

## CHAPTER THREE

### THE BASIC CONCEPTS AND THEORIES OF KNOWLEDGE MANAGEMENT

#### 3.1 Introduction

The preceding chapter presented the legal information environment experiencing the impact of change. It was suggested that knowledge management may play an important role in weathering these changes by transforming legal practices and fundamentally altering the way lawyers interact, communicate, and exchange critical legal information across the firm. In order for lawyers to take advantage of knowledge management, they need to fully understand the concept, approaches, benefits and techniques of knowledge management. This chapter explores some of the basic theories and concepts in knowledge management in order to orientate the researcher towards the issues to be explored in knowledge management in law firms. However, a lot still needs to be done in the form of extending, refining, validating and empirically developing the theories and concepts of knowledge management across specific contexts and locations particularly from an information science perspective. In order to provide the foundation for understanding the fundamental principles to effective knowledge management the discussion in this chapter will be based on the following research questions that seek to address sub problem two of the study:

- ▶ What is knowledge?
- ▶ What are the different approaches to knowledge?
- ▶ What are the different types of knowledge?
- ▶ What is knowledge management?
- ▶ What are the various approaches to knowledge management?
- ▶ What are the existing frameworks models and strategies for knowledge management?
- ▶ What are the technologies and techniques for knowledge management?
- ▶ What are the benefits of knowledge management?
- ▶ Which are drivers of knowledge management?
- ▶ What are the factors that inhibit the success of knowledge management?
- ▶ What are the enablers to knowledge management?

### 3.2 Defining knowledge

It has been noted how several epistemological<sup>3</sup> debates since the Greek era<sup>4</sup> have failed to settle on a single generally accepted definition of knowledge, and how closely related concepts such as data and information can easily approximate some form of knowledge. An examination of the different definitions of knowledge will provide insights into the meaning of knowledge. The Webster's New Collegiate Dictionary defines knowledge as a range of information and understanding while information in turn is said to be knowledge obtained from investigation, study or instruction; and data is defined as factual information used as a basis for discussion. Nonaka & Takeuchi (1995) consider knowledge as true and justified personal belief that increases an individual's capacity to take action. According to Fahey & Prusak (1998), knowledge is what the knower knows that does not exist out of the knower but rather shaped by one's needs as well as one's initial stock of knowledge. Similarly, Davenport & Prusak (1998) refer to knowledge as the fluid mix of framed experience, values, contextual information, and expert insights that provide a framework for evaluating amid incorporating new experiences and information. It originates and applies in the minds of the knower and in the organisations; it is not only embedded in documents or repositories but also in organisational routines, practices and norms. They argue that knowledge involves the link people make between information and its potential application and as such, knowledge is closer to action than information or data and thus corresponds to competence. Sveiby (1997) describes business knowledge as competence that is the capacity to act effectively and efficiently. However, by considering knowledge as competence, Sveiby (1997) disregards the fact that knowledge is a highly abstract cognitive phenomena that does not necessary provide immediate practical applications. According to Mclerney (2002), knowledge is the awareness of what one knows through study, reasoning, experience or association or through various other types of learning. Quinn et al. (1996) equate knowledge with professional intellect. Brown & Duguid, (2000) point out that while knowledge is often thought of as being a property of individuals, a great deal of knowledge is produced as well as held collectively. Such knowledge is quickly generated when people work together in the tight knit groups, which they describe as "communities of practice."

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3 The investigation into the grounds and nature of knowledge

4 These epistemological debates have been expressed from a variety of perspectives and positions including the rationalist perspective (advanced by philosophers such as Descartes in the seventeenth century), the empiricist perspective (advanced by Locke and others in the eighteenth century), and the interactions perspective advanced by Kant and others in the nineteenth century) For a discussion of a history of knowledge and epistemology see Polanyi (1958, 1962)

knowledge management researchers have also referred to knowledge as a state of mind, an object, a process, a condition of having access to information, stocks and flows, usable representations, the perception of pattern, a constitutive force in society and a basic human need (Maslow, 1970; Machlup, 1980; Van Lohuizen; 1986; Carlsson et al., 1998; Schubert et al., 1998; Alavi & Leidner, 1999; Beijerse, 1999; Zack, 1999).

Drawing from the above definitions, it seems clear that knowledge is easier to describe than to define. For the purposes of this study, knowledge is considered as information (artefacts, such as documents and reports, available within the organisation and out of the organisation) combined with experience, context, interpretation, reflection, intuition, creativity plus the ability to use the information to act or innovate. It includes truths, beliefs, perspectives, concepts, judgement, expectations, methodologies and know-how. It is possessed by humans, agents or other active entities. It is the ability to cause things to happen. Given that most of the above definitions represent different views of knowledge it is worth examining these different approaches of knowledge.

### **3.3 The different approaches to knowledge**

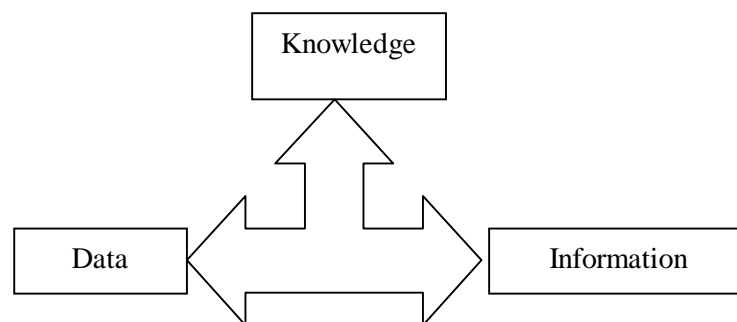
There is a diversity of perspectives on knowledge that highlights the definitional ambiguity surrounding the concept. The different perspectives of knowledge that have been considered pertinent to this study are the data, information and knowledge perspective, the individual perspective, the social perspective, and the organisational perspective. These perspectives are considered in the spirit of accepting a wide range of views as possible rather than attempting to prescribe a particular meaning to knowledge. Each of these perspectives suggests a different meaning to knowledge, a different strategy for managing knowledge and a different implication on knowledge management.

#### **3.3.1 The data, information and knowledge perspective**

In order to fully understand the depth of knowledge, it is important to differentiate it from data and information. Several authors, notably in the information system literature (Fahey & Prusak, 1998; Leonard & Sensiper, 1998; Zack, 1999; Davenport & Prusak, 2000; Wright, 2001; Blair, 2002; Saint-Onge, 2002; Sinotte, 2004), assume a hierarchical distinction between data information and knowledge that goes from data (facts and figures) to information (data with context) to knowledge (information with meaning). That is, knowledge is an authenticated and expanded view of information that follows from information, which again flows from data.

A commonly held view amongst knowledge management theorists with sundry variants is that data is a set of discrete raw numbers and facts and unstructured records of transaction about events in an organisation. Information on the other hand is processed, organised and interpreted data that may be easily captured in text and stored for future use. Davenport & Prusak (1998:2) defines information as “data that makes a difference.” Knowledge has more value because it is closer to action than data and information, and offers meaning and insight. It is when this information is transferred into people’s knowledge base that decisions and actions could be taken.

Researchers like Davenport & Prusak (1998) have elaborated a higher level of this continuum to include wisdom, insight and action on a basis of a value added process, illustrated as a pyramid with data at the bottom and wisdom at the top. However, others (Stewart; 1997:69; Firestone, 2003) have dismissed the notion of data to wisdom hierarchy as bogus and unhelpful on the grounds that one man’s knowledge is another man’s data. Firestone (2003:24) suggests that firms should rather move from the “levels of information” model to a types of “information model” consisting of “data” “just information” and “knowledge” that forms part of a cycle where information is not made from data but data and knowledge are made from pre-existing information. For the purposes of clarity, this study adopts the recursive distinction between information, data and knowledge. As the diagram below shows, the relationship between data, information, and knowledge is recursive. Value is added to data, turning them to information. Information becomes knowledge when it is processed in the mind of an individual. This knowledge then moves down the value chain and becomes information.



*Figure 3.1 The recursive relationship between data, information and knowledge*

The data, information and knowledge perspective provides an inroad in understanding the different concepts by presenting a hierarchical relation between data, information and knowledge with each varying along context, usefulness and interpretability. Two significant implications can be drawn from this view. First, for individuals to arrive at the same understanding of data and information, they must share the same data base. Second, it equates knowledge management tools to information management tools. This perspective however falls short of providing an effective distinction between information and knowledge and when information actually becomes knowledge. (Kogur & Zander, 1992; Sveiby, 1997; Alavi & Leidner, 1999; Wright, 2001; Blair, 2002). The real focus is therefore to understand how knowledge is created through the application of experience to data and information.

Cognitive theories shed light on the various mental processes applied by individuals in the creation and acquisition of knowledge from data and information. Broadly speaking, the theory holds that people's perceptions, feelings, thinking and actions result to a significant extent from processes, which go beyond the simple input provided by the senses (Good & Brophy, 1990; Misch & Tobin, 2006). It posits that many of these mental models find their origins in the very earliest stages of development, including many of the games played in childhood. Jacques & Clement (1991) stratified systems theory outlined four cognitive processes that people employ to manage and organise information and also four orders of increasing information complexity. The four cognitive processes are assertive, cumulative, serial and parallel processing while information complexity ranges from the first to the fourth order of complexity. Jacques & Clement (1991) noted that an individual's cognitive processes do not proceed incrementally but rather in a series of discontinuous steps.

The cognition of a human being is therefore his or her internal mental process that begins with the reception of data and information and terminates with action taking (Kagono, 2006). It is the ability to acquire knowledge, or the ability to know and understand. Consistent with the cognitive view, one may posit that information is converted to knowledge once it is processed in the mind of the individual and knowledge becomes information once it is articulated and presented in the form of text, graphic words and other symbolic forms. A cognitive theory thus provides the link between environmental factors and behaviour and also an explanation why similar sensory inputs may lead to completely different behavioural output in different people.

Although the literature reveal some form of interplay between information and knowledge,



and several knowledge management theorists have even equated information to explicit knowledge (Kogur & Zander, 1992; Sveiby, 1997; Alavi & Leidner, 1999; Wright, 2001; Blair, 2002) several distinctions ought to be drawn between information and knowledge. Researchers such as Roos et al. (1997:7), Wiig (1998), Marakas (1999: 264), McDermott (1999), Bhatt (2000a), and Blair (2002) have identified several distinctions between information and knowledge. According to these researchers, knowledge is richer than data and information. Knowledge must exist before information can be formulated or before data can be measured to form information. They observed that in a sense, knowledge is a “meaning” made by the mind. Without meaning, knowledge is information or data. It is only through meaning or organisation that information finds life and becomes knowledge. For example, information is transferred into knowledge when a person reads, understands, interprets and applies the information to a specific function. If a person cannot understand and apply that information to anything, it remains just information. However, another individual can take the same information, understand it and interpret it in the context of previous experience and apply the newly acquired knowledge in making decisions. Yet, a third person can take the same information and through his/her unique experience and lessons learned, apply knowledge in a way that the second person may not have considered. Thus, knowledge can only live in the minds of people and the moment it leaves the human mind it becomes information.

Another distinction between information and knowledge is that people are at the centre of knowledge management, while information communication technologies are at the centre of information (Marakas, 1999: 264; McDermott, 1999; Bhatt, 2000a; Blair, 2002). In reality, it is not knowledge that is being managed but the people. It is also worth noting that when one loses information we lose something that we can physically possess but when one loses knowledge, he/she loses the ability to do something. Another difference between information and knowledge is that knowledge is a subjective personal process emerging from previous experiences and current events while information is objective data about the environment. Lastly, knowledge belongs to communities and circulates through communities in many ways such that one embodies the ideas, perspectives, prejudices, languages and practices of that community. On the other hand, information is mostly derived from facts, data tools and objects (McDermott, 1999).

The data, information and knowledge dimension and the distinction between information and knowledge does not go very far in clarifying the meaning of knowledge. The personal perspective of knowledge provides yet another dimension to the meaning of knowledge.



### **3.3.2 Personal perspective of knowledge**

From the personal perspective, knowledge is viewed as existing in the individual. This view was epitomised by the Hungarian chemist, economist and philosopher, Polanyi (1958, 1962, and 1966) and expounded by Nonaka & Takeuchi (1995). Polanyi made a clear distinction between tacit (subsidiary) and explicit (focal, codified, articulated) knowledge. The distinction between tacit and explicit is discussed elaborately in section 3.4.1.2 below. The personal perspective together with the data information and knowledge hierarchy does not provide a conclusive view of the meaning of knowledge.

### **3.3.3 Social perspective of knowledge**

From the social perspective, knowledge is created and inherent in the collective actions of a group of people working together and dependent on the social context where they belong. Knowledge ecology, community of practice and knowledge in networks are basic concepts in this social process (Berger & Luckmann, 1996; Brown & Duguid, 2000). McDermott (1999:105) dismisses the idea that knowledge is stuff “between the ears of the individual” and considers knowledge as belonging to communities. He claims that individuals learn by participating in communities full of knowledge and embody the ideas, perspectives, prejudices, languages and practices of that community. Discussions on communities of practice are elaborated in subsequent sections in the study.

### **3.3.4 The organisational perspective of knowledge**

The organisational perspective draws from the data, information and knowledge perspective, the personal perspective and the social perspective to present a deeper understanding of knowledge formed through unique patterns of interactions between technologies, processes, techniques, and people, which is shaped by the organisation’s unique history and culture. From the organisational perspective, knowledge is based on knowledge systems that consist of a series of knowledge processes such as knowledge creation, storage, transfer and application with data, information, knowledge and wisdom as important factors (Ackoff, 1989; Berger & Luckman, 1996). Wisdom is acquired as organisational knowledge accumulates over time, enabling firms to attain deeper levels of understanding and knowledge through the transformation of collective experiences and expertise. New knowledge is introduced in the knowledge system through learning. The ability for a knowledge system to acquire knowledge on its own is known as intelligence.

### **3.4 The nature of knowledge**

The different perspectives of knowledge examined above give an indication of the different definitions of knowledge but do not provide a conclusive meaning of the concept of knowledge. An examination of the nature of knowledge will help to provide a better understanding of this complex notion. Aspects on the nature of knowledge considered in this section are the different types of knowledge, the levels of knowledge and the properties of knowledge.

#### **3.4.1 Types of knowledge**

Knowledge can be classified into several types and may differ according to the type of organisation and context. The classification of knowledge in a marketing, banking and financial industry would be different from that of a professional service firm. The following are some of the classifications of knowledge: tacit and explicit knowledge (Polanyi, 1962; Nonaka & Takeuchi, 1995); tacit, explicit and cultural knowledge (Choo, 2002); practical knowledge, intellectual knowledge, small talk or past time, spiritual knowledge and unwanted knowledge (Machlup, 1980); procedural and analytical knowledge (Zack, 1999); human, mechanised, documented, and automated knowledge (Jacques et al., 1996); know-how, know-about, know-why, know-when, know-with and care-why (Kogut & Zander, 1992; Quinn et al., 1996; Zack, 1999); and internal, external, customer, and market knowledge (Alavi & Leidner, 2001; Butler, 2003). However, the classification of knowledge as administrative data, declarative, procedural and analytical knowledge has become a typical way of classifying knowledge in law firms (Edward & Mahling 1997; Gottschalk, 1999; Khandelwal & Gottschalk, 2003). The different classifications of knowledge are examined in subsequent paragraphs.

##### **3.4.1.1 Tacit and explicit knowledge**

Over the years, the distinction between explicit and tacit knowledge suggested by Polanyi (1962) in the personal knowledge perspective (section 3.3.2) and expounded by Nonaka & Takeuchi (1995) has been elaborated and expanded upon by other knowledge management theorists (Beijerse, 1999; Smith, 2001; Blair, 2002; Choo, 2002; McLenerney, 2002; Jasimuddin et al., 2005). Almost every knowledge management article seems to draw a distinction between explicit and tacit knowledge. It is therefore worthwhile for the purposes of this study, to establish a clear distinction between these two categories of knowledge.





In distinguishing between tacit (subsidiary, implicit) and explicit (focal, codified, articulated) knowledge, Polanyi (1966), describes tacit knowledge as everything we know but cannot really express even to ourselves, or knowing how to do something without thinking about it like riding a bike or playing soccer. This type of knowledge is highly personalised, subjective, unspoken, intuitive, hidden and undocumented and consists of technical skills, “know-how” or “understanding.” It also consists of cognitive dimensions such as implicit mental models and beliefs that shape our perceptions of the world. He describes explicit knowledge as a small body of knowledge considered as information that enables other people to create their own knowledge.

Nonaka & Takeuchi (1995) for their part consider tacit knowledge as knowledge that is not fully articulated in the minds of the individuals and as such difficult to explicitly document while explicit knowledge is that which is written down, expressed in words and numbers and can be easily communicated and shared in the form of hard data, scientific formulae, codified procedures or a universal principle. They further classified tacit knowledge into a sub category of technical and cognitive knowledge. Technical tacit knowledge consist of informal skills or know how called “expertise” that results from experience such as the mastering of a specific body of knowledge for example, the skills of an artist or a designer. A person with technical tacit knowledge is considered as being unconsciously skilled. Cognitive tacit knowledge on the other hand are mental modes stirred by beliefs, perception, ideals, values, emotions ingrained in an individual and often taken for granted.

Many knowledge management researchers (Hedlund, 1994; Beijerse, 1999; Choo, 2000; Smith; 2001; Blair, 2002; Hunter et al., 2002; Mclerney, 2002; Jasimuddin et al., 2005) have come to refer to explicit knowledge as formal systematic knowledge; technical academic data or information. It is typically in the form of books, documents, white papers, data bases, policy manuals, mathematical expressions, copyrights and patent. It can be expressed, captured and codified at which point it becomes information. Documented explicit knowledge is referred to as “codified knowledge.” Codified knowledge is quite structured. Examples of codified knowledge in law firms are; manuals, specialised databases, collection of case law, standardised techniques of investigation or templates for the preparation of legal documents. On the other hand, tacit or implicit knowledge is referred to as knowledge generated in people’s mind, highly personal, undocumented and hard to formalise consisting of subjective insights, intuitions and hunches known as inarticulate intelligence, collective wisdom or elusive knowledge.

Explicit knowledge has also been sub categorised as object and rule-based (Choo, 2000). Object-based explicit knowledge is represented using a string of symbols (words, numbers and formulas) embodied in physical entities (equipment, models and substances) and found in artefacts as patents, products, software codes, computer data bases, drawing tools, photographs, voice recording and films. On the other hand, rule-based explicit knowledge is knowledge codified into rules routines and procedure. An example of rule-based explicit knowledge is intellectual assets. These are codified tangible or physical description of specific knowledge to which a company can assert ownership rights such as assets, plan, blue prints, procedures, drawing, and computer programmes. Intellectual assets that receive legal protection such as trade marks, patents, copyright, trade secrets, and semi conductor masks are referred to as intellectual property.

Tacit and explicit knowledge has been classified into two dominant perspectives of knowledge as a category versus knowledge as a continuum. The knowledge as a category perspective has been discussed in the literature on the topic. For example, Polanyi (1958), Sveiby (1997), Hansen et al. (1999), and Dixon (2000), classify knowledge into a category of explicit and tacit knowledge suggesting that tacit and explicit knowledge represent two separate types of knowledge having distinct features that significantly influence the way it can be shared. On the other hand, Brown & Duguid (1991), Kogut & Zander (1992), Spender (1996), Gottschalk (2002), Hall & Andriani (2003) and Jasimuddin et al., (2005) considered knowledge as a continuum that forms the pool of a knowledge spectrum. They suggest that tacit and explicit knowledge should not be seen as two separate types of knowledge but should rather exist along a continuum of tacitness and explicitness where they are complementary, mutually dependent, interacting and influencing.

Therefore, the key issue should not be in establishing a clear distinction between explicit and tacit knowledge because tacit knowledge forms the background necessary for assigning the structure to develop and interpret explicit knowledge; but rather in understanding the meaning of tacit and explicit knowledge. Besides, what is tacit now may become explicit the next minute and what is explicit can easily return to the source. Alavi & Leinder's (2001) discussions on the linkage between tacit and explicit knowledge reveal that only an individual with the requisite level of shared knowledge space is able to share and exchange knowledge. The explicit and tacit category of knowledge is very crucial because they have become the main knowledge spectrum running across the different categories of knowledge. Although cognitive psychologists sort knowledge into declarative, procedural and analytical knowledge, elements of tacitness and explicitness run through these different categories of knowledge.

### 3.4.1.2 Declarative procedural and analytical knowledge

Declarative knowledge is knowledge about something; it has much in common with explicit knowledge in that it consists of descriptions of facts, things, methods and procedures (Edwards & Mahling, 1997; Zack, 1999). Kogut & Zander (1992) reported that it is sometimes labelled as “Know-that” and “know-what” and involves knowledge that is consciously accessible, articulated and transmitted without loss of integrity once the syntactical rules for deciphering it are known. An example of declarative knowledge is the administrative data about a firm’s daily operation. For practical reasons, declarative knowledge and explicit knowledge may be treated as synonymous because declarative knowledge is knowledge that can be articulated.

Procedural knowledge, also referred to as “know-how,” is knowledge that manifests itself in the doing of something or knowledge of how something occurred or is performed (Polanyi, 1958; Zack, 1999). Procedural knowledge that manifests itself in the doing of something is reflected in motor or manual skills such as dancing, playing a piano or sewing a dress. Procedural knowledge on how something occurred or is performed is manifested in the description of the steps of a task or procedure.

Analytical knowledge also referred to as strategic knowledge, know-when and know-why, is the conclusions reached about a particular cause of action an individual may follow (Kogut & Zander, 1992; Edwards & Mahling, 1997). This knowledge is deeply rooted in the intrinsic skills, experiences, ideals, values, minds and emotions of the individuals and is not easy to express. It results from analysing declarative knowledge.

### 3.4.1.3 Know-how, know-about, know-why, know-when, know-with and care-why

Kogut & Zander (1992), Quinn et al. (1996), Zack (1999), and Dixon (2000) have categorised knowledge from the perspective of a hierarchy of non-rational aspects of knowing, consisting of know-how, know-about, know-why, know-when, know-with and care-why. Tacit knowledge has been associated with know-how, know-why, know-when, know-with and care-why; while explicit knowledge relates to know-about.

Know-how is knowledge on how to do things and corresponds to procedural knowledge, and tacit knowledge (Kogut & Zander, 1992; Grant, 1996). Dixon (2000) refers to know-how as “common knowledge.” An example of know-how is knowledge on how to drive a car. Know-about, also referred to as know-that, is knowledge by information, knowledge

by acquaintance or cognitive knowledge. It goes beyond basic skills competencies and experience to a higher level of mastery of a problem area. It is factual knowledge. For example, it is known that one plus one is two. This corresponds with explicit and declarative knowledge.

In the researcher's opinion, know-why, know-when, know-with and care-why corresponds with analytical knowledge and may be considered as a subset of declarative knowledge. Know-why is knowledge why something occurred (Kogut & Zander, 1992; Grant, 1996). It requires a deeper understanding of interrelationships across knowledge areas that may require a system perspective and provide a more robust framework for grounding decisions and actions in complex tasks. An example of know-why is knowledge on why one is sick. Know-when is a conditional knowledge about understanding when to do something (Quinn et al., 1996; Zack, 1999). For example, knowledge on when to take one's drugs. Know with, is relational knowledge that seeks to understand the relationship between one thing to another (Kogut & Zander, 1992). Care-why, is the highest level of knowledge that is socially contextualised (Quinn et al., 1996). It addresses direct, hidden, near and long term cost benefit as well as assesses and evaluates possible contingencies and trade off.

#### **3.4.1.4 Human, mechanised, documented, and automated knowledge**

Jacques et al. (1996) characterised knowledge into human knowledge, mechanised knowledge, documented knowledge and automated knowledge. According to Jacques et al. (1996), human knowledge is knowledge contained in the heads of the individuals while mechanised knowledge is knowledge embedded in machines necessary to carry out a specific task. They consider documented knowledge as knowledge stored in the form of archives, books, documents ledgers, instruction charts and design specifications; and automated knowledge as knowledge stored electronically that can be accessed by computer programs. In sum, similar to the other categories of knowledge examined above, this classification embodies tacit and explicit elements. Human knowledge is similar to tacit knowledge while mechanised, documented and automated knowledge are similar to explicit knowledge.

#### **3.4.1.5 Internal, external, customer and market knowledge**

It has been observed that internal, external, customer and market knowledge as the three generic classifications of knowledge common to most industries (Alavi & Leidner, 2001; Butler, 2003). Internal knowledge is the vast amount of knowledge that resides in the



organisation and which most often organisations do not know where it is and where to find it. External knowledge is knowledge acquired out of the organisation to advance the organisation's competitive ability. Customer knowledge is the knowledge to the customer about the organisation he/she does business with. Market knowledge is the knowledge of products, processes, competitors, best practices, and project experiences.

It is worth noting that the different categorisations of knowledge examined so far in this section do not attempt to represent a dichotomous or static state of knowledge, but rather provide insights into understanding the nature of knowledge and the different strategic values attached to each category of knowledge. This is because one of the ultimate goals of knowledge management is to understand the knowledge one uses in business.

### **3.4.2 Knowledge levels**

Knowledge can be said to exist exists at two levels irrespective of the types and categories described above. The lower practical or general level that provides insights and understandings which can help to generate more systematic knowledge closer to action, and the higher precise and theoretical level that focuses on high level understanding. For example, Nonaka & Takeuchi (1995) point out that knowledge moves from simple slogans, similes, and metaphors to systematic analogies, and finally to structured models or theories. The classification of knowledge into lower and higher levels is also reflected in the classification of knowledge into core, advanced and innovative knowledge by researchers (Gottschalk, 1999; Tiwina, 2002, Butler, 2003; Gottschalk, 2003; Rusanow, 2003).

Core knowledge is the basic or minimum knowledge required to stay in business (Gottschalk, 1999). This type of knowledge creates efficiency barriers for the entry of new companies since new competitors are generally not up to date with basic business processes. It provides no advantage to the firm to differentiate its product and services from that of a competitor.

Advanced knowledge is what makes a firm competitively visible and active. It enables firms to differentiate their products and services from that of competitors through the application of superior knowledge (Tiwina, 2002).

