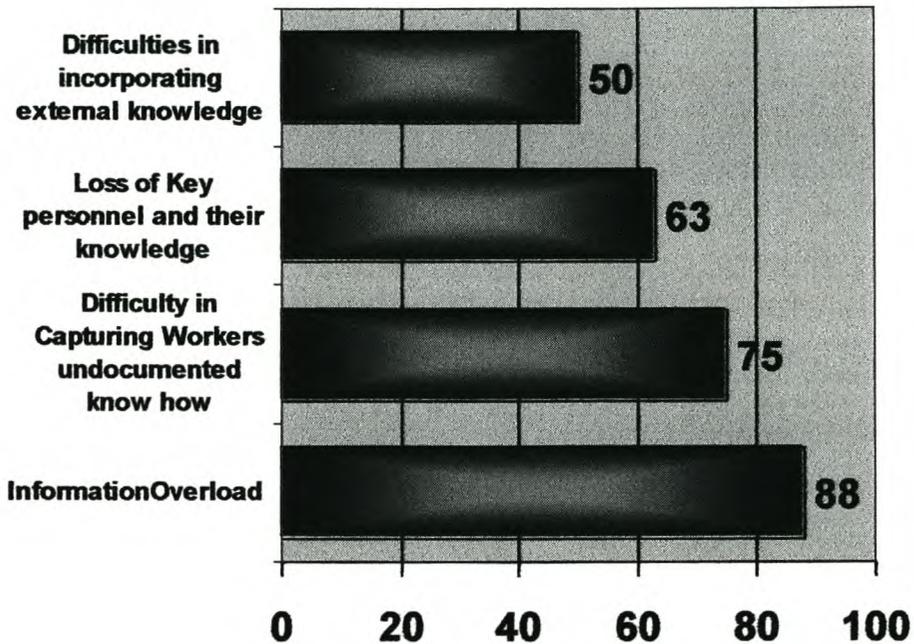
Interesting findings in **Figure 5** reveal that most respondents identified information overload as the motivation for KM initiative as well as capturing workers undocumented know-how. The information that is found in different place seem to be the reason of such response. Loss of key personnel is another problem that will pose a challenge in dealing with. Management should come up with a strategy of how to transfer organizational/tacit knowledge from the individuals to ensure that employees do not leave with the intellectual capital of the institution. A retention strategy should also be looked at.

Computers aid me in doing my daily work

When respondents were asked if computers aid them in doing their work,

80% said yes and 20% said no. This shows that most of the employees have access to the computer and they are at least computer literate which means that the IT infrastructure is in place. There are knowledge workers who still do not have access to the computers and who are still computer illiterate.

Management can be trusted to make sensible decisions for the legislature's future.

45% Disagree that senior management can be trusted with decision
40% Agree on this statement. and 15% gave no opinion.

Senior management keep its commitment to employees

50% disagree on the above statement, 30% agreed, 20% no opinion

I can rely on management to try to help me out when I run into difficulties

15% Strongly disagree, 5% Disagree, 25% Agree and 2% gave no opinion. This shows lack of communication between management and knowledge workers. The percentage on people strongly disagree can be the result that some knowledge workers have specialized in their fields and they rely on fellow colleagues who have been within the institution for a long period than them. The low percentage on people relying on management might be people who always rely on their supervisors for their daily function.

> **Senior management allow me to share ideas and that will improve service delivery**

05% disagree 80% agree, and 15% gave no opinion.

Most of the people agreed that management allow them to share ideas that will improve service delivery. Although there is no formal knowledge sharing sessions, people do share information and knowledge. This is a good sign it terms of implementing KM.

> **I can trust management with information I have**

55% agreed that management can be trusted with information, 25 % disagreed but 15% gave no opinion. At least the element of trust is not that bad, but the legislature will have to be developed on it since it plays a crucial role in KM. People share information or knowledge with people they know and trust.

This last part of the questionnaire required people to voice opinions more especially about senior management. In most cases people opted not to comment perhaps for the fear of being victimized should. The mere fact that respondents cannot say they agree or disagree with the statement, it shows that there is a problem somehow with communication within the institution.

See Appendix B

Senior Managers were asked the following questions:

Senior managers who depart with valuable information in their heads;

The respondents mention that there needs to be procedure for every action and information sharing to ensure empowerment of many individuals as possible.

The respondents also recommended that senior managers should learn to document their knowledge and that knowledge should be put into a repository where it can be easily accessible to any one who needs to it.

Where in legislature the responsibility for KM should reside and

33.3% responded that it should be in a corporate level since KM is one of the strategic tools.

66.6% said it should be in a departmental level and it should be driven by either research unit or the library unit.

The KM issue has not been discussed and the concept is not fully understood.

These responses might be influenced by knowing who the researcher is.

List of competencies for knowledge workers

The competencies that were identified for the legislature were; long serving experienced staff in the legislature; qualified, experienced staff; functional and ability to organize information.

Long serving experienced staff gives the legislature a competitive edge. The legislature needs to find the retention strategy of these employees and ensure that the knowledge they possess is shared among the employees and it is

available so that when they leave the institution, they do not leave with the knowledge of the institution but it is left behind.

> The following questions required managers to respond with **YES/NO** answer

Table 1

QUESTIONS	YES	NO
- Existing culture/value system promotes knowledge sharing		66.6%
- Employees share knowledge by regularly updating databases of good work practices, lesson learned, etc		66.6%
- Legislature knowledge workers prepare written documents such as lesson learned, training manuals, good work practices, articles for publications, etc.		66.6%
- Legislature facilitates collaborative work by project teams that are physically separated		66.%
- Legislature specifically recognize its employees as knowledge workers		66.6%

The responses from **Table 1** show that the legislature is losing a lot of valuable information. There is no return on investment. People work in silos and there is no sharing. Skills are not passed on to individuals. Experiences of the past are not shared and the documents to refer to learn from or correct mistakes of the past are not available.

Management's role is one of defining goals, providing guidance, focusing professionals on organizational objectives and allocating resources. To be able to perform this task, management needs to evaluate what knowledge is required to further the organizational strategy and to determine where critical knowledge

valued by the end- user is located in the organization. This will be the beginning of putting knowledge into the context of strategy.

A barrier that the legislature would overcome before

Senior managers identified the following barriers that the legislature would have to overcome before implementing KM:

- resistance to change;
- lack of understanding KM concept;
- unwillingness to share knowledge for fear of giving up some "power" one might have;
- Silo thinking

The barriers will need to be closed. It is not going to be easy since some of the barriers involve attitudes and to change attitude is not easy.

The legislature will need to engage in an organizational development intervention whether the institution is ready for KM initiative or not. Reasons for change should be provided to employees. A new culture needs to be instilled. Leadership should be champions of change. The employees should emulate leadership actions.

CHAPTER 5

5. RECOMMENDATIONS

This chapter will summarize the recommendations for effective KM initiative for the Legislature. The writer's recommendations are proposed as a set of best generic principles that can be adjusted to suite organizational context and culture when designing and maintaining KM initiative that emphasize knowledge access for the purpose of creating competitive advantage. It is not a comprehensive implementation plan, as this would require an organization to conduct a knowledge audit to determine its unique situation. Furthermore the design of a KM initiative needs to be performed in the context of corporate strategy.

From the findings it shows that the legislature will benefit from the implementation of KM initiative. The legislature needs be ready for the project and ensure all the systems are in place.

Effective KM is relative to the broader business strategy. This means that Legislature's KM initiative should be linked to business strategy. The objective is to determine how effective use of knowledge can support or enhance a well defined business strategy. For example if the legislature is driven by improved service delivery into existing end-users, then KM should focus on improved service delivery.