Innovative knowledge enables firms to clearly differentiate themselves from competition with other firms (Gottschalk, 2003 & Rusanow, 2003). Such knowledge allows firms to introduce new business practices or expand market shares by winning new customers and improving on the conditions of services for existing customers. The next section provides

another dimension to the nature of knowledge by highlighting the properties of knowledge. It provides an understanding of the different ways of improving the flow of knowledge in organisations and the ways that knowledge can be captured, processed, managed and leveraged to achieve business imperative.

### 3.4.3 Properties of knowledge

Besides the categories and levels of knowledge discussed in the preceding sections, knowledge also possesses certain generic properties such as location, dispersion, appropriability, capacity for aggregation, broadness or specificity, and scope (Grant, 1996; Brown & Duguid, 1998; Hunter et al., 2002; Spanos & Prastacos, 2004).

Knowledge is located either at the individual, collective or organisational level (Hunter et al., 2002). Organisational knowledge is the collective sum of individual knowledge, assets and processed information embodied in routines, databases, sharing of experiences and best practices, sources both internal and external to the organisation, and processes produced and held by an organisation. Individual knowledge is necessary for developing the organisational knowledge base (Grayson & O'Dell, 1998; Carayanniss, 1999; Bhatt, 2000; Brown & Duguid, 2000; Nonaka, et al., 2000). Collective or group knowledge is based on the collective experience, insight and context of the group of knowers with the same interest. Tacit knowledge may exist individually in the human mind and experiences and know-how of a person; or collectively in the shape of codified routines and in-house processes or embedded in the social context of the firm. Explicit knowledge on the other hand exists individually in the form of personal manuals, documents, artefacts and computers; and is collectively distributed and scattered in different locations.

Knowledge dispersion or transferability is the breath of knowledge sharing within organisational boundaries. The higher the degree of knowledge transferability, the higher its impact on knowledge creation (Hunter et al., 2002). Tacit and explicit knowledge have different degrees of transferability and may be transferred in the individual, group or collective form. Explicit knowledge is relatively easy to put down on paper or into another media and thus is directly transferable to the person one wishes to transfer knowledge to. The potential for transfer of tacit knowledge at the individual, group and organisational level is low given that it cannot be easily codified and can only be acquired and developed through practice. Tacit knowledge transfer often requires extensive personal contact in the form of mentoring, partnership, apprenticeship or some form of working relationship (Davenport & Prusak; 1998:95).





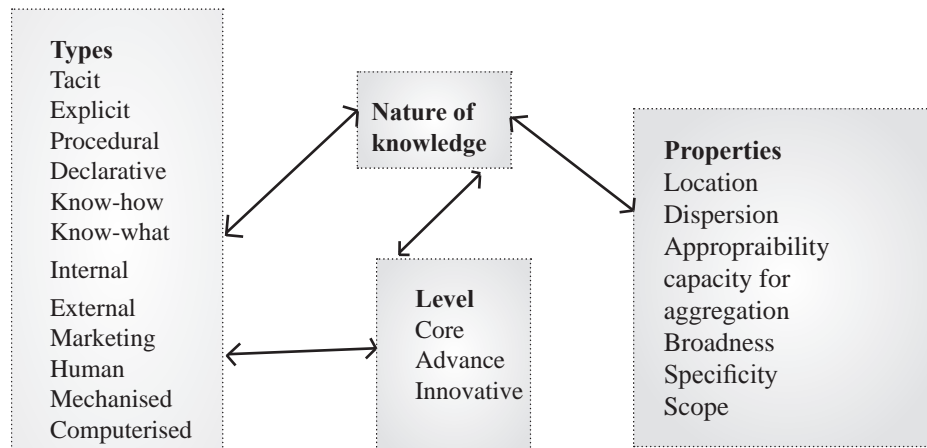
Appropriability is the ability of the owner of a resource to receive a return equal to the value created by a resource (Grant, 1996; Hunter et al., 2002). Knowledge is an intangible and heterogeneous resource that is difficult to measure, volatile, increases with use, and can lead in many ways to value creation when deployed strategically. Tacit knowledge is not directly appropriable because it cannot be directly transferred. It is considered as a form of property right that can be transferred by cooperation, provision of incentives, or some satisfactory contract that may provide the owner intrinsic and extrinsic rewards sufficient to motivate the individual to contribute knowledge. On the other hand, explicit knowledge is easily appropriable because it is relatively easy to put down on paper or into another media and thus, is directly transferable to the person one wishes to transfer knowledge to without losing it.

The capacity for aggregation is the degree to which knowledge can be absorbed and added on new knowledge by individuals or group of individuals. Knowledge has the cumulative effect of added value (Hunter et al., 2002). Individuals, organisations and groups may acquire and add value to their existing knowledge base. For example, a doctor's knowledge about a particular patient may be added to the knowledge that other doctors have about that particular patient.

Knowledge may be broad or specific (Zack, 1999; Spanos & Prastacos, 2004). Broad knowledge is general and external knowledge, and it is often publicly available and independent of particular events. This type of knowledge is commonly shared and more easily codified and exchanged. Specific knowledge in contrast, is context specific. That is, it is highly contextualised and situated to the particular aspect of the local environment and is difficult to transfer. Context specific knowledge may be scientific/technical or knowledge of context. For example, the professional skills possessed by a medical doctor is technical/scientific knowledge, while the detailed knowledge that a medical doctor may possess about the idiosyncrasies of a particular sickness treated for years may be considered as knowledge of context.

Knowledge may be vertical and horizontal in scope (Grant, 1996). The vertical scope varies from less abstract to more abstract knowledge, while the horizontal scope varies from knowledge at the basic or operational level to knowledge at the executive level. The knowledge of employees may be considered as less abstract because employees often carry out routine tasks; while the knowledge of the employer may be considered as abstract because they are responsible for taking decisions regarding the firm.

A summary of the nature of knowledge is represented in figure 3.2 below



**Figure 3.2 Summary of the nature of knowledge**

Figure 3.2 shows that each types of knowledge will exist at the core, advanced and innovative level and each exhibit the different properties of knowledge. The nature of knowledge and the different perspective of knowledge examined above have influenced theoretical developments in knowledge management.

### 3.5 Defining knowledge management

Similar to knowledge, there is still no universally accepted definition of knowledge management. In 2002, Hluppig et al., (2002) identified 18 different definitions of knowledge management. In recent times, almost every article on knowledge management includes a definition of some sort. Several factors appear to have influenced the diverse definitions of knowledge management. First, there is a wide difference in perspectives of the subject by different authors. Second, the fact that the concept of knowledge management is looked at from a wide spectrum of disciplines such as economics, sociology, philosophy, psychology, management, information technology and information science each attributing different meanings to the term. It is also an amalgamation of concepts borrowed from information management, artificial intelligence/knowledge-based systems, software engineering, and business process re-engineering, human resources management, and organisational behaviour. Third, the phrase knowledge management implies that knowledge can be managed when in reality the management of knowledge is about the management of people, processes and systems through which knowledge can be shared. Fourth, like knowledge, knowledge management is an evolving, broad, vague, conceptual, recursive and highly theoretical concept. Therefore, the following definitions are just a representative sample of



the diverse definitions that have been suggested in the knowledge management literature.

Platt (2003) considers knowledge management from an information technology perspective and defines it as accessing, evaluating, managing, organising, filtering and distributing information in a manner that would be useful to end users through a technological platform.

Grant (1996) & Davenport (1997) for their part refer to knowledge management as the systematic, organisational and specific process of acquiring, organising and communicating both the tacit and explicit knowledge of employees so that other employees may make use of it to be more productive. This definition considers knowledge management as focusing on leveraging of knowledge to achieve a business imperative.

Focusing on the intellectual capital point of view, Davenport et al. (2003) described knowledge management as a process of re using intellectual capital. Similarly, Smith (2001:313) considers knowledge management as an ongoing procedure “bottom-up” process that develops and exploits the “tangible assets and intangible knowledge resources” of the organisation and shares it across boundaries in the organisation. Also Boomer (2004) considers knowledge management as a process to embrace knowledge as a strategic asset, drive sustainable business advantage and promote a firm approach to identify, capture, evaluate and share a firm’s intellectual capital.

Effective knowledge management presupposes a knower to have the ability and capability to internalise what is learned through listening, observing, reading and gaining of life experiences. Thus, Mclerney (2002) defines knowledge management as an effort to improve useful knowledge within an organisation by encouraging communication, offering opportunities to learn and promoting the sharing of appropriate knowledge artefacts. This definition considers people and learning issues in an organisational context as important tenets.

The process of knowledge creation, codification, transfer and application are essential components in the definition of knowledge management. Disterer (2003) defines knowledge management as the creation, acquisition, capture, sharing and use of knowledge in any form to increase organisational performance. In the same light, Opp (2004) considers knowledge management as the processes of identifying, capturing, disseminating and using knowledge possessed by individuals and members of the firm.

In essence, knowledge management is the name given to the set of systematic and disciplined

actions that an organisation can take to obtain the greatest value from the knowledge available to it. It is not only based on the management and communication of information and knowledge, but also entails managing the balance of people, processes and technology that determines the organisation and its relationship with its markets. It is about creating an environment where knowledge, creativity and innovation is valued, by facilitating communication between people in different locations and from different departments and creating an organisation that encourages ideas, rewards success, while allowing people to fail and learn from failure. It entails leveraging organisations knowledge for competitive advantage. The different perspectives of knowledge management examined below will provide insights into proper understanding of the different definitions of knowledge management examined above.

### **3.6 Perspectives in knowledge management**

The literature on knowledge management like that of knowledge is replete with different perspectives reflecting the complexity of the concept and the potential for definitional ambiguity. In order to provide guidelines for knowledge management in law firms, five different perspectives of knowledge management are considered pertinent for this study: information technology, personal, social, organisational and business perspective (Drucker, 1995; Sveiby, 1996; Alavi & Leidner, 2001; Hunter et.al., 2002; Gloat & Berell, 2003).

#### **3.6.1 The information technology perspective**

Drawn from the information technology literature, this perspective considers knowledge management as a technological matter and treats knowledge as objects that can be identified and handled in an information system (Earl, 1996; Sveiby, 1996; Carayannis, 1999; Alavi & Leidner, 2001; Hunter et. al., 2002; Sinotte, 2004). It focuses on information management, information systems, data bases, hardware software, and communication tools. However, this perspective seems to oversimplify the concept of knowledge management because knowledge management is not only about the use of technology to manage information. Technology remains a useful enabler rather than a central tenet at the heart of knowledge management. There is no magic bullet knowledge management software and a majority of researchers agree that the main challenge in sharing knowledge has little to do with information technology and everything to do with changing behaviour including people, structures, work practices, decision-making and business strategies. The social approach therefore presents a logical progression beyond the information management.

### **3.6.2 The social or people track approach**

Knowledge management from the social perspective is considered as a social and learning process that focuses on groups of people and social relationships and is influenced by organisational structures, team work and culture. Organisations create, organise, and process information to generate new knowledge through organisational learning, community of practice, knowledge ecology and knowledge networks. (Malhotra, 1998; Johannsen, 2000; Clarke & Rollo, 2001; Cheng, 2001; Kakabadshe et al., 2001; Lang, 2001; Thomas et al., 2001; Alhawamdeh, 2002; Blair, 2002; Wenger, 2003; Sinotte, 2004).

### **3.6.3 Individual (personal) perspective of knowledge management**

The individual perspective views knowledge management as a continuous interplay between personal tacit and explicit knowledge in the organisation. Nonaka & Takeuchi (1995), in exploring the possibility of gathering people together to develop and make personal knowledge effective in organisations, use this perspective to explain how personal knowledge can be created and later converted into explicit knowledge through four processes of dynamic organisational knowledge creation (Internalisation, externalisation, socialisation and combination) discussed in section 3.8.2 below by which individuals participate and transform knowledge between its tacit and explicit forms.

### **3.6.4 The organisational perspective to knowledge management**

Drawn from the organisational knowledge literature, this perspective considers knowledge management as a series of integrated organisational initiatives which includes strategy, structure, culture, style of management and knowledge systems built and implemented by multidisciplinary teams (Beijerse, 1999; Sinotte, 2004). It also considers knowledge management as the process of creating, storing, retrieving, transferring and applying knowledge (Galagan, 1997; Bhatt, 2001). These different processes allow an organisation to learn, reflect, unlearn and relearn.

The organisational process approach has been criticised for making knowledge management to involve a somewhat mechanistic and sequential process step and for focusing attention on explicit knowledge artefacts.

### **3.6.5 Business perspective of knowledge management**

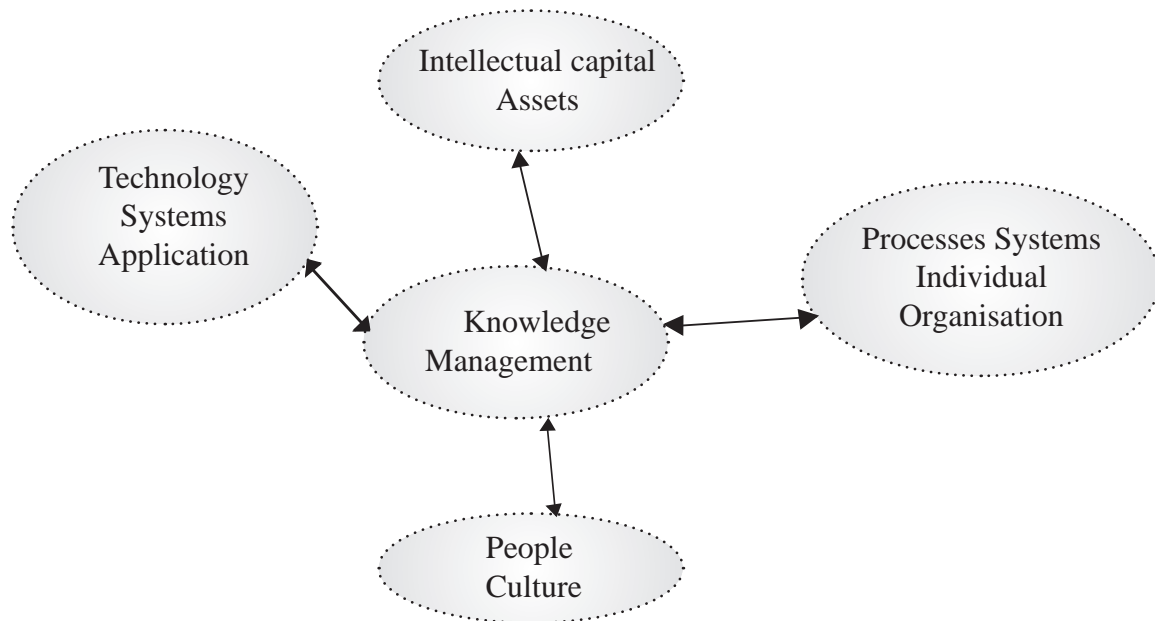
The business perspective builds on the knowledge-based view and the resource based-

view of the firm. The knowledge-based view identifies knowledge as the primary rationale for the firm. It has long been recognised that economic prosperity rests upon knowledge and its useful application. The knowledge based view posits that the product and services produced by tangible resources depend on how they are combined and applied which is the function of the firms' know-how (Skyrme 1997; Teece, 1998; Alavi & Leidner, 2001). The main trust to creating knowledge-based organisations is to know what one knows and then to share and leverage it throughout the organisation.

The resource based-view of the firm on the other hand considers knowledge as a corporate organisational resource, intellectual capital, manageable asset, skills, capabilities, stock flows and competencies that constitute a basis for competitive advantage (Coase, 1937; Drucker, 1995; Grant, 1996; Spender, 1996; Teece, 1998; Sveiby, 1999). It posits that the knowledge inherent in organisations provides a resource on which firms can build and sustain distinctive ability which they can appropriate to enable them survive in the competitive world.

The different perspectives of knowledge management examined above on their own do not provide a conclusive understanding of knowledge management but they at least provide the basis for understanding the different definitions and view points of knowledge management. This study adopts an integrated perspective of knowledge management that considers an integration of the information technology, social, organisational, intellectual and business perspective as illustrated in figure 3.3 below. The integrated perspective of knowledge management may be better understood by drawing an analogy from the human body and its several parts. Just as each part of the human body performs its own unique function which combined together makes a human being functional; so too, different perspectives may be considered as different parts of the same body (knowledge management) which on their own are not effective but when combined may provide a clear understanding of knowledge management. Drawing from the different perspectives of knowledge management examined in the preceding paragraphs, an integrated perspective of knowledge management adopted for this study is presented figure 3.3.





*Figure 3.3 Suggested integrated perspective of knowledge management for this study*

### 3.7 Frameworks in knowledge management

Drawing from the different definitions and perspectives of knowledge management, several frameworks for knowledge management are considered pertinent to this thesis. These are: the learning organisation, knowledge markets, knowledge management process and the knowledge management strategy.

#### 3.7.1 Learning organisation and organisational learning conceptual framework

The basis of this framework is that knowledge is associated with learning, and one of the goals of knowledge management is to establish a collaborative learning environment that promotes and rewards the sharing of resources. No organisation can improve without learning; and increasingly an illiterate is no longer considered as the one who cannot read and write but rather the one who is unable to learn, unlearn and relearn.

Learning increases knowledge and therefore the capacity for effective action (Senge, 1990). Learning occurs when an organisation synthesizes and then institutionalises the individual's intellectual capital, learning memories, culture, knowledge systems, routines and competencies. It may be formal, informal or incidental (Marsick & Watkins, 1996).

Formal learning occurs in the classroom and is highly structured. Informal learning is self-motivated, self-directed and purposeful, while incidental learning is unconscious learning that occurs in the course of an activity or job.

Learning occurs at the individual and organisational level. Individual learning is contingent on a person's general characteristics and abilities, and must be considered in the context of the social entity to which an individual belongs. Organisational learning is the continual process of generating and leveraging individual and collective learning to improve the performance of the organisational system (Tearce & Dealtry 1998). It is a focused, time-framed activity aimed at developing a given set of skills or gaining a relatively narrow targeted set of knowledge. Argyris & Schon (1978) describe organisational learning as attempts by organisations to become learning organisations by promoting learning in a conscious, systematic and synergistic fashion that involves everyone in the organisation. Organisational mission, structure, culture and processes facilitate organisational learning of all its members (Marsick & Watkins, 1999; Slocum et al., 1999). In most cases, organisational learning is incidental and informal.

Learning demands unlearning whereby, errors, failure and environmental uncertainty result in restructuring past successes to fit the changing environmental and situational conditions. It also detects and corrects errors of organisational memory at primary and secondary levels (Argyris & Schon, 1978: 2-3, 27; Cross & Baird, 2000:69; Delphi, 2001). At the primary level, error detection and correction permits an organisation to carry on with its current policies and achieve its present objectives, while at the secondary level, error detection leads to learning that involves the modification of the organisation's underlying norms and present objectives.

Learning may be internal or external, exploitative or exploratory. Investment in research and development (R&D) is an example of internal learning while learning from an alliance partner or competitor is an example of external learning. Exploitation is the pursuit of new knowledge of things that might come to be known while exploration is the use and development of things already known. Firms need to decide on the level of internal and external learning in order to build and reinforce their competitive advantage. They also have to maintain an appropriate balance between exploration and exploitation for survival and prosperity.

The learning process may be radical, incremental, single-loop, double-loop, or triple loop (Argyris & Schön, 1978; Senge; 1990; Crossan et al., 1995). Radical learning is

transformational and manifested in radical changes of behaviour. Incremental learning is manifested in small changes in the observed pattern of behaviour. In single loop learning people continuously improve their current practices or do what they are already doing better. Double loop people fundamentally reshape learners patterns of thinking with the intent of helping them learn to do different things. In triple loop learning, people create a shift in their context or point of view with the intention of helping them learn, grow and produce the results they truly desire.

A learning organisation is therefore one that features learning as one of the key roles and continuously transforms itself and facilitates the individual and organisational learning of all its members. It is the highest state of organisational learning whereby an organisation skilled at creating, acquiring and transferring knowledge has achieved the ability to transform itself to reflect new knowledge and insights through the development and involvement of all its members (Garvan, 1993; Pedler et al., 1989). It values individual and organisational learning as a prime means of delivering its organisational mission, structure, culture and processes (Slocum et al., 1999; Marsick & Watkins, 1999).

Within a learning organisation, employees are likely to feel empowered when given some significant degree of self-determination of their own career and personal development (informal and incidental) rather than simply having formal training imposed on them. The learning they undertake develops not only their direct technical and work-related skills but their social, organisational and communication skills. Employees learn directly and indirectly through the culture of the organisation, to take responsibility for their work. A learning organisation encourages the development and progressions of staff to new areas where growth and career development become alternatives to leaving the organisation; freely let go of past mistakes; exploits new ways; reviews successes and failures and evaluate individuals and departments on their learning systems and past performances. On-the-job training activities such as “vicing” where employees exchange positions to widen their area of expertise and discover their own potential is an important characteristic of a learning environment (Leonard-Barton, 1995). For knowledge management to be effective, organisations should be learning organisations.

### **3.7.2 Knowledge markets**

Knowledge management operates within a market system. An organisation is a knowledge market when knowledge is exchanged for reward of other valuable things such as money, respect, promotion, other knowledge, or just the feeling of satisfaction from assisting

others (Brown & Duguid, 1998; Davenport & Prusak, 1998: 27-30; Grover & Davenport, 2001). To operate within the dynamics of an effective market, a clear price system (reward) must be established and the market place should be effectively built. It may be formal, such as a knowledge maps, or informal, such as chat rooms, talk rooms, knowledge fairs, water-coolers, and corporate picnics. The players in the knowledge market place are buyers, sellers, and brokers. Buyers are knowledge seekers, seeking insights and answers to complex problems. Sellers are people within the organisation reputable for having substantial knowledge about a process or project and willing to share or articulate their knowledge. Brokers know where to locate important information and facilitate contacts between the sellers and buyers.

### **3.7.3 Process framework**

Knowledge management processes offer an understanding of the manner in which organisations create new knowledge, maintain existing knowledge and discard “old” knowledge (Alavi & Leidner, 2001; Grover & Davenport, 2001, Bhatt, 2005). These processes take place in different contexts from organisation to organisation depending on the organisation’s knowledge management focus. The processes are not a monolithic set of activity but are interconnected, recursive, expanding and discontinuous (in situations where new needs and their fulfilment mechanism cannot be created). These processes generally consist of two distinct and interconnected knowledge cycles that feed on each other enabling organisations to learn, reflect, unlearn and relearn. One is the innovative cycle, representing a progression of unstructured knowledge to more structured and reproducible knowledge embedded in processes and businesses. The other is the knowledge sharing cycle representing the process of collecting, organising, sharing, accessing and using information with knowledge repository as the focal point.

Although the literature is replete with different classifications of knowledge management processes, the differences are mainly in terms of the number of processes rather than the underlying concepts. Nonaka & Takeuchi (1995) identify four knowledge conversion processes for organisational knowledge creation as socialisation, externalisation, combination and internalisation. Grover & Davenport (2001) and Ruggles (1998) classify knowledge management processes as knowledge generation, codification and transfer. Duffy (2001) & Carine (2003) consider the key elements of the knowledge management process to be collaboration, content management and information sharing. Skyrme (2002) categorises the knowledge management process as creation, transfer, assembly,

integration and exploitation. Daghfous (2003) classify the knowledge management process as knowledge acquisition, knowledge sharing and utilisation. Bhatt (2001) classifies knowledge management into five processes of knowledge creation, validation, presentation, distribution, and application. Gold et al. (2001) classify the knowledge management process into acquisition, conversion, application and protection. Drawing from the different classification of the knowledge management process, the knowledge management process within the context of this study which are briefly examined below have five sub processes of knowledge creation, codification, transfer, utilisation and protection.

### **3.7.3.1 Knowledge creation**

The knowledge creation process is oriented towards acquiring and developing knowledge, or replacing existing knowledge within the organisational tacit and knowledge base. Knowledge is either acquired within an organisation or from external sources. The process of knowledge creation includes aspects of Nonaka & Takeuchi (1995), four modes of knowledge creation (socialisation externalisation, combination and internalisation). Other terms used to describe the knowledge creation process are: construction, seeking, generation, capture, collaboration, production, development and organisational learning (Duffy, 2001; Gold et al., 2001; Grover & Davenport, 2001; Skyrme, 2002; Carine, 2003).

### **3.7.3.2 Knowledge codification**

The knowledge codification process is based on managing an organisation's internal and external knowledge and the conversion of this knowledge in an accessible and usable form using information technology and information management skills. Activities related to this process are: integration, combination, structure, coordination, conversion, editing, review, approval or rejection, storage, organisation, maintenance, cataloguing, classification, retrieval and organisational memory (Davenport & Prusak 1998; Bhatt, 2001; Duffy, 2001; Gold et al., 2001; Grover & Davenport, 2001; Carine, 2003). As organisations create knowledge and learn, they also forget. Thus, the process of storage, organisation, and retrieval of organisational knowledge also referred to as organisational memory (see section 3.11.6 below) is an important component of the knowledge codification process.

### **3.7.3.3 Knowledge transfer**

Knowledge transfer is the movement of knowledge from the point of creation or codification to the point of use (Nonaka & Takeuchi, 1995; Holtham & Courtney, 1998; Alavi & Leidner,

2001). It refers to ways and means to distribute knowledge in a firm such that it will be easily accessible to those that need it. It also entails encouraging colleagues to share and reuse their knowledge within the firm. Common terms and activities denoting knowledge transfer are socialisation process, knowledge sharing, flows and distribution. Knowledge transfer may occur at different levels: between individuals, individuals to explicit sources, individuals to groups, between groups and from groups to organisation; and the knowledge transfer channels may be informal, formal, personal or impersonal (Nonaka & Takeuchi, 1995; Alavi & Leidner, 2001).

#### **3.7.3.4 Knowledge utilisation**

These are processes oriented towards the actual use of knowledge. It refers to the integration of acquired knowledge into the organisation's products, processes, and services in order to sustain its competitive advantage (Bhatt, 2001; Daghfous, 2003.). It depends on the users' absorptive capacity; that is, the ability not only to acquire and assimilate but also the ability to recognise the value of new knowledge and use it. Effective application of knowledge will result in competitive advantage, improve efficiency and reduce costs.