For any KM initiative to be successful, it needs a buy-in from senior management. The buy-in would not be perceived in terms of sponsoring the project, but also to sell the idea to the rest of the employees of the legislature. The buy-in should also be accomplished with the understanding of the benefits of KM initiative.

Management should ask such questions:

- How does knowledge affect our business?
- What knowledge do we require to achieve our objectives?
- What are the critical business processes?
- What knowledge drives our business processes?
- Where in the business does knowledge translate to action that begets value?
- Where do knowledge gaps exist in the value chain?

These questions can help to initiate KM and they can be answered via the knowledge audit. The knowledge audit is essential for any KM initiative and should be conducted during the strategic analysis process, which is an assessment of an organization's resources, competencies and stakeholder expectations. The sorts of questions raised for the strategic analysis and the knowledge audit, are central to deciding the organization's future and putting knowledge and KM in the context of corporate strategy. The knowledge audit identifies business processes that are particularly knowledge intensive, determines where the critical knowledge links between core competencies exist in the value chain and what basic activities are knowledge demanding. Understanding these knowledge links is imperative for creating competitive advantage as this determines what knowledge is required to execute business strategy successfully (Furlong, 2000).

5.1 COMPETITIVE ADVANTAGE

For KM to be used as a basis for competitive advantage, the focus should be on building the KM the core capability for sustainable competitive advantage.

This would enable other innovative capabilities. By so doing "KM would eventually be integrated into everyone's job, employees should have a common background about KM (Davenport and Prusak, 1998).

Knowledge embedded in products and s services has been recognized as a primary source of sustainable competitive advantage (Clarke and Rollo, 2001) in (Dagfous, 2003).

KM should serve as management strategy tool to network the core competencies in the value chain and connect the organization to the end-user and business environment. This linking will improve performance in the value chain by developing co-operative sharing culture that creates competitive power, because it is difficult to emulate outside of the organization. Such a culture raises core competencies from separate simple business activities, to complex, value adding business processes that enable executor of corporate strategy (Stewart, 1999).

The legislature management has mentioned experienced and professional employees as one tool of their competitive advantage. These people have valuable knowledge about the legislature and the functioning of different units. In practice, some employees and managers do not refer to information on the document, but they use their tacit knowledge which they have acquired over the number of years experiences. If these people decide to leave the institution, the legislature will not only lose these individuals but will also lose the intellectual capital of the institution. Managers should learn to share information and try to transfer their tacit knowledge to the individuals. The absence of knowledge sharing culture, the absence of retention strategy of employees, the absence of exit interviews and proper document management system remain a problem which must be taken care of.

Careful management linkages are often a powerful source of competitive advantage because rivals have difficulty in perceiving them.
Links between core competencies can be made robust by sharing and transferring of tacit knowledge. The competitive power that can be achieved from transferring tacit knowledge has been found to be responsible for the

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success of the Japanese organization that Nonaka and Takeuchi (1995) have studied.

5.2 SETTING UP COMMUNITIES

The development of knowledge communities within the institution will add value in establishing knowledge sharing culture and network structure.

There are different types of communities that different organization such as, communities of practices, communities of interest, knowledge networks, learning communities, to name a few.

Communities of practice for example is defined as "group of informally bound together by shared expertise and passion for a joint enterprise" or " a collection of individuals bound by informal relationships that share similar work roles and a common context" Wegner and Snyder quoted in Gongla and Rizzuto (2001). Communities are usually self organizing, egalitarian and responsible to themselves for the knowledge they create. People join because they have something to learn and something to contribute.

As knowledge is rooted in human experience and social context, managing it well means paying attention to people, culture and organizational structure as well as IT. Considering these issues is essential for identifying, developing and supporting communities that are receptive to contributing, applying and replacing knowledge.

Havens and Knapp (2001) argue that community is largely about collaboration and often this collaboration will centre on a business issue in which all community members have a vested interest.