#### **3.7.3.5 Protection processes**

These are security designed knowledge management processes aimed at protecting the knowledge within an organisation from illegal or inappropriate use or theft. Knowledge protection processes preserves the rare and inimitable quality of knowledge thus ensuring competitive advantage (Gold et. al., 2001). This is a crucial process as not all forms of knowledge in the firm can be protected with property rights and laws such as trademarks, copyrights and patents. Although it is inherently difficult to protect knowledge, an effort should nevertheless be made. The steps that may be taken to do this include: knowledge incentive alignment, employee conduct, and rules or the design of a security system that restricts access to a firm's vital knowledge.

#### **3.7.4 Knowledge management strategies for knowledge transfer**

Identifying a firm's knowledge management strategy will determine its knowledge management campaign. Several researchers: Sanchez (1997), Hansen et al. (1999), Butler (2003) and Connell et al. (2003) identified codification and personalisation as two basic knowledge management strategies. These two different business strategies grounded on the nature of knowledge, address cultural issues differently. Codification focuses on explicit



knowledge and centres on information technology while personalisation tends to focus on tacit knowledge and addresses the storage of knowledge in human minds shared through person to person interface such as story telling, personal meetings and personal contacts.

The basis of the codification strategy is to extract and codify knowledge independent from the person who developed it and store this knowledge in the form of interview guides, work schedules, checklists, and bench marks so that it can be searched, retrieved and used by other employees. Personalisation strategy on the other hand ties knowledge closely to the person who develops it and often depends on the communication skill and will of the professional. Core information communication technology systems necessary for this strategy are knowledge route maps and directories pointing to people, document collection and data sets that can be consulted, for example, “Yellow Pages” (expert locators containing the curriculum vitae competency files, and research interest of individuals).

Hansen et al. (1999), maintain that personalisation strategy provides creative analytical rigorous advice on strategic problems by challenging individual expertise while codification strategy provides fast implementation by re-using articulated knowledge. They contend that all organisations working with knowledge management will have to make one of the two strategies their main strategy. Whilst organisations tend to favour one strategy over the other, the reality is that many organisations will adopt a combination of both strategies so as to obtain optimal maximisation of their knowledge resources. Jasimuddin et al. (2005) and Yu (1999) however argued that the two strategies can coexist.

In essence, both codification and personalisation strategies have positive and negative impacts regardless of which is central to the organisation. A successful symbiosis strategy is one that takes advantage of the positive features of both personalisation and codification strategies. Overemphasising one strategy to the detriment of the other may lead to a situation where an organisation loses its competitive edge. This is because the knowledge bases of organisations are both tacit and explicit and most organisational cultures favour easy knowledge replication while at the same time hinder imitation from competitors.

### **3.8 Models of knowledge management**

Besides the frameworks discussed above, three different models for knowledge management are considered pertinent to this study viz, the intellectual capital, the SECI, ba and knowledge asset model, and the modified socio technical (diamond trist) model of Leavitt (1965).

### 3.8.1 Intellectual capital model

In the knowledge society, knowledge, rather than capital or labour is being considered as the only meaningful economic resource hence the term intellectual capital (Drucker 1995). According to this thinking, the real market value of commercial enterprises consists not only of its physical and financial assets but also of its intangible assets created through intellectual activities ranging from acquiring new knowledge (learning and inventions) to creating valuable relationships. Examples of intellectual assets are patents, copyright, trade marks and trade secrets and other forms of intellectual property estimated to be many times worth book value.

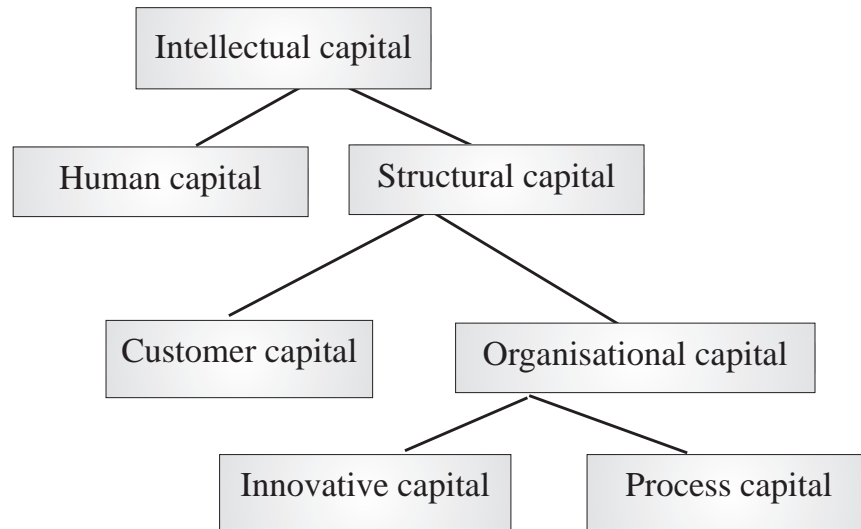
The Intellectual capital model was pioneered by Leif Edvinsson, the corporate director of intellectual capital of Scandia, the Swedish financial service corporation as the Scandia knowledge management approach (Chase, 1997; Edvinsson, 1997; Roos et al., 1997; Corall, 2004). It posits that knowledge is a body of intellectual capital alongside the traditional capital such as plant machinery and other asset. It assumes that intellectual capital and knowledge management are contained in two main categories of human capital and structural/organisational capital and can be segregated into human, customer, process and growth elements.

Human capital, also known as migratory knowledge, (Badaracco, 1991) are the firm's employees characterised by competence, attitude and intellectual agility (Roos et.al., 1997). This type of capital is loaned to the firm and withdrawn when the employee migrates to another firm.

Structural/organisational capital is the intellectual capital that remains in the firm's systems when the employee goes home at night such as the processes, culture and infrastructure. It is categorised as customer, organisational and innovative capital.

Customer capital defines the firm's relationship with its clients or customers or all of those things that bind a particular customer to a particular organisation. This type of capital is of high value in law firms where there are likely to be long standing relationships and prices are likely to be only one of the many factors.

Organisational capital on the other hand is the sum of know-how within the firm while innovative capital is that which is concerned with the firm's future success and profit. The intellectual capital model shown in figure 3.4 below is the Scandia knowledge management approach.



*Figure 3.4 The Scandia knowledge management approach (Adapted and modified from Edvinsson 1997 knowledge management approach)*

Although a number of studies in the knowledge management literature represent knowledge as essentially intellectual capital, knowledge management and intellectual capital are different but related issues that are most often used interchangeably. Like knowledge management, the practical management objective of intellectual capital is to convert human capital (individual and group learning) to structural capital (organisational knowledge or what is left when people go home, such as documented processes and knowledge base) thereby reducing the risk of losing valuable knowledge when people leave the organisation. This model however ignores the political and social aspects of knowledge management such as reward and recognition, power, relations and empowerment resulting into a simplistic mechanised approach to complex social-related issues.

### **3.8.2 SECI, knowledge asset and ba model**

The SECI, ba and knowledge asset model complement the weaknesses in the intellectual capital model by considering knowledge management essentially as a knowledge creation process thus providing a high-level of conceptual representation of knowledge management. This model was originally developed by Nonaka & Takeuchi (1995) in its simplest form as the theory of dynamic organisational knowledge creation in an attempt to set up an

organisation for knowledge creation. It was subsequently adopted and elaborated upon by Nonaka et al. (2002) as the unified model of dynamic knowledge creation. It consists of three parts: the process of knowledge creation and conversion (SECI); resource development and use (knowledge asset); and a context that allows and supports knowledge creation and conversion (ba).

This study focuses on the first part of this model known as the SECI which is similar to Nonaka & Takeuchi's (1995) theory of dynamic organisational knowledge creation. It is based on the presupposition that human knowledge is created by a continual interplay between tacit and explicit knowledge that flows through individuals, and groups within an organisation. This interaction is called knowledge conversion. This model considers four ways of creating knowledge resulting from the interaction between tacit and explicit knowledge, namely socialisation, externalisation combination and internalisation.

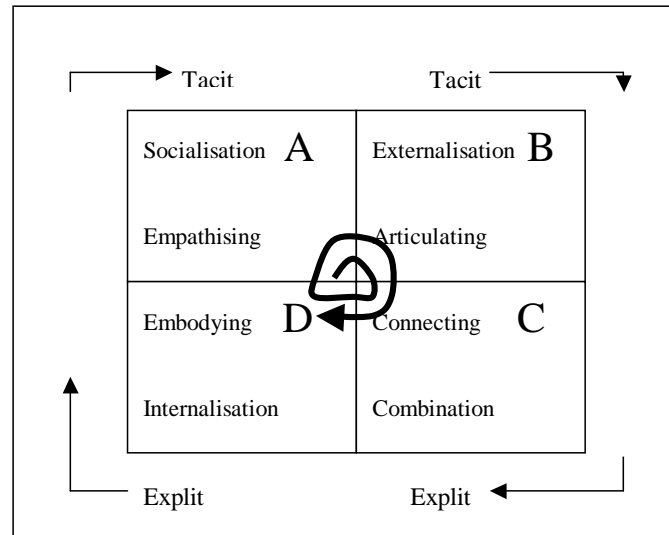
Socialisation is the conversion of tacit knowledge to tacit knowledge. This occurs when one individual shares tacit knowledge directly with another. Tacit to tacit knowledge transfer may occur in the following ways: learning from mentors and peers, observations, constructive brainstorming sessions, on-the-job training, trial and error, imitating others, practising and training, the exchange of ideas, apprenticeship, conversation and everyday comradeship (Beijerse, 1999, Smith, 2001). This knowledge rarely becomes explicit. It has been described as implicit learning or learning by doing.

Externalisation or articulation refers to the process of conversion from tacit to new explicit knowledge, or formalising the inexpressible body of knowledge in the form of metaphors, analogies, hypothesis and models. It includes knowledge that is usually written down or communicated in some permanent or semi-permanent way. Tacit to explicit knowledge transfer may take the form of stories, narratives, multimedia presentations, group reflections, memos and e-mails. This extends the organisation's knowledge base.

Combination is the conversion of explicit knowledge to explicit knowledge in order to create new explicit knowledge. It combines separate pieces of explicit knowledge in to a new whole through a standardisation and systematic procedure. This kind of knowledge creation is usually encountered in education and training. A good example is the use of various data sources to write a research paper. It may also occur when people share their explicit knowledge with one another in a meeting.

Internalisation is the conversion from explicit to new tacit knowledge. It embodies the process of reframing, or interpreting the explicit knowledge using the person's frame of reference so that knowledge can be understood, internalised and accepted by others. This

process involves translating theory into practice, learning by doing and the ability for individuals to apply what they have learnt. One example of internalisation is when new knowledge workers “relive” a project by studying the archives of the project. Another example is learning and understanding the results of something through reading. The process of knowledge creation and conversion (SECI) is shown in figure 3.5 below.



**Figure 3.5 The SECI model (Adapted and modified from Nonaka and Takeuchi, 1995)**

The figure interprets the relationship between the four modes. It reveals that these processes do not occur in isolation but are highly interdependent and intertwined. That is, each mode relies on, contributes to, and benefits from the other modes. Each box represents a form of knowledge creation. Box A represents socialisation; box B represents externalisation, box C represents combination and box D represents internalisation. At the core of this model, there is a dialectic relationship between tacit and explicit knowledge. The model assumes tacit knowledge can be transferred through a process of socialisation into tacit knowledge and tacit knowledge becomes explicit knowledge through a process of externalisation (top 2 boxes of the model in figure 3.5). The model also assumes that explicit knowledge can be transferred into tacit knowledge through a process of internalisation, and that explicit knowledge can be transferred to explicit knowledge through a process of combination (bottom 2 boxes of the model in figure 3.5). When tacit and explicit knowledge collide, a burst of powerful energy appears in pattern B or in pattern D or between pattern B and D. This process blends two different and distant areas of experience into a single inclusive symbol or image like “two ideas in one phrase.”

The second element of the unified model of dynamic knowledge creation is the knowledge asset. It encompasses resources that are used to create knowledge. Nonaka et al. (2002:55) define assets as firm-specific resources that are indispensable to create values to the firm. They are inputs, outputs and moderating factors of the knowledge creating process. Four different qualities of knowledge assets have been distinguished. These are: experimental knowledge assets (expert skills and market experience); conceptual knowledge asset (design and brand equity); routine knowledge asset (the know-how in daily routines and operations and systematic knowledge assets (databases, documents and patents) (Nonaka et al., 2002).

The last part of Nonaka et al. (2002) unified modal of dynamic knowledge creation model is the context condition and environment that facilitate new knowledge creation referred to as the knowledge “ba”(common place for creating knowledge). Ba is the social, historical and cultural mix that the knowledge worker lives in. It can be physical virtual or a combination of both. It is the source of an individuals understanding of the world and the basis for knowledge creation and interpretation of information. The context condition is time dependent and sets the boundaries for the social interaction of the people within the context understanding. Four types of “ba” correspond with the four modes of knowledge creation discussed above. These are: originating ba- the shop floor that enables people to interact with each other and with customers (associated with socialisation mode of knowledge creation); interacting or dialoguing ba-tacit knowledge of local employees used to create sales forces in dialogue with one another (associated externalisation mode of knowledge creation); cyba ba (virtual space corresponding to externalisation); and exercising ba (corresponding to internalisation). The characteristics of the various “ba” and their relationship with the different modes of knowledge creation are important in enhancing organisation knowledge creation.

The SECI, knowledge asset and “ba” interact with each other organically and dynamically. The knowledge assets of an organisation are shared in a “ba” whereas the tacit knowledge held by individuals is concerted and amplified by the spiral knowledge through socialisation, externalisation, combination and internalisation. A clear leadership will direct the process and design the context to enable organisations create knowledge dynamically and continuously. The leadership of the knowledge process and the context is characterised by a series of important tasks such as a knowledge vision and promoting knowledge sharing and a trustful and caring climate.

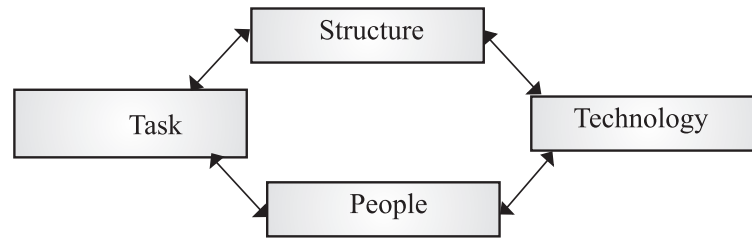


By focusing on the distinction between tacit knowledge and explicit knowledge, the SECI, knowledge asset and “ba” complement the concept of single loop and double loop learning examined in the organisational framework literature (3.7.1). It offers a conceptual model to systematise the ability to learn and increase the knowledge base. Rather than looking at knowledge as a mechanism that threatens the role of the individual, this model encourages companies to provide the individual employee with an opportunity to demonstrate his or her expertise and ensure that the individual abilities are widely recognised and appreciated.

Knowledge transfer in organisations may be much more complicated and convoluted than this simple matrix presented in the SECI, knowledge asset and “ba” model of Nonaka et al., (2002). Besides, the SECI model has been based on studies in Japan and therefore its applicability in African countries may have to be determined. Besides, knowledge management is not only about managing work processes or people that carry out work processes nor is it limited to the creation and sharing of knowledge. In order to ensure a sustainable knowledge management strategy that may result in competitive advantage, organisational variables need to be considered.

### **3.8.3 Leavitt’s diamond organisational model (Diamond Trist) as modified by Edward & Mahling, 1997; Galbraith, 1997; Pan & Scarbrough; 1999**

Leavitt model (1965) has been specifically and widely adopted and cited as a basis for understanding knowledge management in organisations. According to Leavitt (1965), organisations are viewed as complex systems in which four significant variables: task, structure, technology and humans interact to effect changes in the organisation. As the arrow heads in the diagram below indicates, these four groups of variables are highly interdependent so that the change in one usually results in compensatory or retaliatory changes in others. Tasks are the goods and services that an organisation exists to produce. Organisational structure is the distribution of power and shape in organisational form such as system of communication, authority and work flow within the organisation. People are the personnel in the organisation with competence, nature and attitudes. Information technology is considered as a separate component due to its strategic importance in supporting the process of knowledge creation, sharing, application and storage and can also enhance the interaction of individual, group, organisational and inter organisational knowledge.



*Figure 3.6 Leavitt (1965) Diamond Organisational Model (Adapted from Leavitt, 1965)*

However, task, structure, people and technology are not the only organisational variables that may influence knowledge management. This model has been elaborated, adopted and adjusted over the years by other researchers (Edward & Mahling, 1997; Galbraith, 1997; Pan & Scarbrough; 1999) to include other variables such as culture, reward systems, information and decision process. Reward systems are different ways by which organisations compensate its member such as promotion, compensation, and knowledge markets. Organisational cultures are shared beliefs norms, expectations and assumptions that bind people and systems. Information and decision processes deal with issues of planning and control.

An integrated approach of Leavitt's (1965) model and the elaborated version of Galbraith (1997) bring out the value of knowledge management in organisations. Besides the frameworks and models of knowledge management, a solid technological platform is necessary to knowledge management initiatives.

### **3.9 Enabling tools and technologies for knowledge management**

There is a lot in the literature on different tools (software) and technology (hardware) for knowledge management (Davenport & Prusak, 1998; Gottschalk, 1999; Skyrme, 1999; Zack, 1999; Alavi & Leidner, 2001; Bloodgood & Salisbury, 2001:62; Gottschalk, 2002; Tiwana, 2002; Carine, 2003; Daghfous, 2003; Opp, 2004). In general terms, companies considering knowledge management should at least have the basic hardware such as personal computer, phones, scanners and collaboration and communication technologies. Typical knowledge management systems<sup>5</sup> are collaborative technologies, data warehouse, knowledge repository, best practices, document management, knowledge portals, intelligent tools, expert profiles, visualisation software, content management

<sup>5</sup> Knowledge management systems are a group of information technology systems that are applied in managing organisational knowledge. They help leverage and capture explicit knowledge and collective experience and knowledge of employees, support information processing, limit the tacit knowledge that is lost, enhance the organisational process of knowledge creation, storage retrievals transfer and applications used for managing organisational knowledge (Nonaka & Takeuchi, 1995; Davenport & Prusak, 1998, O'Dell & Grayson, 1999; Sveiby, 1999; Alavi & Leidner, 2001; Gottschalk, 2003; Opp, 2004).

systems, online question and answer, customer help desk, discussion forums, bench marking, search and retrieval software and collaboration and project work spaces. Some of these technologies for knowledge management are examined below.

### **3.9.1 Communicative and collaborative technologies**

Communicative and collaborative technologies such as groupware, web based technologies, and content management systems are known to be at the heart of knowledge management infrastructure (Kennedy, 2001; Gottschalk, 2002; Staudt, 2003). They enable professionals in a company to collaborate virtually together without any barrier to geographical location and accelerate the capture and transfer of tacit knowledge by supporting knowledge access, facilitating team work and individual contact with one another. Groupware tools such as email, calendaring, group scheduling, time management and discussion programmes are typical tools for communication and collaboration (Gottschalk, 2002; Staudt, 2003). Lotus Notes, video and text-based conferencing, electronic bulletin boards, chat lines, and knowledge cafés are examples of groupware that provide a virtual space, within which participants can share certain kinds of experience; conduct meetings, listen to presentations, have discussions, share relevant documents, create, acquire, capture, transfer and provide a common work space for geographically dispersed group of people.

Collaborative technologies such as internet/intranet, extranet, World Wide Web and enterprise information portals are generic web technologies that create a seamless flow and transfer of information within the firm (Carine, 2003; Daghfous, 2003). Enterprise information portals have enabled and fuelled the widespread awareness and adoption of knowledge management (Skyrme, 1999). They provide a single point of access to information and knowledge held in many forms and connects individuals dispersed across different countries, time, zones and languages.

### **3.9.2 Knowledge databases and software tools**

The best known database technology of knowledge management appears to be the repository of structured explicit knowledge. Other databases and software tools are collaborative hypermedia, summarisation, content management systems, visualisation software, categorisation software, automated document and search and retrieval software (Davenport & Prusak, 1998; Daghfous, 2003; Opp, 2004).

Knowledge repositories capture knowledge for later and broader access and use by others

within the same firms and serves as a bridge between the storage and retrieval system (Davenport & Prusak, 1998; Zack, 1999; Choo, 2000; Corall, 2004). Although most knowledge repositories serve as a single function, it is increasingly important for companies to construct an internal portal for employees to access different repositories from a single screen. Knowledge repositories typically contain specific types of knowledge for particular business functions. Examples of knowledge available in the knowledge repository are client matters, financial information, best practices, knowledge for sales, lesson learned in projects, learning histories, competitive intelligence, document management, legislative developments, assignments, and market development (Davenport & Prusak, 1998; Zack, 1999; Grover & Davenport, 2001; Carine, 2003). Davenport & Prusak (1998) group the different types of knowledge in the knowledge repositories into three categories: external knowledge (competitive intelligence); structured internal knowledge (documents, project proposals, research reports, product oriented marketing materials, client matters, customer data, policy, and financial matters) and informal internal data (discussion databases sometimes referred to as “lesson learned”). Bearing this categorisation in mind, a law firm’s repository template may be described as structured internal knowledge.

Collaborative hypermedia is software and database tools that capture and codify tacit knowledge. They are good for informal knowledge types and linking ideas without specifying relationships or roles (Shum, 1997). It is useful for documenting discussions and related documents for organisational memory. Technologies such as summarisation are helpful in dealing with information overload by reducing the load of persons attempting to find the right documents to use in some tasks (Marwick, 2001).

Content management is the process of systematic and structural provision, creation, preparation, administration, presentation, processing and publication of content with the goal of getting the right information to the right person (Davenport & Prusak, 1998; Skyrme, 1999). Content management systems manage highly dynamic contents like search result page and enables contents to be published once and used many times through the use of portals.

Visualisation software shows the relationship between different elements of knowledge, used in conjunction with a categorisation engine (Tiwana, 2002). For example, visualisation could show a pattern of cluster of related documents.

Categorisation software assists in the classification of documents by using natural language analysis to identify core concepts within the document (Davenport & Prusak, 1998). Automated document assembly tools with decision-free functionality supports complex and repetitive tasks (Skyrme, 1999).

For example, it can be used by lawyers for routine divorce complaints. It also captures and converts tacit knowledge into a digital format that can be stored, indexed and shared within the enterprise. Search and retrieval software are core knowledge-based software that provide a prevalent way of finding information.

### **3.9.3 Corporate knowledge maps and directories of explicit and tacit knowledge**

Knowledge maps are repositories that do not provide actual knowledge but points to knowledge (people, documents, collections and data bases where knowledge is stored) that can be consulted (Davenport & Prusak, 1998; Grover & Davenport, 2001; Kofoed, 2002). It is the primary means of representing the entirety of the knowledge base and navigating the system showing how knowledge flows in and out of the business process. Knowledge map is not an activity in itself, but rather form the basis for the development of a strategy for managing knowledge and for tactical decisions. For example, internal expert skill directories called, “Yellow Pages” containing curriculum vitae, competency profiles, and research interest, and acts as electronic intermediaries connecting knowledge seekers to knowledgeable people or an external directory called “Blue pages.” These systems are very instrumental in facilitating the transfer of tacit knowledge, assisting colleagues to locate experts who may assist with advice or facilitate the exchange of ideas on a recorded source of knowledge.

### **3.9.4 Intelligent tools**

Intelligent tools are used to anticipate user needs, cull new knowledge from existing knowledge bases and codify and store structured explicit knowledge (Davenport & Prusak, 1998). Examples of intelligent tools are decision support tools, neural network for data mining expert systems, case-based reasoning, virtual reality, genetic algorithm and internet search engines (Davenport & Prusak, 1998; Kofoed, 2002). Expert systems are computerised systems that perform the role of experts or carry out task that require expertise (Tiwana, 2002). Neural networks are statistically oriented tools that are excellent in using data and in classifying cases into one category or another. Case-based reasoning is a business intelligent technology that assists in knowledge codification (Davenport & Prusak, 1998). It enables one to research on a collection of previous cases and chooses the one closest to the case at hand. Davenport & Prusak, 1998 noted that it has not been successful in legal reasoning most probably because legal reasoning is less standardised than customer service problems.

### 3.9.5 Learning and professional development systems

These are the tools that assist knowledge workers to learn and use knowledge. They include computer-based training programmes, web-based learning, web-based tools, multimedia applications, presentation support systems, the use of virtual reality and the virtual learning environment (Gottschalk, 2002; du Plessis, 2004). Bookmark and annotation management systems are information technology applications with knowledge management features that assist individuals in making notes and annotations electronically. Knowledge management programmes provide online training opportunities for those individuals who are always under time pressure and may only sign up for training at unusual slots by making it possible for them to choose a particular training without attending a physical session (Staudt, 2003).

The opportunities to support knowledge management with these information technologies are manifold. Generally, the type of knowledge management tool and technology that a firm will adopt will depend on its current level of knowledge management related activity. The next section discusses the role of information communication technology in knowledge management.

### 3.10 The role of information communication technology in knowledge Management

Information communication technology has generally played a key role in managing knowledge in organisations. It has been used for collecting and codifying knowledge for distribution into decision support systems and explicit systems, keeping track of training and employee development programmes, organisational policies reports, writing manuals and in enhancing expertise (Davenport & Prusak, 1998; Bloodgood & Salisbury, 2001:61; Gottschalk, 2002). In recent times, new technologies and knowledge management systems have been used pervasively to support knowledge management in several ways. Typical examples are: the creation of knowledge repositories; creation, sharing and transfer knowledge; a technical infrastructure for community of practice and knowledge network alliances; finding an expert or recorded source of knowledge; accessing information on past projects and learning about virtual teams (Zack, 1999; Alavi & Leidner, 2001; Bloodgood & Salisbury, 2001:62; Gottschalk, 2002). The subsequent paragraphs elaborate on the role of information communication technology in knowledge management.

Information communication technology provides a seamless pipeline for the flow of explicit knowledge through the different sub stages of knowledge refinery that entails capturing,



organising, searching and presenting the content with sufficient flexibility in order to render it meaningful and applicable. Knowledge management theorists identify the three related stages necessary for the codification of explicit knowledge as internal codification (data warehouse), knowledge refinery and the appropriate technology (Zack, 1999; Choo, 2000; Kesner, 2001; Stover, 2004). Information communication technology such as World Wide Web, Lotus Notes and enterprise information portal offer a potentially useful environment within which to build a multimedia repository of rich explicit knowledge while intelligent tools and databases such as case-based reasoning help to acquire structure, codify and store explicit knowledge (Tiwana, 2002).