Furlong (2001) maintains that communities perform two important functions; that is, knowledge transfer and stimulating innovation. She expands that

organizational learning depends on these groups as they produce a mutual sense of purpose and a forum for exploring ideas.

The whole magic of KM is in people. Learning, sharing and creating is something very natural for human beings. Knowledge workers can experience fun of being a knowledge owners, fun of growing, fun of doing work next to other co-workers they have respect, fun of being innovative, coming up with ideas and seeing them being implemented. This will create a learning organization because people will be learning from each other and sharing ideas and the legislature will be more productive. Management should remember that they cannot make people smart against their will. Individuals should learn on to unpack what they know. Communities of interest provide such opportunities for knowledge workers.

Management should support the development of these committees by providing necessary resources and recognize team effort. The existence of these communities allows people to work in teams. These teams have team leaders. Leaders are born out of communities or learning networks. Leadership skills are developed. Management should reward team effort and not individual effort.

Whatever the communities are producing it should be in line with the organizational governance that is in the value chain of the legislature. Individual should be allowed to make mistakes but learn from the experiences Risk should be take but should be minimal. Communities can be used as vehicles for innovation. Management should shift its strategies an practices associated with developing a new culture of the legislature.

5.3 INFORMATION TECHNOLOGY AND KNOWLEDGE MANAGEMENT

The organization should clearly understand that KM is not IT. IT is a tool that enables KM initiative. This is important to understand this because the misconception of KM can lead the institution into falling prey of the vendors who are selling expensive IT software leaving outside the human capital. IT can be used to solve the problem that the legislature has. But it should be clear that it if the legislature wants to implement KM initiative, people are the priority and then the last thing to take care of is IT.

When considering IT for KM, management must consider how knowledge workers actually perform their work. The emphasis is not on IT itself but on the work practices it will support. Information systems should be designed based on a template of how professionals actually work. Software should provide professionals with easy to use programming features so they can customize computer applications to the way they work or to the particular demands of their projects. Search and retrieval tools should allow users to capture local innovation and easily create software that allows them to share the innovation organization wide. Critical mass, so essential for any KM initiative, will be easier to achieve when technology can perform these functions as work processes and KM processes will merge to their embedding in IT.

The role of IT for KM is to support the knowledge worker by empowering them to satisfy the end-user. The limitations of IT require management to pay particular attention to the softer cultural issues of KM.

These issues such as sharing, community, trust, knowledge redundancy, innovation and common language are all issues that IT can support due to its communication and networking potential. However, only human intervention can nurture the KM culture and behavior. IT, at present is not capable of creating contextual knowledge or improving human attitudes towards

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knowledge processes. IT for KM is not capable of producing a successful KM initiative without the appropriate change in human and organizational behavior.

5.4   CHANGING ORGANIZATIONAL CULTURE

Culture has been identified as one of the strongest pillars of KM. The findings of the study show that the legislature's culture does not allow employees to share their knowledge with each other.

To change organizational culture can be a daunting task. This definition of culture that says "this is how we do things here" make things even worse if people adhere to it. Strong reasons should be provided to employees what is wrong with the prevailing culture and why should they change their behavior all of a sudden.

Organizational culture can bring success or failure to the KM initiative. There are many frictions that can impede KM success (Steward, 1999) highlights the seven common ones:

- Lack of incentivisation – establish a KM metric and method of incentivisation.
- Lack of trust – build a relationship and trust through face to face meetings and establish a common business language.
- Lack of time and meeting places –establish times and places for knowledge sharing and learning.
- Functionally based information systems – integration of diverse types of business information across processes.
- Lack of employee awareness of their knowledge responsibility – educate employees and connect these responsibilities to performance appraisals.
- Lack of knowledge absorption capacity in recipients – educate employees for flexibility, provide time for learning, hire people with a

positive attitude toward learning, encourage questioning of the status quo.