Information communication technology also supports the different sub processes of knowledge management by facilitating the capture, codification, transfer, application and protection of knowledge (Zack, 1999; Alavi & Leidner, 2001; Daghfous, 2003). The tools and technologies that support the process of knowledge capture may be referred to as capturing tools and technologies. Examples are: word processing, spread sheets, scanners, and scanning software, email and fax server software, voice dictation, intuitive search tools, practice management systems, automated document assembly, and collaborative and communication technology.

Codification tools and technology support the codification process of knowledge management (Zack, 1999; Alavi & Leidner, 2001). The following are some examples of codification tools: knowledge databases, advanced computer storage techniques; sophisticated retrieval techniques such as query languages, multimedia databases and database management systems. A good thesaurus will connect the researcher's terms with the categoriser's terms and facilitate searches in database. Intelligent tools and technologies such as artificial intelligence, expert systems, neural networks, fuzzy logic, genetic algorithms, case-based reasoning, agents and knowledge discovery database, capture and codify the knowledge of the community. Collaborative and communication technologies and groupware enables organisations to create intra organisational memory in the form of structured and unstructured information that shares memory across time and space.

Communicative and collaborative tools and technologies support the knowledge transfer process (Zack, 1999; Choo, 2000; Stover, 2004). The following are some general examples of communicative and collaborative tools and technologies: cutting edge technologies such as bulletin boards, discussion groups, emails, Lotus Notes, discussion databases portals, internet, intranet, extranet and web based portals, creating a forum that facilitate



contact between people seeking knowledge and those that have knowledge. Taxonomies of organisational knowledge maps enable individuals to locate knowledge (Davenport & Prusak, 1998). Communicative technologies such as telephones, pagers and faxes also support the knowledge transfer process (Egbu & Botterill, 2002).

Application tools and technologies support the application process by codifying, automating and embedding knowledge in the organisational routine (Zack, 1999; Alavi & Leidner, 2001). For example, corporate intranets updates, organisational directives (repair manuals and policy) and decision support systems use knowledge to inform the knowledge systems. Also, intelligent tools and technologies such as expert systems, neural networks, intelligent agents and case-based reasoning may capture and provide access to customer services, problem resolution, legal knowledge, new product development, and well specified organisational procedures (Gottschalk, 2002).

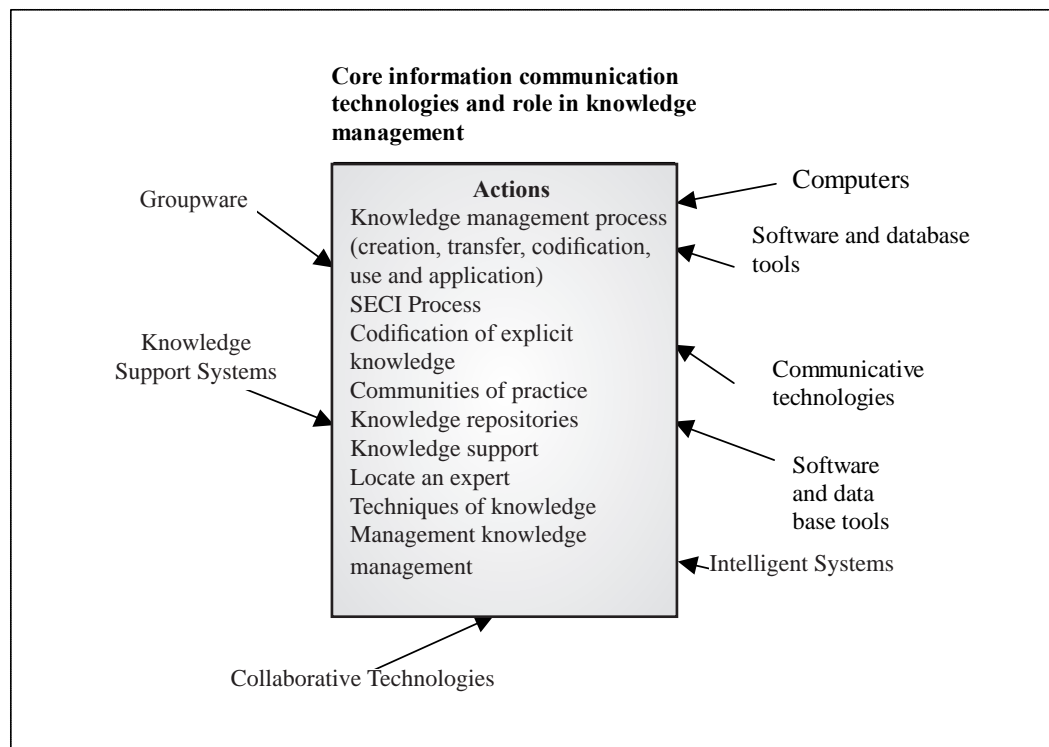
Information communication technology play a crucial role in Nonaka & Takeuchi's (1995) theory of dynamic knowledge creation (socialisation, externalisation, combination and internalisation) examined in section 3.8.2 above. The tools and technologies used in the four interdependent processes are similar to the tools and technologies used to support the knowledge management process of knowledge creation, codification, transfer and application. For example, communication tools and technologies support the socialisation process by connecting people with people (Junnarkar & Brown, 1997; Marwick, 2001). Tools and technologies that support the externalisation process are browsable videos, audio learning methodologies; case-based reasoning; decision support systems and knowledge data mining. Tools and technologies that support the combination process are computer-based technologies, data bases, classification methodologies, web based tools, summarisation, taxonomies, intranet, internet and portals. Finally, visual representation tools, data mining tools and geographical information systems are tools and technologies that support the internalisation process.

Gottschalk (2002) & Khandelwal & Gottschalk (2003:92-93) using the knowledge management technology stage model identified four different stages by which information communication technologies may support knowledge management in the law firm. At the first level, end user tools (basic hardware and software) are made available to all knowledge workers in the firm. At the second level, information on who knows what (knowledge sources such as databases and internet) are made available electronically. At the third level, some information representing knowledge (what knowledge workers know) are stored and

made electronically and at the fourth level, information systems capable of simulating human thinking such as expert databases are applied in the organisation. Considering the role of technology in knowledge management according to stages and processes may however be tricky because knowledge management is a recursive process. Nevertheless, it provides a valuable starting point to identify the current situation and plan for future application of knowledge management in an organisation.

The different stages of knowledge management highlighted by Snowden (2002) & Koenig (2005) illuminate the important role of information communication technology not only in the emergence of knowledge management but also in the knowledge management processes. Snowden (2002) identifies three generations of knowledge management. First, the pre 1995 generation that focused on the computerisation of major business applications leading to the technology-enabled revolution dominated by the concept of process re-engineering. Second, the 1995 generation triggered by the popularisation of the SECI model of Nonaka (section 3.8.2). Finally, the new understanding that emerged beyond the post-1995 period whereby knowledge is no longer managed only as a thing, nor as content but seen paradoxically as a flow focusing more on its context and narrative and requiring diverse management approaches.

On the other hand, Koenig (2005) identifies the following three different stages of knowledge management: initial information technology stage, the human relations stage and the content and retrievability stage. Koenig (2005) suggest the awareness of the importance of knowledge external to the organisation as an emerging fourth stage of knowledge management. Like the first three stages, the fourth stage of knowledge management has also been triggered by advances in information communication technology as the intranet-based knowledge management systems are fast extending to extranet-based knowledge management systems (Koenig, 2005). Figure 3.7 below represents an overview of the role of information communication technologies in the knowledge management discussed above.



**Figure 3.7 Summary of the role of technology in knowledge management**

It must be noted that although information technology can help to achieve the above and many more objectives of knowledge management, technologies remains a useful enabler rather than a central tenet. Information technology will only be effective when people in the organisation cooperate and share knowledge with each other. Therefore, the next section considers non-technological factors such as the techniques of knowledge management that need to be in place in order to implement effective knowledge management.

### 3.11 Techniques of knowledge management

Much has been written about the several techniques in knowledge management (Fahey & Prusak, 1998; Holtham & Courtney, 1998; O'Dell & Grayson, 1998; Baumard, 1999; Alavi & Leidner, 2001; Kofoed, 2002; Skyrme, 2002; Carine, 2003; Stover, 2004; Squier & Snyman, 2004; Rusanow, 2007). These techniques may be formal, informal, personal or personal. While some of these techniques use associated computer tools to facilitate implementation and diffusion throughout the organisation, others do not require the use of technology. Others also employ a mix of technology and non-technological techniques. The most widely recognised technique of knowledge management is community of practice.

### 3.11.1 Communities of practice

Communities of practice are informal group of people from all levels and functions in the organisation who share a common area of expertise and/or who search for solutions to common problems (Brown & Duguid, 1991; Stewart, 1997; Wenger, 1998; Wenger & Synder, 2000; Smith, 2001; Wenger, 2003). The idea of communities of practice originated in classical Greece as “corporations” of metalworkers and evolved in the middle ages into guilds that maintained standards to protect the interests of its members and has developed through the organisational learning movement. Communities posit that knowledge flows through a network of people who may not be in the same organisation but do have the same work interest. Communities are built on mutual agreement whereby community members share a set of resources like language, routine, artefacts and tools. To build communities of practice, time should be given to organise and attend meetings, create bulletins and sample skill directories. Besides the presentations of information and ideas, communities of practice have a physical or electronic forum that spark collaborative thinking and working. Wenger & Snyder (2000) use examples from the World Bank and a consultancy business to illustrate how communities of practice drive strategy, start new lines of business, facilitate problem solving, transfer best practices, develop professional skills and help organisations recruit and retain talents.

Other fluid and interpenetrating practices similar to communities of practice are knowledge communities, knowledge webs and communities of interest. While communities of practice are directed at immediate concerns on some specific set of work practices as seen above, knowledge communities focus on creating and sharing more generalised knowledge that may have potential future utility. Knowledge webs on the other hand are colleagues from different functional areas or offices of an organisation who assist one another on an “as needed basis” (Skyrme, 1999; Carine, 2003). A community of interest may consist of a group of people scattered over a company who do not meet formally but work together through informal communication and contact on a given project (Smith, 2001).

### 3.11.2 Conversations by water coolers

These are informal conversations at break time, at hallways and at canteens. Conversations have long been recognised as the most important form of knowledge transfer in the new economy (Webber, 1993). Through conversations knowledge workers discover what they know, share knowledge with colleagues and in the process create new knowledge for the organisation.

The increasing importance and effectiveness of conversation by water coolers has resulted into formalised forms of conversations such as “corporate picnics,” “open forums,” and “talk rooms” that encourage unpredictable creative blending and exchange of ideas amongst members of the organisation. Many companies in Japan have set up “talk rooms” where members of the organisation are encouraged to meet without a formal agenda to discuss what is in their minds (Nonaka & Takeuchi, 1995).

### **3.11.3 Knowledge networks**

While communities of practice and conversations by water coolers are informal techniques of knowledge transfer within an organisation, knowledge networks consist of formal teams, alliances, groups of colleagues, or partnerships with people from various organisations, positions and spheres of influence brought together by electronic interaction such as chat rooms to hold “best practice” sessions, work on projects, foster learning and solve problems (Powell et al., 1996; Apostolou & Mentzas, 1999:134; Alavi & Leidner, 2001; Carine, 2003). Trust, openness and reputation are necessary to create an innovative environment for effective knowledge network. As organisations become more multifaceted, and the sources of expertise become widely dispersed, organisations are challenged to go beyond developing their internal abilities to identify and utilise existing knowledge in order to become more creative, proactive and innovative. The locus of creativity and innovation is therefore found in organisational networks and alliances rather than in individual firms. However, it must be borne in mind that contribution to a knowledge network may benefit the network without necessarily benefiting the individual contributor.

Knowledge networking can take the form of training with external experts and peers, secondment programmes with other organisations, clients briefing, external conferences or meeting of a professional societies (the Law Society in the case of law firms). Cross-functional teams with people from different disciplines and organisations units are a good way of sharing informal knowledge across normal disciplines and organisational boundaries. Tutoring and mentoring is another technique of knowledge transfer.

### **3.11.4 Tutoring and mentoring**

The term mentor originally alludes to a trusted guide and the mentor-protégé relationship was a long-term intimate relationship with the ultimate aim of making the protégé a more competent, mature and self-sufficient person (Merriam, 1983). The use of the term has evolved over time to refer much more generally to a counsellor, support person, master,





groomer, leader, coach, role model, confidant, nurturer and supervisor. Tutoring may be either formal or informal. Examples of formal tutoring and mentoring are training sessions, teaching, plant tours, quality circles, coaching, and job rotation (Egbu & Botterill, 2002; Skyrme, 2002). Question and answer sessions provide an opportunity for informal tutoring and mentoring (Stover, 2004).

Mentoring and tutoring systems assist new employees by allowing senior employees share their expertise, knowledge, wisdom, specific insights, practice and skill with junior colleagues within a short space of time; provide opportunities for continuous education and preserve individual skills and knowledge from being outdated and counterproductive (Sveiby, 1995). By delegating tasks to junior employees through tutoring and mentoring, senior employees are also able to perform challenging tasks within the firm thus resulting in better decision-making. Tim (1997) observed that in one company, each employee has a learning agenda in which they are given targets for the coming year in terms of personal development. Mentoring and tutoring also preserve the firm's organisational memory in case an individual leaves the firm or dies.

### **3.11.5 Developing the organisational memory**

Organisational or collective memory also referred to as the firm's intellectual capital is the knowledge and knowing capability of an organisation. It preserve behaviour, norms, values and mental maps over time that could easily be lost as employees come and go and leadership changes. The literature draws a distinction between individual and organisational memory. Individual memory is developed based on a person's observation, experiences and action while organisational memory on the other hand is organisational knowledge stored and distributed across different retention facilities (individuals, structures, transformation, ecology, values, culture, history of past events and their interpretation and external archives) that can be retrieved, remembered and brought to bear on present decisions (Argyris & Schon 1978; Fiol & Lyles, 1985; Walsh & Ungson, 1991).

In the emerging knowledge-based economy, it is increasingly important for organisations to increase their ability to retrieve their previous experiences as the need arises. Organisations that encourage learning will pay attention to building and developing the collective organisational memory so that knowledge and competences representing the past and present collective learning of employees are transferred across generations of learning. Knowledge management captures the organisation's individual knowledge or team capabilities and transforms it into organisational knowledge, documented processes

and knowledge base thus reducing the risk of knowledge deterioration that may arise when people leave the organisation.

### 3.11.6 Other core techniques of knowledge management

The following other core techniques of knowledge management were identified in the literature (Tim, 1997; Skyrme, 1999; Hutt et al., 2000; Soliman & Spooner, 2000; Bollinger & Smith, 2001; Alavi & Leidner, 2002; Rusanow, 2004).

- ▶ The organisation's newsletter with upcoming community events, recent successes and failures, and newly published best practices and lessons learned;
- ▶ Semi structured interviews and skilful dialogues which provide effective ways of gathering and making explicit core knowledge;
- ▶ Codification of good practice in the form of methodology relevant to process design the design of work activities, guidelines or workbooks;
- ▶ Software development, prototyping and packaging that may be used to embed knowledge in routine activities;
- ▶ The design of an organisation in a way that the lay-out provides space for staff to meet, share knowledge and create new ideas;
- ▶ Share fairs which are events that combine knowledge providers like research and development (R&D) teams with knowledge users or exploiters (business unit or venture capitalist );
- ▶ Effective marketing in the form of articles, conference presentations, brochure and promotion or e-marketing over the internet;
- ▶ After Action Review (AAR) which are systematic processes carried out at the end of an assignment or task to distil the lessons learned. It seeks to answer questions such as: What should have happened? What actually did happen? What lessons can be learned from what went wrong and what went right?
- ▶ Lessons learned from these big projects may be systematically analysed and stored for access by other
- ▶ Story telling is an informal technique of knowledge transfer that makes it more memorable;
- ▶ Knowledge centres like library and information centre typically staffed by information professionals act as a conduit between requesters and suppliers of knowledge;
- ▶ Information sharing policies used to establish knowledge that can be shared and

knowledge that need not be shared;

- ▶ Research and development programmes which provide formalised mechanism for research and knowledge generation; and
- ▶ Transition, time and effort provided at the end of big projects which provide room for effective debriefing, enabling members to learn systematically from the experiences of a project and how the project could be improved in future.

The use of information communication technology for knowledge management and a proper application of the above techniques to facilitate knowledge management may leverage knowledge management in unprecedented ways. The next section identifies some of the benefits that may result from leveraging knowledge management in organisations.

### **3.12 Benefits of knowledge management**

Perceptions of the benefits of knowledge management vary from individual to individual and organisation to organisation. The following recurrent potential benefits of knowledge management have identified in the literature all pointing towards value creation and effective knowledge leveraging and innovation:

- ▶ Improved ability to sustain competitive advantage of an organisation (Wiig, 1993) ;
- ▶ Immediate results in solving organisation-wide problems (Skyrme & Amidon, 1997);
- ▶ Improved organisational productivity in delivering services to client (Nonaka & Konno, 1998; Baumard, 1999);
- ▶ Development and constant improvement of competitive long-range service and technology strategies (Beijerse, 1999);
- ▶ Improvements in the quality of an organisation's work force, through capacity building (Liebowitz, 1999);
- ▶ Stimulation and motivation of employees (Choo, 2000);
- ▶ Established formalised knowledge transfer system (best practices, lessons learned), (Daghfous, 2003; Stover, 2004);
- ▶ Improved capture and use of knowledge from sources outside the firm (Stover, 2004);
- ▶ Improved integration of knowledge within the firm (Beijerse, 1999; Liebowitz, 1999);
- ▶ Better on-the-job training of employees (Skyrme & Amidon, 1997; Nonaka & Konno, 1998);

- ▶ Enhanced client relations—better client interaction (Wiig, 1993);
- ▶ Development of a culture for organisational growth and success (Choo, 2000);
- ▶ Improved employee retention (Baumard, 1999; Beijerse, 1999);
- ▶ Enhanced business development and the creation of opportunities for organisations (Liebowitz, 1999);
- ▶ Improved efficiency (Choo, 2000; Daghfous, 2003; Stover, 2004);
- ▶ Better decision making (Daghfous, 2003; Stover, 2004);
- ▶ Improved market position by operating more intelligently on the market (Liebowitz, 1999);
- ▶ Enhanced profitability of the company (Stover, 2004);
- ▶ Optimal interaction between product development and marketing improve group competencies (Skyrme & Amidon, 1997);
- ▶ Enhanced performance and productivity by solving emerging organisational problems (Nonaka & Konno, 1998; Baumard, 1999);
- ▶ Fostering innovation and services (Choo, 2000; Daghfous, 2003);
- ▶ Enabling identification of knowledge gaps (Liebowitz, 1999; Choo, 2000);
- ▶ Identification of knowledge flow (Daghfous, 2003; Stover, 2004) and
- ▶ Identification of knowledge assets (Nonaka & Konno, 1998).

These benefits of knowledge management although compelling are usually intangible and difficult to quantify. Schick (2001) found that while 91% of companies surveyed agreed that knowledge management practices have helped improve organisational efficiency only five % were able to calculate a return on investment from the knowledge management initiatives. The outcome of a knowledge management initiative may be measured by determining how the above benefits of knowledge management meets the knowledge management objectives and the business needs. The next section therefore identifies and discusses the objectives (drivers) and value proposition of knowledge management that would assist the firm to measure the outcome of its initiatives.

### **3.13 Drivers of knowledge management**

Organisations invariably have different reasons for wanting to achieve best practices and leverage information and knowledge. Knowledge management theorists (Wiig, 1993; Skyrme, 1999; Ndlela & duToit; 2001; Butler, 2003; Mason & Pauleen, 2003) have identified several commonly recurrent drivers of knowledge management in the company. The main ones are: the realisation of the changing role of knowledge, sophisticated

customers, competitors and suppliers, cost avoidance, leveraging of knowledge, value measurement of intangible assets, globalisation of business, international competition, increase in information technology, rapid growth, loss of corporate memory, geographic dispersion, strategic mindset, culture of accountability responsibility, staff turnover, staff retention, loss of intellectual asset and need for knowledge sharing. It is worth noting that the significant driving factors are mostly external. These factors are grouped and discussed under the following three categories: the value proposition of the enterprise base resource, the desire to ensure sustainable competitive advantage and the need to improve knowledge assets.

### **3.13.1 Determining the value of knowledge management**

Though organisations have different reasons for achieving best practices and leveraging its knowledge for competitive gain, the main drive behind most organisations moving forward with knowledge initiatives is the value proposition. This is because it provides the focus and business rationale for the knowledge strategy. The value proposition is determined by the following four factors: value, rareness, imitability and the organisation (Barney, 1995; Bollinger & Smith; 2001; Ndlela & du Toit; 2001; Butler, 2003) which Barney (1995:50) term as the “VRIO framework.”

The value factor of enterprises’ knowledge resources fall in to three basic categories: operational excellence, product market and customer intimacy (Bollinger & Smith; 2001; Ndlela & du Toit; 2001; Butler, 2003). Operational excellence involves the identification of best practices within an organisation and transferring and sharing critical knowledge from the best performing areas to those who need improvement. The consequences of effective knowledge transfer are the improvement of organisational performance, reduced expenses and increased revenue. Product to market value proposition is the reduction of the time it takes to develop a product and take to the market that may result in enterprises charging premium cost. It is expected that knowledge management should increase revenue and decrease cost. Ndlela & du Toit; (2001) noted that value proposition may be achieved by providing an appropriate mechanism that ensures that new and creative ideas from within the organisation and from the external market are incorporated in the various products, ensuring that lessons learned from previous products and successes and failures are captured and shared through the development of an appropriate process. Butler (2003) observed that customer intimacy is the capturing and sharing of information about an organisations customer. It involves understanding the customers’ needs and preferences

and leveraging knowledge to develop new products and services for customers.

It has been noted that the valuable but common characteristic of knowledge management would provide only competitive parity rather than competitive advantage (Ndlela & du Toit, 2001). Generally, in order for a knowledge management programme to attain competitive advantage and become a strategic asset, the rare characteristic of the enterprise needs to be developed (Bollinger & Smith; 2001; Ndlela & du Toit, 2001; Butler, 2003). The rare characteristic of the company often depends on the knowledge and experiences of current and past employees, and is built on specific organisational prior knowledge developed gradually through human exchange and dedicated investment in continuous learning.

The valuable and rare characteristic of knowledge management by themselves may only enhance the enterprises' profit for a short time because other enterprises may imitate these characteristics over time (Ndlela & du Toit; 2001; Butler, 2003). Therefore, it is important to develop and nurture a unique characteristic of knowledge management resource that cannot be imitated by other competitors. Daghfous (2003) refers to this unique and imitable characteristic as the company's core capability. This implies focusing on the unique past history of the organisation's own experiences and accumulated expertise and focusing on a good and unique knowledge infrastructure which would support its business goals.

It is only when an organisation is a learning organisation which exploits its knowledge resource that the valuable, rare and imitable characteristic of its knowledge asset would result in competitive advantage.

### **3.13.2 Competition**

The imperatives of globalisation, international competition, advancement in information technology, peer pressure, sophisticated customers, competitors, suppliers and rapid growth amongst other factors have resulted in unending struggle for companies to differentiate themselves from relentless competitors (Bollinger & Smith; 2001; Butler, 2003). Therefore, in order for firms to remain competitive, they need to be aware of their competitors and compete deeply to leverage and create new knowledge that will favourably position them in their chosen markets. Knowledge management plays a major role in ensuring that knowledge is leveraged for competitive advantage.

### **3.13.3 Strategic knowledge asset**

Researchers such as Prusak (1996), Skyrme (1997), & Ndlela & du Toit (2001), have



emphasised the importance of knowledge as an asset. In order to derive the best value from knowledge and become knowledge-based, organisations need to know what their knowledge assets are and how to manage and make use of these assets. According to Prusak (1996:6) the only thing that gives an organisation a sustainable competitive edge is what it knows, how it uses what it knows and how fast it can learn something new.

Geographical dispersion of workers in search of greener pastures and staff turnover due to employees taking up early retirement, or from the granting of severance packages resulting from challenges to ensure equity in terms of gender or race are the major causes of loss of intellectual assets and institutional memory (Ndlela & du Toit, 2001; Mason & Pauleen, 2003).

Knowledge management is credited with combating the effects of staff turnover; and helps to retain critical knowledge through dedicated capture of knowledge from employees leaving the enterprise and facilitates knowledge transfer between staff. The rationale is that when people are happy and are staying in an organisation, then the company is doing its best in maintaining the knowledge base.

### **3.14 Barriers to knowledge management**

Notwithstanding the benefits and drivers of knowledge management, and the fact that many organisations are gradually embracing knowledge management, there are lots of potential barriers to the successful implementation of knowledge management. In order to establish a conducive environment for knowledge management, it is necessary to identify and tackle the various barriers to knowledge management. Bonfield (1999) identified cultural, technological, and economic and market place barriers to knowledge management. Ndlela & du Toit (2001) considered people-related issues as major barriers to successful implementation of knowledge management. Bollinger & Smith (2001) considered people-related barriers from an individual, group and organisational perspective. Depres & Chauvel, 2000:171-194) identified structural, cultural, managerial, people and cost factors. Syed-Ikhsan & Rowland (2004) identified culture, technology, people, human resources, staff turnover and political directives as barriers to knowledge management. Mason & Pauleen (2003) considered culture, lack of awareness, and poor leadership as barriers to knowledge management; while Squire & Snyman (2004) see technology, structure, culture and costly mistakes as barriers to knowledge management. In this study, these different barriers are grouped into cultural, social, organisational and technological barriers and examined in the subsequent paragraphs.