- Knowledge cartography and poor employee profiling – map and profile employees' knowledge in critical business processes, publish map and profiles on-line.

Knowledge cartography is essential for an effective KM culture as it creates an access guide to cross-functional sources of knowledge and reveals knowledge gaps in business processes. Cartography is a knowledge audit activity and initial efforts should focus on a defined process. The essential traits of knowledge map are clarity of purpose, accuracy, availability and ease of use, (Davenport and Prusak, 2000).

Success of the KM initiative depends heavily on culture. Benefits of knowledge cartography should not be underestimated as it promotes knowledge accessibility and the cultural "…idea that corporate knowledge belongs to the corporation as a whole, not to a particular group or individual" (Davenport and Prusak, 2000).

5.5. KNOWLEDGE LEADERSHIP

Concerning knowledge leadership, the role of a leader is to establish business strategy, a vision and goals that a diverse group of employees can focus their collective effort on.

The leader must grasp the value of the organization's knowledge base and then focus this knowledge base on corporate goals and objectives. The shift from being a source of knowledge to the nurturer of knowledge lies at the heart of knowledge leadership. Knowledge nurturing requires organizational trust and depends on the sense of community; consequently, management must identify, facilitate and support cross-

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functional communities of interest to effect omnipresent trust (Furlong, 2002).

Leaders must have a mindset with a desire to share. They must also educate employees on the power of knowledge sharing. Nurturing knowledge requires coaching rather than executive direction and the executive have to ask the right questions regarding knowledge application rather than provide answers. Leaders have to stimulate the knowledge process by removing barriers to sharing knowledge and networking. Leaders must get rid of the "silo syndrome" and encourage the employees to work in teams. Employees should be able to interact with other employees from different levels and different units to solve certain problems of the institution. By working together in teams, solving problems, they learn from each other and the skills are passed on. They must be obsessed with a passion for continuous learning on the job.

The concept of "Ubuntu" plays a major role in the KM initiative. Successful leaders are those who place more value on the employees. They must excel in interpersonal skills. Skills like Emotional Intelligence (EQ), Spiritual Intelligence, etc should be acquired by leaders. Leaders must also ensure resources are available so that employees can self-organize around client issues.

5.6 INCENTIVISATION

Leadership also has to implement an incentive scheme that encourages KM participation and assigns value to knowledge. Leaders should remember that human beings are emotional beings. Davenport and Prusak (2000) state that it is important to recognize knowledge sharing. Implementing KM incentive scheme challenges the individual's belief that knowledge is power by encouraging them to share.

In order to develop and nurture KM behavior and culture, it is essential to establish a metric for recognizing when valued knowledge sharing activity has occurred and a method to reward this behavior. The value of knowledge sharing should be reflected in the on-going personnel evaluation, periodic merit review or pay bonuses of the organization, so that managers and staff can see that knowledge sharing is one of the principal behaviors that the organization encourages and rewards (Denning, 2004).

While monetary means should be the base of incentivisation, other non-monetary self-esteem enhancing reward should be considered.

5.7 CHANGE MANAGEMENT

Introducing KM initiative requires organizational change and KM will inevitably acts as a catalyst for transforming the existing organizational culture. Identifying what kind of information or knowledge to capture and share directly depends on core processes.

There is a belief that 'knowledge is power.' Changing people's mindset can be a daunting task and it always results in resistance to change which Leonard-Barton (1995) referred to as 'core rigidity'.

Altering core rigidities can result in loss of power on the part of certain individuals, who would be expected to be even more resistant to change. Resistance to change should be overcome by first identifying the barriers to knowledge sharing, and also barriers related to legislature culture and structure. For people to change, it should be easy and painless as possible.

To seek lasting changes in both individual behaviors and organizational culture, the legislature should:

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- Focus on changing individual behaviors first
- Understand the barriers to knowledge sharing and seeking to eliminate them
- Introducing policies and practices that enable and encourage knowledge sharing
- Understanding your organizational culture and working within it rather than against it, while gradually working to change it.

Leading by example is the key to knowledge sharing. Even if leaders are the supporters of KM initiative, they need to be coached. They need to be shown the way and then be seen to be leading the way. Middle managers are also important because they work day-to-day with people and they are often evaluated on how their individual section performs.

The legislature will need to develop a business process reengineering effort to integrate KM within the organization the existing business culture must be understood. Operational processes must be aligned with the vision while redesigning the organization and identifying key levers of change including roles and responsibilities.

As with any change, whenever people are asked to do something differently they need a good reason: what's in it for me? If people believe they will benefit from sharing knowledge either directly or indirectly they are more likely to share.

In seeking to sustain a knowledge-sharing culture, the legislature will need to address the formal rewards that are embedded in HR policies and practices.

To create a culture that support knowledge creation, sharing and re-use, the legislature will need to recognize and reward those behaviors.

Based on the values and norms, the political system in the legislature should emphasize that, power is not a product of knowledge hoarding, but rather a product of knowledge sharing (McDermott, 1999) in Arnold (1998).

While the legislature culture cannot shift to one of openness and mutual trust overnight, management should make significant progress by helping and encouraging individuals and teams to form new and better relationships.

Employees need to be trained in KM skills. They need to be educated about what knowledge is valuable, how to create it, find it, evaluate it, share it, use it, adapt it and reuse it etc. It is important to ensure that essential communication skills are looked at. Employees should understand the benefits of knowledge sharing: benefits to the legislature and benefits to them personally. The more these benefits can be clearly demonstrated, the more people are likely to be open to change.

CHAPTER 6

6.   CONCLUSION

The legislature needs to appreciate knowledge that exists in the institution and it should ensure its optimal use. Starting a KM initiative would also give the legislature a sustained competitive advantage because at this stage this concept has not been initiated in other legislatures and some of the government institutions, they have begun to see the value of KM principles.

The objective of KM is to support the achievement of business objectives. Both knowledge contributions/sharing and its reuse need to be encouraged and recognized at the individual employee level as well as the legislature as whole.

The legislature is a public sector entity. Like any public organization, it should capitalize on four elements:

- Collective information resources
- Intellectual capital of individuals
- The multitude of external resources available to government;
- Input of citizens who now have the capacity to play an interactive role in the process of government.

The success of these initiatives will depend upon both leadership and commitment at senior levels of the organization to break down the barriers of "silo thinking". It will also require more refined used of one of the most important resources – the intellectual capital of the people who work in the organization.

To be successful the leadership must embrace the knowledge sharing concept, and its precepts. More importantly it must be a key component in the strategic vision of the organization. Another important need is a

designated and supporting staff to recognize the organization and implement the principles of KM to maximize benefits.

It is inherently clear that virtually every employee is a potential source of data, information and knowledge that could be invaluable to the goals and aims of the organization. Sustained strategic commitment and a culture that is conducive to support knowledge sharing are vital for success in Knowledge Management.

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APPENDIX A
Kindly assist me in filling in the questionnaire for Knowledge Management Research study purpose.

DEFINITION OF KNOWLEDGE MANAGEMENT

Knowledge Management (KM) involves any systematic activity related to the capture and sharing knowledge by the organization.

     NAME: ....
     DESIGNATION: ....
     JOB/FUNCTION: ....

1.   What is your level of understanding the concept Knowledge Management (KM)?

     ☐   Have an idea

     ☐   Heard of it, but do not clearly understand the concept and its benefits

     ☐   Aware of KM and its benefits

     ☐   Never heard of it?