### 3.14.1 Cultural barriers

Several knowledge management theorists have identified cultural barriers as the prevalent challenge to successful implementation of knowledge management in most organisations. A 1998 survey of 431 US and European organisations, identified culture as the biggest barrier to knowledge transfer (Ruggles, 1998). Later studies have also presented culture as a barrier to knowledge management (Soliman & Spooner; 2000; Bollinger & Smith, 2001; Blair, 2002; Butler, 2003; Squire & Snyman, 2004; Syed-Ikhsan & Rowland, 2004). Most organisations do not have the culture that naturally supports the sharing of knowledge. They are trained to use knowledge for their own good and to share it grudgingly. The “knowledge is power” culture enables one to better understand these cultural barriers. This type of culture describes situations where professionals with the highest reputation and monopolies of knowledge perceive knowledge as a source of power. That is, people who have knowledge are more powerful than people who do not have and there is a sense of worth and status to be gained because of expertise. People who are knowledgeable in an organisation believe that their career prospects depend on the ability to keep their unique information and knowledge because it will enable them to reap value from knowing what others do not know (Quinn et al., 1996; Reimus, 1997:10; Andrews, 2001:25). Therefore, sharing of knowledge may result in loss of power, revelation, and uncertainty. As a result, many organisations encourage a knowledge hoarding culture by recognising and rewarding those who have knowledge rather than those who share it. It therefore becomes very difficult when such information hoarders leave the organisation because they go away with the knowledge, leaving the organisation with knowledge gaps.

In addition, at the team level, members may be reluctant and uncertain to share knowledge because they fear criticism from their peers, or recrimination from management (Bollinger & Smith, 2001; Ndlela & du Toit, 2001; Disterer, 2003). Lack of respect and trust will result in subversion of group efforts. Young and inexperienced colleagues may face the challenge of publicly justifying their true belief to others peers. Sharing of knowledge is often regarded as an additional work particularly in organisations where performance is measured by billable hours and reward systems are based on what a person knows.

### 3.14.2 Social barriers

Knowledge management is a deeply social process therefore the failure to address people-related issues has resulted in many social barriers to effective knowledge management

in organisations. The major social barriers identified in the literature are insufficient communication, lack of employee learning and interaction, performance management, lack of appropriate incentive schemes, ambiguous reward systems, lack of leadership commitment and resource constraints (Ndlela & du Toit, 2001; Mason & Pauleen, 2003).

Other social barriers identified are language, conflict avoidance and the lack of alignment between the personal intention of the individual and the paradigms of the organisation. People may lack a common language to communicate and externalise tacit knowledge hidden in individual paradigms and beliefs (Nonaka 1994:21; Disterer, 2003). In addition, spoken and written language such as English, may involve high-order "literacy" in more technical languages such as blueprints or statistics. Also, conservative habits such as conflict avoidance may prevent the sharing of knowledge. For example, if the leading members of the firm are not willing to take risks and have the "don't rock the boat attitude", new ideas may be covered very easily and different views and perspectives would be hidden. This is why one of the eleven deadliest sins of knowledge management is not to establish, challenge and align a shared context for the members of the organisation (Fahey & Prusak, 1998:268). This shared context requires engagement in open, honest, supportive and critical dialogue to develop different views. The lack of alignment between the personal intention of the individual and the paradigms of the organisation will make it difficult to articulate and justify personal beliefs that do not fit into the operating paradigms of the organisation. For example, in most organisations the ruling paradigms vision, mission, and strategic issues are made known only to a few employees who have over time gained the confidence of management.

### **3.14.3 Organisational barriers**

The structure of the organisation may be organised in a way that inhibit the flow of information. The bureaucratic and hierarchical structures prevalent in most organisations with formal and administrative procedures prevent cross-functional communication, cooperation and sharing of knowledge and new ideas (Kofoed, 2002; Disterer, 2003).

Knowledge management can be very time-consuming and labour intensive. People are already busy in their day to day activities, and sharing knowledge may mean changing the way they work or adding extra steps to reflect on knowledge management initiatives. Knowledge is constantly changing both at the individual and organisational levels and this has resulted to difficulty in codifying tacit knowledge.

Cost issues may have negative effects on knowledge management (Diakoulakis et al., 2004). In order for a knowledge management strategy to be effectively and gainfully implemented, organisations have to grapple with many cost-related issues such as the cost of investment in information communication technologies, the cost of acquisition of knowledge from external sources, the cost of creating, sharing and using of knowledge, the cost of hiring employees, the cost of redesigning the organisation, and the cost of educating employees amongst other factors.

The size of a firm may have something to do with the willingness of the firm to devote personnel and money to new technologies (section 4.7.6; Curve Consultant Survey Report, 2003). Small firms where people communicate with others easily and pass along information in the hallway may not consider knowledge management a priority. Notwithstanding their inaccessibility to technology, small firms still have the potential to benefit from the flexibilities of knowledge management because as already noted technologies are only enablers to knowledge management.

The political status of knowledge management is yet another barrier. Knowledge is often associated with power, money and success and there is no secret that power related issues are often political issues involving money and the drive for success. It is therefore not surprising that political undertakings such as knowledge hoarding rather than sharing, ambiguous reward systems, lobbying, intrigue and back-room deals are associated with knowledge management (Davenport, 2000; Daghfous, 2003; Diakoulakis et al., 2004).

Insufficient communication may result in the lack of awareness and understanding of the knowledge management vision in an organisation (Mason & Pauleen, 2003). Organisational blindness is yet another barrier to the effective implementation of knowledge management. This arises over time, as knowledge embedded in procedures become stagnant due to the fact that people are making no effort to improve on current practices because of the believe that these practices are the best (Daghfous, 2003).

#### **3.14.4 Technological barriers**

Although information communication technology is the cornerstone for the implementation of knowledge management as noted in sections 3.9 and 3.10 above, there are several limitations that may result from the use of information communication technology. First, information communication technology may lead to a flood of information thus diminishing the ability of the employee to make sense of the organisation's knowledge

management. Without an active oversight, technology may just add to the information glut in the organisation (Soliman & Spooner, 2000). Second, by their very nature they may be complex and difficult to use. There are no “one-size-fits-all” technology solutions for knowledge management although some software products are represented in this manner (Daghfous, 2003; Eman, 2003). Third, the unavailability of information communication technology in an organisation is itself an impediment to knowledge sharing since they are major enabler to knowledge management. It is worth noting that the diffusion and effective utilisation of information communication technology has not spread evenly over the world. They are mostly utilised in Western industrialised nations and less in developing nations. It is not uncommon to find small businesses in developing countries with little or no information communication technology tools or with tools that have not been infused into business practices (Okunoye, 2001; Eman, 2003). Finally, resistance is often met in the use of information communication technology particularly amongst the older employees who are often overwhelmed with the ubiquitous presence of information communication technology, and rely on the information communication technology skills of the younger employees.

### **3.15 Enablers to knowledge management**

From the above barriers, it is clear that in order for organisations to reap the benefits of knowledge management there needs to be a significant improvement in the way knowledge is managed. The following section identifies and discusses some of the factors that need to be improved to enable for knowledge management to flourish.

#### **3.15.1 Encouraging a culture of knowledge sharing**

There has been general agreement amongst scholars that a psychologically healthy, open, positive, non-secretive, knowledge-sharing, cooperate, organisational culture where ideas are sharply criticised, individuals are respected and staff are encouraged to discuss their mistakes is crucial for knowledge management to flourish (Nonaka & Takeuchi, 1995; Baumard, 1999; Hansen et al., 1999; Dixon, 2000; Maiden, 2000; Soliman & Spooner, 2000; Smith, 2001; Nonaka et al., 2002; Daghfous, 2003; Stover, 2004). Aadne et al., (1996) define a cooperative culture as a horizontal and vertical connection within the firm that shares compatible goals, strive for mutual benefits and acknowledges high level mutual interdependence. A cooperative organisational culture should therefore ensure a cultural shift from the knowledge mantra that reads “knowledge is power, hoard it” to

“knowledge is power, share it to multiply and gain competitive advantage.” What follows examines some the ways by which a knowledge sharing culture may be encouraged in an organisation.

An attitude of trust and concern amongst members of the firm is a precondition for knowledge sharing. Trust is the expectation, assumption or belief that a person’s future action will be beneficial, favourable or at least not detrimental to one’s interest (Robinson, 1996). Trust reduces the fear that others would act opportunistically. Krogh (1998:136) relates trust to care and defines it as, leniency in judgment, courage to voice opinions, the feeling of concern and interest for different view points and experiences within the organisation. Organisations should strive for a culture of accepting mistakes, a climate of experimenting, taking risks, and constructive conflicts that gives members a chance of “falling forward.”

Cooperation and sharing would occur when people are recognised for adding to databases or for sharing their special form of knowledge. The provision of personal recognition to an expert or recognition of ownership from peers and superiors when one contributes to a knowledge database or actively participates in knowledge sharing has been successful in enhancing knowledge sharing in many organisations. In the academic world for example, the recognition of ownership has been a major driver for knowledge sharing through publishing. Most academics earn little or no monetary benefits for the contribution of articles in a journal, but good articles or a series of articles published by an individual will earn him/her academic recognition from peers and usually leads to promotion in the academic profession.

A number of instances have been recorded in the literature where recognition of ownership has been used as a means of encouraging knowledge sharing. Brown and Duguid (2000) reported that technicians who contributed to the Xerox database for repairing photocopying machines earned recognition among their peers and built up social capital in the organisation through the quality of their services. Also, Davenport et al. (1998) reported that the knowledge managers at Buckmans Labs judged and rewarded 150 “knowledge sharers” with a lap top and an incentive trip to a resort. According to Hansel et al. (1999), knowledge sharing may be encouraged by massaging the egos of the contributor or by recognising their contribution and paying them for contributing.

Rewards and incentives may also be used as an extrinsic motivation to encourage knowledge sharing. An exploratory study by Bock & Kim (2002) on what actually motivates people





to share knowledge suggests that a positive organisational attitude towards sharing and expectations of benefits from the organisation provide better results than external reward. Similarly, drawing from the expectancy theory, Davenport et al. (1998) reported that the strengths and the willingness to contribute to the knowledge management system depends on the strengths and the expectations that contributing to the system will be followed by a given outcome and the attractiveness of that outcome to the contributor. Reward systems are based on equitable recognition, trust and commitment. For example, an awareness that working with knowledge management will be considered when performance evaluation comes up or in any future career decisions is important. At Ernst & Young, knowledge sharing is part of the employees' performance review and has a major impact on salary (Quinn et al., 1996). Many organisations now incorporate issues of knowledge sharing in their compensation plans and promotional policies. Most of the big consultancy and accounting firms commonly base their personal evaluation on how many contributions are made to data bases, how many new employees have been tutored, and how many training courses have been designed. Using extraordinary recruitment methods to attract, hire and retain the "best" people and providing a pleasant supportive working environment are intrinsic motivational incentives that appeals to a person's sense of belonging and friendship.

Interacting with others rather than isolating oneself is important for knowledge sharing to take place. This could be attained by locating people who normally work together closer to each other; or encouraging people to share their precious knowledge assets with each other in a complementary manner through collaborative relationships, informal conversations and formal information transfer (Nonaka et al., 2001). Interaction may also occur through training, interactive learning, working experiences and dialogue and can also take the form of formal interviews between outside observers and employees on their personal and organisational knowledge base (Baumard, 1999).

A good organisational design will foster collaboration and knowledge sharing within the firm. Organisations may be designed with important lay out of spaces for staff to meet informally to encourage the exchanges of new ideas.

Clearly, the more language employees speak, the better their ability to acquire the knowledge of customers, markets especially in the global market. Therefore, staff with appropriate linguistic backgrounds will support knowledge management activities (Soliman & Spooner; 2000). Also, the availability of a common language to communicate and externalise tacit

knowledge hidden in individual paradigms and beliefs will facilitate knowledge sharing (Nonaka, 1994:21; Haldin-Herrgard, 2000:361).

The transition time and efforts usually provided at the end of bigger projects provides room for effective debriefing and enable others to learn systematically from the experiences of the project. Tim (1997) reported that a consultant company, Mckinsey & Company recognised the need for practical measures such as post-study debriefs during which groups seek to find out what they have learned from a project and how the project could be improved in future. Lessons learned from these bigger projects may be systematically analysed and stored for access by other employees.

Information sharing policies may establish the off-limits of what knowledge can be shared in organisations. Successful alliances for example do manage the flow of knowledge by monitoring information that alliance partners request and receive clearly establishing skills and technologies that are off-limit. Encouraging employees to engage in reflexive practices that is, making employees think and analyse their actions in a critical manner that would improve professional practice will also facilitate knowledge management (Baumard, 1999).

However, effecting a cultural change is often a difficult, time consuming and frustrating process in an organisation, especially when the purposes of the cultural change is not understood or accepted by employees. Therefore, in order to ensure success, cultural changes ought to be carefully nurtured and implemented. However, cultural issues are not the only issues to be attended to in order to facilitate the effective implementation of knowledge management. The leadership of the organisation plays an important role in facilitating the knowledge management initiative.

### **3.15.2 Leadership commitment**

Most knowledge management researchers recognise the important role of top management and leadership commitment to knowledge management. It has been observed that top management and leadership act as peers in providing leading examples of knowledge sharing, identifying specific barriers to knowledge management and sending messages throughout the firm that knowledge management is crucial (Davenport et al., 1998; McDermott & O'Dell, 2001:78). The leadership also funds and supports knowledge management activities, recognise and appreciate members' efforts and achievement in the area of knowledge management, and positively communicate the need to nurture, enhance,

and care for knowledge initiatives (Nonaka & Konno, 1998). If top management sensitise the firm that knowledge management is critical to the future growth of the firm or department, members would start to pay attention to knowledge management. If top management addresses the cultural barriers to knowledge management, members will begin to adopt knowledge management in their daily work practices (McDermott & O'Dell, 2001:78). Before moving into full scale implementation of knowledge management the leadership is responsible for adopting an approach that aligns the firm's business objectives, strategic views, mission, values, goals, and objectives to the knowledge management approach. However, an appropriate knowledge management culture and top leadership commitment by themselves will not result in effective knowledge management without an appropriate information technology infrastructure.

### **3.15.3 Appropriate information technology infrastructure**

Although information communication technology are a cornerstone for knowledge management as observed in sections 3.9 and 3.10 above, it may by its very nature pose some barriers to effective implementation of knowledge management as noted in 3.14.4. Therefore, a thoughtful implementation of information communication technology for knowledge management process in organisations is a way to invigorate a knowledge management initiative. Functional, technical, cultural fit and costs are major variables to consider in the selection of the appropriate technology for each organisation (Smith, 2001). Members in the organisation can no longer afford to be illiterates in information communication technology and hence knowledge management. Short courses in information communication technology should be carried out and every member sensitised on the importance of information communication technology. However, with an appropriate knowledge management culture in place, a solid leadership commitment and the appropriate technology, a knowledge management initiative may not be effective if the organisational structures are not redesigned flexibly in ways that may encourage sharing and collaboration across the organisation.

### **3.15.4 Organisational structure**

An organisational structure that supports knowledge management is critical for knowledge management to flourish. The widely accepted structures in Western organisation are the top-down, bottom-up, and the hypertext organisation also known as the middle-up-down management (Nonaka & Takeuchi, 1995). Top-down management is the traditional

hierarchical model whereby top management pass orders and plans down the pyramid to middle management. The bottom-up management has a flat structure whereby ideas are created and to a large extent controlled from the bottom of the organisation. In the hypertext organisation, knowledge is created by middle managers who are often leaders of teams or task forces. Hypertext organisations are suitable for knowledge management because they enable the different stages of knowledge creation to occur smoothly within the organisation.

### **3.16 Strategic planning for knowledge management**

Implementing knowledge management programmes within the organisation can be very costly especially during the start-up phase. It is therefore important to ensure that organisations have in place a set of carefully developed and discussed strategies before significant investments are made in knowledge management. The following section presents a set of strategies suitable for the implementation of knowledge management in organisations.

#### **3.16.1 Clear and articulated business objectives**

In order to enable a firm measure and evaluate the success of the knowledge management initiative, a full scale analysis of the firm's business objective is essential. A business objective is like a vision of where an organisation is, where it wants to go, and the resources that are needed to reach there. An internal and external audit analysis of the firm's business environment will define its business objective, competence, strength, opportunities and weaknesses. Internal analysis involves assessing the function of the business and how the business resources such as human resources, information resources, and technology support these functions, while external analysis determines and understands the conditions, forces and changes in the firm's business environment (Synman & Kruger, 2002). After identifying the firm's business objectives, the next step will be to determine the knowledge management strategy.

#### **3.16.2 The knowledge management strategy must be aligned with the goal of the firm.**

There is a direct relationship between an organisation's approach to knowledge management and its ability to achieve its business objectives (Hansen et al 1999; Carlsson, 2001; Ndlela & du Toit; 2001; Synman & Kruger, 2002; Rusanow, 2003; Rusanow, 2004). Knowledge

management initiatives may take several strands. It may involve making formal explicit knowledge more visible and usable; making informal tacit knowledge explicit public and useful; managing the knowledge management process; leveraging implicit knowledge; retaining knowledge of employees as they exit the organisation; the efficient access to knowledge repositories; or the determining suitable technologies and techniques in knowledge management. These strategies vary from organisation to organisation and it is most often influenced by the diverse changing business environment. Wiig (1997) identified five strategies used by organisations to implement knowledge management systems: business strategy, intellectual asset management, personal knowledge asset, knowledge creation strategy and the knowledge transfer strategy. A knowledge-based SWOT (strength, weaknesses, opportunities, and threat) analysis will assist a firm to determine the knowledge initiative that would enable them achieve their business objective.

### **3.16.3 Knowledge management should be prioritised and implemented in phases**

Successful knowledge management initiatives have generally been approached with a selection of priority areas ranging from a discrete high impact pilot programme to mid term phase and then the final phase (Platt, 1998; Maiden, 2000; Kofoed, 2002; Nathanson & Levison, 2002; Rusanow, 2003). The pilot phase is an important, relatively small, cheap and manageable test phase that lays the foundation of knowledge management. Considering that members in an organisation are bound to be apprehensive about the introduction of knowledge management initiatives, showing that the project can be successful within a small area of the organisation through a pilot may be a major incentive to the rest of the organisation. Also, in firms where knowledge management efforts have been tried with unsuccessful results, there is often reluctance to attempt any further knowledge management initiative and the tendency to dismiss and criticise the whole notion of knowledge management rather than analysing where the prior project failed. Pilot projects will assist in the development of more effective new projects. It would enable knowledge managers to educate themselves, learn from their mistakes and raise awareness about the concept and benefits of knowledge management to the rest of the organisation. Buckler (2004), refers to the pilot phase as a period of faith. It is only after a successful pilot project that a successful mid term phase can be implemented. The mid term phase focuses on addressing the fundamental challenges to knowledge management. It is at the final stage that a firm ensures that the knowledge management initiatives are aligned with the business objectives of the firm.

### **3.16.4 Types of knowledge management strategies for knowledge transfer**

Identifying a firm's knowledge management strategy will determine its knowledge management campaign. As noted in section 3.7.4 above, codification and personalisation strategies are the two different types of knowledge management strategies for knowledge transfer in organisations (Sanchez, 1997; Hansen et al., 1999; Butler, 2003; Connell et al., 2003). While firms tend to adopt one strategy in favour of the other, the reality is that a combination of both strategies will result in an optimal maximisation of a firm's knowledge resource (Yu, 1999; Johannessen et al., 2001; Jasimuddin et al., 2005). This is because the knowledge base of an organisation is both tacit and explicit and overemphasising one strategy to the detriment of the other may lead to a situation where the organisation loses its competitive edge.

### **3.16.5 The scope of knowledge to be managed**

Understanding the value of the knowledge used to run a particular business is an important step in ensuring that knowledge management supports the business as well as practice. The different types of knowledge for knowledge management were considered in section 3.4.1 above. For each type of knowledge that a firm creates or seeks to capture there is a corresponding knowledge management initiative. Therefore, organisations need to know what knowledge they possess in order to better manage and derive the best value from it. An information and knowledge audit will unveil the existing knowledge in the firm and detect existing knowledge gaps in the firm's repositories. It will also assist knowledge managers to understand and identify the tacit knowledge that sometimes flows between individuals. The results of the information and knowledge audit will then be mapped to chart how information flows through the firm's various business processes, how knowledge is transferred throughout the firm, identify who knows what in the firm and detail what information and knowledge exists (Bollinger & Smith, 2001; Roberts, 2000:6).

### **3.16.6 Create a knowledge management team with leadership**

The project managers of knowledge management should constitute a team of competent and flexible members derived from a cross section of disciplines such as information technologist, library and information professionals and human resource experts so that the different needs across practice groups can be addressed. Team members should have formidable breath of mind and experience and high level of tolerance and patience. Above all, the knowledge management team should designate a chief knowledge officer with



good communication skills and visionary leadership to develop and drive the knowledge initiative (Soliman & Spooner, 2000; Chauke & Snyman, 2003). This is very important because organisations have recognised that successful knowledge management initiatives depend on the commitment of top management, and the contribution of senior consultants or experts who recognise and support knowledge management as an integral part of the firms' business strategy.

### **3.16.7 Determine an appropriate knowledge management infrastructure**

An appropriate knowledge management infrastructure consists of a mix of technological infrastructure, organisational infrastructure, non-technological techniques and interpersonal skills.

Technological infrastructures are the tools and technologies for knowledge management such as computers, collaborative and communication technologies, intelligent tools, expert systems described in section 3.9 above. These tools and technologies support the various knowledge management activities discussed in section 3.10, such as the capture, codification and dissemination of knowledge. However, if a group of people are not sharing knowledge and interacting with each other, information technology is not likely to create it. Therefore, the use of the non- technological techniques described in section 3.11, such as communities of practice, brainstorming, tutoring and mentoring should be taken into account for knowledge management to succeed.

An appropriate organisational infrastructure comprises of the organisation's culture and values, the role of management and human resource departments, the politics of the organisation and employees' skills. An appropriate culture for knowledge management emphasises that power is not a product of knowledge hoarding but rather a product of knowledge sharing. It is necessary for management to be in front to create an environment that truly values knowledge sharing. The politics of the organisation is crucial because it determines whether the status and power of the firm are for or against knowledge sharing.

Employees' skills and prior knowledge on knowledge management are a key component to the organisational infrastructure given that employees have to be aware of the basic issues of knowledge management before the initiative is undertaken.

### **3.16.8 Learning organisation**

The values in the company should be those that create a learning environment in which

individuals are committed to excellence, and failures and risk-taking tolerated (section 3.7.1.). There must be a continuous process of knowledge creation and sharing to ensure that businesses remain innovative and healthy (Argris & Schon, 1978; Senge, 1990; Cross & Baird, 2000).

### **3.16.9 Environmental factors**

Environmental factors are crucial for the effective implementation of knowledge management in organisations. These are factors that are not directly controlled by the organisation but influences and affect the organisation and vary depending on the type of organisation, firm, or country. Some examples of environmental factors that influence and affect the organisation are competition, fashion, markets, technological edge, and the GEPSE, that is, the governmental, economic, political, social and educational climate (Okunoye, 2001; Diakoulakis, 2004). The environmental influences to knowledge management identified in a study of knowledge management in six research institutes in Sub Saharan Africa are: government commitment, funding level, transport, telecommunication, and electricity (Okunoye, 2001).

### **3.17 Conclusion**

This chapter attempted to answer the research questions for sub problem two of this study by exploring some basic concepts and techniques of knowledge management. It was noted that there is no generally acceptable definition of either knowledge or knowledge management. Nevertheless it was seen that these concepts could be described in a number of ways.

Four different perspectives of knowledge viz, data, information, and knowledge perspective, individual perspective, social perspective, and organisational perspective were identified each suggesting different strategies for managing knowledge and different implications on knowledge management. These perspectives helped to clarify the definitional ambiguity of knowledge management and provide some understanding of the concept. Aspects such as the nature of knowledge, types of knowledge, knowledge levels and properties of knowledge helped in providing a holistic understanding of the concept of knowledge and have influenced theoretical developments in knowledge management. Knowledge management for the purposes of this study was considered to be a set of systematic and disciplined actions that an organisation takes to obtain the greatest value from the knowledge available to it.

Similarly, four different perspectives of knowledge management: the information technology perspective, personal perspective, social perspective and business perspective of knowledge management were discussed. These perspectives helped to clarify the definitional ambiguity of knowledge management and provided some understanding of the concept. Knowledge management for the purposes of this study was considered to be a set of systematic and disciplined actions that an organisation takes to obtain the greatest value from the knowledge available to it.

Drawing from the different definitions and perspectives of knowledge and knowledge management, several frameworks and models for knowledge management were considered pertinent to this study. The different frameworks examined were: organisational learning and learning organisation, process framework, market system, and knowledge management strategies. The three different models considered were: intellectual capital; SECI, ba, and knowledge assets and the Socio technical (diamond trist) model.

It was noted that the roles of information communication technology in knowledge management are manifold. For example, it provides a seamless pipeline for the flow of explicit knowledge; supports the different sub processes of knowledge management that entails the capture, codification, transfer, application and protection of knowledge and various kinds of computer supported collaborative work systems help to create, acquire share, and use knowledge within the community. Examples of information communication technology used for knowledge management were identified to include personal computers, phones, scanners, collaboration and communication technologies, and groupware and knowledge management systems. However, it was pointed out that information communication technology will only be effective when the people in the organisation cooperate and share knowledge with each other. This also called for the use of non-technological techniques of knowledge management such as communities of practice, tutoring and mentoring, collective brainstorming, knowledge networks and project experiences.

Organisations invariably have different reasons for knowledge management. Nevertheless, competition, strategic knowledge asset and the value of knowledge are the driving factors of knowledge management in most organisations. Some common recurrent benefits of knowledge management are improved ability to sustain competitive advantage, immediate results in solving organisation-wide problems, improved organisational productivity, and improvement in the delivery of services to clients, and stimulation and motivation of employees. These benefits of knowledge management although compelling, are intangible



are difficult to quantify. The cultural, organisational, social, technological and political barriers for the successful implementation of knowledge management need to be tackled before a conducive environment for knowledge management can be established.

Notwithstanding the benefits and drivers of knowledge management, several cultural, organisational, social, technological and political barriers for the successful implementation of knowledge management need to be tackled before a conducive environment for knowledge management may be established.

The chapter ends with a strategy for successful implementation of knowledge management. It was observed that before implementing a proper knowledge management strategy in an organisation certain factors needed to be considered. These include, a clear and articulated business objective aligned to the knowledge management objective, types of knowledge management strategies for knowledge transfer, the scope of knowledge to be managed, the appropriate infrastructural requirements, and a learning organisation. Effective knowledge management therefore lies in applying an integrated approach of people, technology, strategies, and processes. The theories and principles of knowledge management discussed in this chapter provide a background for the investigation of knowledge management in law firms. The next chapter therefore focuses on the applicability of these basic concepts and theories of knowledge management within the context of a law firm.

## CHAPTER FOUR

### KNOWLEDGE MANAGEMENT IN LAW FIRMS

#### 4.1 Introduction

The preceding chapter examined the general concepts of knowledge and knowledge management. This chapter looks at the key insights of the concepts of knowledge and knowledge management in the context of the law firm. As a result of the consequences of the changing legal information environment in chapter two, law firms are challenged to organise, leverage and manage their knowledge more than ever before as a means of weathering changes, sharpening their competitiveness, providing efficient services, attracting new clients and broadening their influence within the legal industry and the global economy. The writings by practitioners and researchers on the importance of knowledge management in law firms reflect the immense interest of knowledge management in the legal profession (Kofoed, 2002; Lamont, 2002; Leibowitz, 2002; Nathanson & Levison, 2002; Parsons, 2002; Curve Consultant Survey Report, 2003; Gottschalk, 2005; du Plessis & du Toit, 2005; Rusanow, 2007). Law firms, due to the intensity of knowledge work involved in their operations therefore provide a fruitful arena for knowledge management research. In order to develop guidelines for knowledge management in law firms, the discussion in this chapter will be developed around the following research questions centred on sub problem three of the thesis:

- ▶ What are the different types and categories of knowledge existing in the law firms?
- ▶ What approaches do law firms mainly follow in knowledge management?
- ▶ Which tools and technologies are used for knowledge management in law firms?
- ▶ What are some of the techniques of knowledge management in law firms?
- ▶ What are the benefits of knowledge management for law firms?
- ▶ What models and framework exist for knowledge management in law firms?
- ▶ What factors inhibit the success of knowledge management in law firms?
- ▶ What factors are critical to the success of knowledge management in law firms?
- ▶ What are the strategies for knowledge management in law firms?
- ▶ What are the strategies for knowledge management in law firms?

#### 4.2 Types and categories of knowledge in the law firms

Knowledge in the law firm resides in many different places, such as databases, filing cabinets, and print material and the intrinsic skills and experiences of the lawyers and their

staff. An understanding of the different types of knowledge that is managed in the law firms is crucial for the development of any effective knowledge management strategy that will reflect the business value of the firm because each type of knowledge has a different strategic value. It was observed in chapter three (section 3.4.1) that there are several types and categories of knowledge and that the classification depends on the industry. Even within different industries, there are different types and categories. Hence, legal researchers have classified the knowledge in the law firm into different dimensions and types. For example, Rusanow (2003) defines the broad category of knowledge used in the law firm as knowledge of the law, knowledge of the firm, client information, commercial markets and specific industries, staff skills and expertise, past projects, and knowledge about third parties (judges, opposing counsel, or external consultant). According to Kay (2002), knowledge in a law firm includes knowledge of the law, knowledge about clients and their industries, marketing information and financial information. Edwards & Mahling (1997) use a slightly more sophisticated subdivision to categorise the different types of knowledge involved in the practice of law as administrative data, declarative knowledge, procedural knowledge and analytical knowledge; a classification that has also been adopted by Gottschalk (1999, 2002). Drawing from the above categorisations, this study classifies knowledge in the law firm under three broad categories as tacit knowledge, explicit knowledge and knowledge of the business of law. This is because elements of tacit and explicit knowledge runs through the different categorisations of knowledge suggested by the various legal researchers while other knowledge crucial for the practice of law may be conveniently referred to as knowledge of the business of law.

#### **4.2.1 Explicit knowledge**

This section draws from the definitions of explicit knowledge in section 3.4.1.1 (Polanyi, 1962; Nonaka & Takeuchi; 1995; Choo, 2002; Jasimuddin et al., 2005) to establish the meaning of explicit knowledge in the law firms. Explicit knowledge in the law firm is knowledge expressed in words, found in documents and embedded in the firms' routines, processes, practice and norms and can be easily codified. According to Gottschalk (2002) explicit knowledge in the law firm includes knowledge acquired through formal education in the law school and can be easily communicated and shared.

It has been reported that explicit knowledge in the law firm may be created either externally or internally (Edward & Mahling 1997; Gottschalk, 2002). Examples of externally created



explicit knowledge are legal and declarative knowledge<sup>6</sup> (substantive principles of law). Law firms typically generate and maintain different types of legal knowledge varying from one legal discipline to another. Legal knowledge exists in the form of legal texts, legislation, case law, legal principles contained in statutes, printed resources, databases, commentary and interpretation, the firms repository of template documents, court opinions, research sources, CD ROM sources and other sources of primary legal authority (Kofoed, 2002; Rusanow, 2004). It is common knowledge that the major sources of legal knowledge are primary sources of law, secondary sources of law and “finding sources” (reference sources). These are highly documented and structured with high standards of completeness, reliability, and authority. Examples of primary sources of legal information are legislation (statutes) and case law. Legislation are laws that may be created by the executive and legislative branches of the government. Legislation derived from Acts of Parliament are codes and ordinances while legislation derived from the executive branch of government are ministerial orders, statutory instruments and regulations. Case law on the other hand emerges from the judiciary. It consists of the law that emerges from cases decided in courts and administrative tribunals. Secondary sources of legal information and knowledge are found in textbooks, law reviews, commentaries and journals. “Finding sources” of knowledge consist of resources traditionally found in legal reference works, digests, indexes to legal periodicals, and legal encyclopaedias.

Examples of internally created explicit knowledge (also referred to as explicit procedural knowledge) are standard forms and best practice documents (Edward & Mahling, 1997; Gottschalk, 2002; Kay, 2002). Standard forms also referred to as precedents<sup>7</sup> are generic documents that a law firm has typically invested in producing, for use in many matters. For example, when dealing with conveyancing, a lawyer does not necessarily have to draft a new agreement but may use one of the existing precedents and apply limited amendments to the present circumstances. Many firms use precedent banks as part of their work product. Staudt (2003) reported that using a document on a firm’s approved precedent reduces the time lawyers spend on mundane aspects of document drafting which in turn eliminates duplication, ensures consistency and enhances productivity.

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6 See section 3. 4.1.2 for a discussion on declarative administrative and analytical knowledge.

7 Generally, precedents are reasoned judgement passed in the higher courts that become a source of authority to the lower courts. However, the term precedent may mean different things in different contexts. In this instance, it refers to drafted transaction documents with a range of variables that makes it possible for a lawyer to produce another transaction document by typing an alternative variable that he/she needs without completely changing the format of the original transaction documents.

He also observed that it will serve as a mentoring opportunity to junior colleagues because they may be able to access the knowledge of other lawyers that have attempted similar task within a short space of time.

Generally, best practice documents are specific documents on matters whose quality has been assessed by the firm's committee and identified to be good examples of work products that can be used in similar situations. These include briefs, research memos, pleading, forms and knowledge embodied in the work product of lawyers in the form of transactional documents such as contracts, opinions, reports, letters of advice, legal briefs, deeds and agreements (Edward & Mahling, 1997; Gottschalk, 2002; Kay, 2002). A very unique client's case requiring highly specialised knowledge or one that the solution may be a variation on a well-known theme that is generated and kept by lawyers to serve as useful examples for faster and more efficient handling of related work are examples of best practice documents.

#### **4.2.2 Tacit knowledge**

Similar to the preceding section, the definition of tacit knowledge in the law firm is drawn from the different definitions of tacit knowledge by knowledge management theorists in section 3.4.1.1 (Polanyi, 1962; Nonaka & Takeuchi; 1995; Choo, 2002; Jasimuddin et al., 2005). Tacit knowledge in the law firm is the dynamic knowledge that is not easily expressed, not easily codified or shared in the law firm. It enables one to do things unconsciously without being able to articulate it. It is highly personal, hard to formalise and difficult to communicate to others. According to Gottschalk (2002), tacit knowledge is the expertise and experience developed from learning on the job and from training and interaction with the environment. Tacit knowledge in the law firm can be exchanged during transient events, by emails or discussions, at meetings that may not be formally documented, or may just pass between people in question and answer dialogue at in-house seminars or training sessions. Although amorphous, this kind of knowledge is generally higher in value and differentiates the firm in a competitive legal market. Generally, it is not often possible to capture all the tacit knowledge in the law firms and thus, the challenge therefore remains in identifying the elements of tacit knowledge that can be captured and made explicit.

Edward & Mahling (1997) noted that analytical knowledge and implicit procedural knowledge form part of the tacit knowledge base of the law firm. They observed that analytical knowledge is deeply rooted in the intrinsic skills, experiences, ideals, values, minds and emotions of the staff and lawyers and is not easy to express. On the other hand,

they described implicit procedural knowledge as practical knowledge required in enforcing the substantive principles of law. That is, knowledge that is concerned with the skills and expertise described in terms of the results they lead to, but cannot be fully explicit. An example of procedural knowledge is knowledge on the mechanics of complying with a legal requirement in a particular situation such as hints at arguing motions. Generally, after acquiring declarative knowledge of the law, lawyers still need a corresponding deep understanding of procedural knowledge in order to apply the skills that cannot be articulated. Edwards & Mahling (1997) also noted that while explicit knowledge is meant to be publicly and readily accessible to all, tacit knowledge (analytical and procedural knowledge) within the firm can raise issues of confidentiality and security. This is because lawyers in the firm have professional ethical obligations to their clients to maintain the confidentiality of information furnished by the clients.

#### **4.2.3 Knowledge of the business of the law firm**

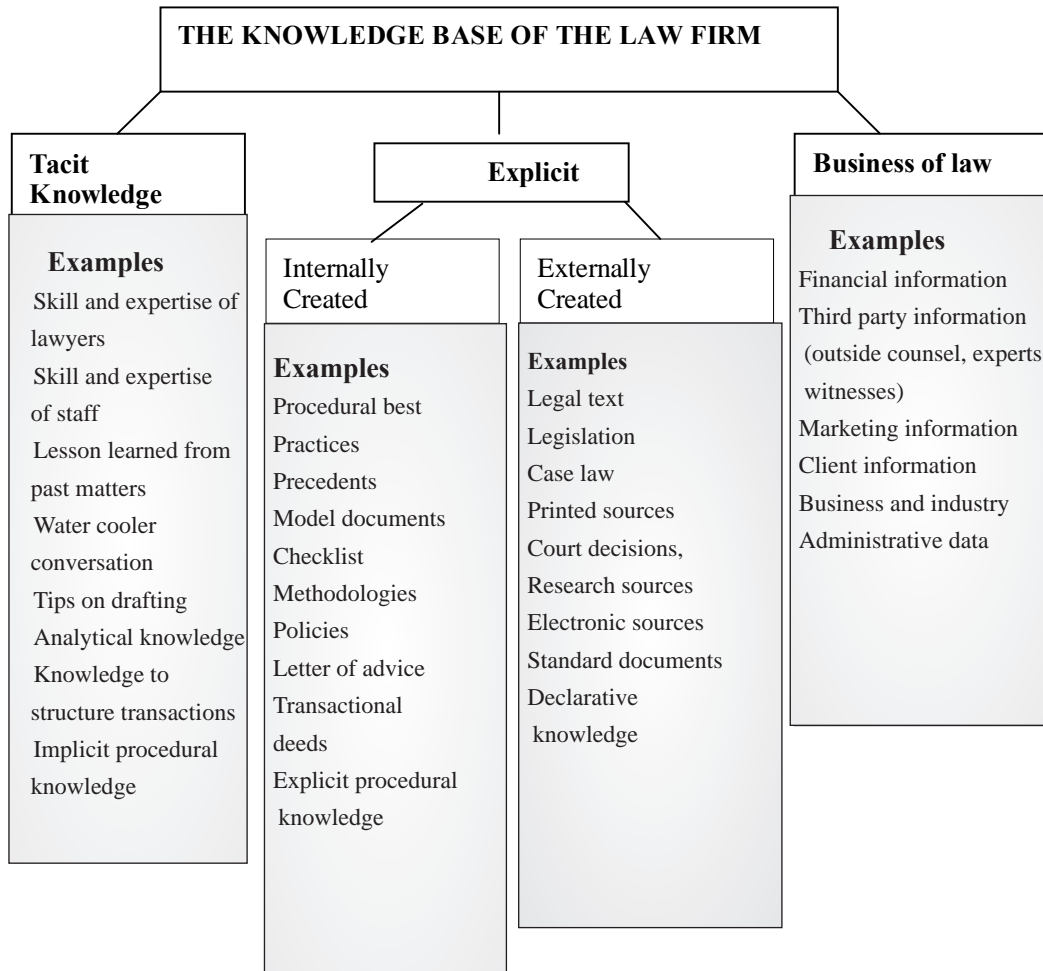
This is non legal knowledge, administrative data<sup>8</sup>and knowledge of the firm's market position and business strategy that makes it possible for any one to find and access the firm's procedures and policies. Legal researchers such as Edward & Mahling (1997); Kay (2002) and Rusanow (2003) consider the following as knowledge of the business of law: knowledge of clients and their industry, marketing information, knowledge about third parties, knowledge about the firms' relative market strengths and weakness, its competitors, industry trend, financial position, financial news, expert information, knowledge about judges, opposing counsel, consultant business, scientific and scholarly information on subjects such as medicine, science, statistics, and also demographic information.

Client information is information generated in the firm's day-to-day business (Kay, 2002). Lawyers who monitor client information may be able to make informed decisions about necessary action that would lead to client satisfaction. Client's personal details, billing data, clients' names and matters, staff payroll data, and client invoice data are examples of client formation (Rodriguez et al., 2002). Marketing information include information about cases, awards, articles, initiatives, and acquisitions of the firm (Edward & Mahling, 1997). Multiple financial matters are available in the firm that range from tracking the number of hours spent on administrative data of a particular matter to billing a lawyer, recovery and office expenses.

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<sup>8</sup> Administrative data includes all the information about the firm's operations such as hourly billing rates for lawyers, clients' names and matters, staff payroll data and client invoice data.

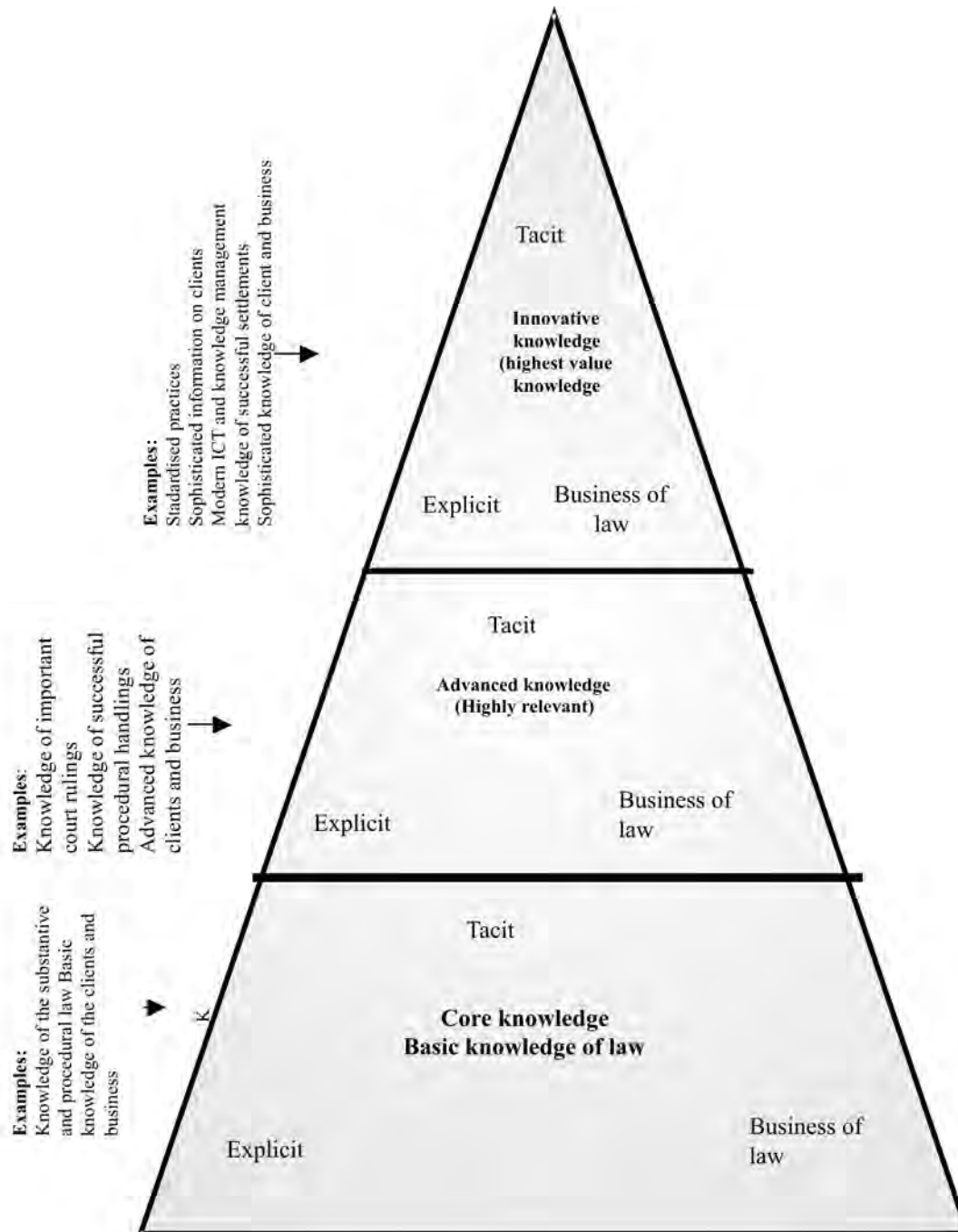
An overview of the different classification of knowledge into tacit, explicit and business of law is presented in figure 4.1 below.



*Figure 4.1 Categories of knowledge in the law firm*

#### 4.2.4 Levels of knowledge in the law firm

Tacit knowledge, explicit knowledge and knowledge of the business of law as categorised in the preceding section may exist at three basic levels in the law firm, namely core knowledge, advanced knowledge and innovative knowledge (Gottschalk, 1999; Gottschalk, 2002; Rusanow, 2003). This study draws from Gottschalk (2002) Rusanow (2003) and du Plessis (2004) to present the different levels of knowledge in the law firm in a form of a pyramid in figure 4.2 below, with each category of knowledge (tacit ,explicit and business of law) existing at different levels of knowledge sophistication.



*Figure 4.2 A suggested pyramid representing the different levels of knowledge and the categories of knowledge (adapted and modified from Rusanow 2001:9-11)*

Core knowledge is the basic knowledge required for the daily operations of the firm that provides no competitive advantage (Gottschalk, 2002; Rusanow, 2003; du Plessis, 2004). It consists of the general data, information and knowledge of the law firm. For example, administrative data, knowledge of the law knowledge of procedures, knowledge of clients, and basic marketing information.

Advanced knowledge in the law firm is knowledge that makes a firm competitively visible and active to distinguish its products and services from that of other competitors through the application of valuable rare and superior knowledge (Gottschalk, 2002). Examples are important court rulings and knowledge of successful legal procedures.

Innovative knowledge is the unique knowledge of the law firm that enables it to lead its entire industry, differentiates the firm from other competitors, intensifies its business objectives and introduces new business practices (Rusanow, 2003). Knowledge of standardised repetitive legal cases and knowledge of information technology are examples of this category of knowledge.

#### **4.3 Law firm's approach to knowledge management**

The different perspectives to knowledge management, namely the information technology, personal, social, organisational and business perspective were examined in chapter 3 (section 3.6). From the varied sources of knowledge available in the law firm observed in section 4.2 above, one may assume that law firms will embrace a holistic approach to knowledge management. This is however not the case. Most studies on knowledge management in law firms tend to adopt a technological approach to knowledge management overlooking the other perspectives (Terret, 1998; Gottschalk, 1999; Gottschalk, 2000; Campbell, 2002; Gottschalk, 2002; Hunter et al., 2002; Kofoed, 2002; Khandelwal & Gottschalk, 2003; Staudt, 2003; Opp, 2004, Gottschalk 2005). For example, considerable emphasis has been placed on the use of knowledge-based systems in creating, sharing and utilising collective knowledge, tools and techniques for knowledge representation, the capturing and storing of explicit knowledge in the work product repository, knowledge repository, and on intranet and extranet projects.

In a study of knowledge management in Scottish law firms, it was concluded that all the five firms sampled limited their knowledge management initiatives to technology. These firms used information communication technology as a tool for the repository of codified knowledge (Hunter et al., 2002). A Canadian firm established a full text repository of work



product on substantive law and precedent model (Chester, 2002). Another study showed that large United Kingdom firms have developed extranet “pay-per-view” websites that offers users access to value added legal information regulations with commentary produced by specialists (Susskind, 2003). Kay (2002) observed that one Australia’s largest and leading international firms, Blake Dawson Waldron, has invested significantly in knowledge management technologies and developed software products that facilitate knowledge management such as virtual deal room, electronic discovery of files and emails, and virtual lawyer systems. Most of Gottschalk’s empirical studies on knowledge management in the law firm adopt the technological dimension (Gottschalk, 1999; Gottschalk, 2000; Gottschalk, 2002). For example, the 1999 study on the use of knowledge management in Norwegian law firms revealed that the extent to which law firms in Norway use information technology to support knowledge management is significantly influenced by the extent to which firms generally use information technology. The 2000 study on the use of information technology to support inter-organisational knowledge management on Norwegian law firms indicates a significant positive relationship between the extent of information communication technology use and the extent of co-operation and knowledge co-operation among law firms.

Due to the fact that most of the studies in knowledge management in law firms have focused mostly on a one dimensional approach to knowledge management, one is inclined to think that knowledge management in law firms begins and ends with building of information systems. This is however not always the case. The mere existence of technology or the use of technology will not turn a knowledge hoarding organisation to a knowledge sharing one. Notwithstanding this, the fact that law firms tend to adopt the technological route to knowledge management is an indication that that information communication technologies are enablers that may play a crucial role in knowledge management in law firms.

There are however few studies worth noting where knowledge management in law firms has not focused only on the technological approach. Recently, it was reported that a leading Australian firm in knowledge management has, unlike most of its rivals, focused its management initiatives on managing knowledge relating to the business of law and the existing and prospective client information and business position (Rusanow, 2007). Khandelwal & Gottschalk (2003), in a survey of knowledge management in Australian law firms adopted both an information technology and business approach. Drawing from the information technology perspective, they used the knowledge management technology stage model to identify four different stages by which information communication technology

may support knowledge management activities in the law firm. These authors also adopted the knowledge-based view of the firm that establishes itself as an important perspective in strategic management to develop a framework for comparing the knowledge management approach in individual law firms. Similarly, Carine (2003) developed a framework for comparing the knowledge management approach at individual law firms and law firm alliances, while Kofoed (2002) carried out a case study on two law firms; Bech Brun Dragsted and Allen & Overy in the United Kingdom to identify the factors critical to the success of knowledge management in law firms. Forstenlechner (2006) carried out a case study on the effect of knowledge management on law firm performance.

Nevertheless, the adoption of a one dimensional technological approach to knowledge management by most researchers of knowledge management in law firms confirms the view that most lawyers still consider knowledge management as a narrow theoretical concept. Nathanson & Levison (2002) reported that while knowledge management in 500 global companies had achieved significant successes, for many other law firms, knowledge management had failed. Kofoed (2002) reported that, only very few law firms have managed to establish a really well-functioning system. There has been little acknowledgement from lawyers of the importance of managing the knowledge about clients, the skill and expertise of staff, or knowledge about the third party. There has also been little attention paid to the identification and sharing of tacit knowledge and very little research on the knowledge management process. Therefore, the major challenges to law firms in terms of knowledge management are to be able to make the knowledge that rests with the individual members of the organisation available to the entire organisation, find ways of not reinventing the wheel, capturing knowledge and history about the past dealings with people and sharing knowledge amongst members in the firm.

In addition, most knowledge management initiatives in law firms have also focused solely on large firms. In a study of knowledge management in Virginia law firms, it was found that most Virginia law firms were waiting to see how the large firms fared before adopting knowledge management (Gonzalez, 2002). A 2003 global law firm knowledge management survey report revealed that knowledge management organisation of leading law firms in the United States, United Kingdom and Australia recognised knowledge management as a key business driver even though many of the participant firms had embryonic knowledge management organisations (Curve Consultant Survey Report, 2003). The present leading law firm in knowledge management appears to be one of Australia's largest firms, Allens Arthur Robinson (AAR, [aar.com.au](http://aar.com.au)), with 800 lawyers (including 190 partners) and

approximately 700 non-legal staff (Rusanow, 2007). Though large firms may be seen as logical users of sophisticated knowledge management systems, small firms possess the flexibility to take advantage of many of the knowledge management initiatives that exist today and may have placed this initiative in the back seat due to financial cost.

In sum, it is quite clear that literatures abound from legal practitioners and scholars as to the enormous potential for knowledge management in law firms and the importance of knowledge tools and techniques for knowledge representation and knowledge transfer without much empirical evidence (Terret, 1998; Leibowitz, 2001; Campbell, 2002; Nathason & Levison, 2002; Platt, 2003; Rusanow, 2003; Staudt, 2003; Rusanow, 2004). There is still little or no writing on knowledge management in law firms in Africa not to talk of Botswana. This study hopes to provide an empirical understanding of some of the theoretical concepts of knowledge management that would be useful to the law firms within an African context.

#### **4.3.1 Tools and technologies for knowledge management in law firms**

The tendency of law firms to adopt a one dimensional technological approach for knowledge management as observed in the preceding section is an indication that technology is a crucial tool for knowledge management in law firms. It is therefore necessary to consider some of the tools and technologies used to leverage knowledge management in law firms. Drawing from the tools and technologies for knowledge management in section 3.9, typical tools and technologies for knowledge management in law firms are: networked computers, emails, telephones, repetitive automated document assembly, internet and intranet technologies. Other sophisticated technologies may include databases and software tools, collaborative technologies, enterprise information portals, expert systems and business and artificial intelligence tools. In this section, the tools and technologies for knowledge management in law firms are considered under the following six categories: preliminary tools and technologies, software and databases tools, collaborative technologies, technologies for knowledge transfer, technologies for content management and technologies to support and augment the lawyer's work.