2.   If you have never heard of KM, please move on to question **FIVE.** If you have an idea, or heard of it, kindly continue with the questionnaire

   What do think the organization will benefit for from KM implementation? (Multiple answer if possible)

     ☐   Increase in productivity

     ☐   Improve competitive advantage

     ☐   Employee development

     ☐   Reduce costs

     ☐   Enhance customer focus

     ☐   Increase Return on Investment (ROI)

3.   Are you able to share or get access to organizational information /knowledge?

     | YES | | NO |

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4. If the answer in No, please briefly describe what is hindering you.

....

....

....

5. Does the current organizational culture allow you to share information / knowledge?

| YES | | NO |

6. Where do you keep your information/knowledge?

☐ Computer hard drive

☐ Stiffy disks

☐ Arch files

☐ My head

☐ Other (please specify)...

....

7. Is the information/knowledge easily accessible to other colleagues when you are not around?

| YES | | NO |

8. What do you think would motivate the legislature to implement KM practice? (Multiple answer if possible)

☐ Information overload problems within the legislature

☐ Difficulty in capturing workers undocumented know-how

☐ Loss of key personnel and their knowledge

☐ Difficulties in incorporating external knowledge

☐ Other (please specify)...

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9. In your opinion, what knowledge Management initiative is would be the most beneficial to the Legislature?
    (Multiple answer if possible)

    Regular formal knowledge sharing meetings (e.g. internal seminars)

    ☐ Regular informal get-together meetings (e.g. coffee breaks, lunches)

    ☐ Continuing professional development programs
       (e.g. formal training on- or off-line)

    ☐ Powerful Intranet search engine (personalized recommender systems)

    ☐ Document management system

    ☐ Other (please specify)..

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10. Select the following types of data/Information/knowledge that would be most useful to you if you have an organizational   Web Portal (Multiple answer if possible)

    ☐ Legislature calendar

    ☐ Workflow

    ☐ Records management

    ☐ Task management

    ☐ Document management

    ☐ Other (please specify)..

11. Computers aid me in doing my daily work

    ☐ Strongly   ☐ Disagree   ☐ Agree   Strongly ☐   No opinion
       Disagree   Agree

12. To learn new application, I...

    ☐ Read the manual cover to cover

    ☐ Skim manual

    ☐ Use the manual as a reference

    ☐ Put manual away never use it

    ☐ Not use the manual but ask someone to help

13. How often do you use the World Wide Web to do your job?

☐ Never ☐ Once a ☐ Once a ☐ Once a ☐ Once an
Month Week Day Hour

14. How often do you use Legislature Intranet?

☐ Never ☐ Once a ☐ Once a ☐ Once a ☐ Once an
Month Week Day Hour

15. What kind of information do you use the Intranet for? Please specify

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16. Management can be trusted to make sensible decisions for the legislature's future

☐ Strongly ☐ Disagree ☐ Agree ☐ Strongly ☐ No opinion
Disagree Agree

17. Senior management keep its commitments to employees

☐ Strongly ☐ Disagree ☐ Agree ☐ Strongly ☐ No opinion
Disagree Agree

18. I can rely on management to try to help me out when I run into difficulties with my job

☐ Strongly ☐ Disagree ☐ Agree ☐ Strongly ☐ No opinion
Disagree Agree

19. Senior management allow me to share ideas and that will improve service delivery

☐ Strongly ☐ Disagree ☐ Agree ☐ Strongly ☐ No opinion
Disagree Agree

20. I can trust management with the information I have

☐ Strongly ☐ Disagree ☐ Agree ☐ Strongly ☐ No opinion
Disagree Agree

Thank you for your time.

☺   ☺   ☺ God Bless ☺   ☺   ☺

Appendix B

TO: The Management

As I am doing my Mphil in Information and Knowledge Management at the University of Stellenbosch, I have chosen a Research topic on Knowledge Management in the KwaZulu-Natal Legislature. I need your help in filling in this survey questionnaire for my research purpose.

The purpose of this study is to gain some understanding of the perception of the concept of Knowledge Management and whether it can be implemented by the Legislature to achieve competitive advantage.

I assure you that whatever information collected in this survey will be dealt within a confidential manner. I request you kindly to fill out this questionnaire.

I appreciate you for the effort taken to fill out this form for my research.

Thanking you.

Thandeka Mabaso

TERMINOLOGY EMPLOYED

The following key concepts are embodied in the study:

KNOWLEDGE MANAGEMENT

Knowledge Management (KM) is a discipline that promotes an integrated approach to creation, capture, organization, access and use of an institution's information assets. These information assets may include databases, document, policies and procedures as well as the uncaptured, tacit expertise and experience resident in individual workers.

KNOWLEDGE WORK

Knowledge work is mentally rather than physically intensive. Its raw material is information and its primary product is information to which values has been added by the knowledge and problem-solving skills of the knowledge worker.

KNOWLEDGE WORKERS

Knowledge Workers employ their knowledge to solve problems and create solutions. Their activities reflect those of rapidly growing knowledge workforce with position for everyday level workers, middle level knowledge workers and senior level jobs. All these levels knowledge workers employ their know how to add value to operations, products and services.

CORE COMPETENCIES

Core competencies is a mix of skills and technologies which incorporate both tacit and explicit knowledge organizations seek to identify, select,

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develop and protect those competencies which distinguish them from competitors, not least by adding unique value for customers.

KNOWLEDGE COMPETENCIES

The list of potentially long but in general knowledge competencies include such attributes as abilities in knowledge creation and sharing, problem identification and solving, and learning and research skills.

1. How would you rank your own level of understanding/experience and familiarity with KM concept?

    (a) Have an idea

    (b) Know the concept but no practical experience

    (c) No idea at all

2. What is the legislature's competitive advantage?

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3. Could you say if the Legislature will be interested / adopt the practices of concept of KM in order to achieve its competitive advantage:

    (a) It does not see the value in KM.

    (b) It has not considered this matter,

    (c) The concept is unhelpful,

    (d) The legislature lacks the resources to engage in the job restructuring that this would involve;

    (e) Other (please specify)

4. Please tick in the box yes/no"

Does the existing culture/ value system promote knowledge sharing:

yes	no

5. Do the legislature workers share knowledge or information by regularly updating databases of good work practices , lesson learned or listing of expert

yes	no

6. Do knowledge workers prepare written documents such as lesson learned, training manuals, good work practices, articles for publication etc (organization).

yes		no

7. Does the legislature Facilitate collaborative work by project teams that are physically separated ?

Yes   No

[ ]   [ ]

8. Does the legislature specifically recognize its employees as knowledge workers?

Yes   no

[ ]   [ ]

9. Senior managers whose departure means they would take valuable information held in their heads with them, what do you think the legislature should to identify and capture this information?

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10. In your opinion, where in the legislature does responsibility for KM should reside?

(a) In a corporate level appointment (please specify)

(b) In a departmental appointment (please specify)

(c) Within a team (please specify)

(d) Other (please specify).

11. Would the designation knowledge worker apply to :

(a) All staff

(b) Some staff (please specify)

12. Could you please list some competencies that would identify people as knowledge workers in the legislature:

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13. Do you think using KM practices in the legislature can:

- increase knowledge sharing horizontally (across departments, functions, etc)

  yes   no

- increase knowledge sharing vertically (up the organizational hierarchy)

  Yes   No

- improve worker efficiency or productivity

  Yes   No

- improve skills and knowledge of workers

  Yes   No

- improve customer relations

  Yes   No

- prevent duplicating research and development

  Yes   No

- improve organizational memory

  Yes   No

- increase the ability of capturing knowledge from other institutions

  Yes   No

- Improve involvement of workers in the workplace activities

  Yes   No

14. Can you think of any barrier that would the legislature would have to overcome before the implementation of KM?

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Thank you for your time

!!!GOD BLESS!!!