##### **4.3.1.1 Preliminary tools and technologies of knowledge management**

Technologies such as telephones and personal networked computers with standardised productivity tools (word processing, spreadsheets, legal databases and presentation software), collaborative and communicative technologies (intranet portals and internet)

,and groupware (emails, video conferencing, calendaring, group scheduling and task list) are the initial tools and technologies required for knowledge management in the law firm. They facilitate the transfer of tacit knowledge and the exchange of documents and convert lawyers from information consumers to consumers of knowledge. Collaborative and communicative technologies foster knowledge exchange amongst communities of practice (Gottschalk, 2002; Khandelwal & Gottschalk, 2003). These tools technologies for knowledge management are similar to what Gottschalk in the knowledge management technology stage model refers to as the end-user tools.

#### **4.3 1.2 Software and databases tools**

A major database technology for knowledge management in law firms is a repository of work product database of documents, substantive law and precedent that is fully searchable, profiled and made accessible to members of the firm across task levels and entities (Chester, 2002; Kofoed, 2002; Lamont, 2002; Staudt, 2003). A repository of work product data base may also store the firm's "best practices" such as briefs, pleadings, research memoranda, transactional documents and other forms of agreement thus reducing the time lawyers spent in research and drafting. As noted in section 3.9.3, above, knowledge repositories typically contain specific types of knowledge for particular business functions such as client matters and financial information, best practices, knowledge, lessons learned in projects, learning histories, competitive intelligence, document management, legislative developments, assignments, and market development (Davenport & Prusak, 1998). New systems allow searchable online document repositories to manage the millions of documents that firms need. For example, Susskind (2003:41 42) reported that Case Central Inc is a secured searchable online document repository that had 80 million pages under management in the year 2000 and a customer base that grew at almost 300 per cent in twelve months time. Access to the firm's knowledge repository is facilitated by the firm's intranet, extranet and web-based portal technology. Once created, the contents of the repository continue to expand and needs to be managed and reorganised from time to time.

It has been noted that document management systems and content management systems are very important tools for managing the vast contents of the knowledge repository (Staudt, 2003). Document management facilitates the secretarial function of the law firm making it easy to save and retrieve work in progress. It captures stores and sometimes archives and retrieves documents that mainly contain texts such as records in documents file. A number of commercially available document management products such as soft solutions

and file net focus on recording, processing, standardisation and development of knowledge management systems such that if correctly implemented, it can prevent computer network anarchy (Staudt, 2003). A content management system on the other hand, manages highly dynamic contents and focuses on the publication of content. Both content management and document management systems facilitate legal research, maintain a history of file content, expedite the retrieval and processing of documents, enhances the quality of information, maintain control over the security and access to documents, log access to files, and integrate information and knowledge from multiple locations (Thompson, 2003; du Plessis, 2004).

Model documents (forms drafted and sanctioned by the practice group) and precedent databases (documents from actual deals) exist in law firms as fully indexed and searchable databases (Chester, 2002). Model documents reduce the time lawyers spend in mundane drafting while precedents make it easy for lawyers to be able to access the knowledge of other lawyers who have attempted a similar task.

Work process tools allow firms to track records and enhance work processes (Delphi, 2001; Chester, 2002). They enable any request for work by practice groups to be accepted and referred online where progress may be monitored over the Intranet. Work flow tools also organise the research activities of lawyers by assisting in the selection of relevant documents, creating new workflow paths, utilising current template paths or describing and implementing the research stages required (Thompson, 2003).

Automated document assembly tools restructure the method lawyers use for repetitive drafting tasks like routine complaints in divorce cases or documents prepared in uncomplicated legal estate cases and complicated transactions, provided the text does not require large amounts of customised drafting (Staudt, 2003).

Case management, practice management and matter management systems are inter related software tools. Case management systems organise and control the administrative, legal and factual information on cases and provide lawyers with information on the case they are working on. It integrates with time, billing and calendar systems to provide contact management, transaction management, matter management, docketing, access to documents generated and time and billing reports (Platt, 1998). In essence, case management systems are used to organise case billing and research activities. In legal practice, a case management system allows lawyers to access information in or out of the office and if necessary, a synchronised electronic time billing feature to facilitate time recording.

Practice management systems on the other hand, gather best practices and trigger reminders

to lawyers on the next step to complete with proposed forms and documents. Automated billing document assembly and automatic reminders of due date and deadlines are examples of practice management activities. The LexisNexis version of time matters, is a practice management system that begins with data entry and data retrieval forms, and changes depending on what the lawyer wish to accomplish be it a contact or an appointment (Staudt, 2003).

Both practice and case management systems assist in establishing a better understanding of the client needs, establish client trust, leverage client-lawyer relationship, facilitate tracking of new business efforts and provide orientation in terms of conflict of interest (Evans 2001; Jackson, 2001; du Plessis, 2004).

Intuitive search tools extract knowledge and information from unstructured data like e-mail repositories. For example, LexisNexis e-Discovery solution, help lawyers to search organise, and tag electronic documents so that they can easily access relevant ones (Staudt, 2003).

Other software and database tools are marketing information, contact management database, conflict management systems and record management database (Lamont, 2002; Platt, 2003). Platt (2003) notes that marketing information database includes access to expert list, calendar of events, firm's newsletter, links to client site and links to marketing articles. It markets the entire market base of the firm through the intranet and manages the marketing process. He posits that contact management databases tract the contact information and other bits of data for expert witnesses, litigation support services and conferences. Conflict management systems run conflict checks and maintain a database of clients. Record management database track documents and data from cases making it easier for a researcher to find case information (Lamont, 2002).

#### **4.3.1.3 Tools and technologies for knowledge transfer**

Collaborative technologies (internet/intranet, extranet, world wide web, enterprise information portals); groupware (emails, Lotus Notes, video and text-based conferencing, electronic bulletin boards, chat lines, and knowledge cafes) and other basic tools of knowledge management (telephone and personal networked computers) are very effective in enabling the transfer of tacit knowledge in the law firm (Carine, 2003; Staudt, 2003; Buckler, 2004).

In recent years, web-based portals have become extremely popular in addressing knowledge



management initiatives in law firms (Staudt, 2003; Buckler, 2004). Besides the ability to serve as a single point of entry to the web, portals generally capture information and knowledge residing in the databases, enhances knowledge sharing, and fosters communication and the development of new communities of practice through broader publication right and content management. Staudt (2003) notes that client information, existing work product, new developments in the firm and breaking news, can be gathered and shared through a web browser using a portal technology like LexisNexis portal powered by plum tree.

#### **4.3 1.4 Tools and technologies for knowledge sharing**

Collaborative technologies (internet/intranet, extranet, World Wide Web, enterprise information portals.), groupware (Lotus Notes, video and text-based conferencing, electronic bulletin boards, chat lines, and knowledge cafes) and the preliminary tools for knowledge management (telephones and personal networked computers) are also crucial for sharing knowledge within the law firm (Carine, 2003). Generally, it has been observed that appointing knowledge managers and knowledge units that are responsible for leading the implementation and facilitation of knowledge management activities, knowledge distribution mechanism to ensure that knowledge is pushed to relevant people, training with internal and external experts and encouraging networking through secondment programmes with clients are common tools for sharing knowledge (Apostolou & Menzas; 1999 & Elder, 2002). These tools may also be used to share knowledge in law firms. Other knowledge management tools that support the sharing of knowledge in the law firm are knowledge network or teams of colleagues brought together to work on a project, knowledge centers and knowledge webs where colleagues from different functional areas or offices assist one another on a needs basis (Carine, 2003).

#### **4.3.1.5 Tools and technologies for organising the content of knowledge management**

One of the major challenges to a knowledge management system is to be able to determine the quality of knowledge that is available in the system and how to search for that knowledge. Carine (2003) considered knowledge process databases and collaborative technologies (internet/intranet, extranet, World Wide Web, enterprise information portals) as relevant tools for managing the content of a knowledge management system in law firms.

Knowledge management researchers have identified several tools and techniques for organising the content of knowledge management that may also be applicable for law firms. For example, Apostolou & Menzas (1999) noted that document and content management

systems as relevant tools in managing the content of a knowledge management system; while indexing tools organise and cross-reference material by subject and practice area, making it easy to locate. Also, expert skill directories generally assist colleagues to locate colleagues that may assist with advice and exchange of ideas; while knowledge mapping tools locate and evaluate knowledge resources that are available to the firm (Skyrme, 1999).

#### **4.3 1.6 Tools and technologies to augment the lawyer's knowledge**

Although the tools and technologies considered in the preceding section is crucial in leveraging the day to day activities of the lawyer and the law firm staff, they do not leverage or augment the lawyer's knowledge. The improvements of a lawyer's productivity lies in the creation of specific practical knowledge and information systems that capture, search, retrieve, sort and manage information related to their specific areas, as well as support legal research, enabling lawyers to evaluate and separate relevant information from irrelevant information. These include legal information systems, expert systems and expert databases, artificial intelligence and decision tree analysis and data mining.

Legal information systems for example assist lawyers in legal research. It is common knowledge that there are vast amounts of commercial legal databases, available over the Internet that lawyers could subscribe too such as LexisNexis, Butterworths, Justastat, Westlaw, Thomas and Dialog. Law firms may even develop their own in-house database or access legal material from databases that are freely available on the Internet. The shift towards electronic libraries has enabled lawyers to carry vast amount of primary and secondary sources of information in a portable form. Lawyers are also using a number of tools to help in electronic discovery, filing, court presentation and analysis.

Expert systems are designed to carry out tasks that require expertise. They capture the knowledge of experts and imitate the logic or reasoning of human experts transformed in automatic or programmed reasoning and is usually limited to specific areas of law with the ability to reason within a defined scope (Chester, 2002; Gottschalk, 2002; Khandelwal & Gottschalk, 2003; Staudt, 2003). Experts systems are similar to what Khandelwal & Gottschalk (2003) in knowledge management technology stage model refer to as information from lawyers stored and made available to colleagues. Capturing expert knowledge enables the law firm to retain its possession of expertise even after an expert retires or leaves the firm. Though it may seem difficult to capture human expertise, expert systems provide the feasibility of describing the expert behaviour of an individual in a particular circumstance

in a way that others can access and learn from the expert (Kay, 2002). Susskind (2003) identified six kinds of expert systems that play an important role in law firms as diagnostic systems, planning systems, procedural guides, intelligent checklist, document modelling and argument generation systems.

Expert databases on the other hand are databases of the contact details of experts in the law firm that provide directories categorised by practice area and specialty indicating the expert's specific skill and competencies. A good example of the expert database is the expert skill directories called, "Yellow Pages" containing curriculum vitae competency profiles, and research interest; and acts as electronic intermediaries connecting knowledge seekers to knowledgeable people (see section 3.9.3 above). Another example of skills and experience databases is a knowledge vault. This a skill and experience database that collects information on the experience, skills and other proficiencies of lawyers at all levels known to possess the key explicit and tacit knowledge in the law firm (Chester, 2002). Expert systems and expert databases are therefore different but related tools that augment the knowledge base of the lawyer, save time and enhance litigation through enhanced knowledge acquisition, organisation, retrieval analysis and disclosure.

Artificial intelligence is similar to what Gottschalk (2002) and Khandelwal & Gottschalk (2003) refer to as information solving problems made available to the lawyer. Artificial intelligence will be very beneficial to lawyers because these technologies support advanced information searching and retrieval, user profiling and profile matching, case analyses and data or web mining. For example, data mining aims at identifying useful patterns in a knowledge base suggesting investigations or the use of information relationship to address business problems thus saving time in similar future cases. Vast repositories of court filing and current docket databases can be mined for connection between judges, clients and the work of the lawyers. For example, LexisNexis Court link allows legal professionals to use court records in new ways to support the development of litigation strategies as well as perform due diligence to support business decisions (Staudt 2003).

Case analysis technology is an artificial intelligence technology that assists lawyers to look at cases from different angles enabling them to analyse the relationship between the facts and the law. For example, case map is a recent database application that enables lawyers to work with the knowledge that they acquire during the preparation of a case. It allows lawyers to organise, manage, analyse and process knowledge about a case and the development of a trial strategy (Lamont, 2002; Dubin, 2005). Case-based reasoning is

another case analysis technology that involves the extraction of knowledge from a series of narratives or cases about a problem. However, Davenport & Prusak (1998) noted that this technology has not been very successful in dealing with legal matters. This may be because legal reasoning is less standardised than customer service problems.

#### **4.3.1 7 Tools and technologies used for the different levels of knowledge**

The knowledge management literature indicates that the initial stages<sup>9</sup> of knowledge management have been driven primarily by information communication technology. For example, Snowden (2002) reported that the first stage of knowledge management was characterised by the computerisation of many business applications leading to the technology-enabled revolution dominated by the perceived efficiencies of process engineering. Similarly, Koenig (2005:4) described the first stage of knowledge management metaphorically as “the internet out of intellectual capital.” He noted that when the internet emerged, organisations realised that the intranet flavour of the internet was a God given tool to accomplish knowledge coordination and sharing.

Khahdelwal & Gottschalk (2003) in the knowledge management technology stage of growth model identified four different stages by which information communication technology may support knowledge management in the law firm. At the first stage the end user tools are made available to knowledge workers; at the second stage, information about who knows what, is made available to all people in the firm; at the third stage, information from knowledge workers is stored and made available to all people in the firm whilst the final stage deals with information systems solving knowledge made available to knowledge workers.

Gottschalk (2002) and Khahdelwal & Gottschalk (2003) adopted the knowledge management technology stage of growth model to examine the role of technology in law firms by identifying the different tools and technologies that can be used to manage the administrative, declarative, procedural, and analytical category of knowledge. They identified technologies that support the core administrative knowledge in the law firms as accounting systems, client billing and word processing systems. On the other hand, technologies that support declarative knowledge are library systems, electronic legal resources, document management and legal databases.

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9 See section 3.10 for a description of the different stages of knowledge management

In addition, technologies that support procedural knowledge are case collection, procedural standards and publishing systems. Also, they considered technologies crucial for innovative and analytical knowledge as law interpretation, case interpretation, expert registration and summation.

Although the above technologies present exciting potential for knowledge management in law firms, they are just enablers to knowledge management. Knowledge management requires the use of proper techniques, individual participation, commitment and culture. It is easier to develop good knowledge management initiatives with passionate and committed people and sub-standard information communication technology tools than the other way round. Just as there are several technologies of knowledge management, there are several techniques of knowledge management because the threads of information communication technology run through most of these techniques. It is therefore worthwhile to examine some of the techniques of knowledge management in law firms.

#### **4.4 Techniques of knowledge management in law firms**

Some of what is now called knowledge management has been with lawyers since the time of the manual typewriter (Buckler, 2004). Lambe (2003) posits that from the Code of Hammurabi, almost four thousand years ago, to modern law reports and LexisNexis, the practice of law has been a practice of knowledge requiring accurate, effective, and objective use of information. Almost all departments in the law firm require and carry out some form of knowledge management even on *ad hoc* bases. Examples of knowledge management that have always existed in law firms though not necessarily under the banner of knowledge management are precedents, “form libraries,” “work product,” “brief banks,” professional development programmes, legal research, mentoring programmes, partners training associates, hiring and training young lawyers and conversations by water coolers (Edward & Mahling, 1997; Abell & Oxbrow, 2001; Staudt, 2003; Rusanow, 2004). Legal research is a form of knowledge management in law firms in which lawyers seek the written work of judges, law professors and other lawyers to build on legal information and make suggestions about changes and new dimensions in the law. The use of work product repositories and precedents on their own has certain limitations. The general assumption while using a precedent system or work product repository is that, the lawyer knows what he/she is looking for. In reality, most of those in dire need of the firm’s prior work products and precedents are inexperienced lawyers who may not be familiar with the knowledge of the process of managing a project. Besides this, the product repository documents represent only part of the knowledge and experience of the lawyer. Lawyers do not just

draft documents in the vacuum but need to listen to clients and interpret the law in the context of the client's specific circumstances.

What is new and exciting about knowledge management in the law firm is the fact that significant pressures faced by the legal industry in recent years (chapter 2) have compelled law firms to acquire and leverage knowledge effectively within the firms in order to become more adaptive, innovative and competitive. Hence, law firms have started formally adopting knowledge management programmes by considering knowledge management business imperatives and taking initiatives to extend knowledge management programmes beyond work product repositories and precedents.

Many attempts are being made to increase the range of knowledge management initiatives. A variety of approaches to in-house know-how and info-bank systems have been attempted and adopted by several firms with varying degree of success. Leading firms in United States, United Kingdom and Australia have well-developed know-how systems and info-banks that include, firms precedents, information on foreign lawyers, curriculum vitae of counsel and opinions and court transcripts maintained by full time professional support lawyers who are senior lawyers and experts in their field.

In 2001, one of the largest international law firms in the United Kingdom, Linklaters, introduced a formal mechanism for knowledge sharing and know-how that includes a know-how index (letters of advice, opinion, documentation and experience on points of law ); a transaction index ( to determine previous transactions done ); precedents (with drafting note against each clause); internal publications (means of sharing short and concise information); and the existence of formal group of lawyers with a common interest (Abell & Oxbrow, 2001:197-198). Linklaters also helped to develop a know-how product called "blue flag" sold over the internet; targeting clients by keeping them up to date about legislation that apply in different countries on a specific practice area. Another firm implemented a technique known as "power tool" that consists basically of the template of legal documents and memorandum dealing with various legal issues and collection of court rulings (Kofoed, 2002). Recently, one of the leading Australian knowledge management firms, Allen Arthur Robinson (AAR), introduced several measures including a skills and expertise locator, clause library, professional development programme, client relationship management system, know-how files, and a third-party contact database (Rusanow, 2007). This firm is now leading other law firms in implementing debriefing, managing knowledge relating to internal processes, and collecting and sharing lessons learned from past projects.



Litigation strategy, client relation management, conflict checking, delivery of client service and record management are recent knowledge management techniques that may be given careful consideration in law firms (Opp, 2004; Dubin, 2005). A litigation strategy allows a lawyer to pull information that may otherwise be hidden in legal pads, banks and boxes or in the memory of lawyers, into formats that allow lawyers to organise and analyse facts in a helpful manner. Through simple tagging of information, lawyers may use this technique to find answers to difficult questions. For example, a lawyer preparing a summary judgment motion can, in a matter of seconds, retrieve a list of all undisputed facts in the case relating to the issue. Client relation management is a method of gathering, associating and using in an efficient manner, information about customers. Lawyers can easily make mistakes when information about clients is not available. This technique promotes the cross selling of business to existing clients and has a spill over effect in the area of conflict checking. Conflict checking maintains a database of clients detailing corporate relationship. This is a tricky area in law firms as the number of clients increase and combinations of companies enter into joint ventures. The delivery of legal services to clients with the use of knowledge management systems and artificial intelligent tools in what is sometimes referred to as “latent market for legal services” (Susskind, 2003) is an exciting technique of knowledge management. With regard to managing information overload, lawyers through the use of knowledge management tools such as creating daily electronic newspapers, personalised resources, and personal knowledge management tools, make it easy to manage the flow of information (Rusanow, 2003).

In essence, given a collaborative learning environment and the availability of intranet and other collaborative technologies, a typical knowledge management initiative in the law firm would consist of the following: best practices (a lawyer’s work product that includes briefs, research memos, pleading, transactional documents); resumes (a system where resume for the lawyer and staff are maintained that allows others to identify expertise that would otherwise not be known); office directory (staff telephone numbers and e-mail addresses); calendar of events (important dates to remember in the firm); office newsletters (information and current developments in the firm, access to marketing articles); client information and matter (news about client, information on cases, time and billing efforts and maintaining competitive intelligence) and variety of systems depending on needs of the firm (expert witness databases, artificial intelligence, litigation support services, directory and many other databases that are created and maintained in-house, purchased from vendors or accessed freely over the internet).

Knowledge management researchers (Maiden, 2000; Buckler, 2004; Wesemann, 2006) have identified the following as other techniques of knowledge management in law firms:

- ▶ Creating a knowledge concierge. A knowledge concierge is an individual who keeps track of the lawyer working on a particular issue such that a lawyer seeking guidance on a client issue may be referred to the lawyer having the best applicable knowledge and experience at hand.
- ▶ Weekly learning report in which each lawyer distributes a weekly report outlining the most important things he/she did in the past week and what he/she learned in the process.
- ▶ Informal conversations on the hallways, firm gossip, communities of practice including professional associations such as bar associations or law societies, written newsletters and updates, and briefs filed in relevant litigation.
- ▶ Regular in-house seminars, presentations or training sessions led by lawyers or professional managers provide ample opportunity to interact, discuss or learn about key issues or new developments relevant to practice areas.
- ▶ The discussion of major projects after conclusion and recording of key lessons learned after which the information is put into a project summary and made available over the internet.
- ▶ Online forums like intranet news groups or email distribution list exist whereby lawyers subscribe to forums dealing with their particular interest and post messages containing information they think might help colleagues. Technologically advanced lawyers use listserv on the internet or subscription services such as Counsel Connect on the World Wide Web to share knowledge.
- ▶ An excellent knowledge centre staffed by highly qualified and experienced knowledge management staff will be very useful. Lawyers may subscribe for most services (local and international case law, legislation, intelligent services, library catalogues, know how and client referral bases) to be delivered on a virtual library.

It is worth noting that the implementation of a particular technique depends on the needs of the law firm and the policy in the office that permit the exchange of knowledge. Having examined the tools, technologies and techniques of knowledge management in law firms, it is now worth finding out the benefits that may result from adopting formal knowledge management.

#### **4.5 Potential benefits of knowledge management in law firms**

The successful implementation of knowledge management in the law firm would result in the delivery of better quality product to the clients, professional satisfaction to the lawyer, increase profitability in the law firm and an enhancement of teamwork. Lamont (2002) has even gone as far as asserting that very few professions could benefit more from knowledge management than the legal profession. The major benefits that may accrue from a successful implementation of a solid knowledge management strategy in the law firm are summarised under the ten points discussed in this section (Maister, 1993; Terret, 1998; Chester, 2002; Kofoed, 2002; Wesemann, 2006).

##### **4.5.1 Knowledge management improves the provision of services to client**

Considering that there is a lot of pressure on law firms from clients (section 2.4.10) it is likely that knowledge management would result in the provision of high quality legal services to the client. Chester (2002) observed that timely billing, the ability to respond to the unexpected, the ability to create innovative solutions for blue sky thinking, and the ability to curb legal cost are likely benefits to the client that may result from the use of knowledge management. Knowledge management will enable clients to access cost effective services from a talented lawyer with unique knowledge on the particular issue of concern (Susskind, 2003). Clients would rather pay a higher premium rate knowing that they are paying money for unique value and knowledge rather than paying a lower rate to a lesser qualified lawyer who would produce inferior results. It has been noted that law firms in Canada, United States, United Kingdom and Australia are considering knowledge management as a necessity for meeting emerging client demand for efficiency, accountability, and controlled legal cost (Chester, 2002; Nathanson & Levison, 2002; Wesemann, 2006; Rusanow, 2007). Dubin (2005) reported that with knowledge management in place, less time will be devoted to routine tasks many of which are non-billable and more time devoted to planning a strategy with regards to the challenging and substantive aspect of the client request.

##### **4.5.2 Knowledge management enhances economic profitability**

The consequences of the delivering of high quality legal services to satisfied clients as observed in the preceding paragraph is more business generated, hence resulting in better economic performance. Generally, the cost implications of knowledge management seem minimal. Many studies have shown that the knowledge management efforts from the largest leading firms involve just the part time effort of a few people (Kofoed, 2002; Wesemann,

2006; Ruanow, 2007). Though one may argue that with knowledge management in place, firms would have less billing time, resulting in poor economic performance, the truth is that the fast delivery of high quality services results in satisfied clients and therefore more business is generated. Besides, law firms are gradually drifting away from the time-based traditional billing model. An emerging trend in knowledge management is for clients to ask for fix rate agreements and electronic connections to the firm. According to Onwusah (1997), the client's perception of "value" is driving the move away from the traditional cost-plus basis of billing to a perceived value added service. Other emerging ways of billing clients are based on services provided rather than time taken. Kofoed (2002) notes that some firms are offering, "no win no fee service." Rusanow (2003) advocates billing by transaction.

#### **4.5.3 Knowledge management provides professional satisfaction**

It has been reported that knowledge management contributes to the professional satisfaction of lawyers by exposing lawyers with special experience and expertise to work on projects in their area such that they attain professional excellence, equip themselves with advanced skills and provide exceptional services to clients at a higher rate (Chester, 2002; Rodriguez, 2002; Rusanow, 2003; Wesemann, 2006; Rusanow, 2007). It was also observed in section 2.2 that law firms are learning organisations where professionals continue to crave for new skills and desire to gain specialised knowledge in particular areas of law and legal practice. Therefore, knowledge management will likely provide lawyers with an environment that allows them to fully develop their skills, rapidly increase their knowledge and achieve professional excellence.

Knowledge management initiatives such as precedent documents, repositories of prior work product and project methodologies enhances the lawyer's competence by reducing the time that he/she would take to draft documents and conduct research (Staudt, 2003). Knowledge management programmes also provide online training opportunities for lawyers that enable them to become more efficient and effective in computer literacy skills (Martin, 2002).

Buckler (2004) reported that knowledge management is particularly beneficial to young lawyer who rather than having to acquire knowledge through years of experience would be able to acquire relevant information within a short space of time on what is already done in other departments. It ensures that lawyers do not repeat the firm's past errors but rather learn from the firm's past successes.

Knowledge management initiatives may also assist with the integration of new lawyers to the firm while focusing on improving the skills of junior and senior lawyers (Chester, 2002; Kay, 2002; Staudt, 2003). Hence, knowledge management will clearly accelerate the learning curve of young lawyers with new expectations and demands.

#### **4.5.4 Knowledge management improves retention rate**

Bearing in mind that lawyers are becoming highly mobile (section 2.4.13), the improvement of retention rate would likely result in professional satisfaction and thus reduce labour mobility. Buckler (2004) observed that knowledge management programme for professional development provides lawyers with opportunities for on-going intellectual stimulation thus avoiding the boredom and frustration that may result in a lawyer deciding to leave a firm because he/she is tired of repeating the same type of work every day. Leibowitz (2004) noted that in situations where lawyers decide to leave the firm, knowledge management ensures that there is continuity of knowledge. He posits that it also helps capture and effortlessly share senior lawyers' knowledge before retirement amongst everyone in the firm. Rusanow (2003) notes that knowledge management enables law firms to immediately share and use knowledge acquired when new members join the firm or when existing members do something new. It has been observed that tutoring and mentoring techniques enable senior lawyers to transfer their knowledge, wisdom, specific insights, practice and skill to the junior lawyers within a short space of time so that when the lawyer leaves the firm or dies, the firm's substantive practice, knowledge, history, stories and culture is preserved (Rusanow; 2004; Dubin, 2005). It therefore seems clear from the above that knowledge management initiatives will enable firms to attract and retain talented lawyers and also their clients. Developing the firms organisational memory may improve as the retention rate of the firm increases.

#### **4.5.5 Knowledge management and organisational memory**

Organisational memory is the collective tacit and explicit knowledge (processes and products) within the organisation stored and distributed across different retention facilities which may be retrieved, shared, preserved, remembered and brought to bear on present decisions and for later re-use (Foil & Lyles, 1985; Walsh & Ungson, 1991). The following have been identified as retention channels that preserve and facilitate organisational memory: individuals, structures, transformation, ecology, values, culture, history of past events and their interpretation and external archives. Organisational memories generally

preserves behaviour, norms, values, and mental maps over time and this could easily be lost as employees come and go and leadership changes. du Plessis (2004) reported that knowledge management will capture the organisation's individual knowledge or team capabilities and transform it into organisational knowledge, documented processes and knowledge base thus reducing the risk of knowledge deterioration that may arise when people leave the organisation.

#### **4.5.6 Knowledge management supports and encourage a learning culture**

As noted in chapter three (section 3.7.3), one of the foundations of knowledge management is the power of learning. Dubin (2005) observed that knowledge management initiatives may support and promote a learning culture that may foster growth and career development in the firm, and thus improve on the retention rate. An organisation with a learning culture will favour the building and development of the collective organisational memory so that knowledge and competencies representing the past and present collective learning of employees are transferred to new members across generations of learning (Pedler et al., 1989; Garvin, 1993).

#### **4.5.7 Knowledge management promotes team work and the culture of knowledge sharing**

Although increased competition in the legal market (section 2.5) has compelled law firms to share their knowledge more than ever before, it is evident that a knowledge sharing culture runs counter to the culture law firms instil on the lawyers. It has been observed that generally, law firms are noted for their star, expert, secretive, exclusivist, personal and individualistic culture that emphasises high-level individual creativity (Handy, 1985; Terrett, 1998:68; Hunter et al., 2002; Maiden, 2002; Carine, 2003:3; Lambe, 2003). Lawyers tend to hoard knowledge believing that the monopoly on particular information will lead to personal indispensability, job security, influence, and professional respect within the firm, while sharing this knowledge on the other hand may result in a loss of the value and rareness of the monopolised knowledge.

The knowledge management mantra holds that indiscriminate knowledge sharing is good (Lambe, 2003). It empowers the receiver of the knowledge and still remains with the person who is sharing the knowledge. Knowledge management promotes a culture of knowledge sharing that extends beyond the access to knowledge in the hallways, at the water cooler and at lunch time, to communication, collaboration, trust and teamwork (Kofoed, 2002). Knowledge management fuelled by advanced technology such as collaborative work spaces,



groupware, intranet, extranet, virtual deal room, knowledge maps, knowledge repositories together with techniques such as community of practice, knowledge concierge, tutoring and mentoring, apprenticeship, talk rooms, storytelling and knowledge fairs creates a culture of shared knowledge that foster team work, trust, collaboration and communication (Chester, 2002; Carine, 2003; Wesemann, 2006). Collaboration enables colleagues learn from each other, exchange ideas and generate new knowledge. When there is trust there is an increased awareness of the depth of knowledge of other members in the firm resulting in respect and commitment that in turn results in the provision of quality service to clients.

#### **4.5.8 Knowledge management is an important approach for law firms to gain competitive advantage**

The competitive strength of a law firm comes from its knowledge. Therefore, at a time when law firms are increasingly faced with challenges from competition in the legal market, the drive to specialisation and the need to operate globally (section 2.4.6, 2.4.8; 2.4.9) knowledge management may provide a competitive edge. It will enable law firms to build up market trends and develop business strategies directed at meeting the needs of both existing and potential clients (Jackson, 2001:33; Gottschalk, 2002; Kay, 2002; Curve Consulting, 2003; Rusanow, 2003; Rusanow, 2007).

#### **4.5.9 Knowledge management will provide lawyers with the knowledge they need and when they need it**

Knowledge management may help solve the problem of information overload (section 2.4.5). Knowledge management applications and tools such as intelligent agents, artificial techniques, meta-data portals, mark-up languages and user interfaces (Bookman, 1999:44; Marwick, 2001; Lamont, 2002; Heckman, 2003) may provide the ability for lawyers to research and organise irrelevant information on the web. Meta-data stored by portals and visualisation techniques like themescape and visual net may be used to draw visualisations of large amounts of information that may assist a user understand the available information more easily, and also facilitate subject-based browsing and navigation (Marwick, 2001). Indexing tools such as taxonomies organise and cross-reference material by subject area and other criteria making it easy to find information when needed (Buckler, 2004). Marwick (2001) reported that knowledge management techniques such as summarisation allows users to avoid reading a document not relevant to their current tasks thus reducing the time an individual attempts to find the right documents to use in a particular task.

#### **4.5.10 Knowledge management meets the information and knowledge needs of the lawyer**

A law firm's knowledge management initiative may focus on understanding the different types of information and knowledge that lawyers need at the different stages of their professional development. It may also support and integrate the individual lawyer's needs and the firm's needs. Staudt (2003) classifies lawyer's professional development into three stages: grinders of information (junior lawyer at the early years of their career); minders of information (senior lawyers at the middle of their career); and finders of information (senior lawyers at the last stage of their career). Bearing this categorisation in mind, it is obvious that the professional demands of junior lawyers will differ from those of senior lawyers.

### **4.6 Frameworks and models of knowledge management**

In order to provide a theoretical foundation for understanding of knowledge management in law firms some frameworks and models of knowledge management in organisations were examined in chapter 3 (section 3.7 and 3.8). These frameworks and models are based on experiences and studies in Western industrialised nations that are already knowledge economies. A lot still needs to be done in the form of empirically extending and refining these frameworks and models by focusing on how they can be applicable in the context of a Third World country (Botswana) and within specific organisations (the law firm). The applicability of these frameworks and models within the context of a law firm is likely to be different because law firms are knowledge organisations that do not go through an iterative cycle to refine its physical products. It is therefore necessary to test the applicability of these frameworks and models within context of the law firms in Botswana.

#### **4.6.1 Framework for knowledge management**

The four different frameworks for knowledge management examined in chapter 3 (section 3.7) are the learning organisation, knowledge markets, knowledge management process and the knowledge management strategy. Each of these frameworks will be now discussed within the context of the law firm.

##### **4.6.1.1 The learning organisation framework**

The learning organisation framework is particularly apt for law firms which are essentially

learning organisations conducive for knowledge management because their legal service market is knowledge and knowledge management is about leveraging this knowledge for the benefit of the law firm. Lawyers crave for new skills and greater expertise throughout their career. Leading law firms encourage their lawyers to become experts in their practice area by investing heavily in lawyer's training and mentoring programmes (Rusanow, 2003). Knowledge management encourages staff to acquire and share knowledge with others. In addition, law is constantly changing and lawyers need to keep up with these frequent changes and regulations in their practice area by constantly learning (Best 2003). Hence, within the context of the law firm, this framework does provide an understanding on how to encourage communication, offer learning opportunities and promote the sharing of knowledge within the firm.

#### **4.6.1.2 Knowledge markets**

An organisation is a knowledge market when knowledge is exchanged for reward or other valuable things such as money, respect, promotion, other knowledge, or just the feeling of satisfaction from assisting others (Brown & Duguid, 1998; Davenport & Prusak, 1998). Law firms are not market systems as such because lawyers are noted for their culture of individuality and the "knowledge is power" mentality inhibits knowledge sharing. However, knowledge management may assist law firms to demonstrate their value in knowledge sharing by ensuring that the reward system of a firm provides clear incentives and motivation for contributing to the dynamics of an efficient knowledge market in several ways. Some law firms are drifting away from assessing fee earners (associates or professional assistants) based on improved billable work to assessments based on their willingness and ability to participate in knowledge management systems. Prizes may be offered to top contributors of knowledge management over a period (Kofoed, 2002). In law firms where knowledge is the key working tool, recognition of ownership from colleagues and partners is a natural device to contribute to the knowledge management system. The basic idea is that the person contributing to the knowledge management system receives acknowledgement from peers and from superiors for his or her contribution to knowledge management. Lawyers may also be encouraged to share knowledge by changing the performance objectives and appraisal systems to formally recognise knowledge sharing (Schmidt, 2001).

#### 4.6.1.3 Knowledge management processes

Knowledge management processes offer an understanding of the manner in which organisations create new knowledge, maintain existing knowledge and discard “old” knowledge. The knowledge management processes adopted for this study is the creation, codification, transfer, utilisation and protection processes (section 3.7.3).

The knowledge creation process is oriented towards acquiring and developing knowledge or replacing existing knowledge within the organisational tacit and knowledge base. A vast amount of knowledge is generated within the law firm and from external sources on a daily bases.

The knowledge codification process is based on managing the firm’s internal and external knowledge and the conversion of this knowledge to an accessible and usable form using information technology and information management skills. This includes all processes in the law firm that deal with the content management of knowledge such as conversion, editing, review, approval or rejection, storage, organisation, maintenance, cataloguing, classification, retrieval, reservation and disposal of knowledge in a form that will be easily accessible to those that need it.

Knowledge transfer is the movement of knowledge from its point of creation or codification to the point of use. It refers to ways and means to distribute knowledge in a firm such that it will be easily accessible to those that need it. Law firms are noted for their individualistic and secretive culture. Therefore, knowledge management would result in adopting ways and means to distribute knowledge and encourage colleagues to share and re-use knowledge within the firm.

Knowledge utilisation is oriented towards the actual use of knowledge. It refers to the integration of acquired knowledge into the products, processes, and services of the law firm in order to sustain its competitive advantage.

Knowledge protection processes will protect the knowledge within the law firm from illegal or inappropriate use or theft. This process is apt for law firms because lawyers are very sensitive to ethical issues of client confidentiality and security of information and would therefore employ all necessary techniques to ensure the protection and security of the different categories of knowledge in the law firm.

#### **4.6.1.4 Codification and personalisation**

Codification and personalisation are two basic strategies of knowledge management (Sanchez, 1997; Hansen et al. 1999; Butler, 2003, Connell et al., 2003; section 3.7.4). Codification focuses on explicit knowledge and centres on information technology while personalisation tends to focus on tacit knowledge and addresses the storage of knowledge in human minds shared through person to person interface such as story telling, personal meetings and personal contacts. Both strategies may have positive and negative impact regardless of which is central to the organisation. Because most law firms have limited their knowledge management approach to information technology, the dominant strategy in law firms seems to be the codification strategy. However, the challenge in the law firm is to make explicit knowledge available as well as also ensure that tacit knowledge is shared through personal interaction thus implying that neither personalisation nor codification strategy alone will be sufficient to manage the knowledge of the law firm. Both approaches need to be integrated so that the benefits of both tacit and explicit knowledge can be gained. A successful symbiosis strategy is one that takes advantage of the positive features of both personalisation and codification strategies.

#### **4.6.2 Models of knowledge management**

The different models of knowledge management (section 3.8) whose application may be adopted within the context of the law firm are the intellectual capital model, the SECI, knowledge asset and “ba” model and the Leavitt’s diamond organisational model (Diamond Trist) as modified by Galbraith (1997) and Pan & Scarbrough (1999). The following subsections examine these models within the context of a law firm.

##### **4.6.2.1 Intellectual capital model**

Several authors have recognised that the competitive strength of law firms is in its intellectual capital (Chester, 2002; Gottschalk, 2002; Kofoed, 2003). The growth and recognition of intellectual capital in organisations in recent years has challenged law firms to better manage their collective knowledge as an asset. Terret (1998) adopted this model as one of the bases of understanding the different categories of knowledge in the law firm. He considers knowledge management in the law firm as a renewable, reusable and accumulating resource of value to the firm when applied in the production of legal services. The model categorises knowledge into human and structural capital. Human capital within the context of the law firm is the knowledge of the lawyers and the employees in the law

firm. This may be equated to the tacit knowledge base of the firm. Structural capital on the other hand, is the intellectual capital that remains in law firms when the employees and staff go home at night together with all other knowledge embedded in the processes, culture, print resources, electronic assets, information about the firm's operations, hourly billing rates for lawyers, clients' names and matters, staff payroll data and client invoice data. Explicit knowledge (declarative knowledge, explicit procedural knowledge and knowledge of the business of law) are examples of the structured capital of the law firm's knowledge.

The extent of the application of this model within the law firm is limited because unlike manufacturing companies which are listed on the stock exchange with assigned monetary value to their intellectual capital, law firms are knowledge-based companies that are not listed on the stock exchange making it difficult to assign monetary value to their intellectual capital. Besides, law firms place more value on the human capital (particularly, the individual lawyers expertise) than on the structured capital.

#### **4.6.2.2 SECI, knowledge asset and “ba” model in the law firm**

While the intellectual capital model provides a basis for understanding the different categories of knowledge in the law firm, the SECI, knowledge asset and “ba” model (Nonaka et al., 2002; section 3.8.2) may be adopted as the basis for understanding the dynamic process of tacit and explicit knowledge creation, generation and storage within the law firm.

Socialisation, externalisation, combination and internalisation are components of the SECI process (Nonaka & Takeuchi, 1995; section 3.8.2). Socialisation in the law firm is the transfer of tacit to tacit knowledge through the sharing and exchanging of experiences by observation, imitation and practice to create new knowledge within the firm. It generally occurs through workshops, apprenticeships, conversations in the hall ways, seminars, and conferences, newsletters, as well as at the water coolers. Typical examples of tacit knowledge transfer within the law firm are tutoring and mentoring opportunities where senior lawyers train and equip junior lawyers, and junior lawyers learn from senior lawyers by imitation, observation and practice. Externalisation is the process of articulating tacit knowledge into explicit knowledge through concepts and analogies. An example of when tacit knowledge is transferred to explicit knowledge within the context of a law firm is when a lawyer develops a new approach to a legal matter based on his tacit knowledge,



judgment, experience and understanding. This knowledge may then be transferred to explicit knowledge in the form of precedents and work products documents, briefs or knowledge banks where it may be shared by other members of the firm. Another way is by a lawyer capturing what he/she learned at a workshop into explicit form such as written report.

Combination within the context of the law firm is the explicit to explicit knowledge transfer. This is due to the fact that most knowledge management initiatives in law firms has focused on a one dimensional perspective of information technology (Terret, 1998; Gottschalk, 1999; Gottschalk, 2000; Campbell, 2002; Gottschalk, 2002; Hunter et al., 2002; Kofoed, 2002; Khandelwal & Gottschalk, 2003; Staudt, 2003; Opp, 2004, Rusanow, 2007; section 4.3). It therefore stands to reason that combination in the form of document management and document centralisation in info-banks is the dominant approach of knowledge management. However, as noted in the literature, the knowledge management process in the law firms is not limited just to combination. An example of combination approach in the law firm is when a lawyer puts together information collected from different sources in the firm to write up a judgment, or a research paper. Combination of knowledge between lawyers may occur through the telephone, informal conversations, exchange of document, meetings and computerised networks. Law firm know-how projects establish or capture legal knowledge in the form of legal documents.

Internalisation is explicit to tacit knowledge transfer within the law firm. This is the process of experiencing knowledge through an explicit source. For example, one can combine the experience of reading the workshop report with previous experiences in order to form an opinion on an issue. Another example is a lawyer adopting a similar solution to a legal matter that has been used by others in the firm.

Knowledge assets refer to firm-specific resources that are indispensable to create, save, use and transfer knowledge. The lawyers are the main knowledge asset within the law firm. The top management (managing partner) is a crucial knowledge asset because knowledge creation may be facilitated by the consistent, reliable and plausible behaviour of top management.

Ba is the Japanese word for place or space and it is the shared context for knowledge creation. It is the social context within the organisation including its culture, work practices and business strategies where the transfer of knowledge takes place. The law firm provides the knowledge space for the creation of knowledge.

#### **4.6.2.3 Leavitt's diamond organisational model (Diamond Trist) as modified by Edward & Mahling (1997); Galbraith (1997) and Pan & Scarbrough (1999)**

Leavitt's (1965) model adopted and modified by Galbraith (1997) and Pan & Scarbrough (1999) to include other variables such as culture and rewards provide the basis for the understanding of knowledge management within a typical law firm environment in terms of task, structure, people and technology, rewards and culture. Edward & Mahling (1997) adopted this model to provide a framework for the evaluation of the knowledge management needs within the large law firms.

Tasks are the production of goods and services that the organisation exists to perform. The major legal tasks performed in the law firms are the provision of legal services to clients and attending court sessions. These tasks are generally aimed at adapting the law to the needs of a specific case. Other sub-tasks are legal research, giving legal advice to clients and the analysis of the law and the facts as they appear in a particular client's situation. These different tasks performed in the law firm are linked to the structure, culture, techniques, people and technology of the law firm.

Structure is the system of communication, authority and work flow within the organisation. For knowledge management to be successful, law firms must adapt its structure (Buckler, 2004). Law firms are professional bureaucracies, where lawyers enjoy a relatively high degree of professional autonomy (Mintzberg, 1989; Davenport et al., 1998). The managing partners play a less intrusive role in the day-to-day activities of the lawyers. However, despite the unobtrusive role of top management, a managing director in the firm will usually consult with the committee of partners in providing the overall direction of the firm. He/she is responsible for developing and encouraging knowledge management in the law firm and in shaping the overall knowledge management activities in the firm.

Besides the organisation and work flow, it is also crucial to understand the structural organisation of the law firm. The Leavitt (1965) model considers the people in the organisation as a component of the knowledge management team. A small firm consists of a sole proprietor and the administrative staff, while a typical large law firm's structure consist of the managing partner, the partners, lawyers, associates and non legal professional staff (legal assistance, legal information professionals, clerical and administrative staff, information system staff, marketing staff and financial and business support staff).

Technology is an important aspect in Leavitt's (1965) model. There is no doubt from the

literature examined in this study (section 4.4.7) that information communication technology forms a cornerstone to knowledge management. In a study of the adoption and use patterns of knowledge management in law firms in Botswana it was found that law firms in Botswana were at the initial stages of the adoption of information communication technologies and were yet to adopt technologies for knowledge management (Fombad, 2002).

It is worth noting that there is no standard model or framework for knowledge management in legal practice because as already observed, no two law firms are exactly the same. Each firm has its unique knowledge management needs. Therefore, the frameworks and models of knowledge management examined so far provide just guidelines for understanding of knowledge management in law firms.

#### **4.7 Barriers to knowledge management in law firms**

It has been observed from studies in knowledge management in law firms that in spite of the enormous potential for the use of knowledge management, knowledge management remains a narrow theoretical concept to many lawyers as very few law firms seem to have managed to establish a really well-functioning system. Therefore, a general assumption that because law firms have more sources of knowledge, they are expected to have more knowledge at their disposal does not necessarily hold. The discussion in this section focuses on a number of barriers to knowledge management to law firms that must be addressed to enable the full benefits of knowledge management to be enjoyed.

##### **4.7.1 Cultural Barriers**

As in many organisations, several legal researchers have identified cultural barrier as the most prevalent challenge to successful implementation of knowledge management in law firms (Terret, 1998; Kofoed, 2002; Curve Consultant Survey Report, 2003; Rusanow, 2003; Rusanow, 2007). The individualistic culture and the time-based billing model are the prevalent cultural impediments to knowledge management in the law firm.

###### **4.7.1.1 Individualistic culture**

Law firms are noted for their personal and individualistic culture that emphasises high-level individual creativity (Handy, 1985; Terrett, 1998:68; Hunter et al., 2002; Maiden, 2002; Carine, 2003:3; Rusanow, 2003; Rusanow, 2007). Underscoring this view, researchers have referred to law firms' culture as star, expert, and secretive or exclusivist (Maiden, 2002; Lambe, 2003). This may be because lawyers compete directly with each other for

the same clients through their special knowledge, gifts and talents, and are under the urge to build a unique individual expertise in a certain areas. Also, because of the general prohibition against advertising in the legal profession, a client's choice of a firm most often has depended on the star, reputation or expertise of a particular lawyer.

The "knowledge is power" culture enables one to better understand this individualistic culture. Because knowledge is regarded as power, people try to make a secret of it. This type of mentality describes situations where professionals with the highest reputation and monopolies of knowledge believe that their career prospects depend on the ability to keep their unique information and knowledge to themselves (Reimus, 1997:10; Andrews, 2001:25). The "knowledge is power" culture is typical of law firms because lawyers are often not willing to share their expertise, believing that monopoly of particular information will lead to personal indispensability, job security, influence, and professional respect within the firm. A large part of their value to the firm and the client is the information they have acquired over years of practice and carried around in their heads. Therefore, sharing this information and knowledge may result in a loss of the value, and rareness of the monopolised knowledge. Also, lawyers are comfortable in hoarding information than sharing it with colleagues who may want to outsmart them (Rodwell & Humphries; 1998; Wesemann; 2006). It is common to find colleagues who may want to outsmart the contributor of knowledge by judging the peer's work as inferior and hastily pointing out improvements just to emphasise their own expertise. Lawyers may sometimes hoard information because of the feeling that many pieces of information about the firm should not be made available to those colleagues involved in management.

The knowledge management mantra that holds that knowledge sharing is good and power comes from transmitting information to make it productive, not from hiding, is essential to overcome a culture of knowledge hoarding in the legal profession. For knowledge management to be effective, lawyers need to be rewarded and feel appreciated for sharing and contributing their expertise to the firm as much as they are for possessing it in the first place. There is a need for lawyers and employees to have some sort of self-motivational creativity and sense of why knowledge sharing is important.

#### **4.7.1.2 Time-based billing model**

The time-based billing model and the partner-compensation model where the partner is compensated based on revenue generated, and revenue is generated based on hours billed, have been identified as probably the greatest barrier to knowledge management in law firms

(Terret, 1998; Kofoed, 2002; Rusanow, 2003; Rusanow, 2007). The traditional culture of the law firm associates the main source of income of the lawyer on the time he/she spends in deploying knowledge to the services of clients, and not on other internal efficiencies. This implies that, the time spent on knowledge sharing, capturing or coding is non-billable and will not measure performance. Therefore, if knowledge management is not officially recognised as a requirement of the job, there will be little motivation from lawyers who are already under time pressure to produce billable hours, to engage in knowledge management activities because it will be considered as some additional work and a waste of time. Hence, lawyers need incentives to devote time on knowledge management initiatives. Kofoed (2002) noted that the new way of billing clients based on services provided rather than time taken is expected to encourage knowledge management as fees may be allocated for the use of knowledge management systems.

#### **4.7.2 Technological issues**

Perhaps one of the greatest difficulties in the implementation of knowledge management in law firms is the fact that knowledge management is perceived as a technology-related initiative (Terret, 1998; Gottschalk, 1999; Gottschalk, 2000; Campbell, 2002; Gottschalk, 2002; Hunter et al., 2002; Kofoed, 2002; Khandelwal & Gottschalk, 2003; Staudt, 2003; Opp, 2004, Rusanow, 2007). In many respects, information communication technology contribute to making the sharing of knowledge between people more effective although knowledge management is not all about technology. However, it must be borne in mind that the implementation and use of information communication technologies alone will not guarantee success. Rather it is the innovative creation and effective sharing of knowledge that matters. This is because knowledge is still a human issue and the information technology department should be the last place for knowledge management to reside.

It is still very common to find lawyers who are reluctant to use new technologies. This resistance is high, particularly amongst the older lawyers who are overwhelmed with the ubiquitous presence of information communication technology and often rely on the research skills of the younger lawyers (Dubin, 2005). It is curious that some lawyers will balk at the notion of using information communication technology for knowledge management when the legal profession is one that shows a demonstrated ability to learn completely new areas of knowledge in preparing cases and representing clients. The reason for this may be due to the legal mindset. Lawyers generally seek to apply high standards in terms of authenticity, quality, security and integrity of information and knowledge on which they base their

arguments and serve their clients (Gottschalk, 2000:73). These same standards translate are used in assessing the use of information communication technology and any tool that fails in any significant detail to meet these standards may encounter distrust from the lawyers. Thus, information communication technology used for knowledge management should be up to date, secure and fully accurate so as to avoid any chances of distrust from the lawyer. The reluctance to use information communication technologies can translate into the unwillingness to assist in knowledge transfer techniques that will involve the use of information communication technology.

#### **4.7.3 Inability to enforce knowledge management**

A knowledge management system would only have value when lawyers routinely input their work product and consult the systems when performing their work (Wesemann 2006). Therefore, firms that have problems requesting their lawyers to submit the time sheets and legal briefs and other forms of knowledge promptly to the knowledge system will find it difficult to comply with knowledge management expectations.

#### **4.7.4 Conflict avoidance**

Fahey & Prusak (1998:268) noted that the attitude of conflict avoidance and some conservative habits may prevent the sharing of knowledge within an organisation. This is why one of the eleven deadliest sins of knowledge management is not to establish, challenge and align a shared context for the members of the organisation. This shared context requires engagement in open, honest, supportive and critical dialogue to develop different views. Therefore, in law firms if the leading members of the firm are not willing to take risks and have the “don’t rock the boat attitude,” new ideas may be covered up very easily and knowledge not culturally legitimated may be suppressed.

#### **4.7.5 Bureaucracy and hierarchy**

The organisational structure of law firms is professional bureaucracies. Professional bureaucracies are structures where the operating core (lawyers) enjoy a high degree of professional autonomy and top management play a less intrusive role in the day-to-day activities of the lawyers (Mintzberg, 1989). In spite of the professional autonomy, it is not uncommon for professional bureaucracies to have formal and administrative procedures that prevent cross-functional communication, cooperation and the sharing of knowledge and new ideas.



Therefore, top management still has an important part to play in shaping the overall direction in which knowledge is created and disseminated.

#### **4.7.6 Size of a firm**

Arguably, the size of the firm may have a bearing on the willingness of a firm to implement knowledge management. In considering the size of the firm, it is important to make a distinction between large firms on the one hand, and small firms on the other hand, often referred to as small and medium size firms. Generally, there has been no single, distinct and uniformly acceptable definition of a small firm appropriate in every case, and different definitions may differ according to the sector being studied (Amboise & Muldowney, 1988; Storey, 1994). Newbould & Wilson (1977) cited in Egbu (1994) state that the choice of measure is flexible and it does not matter much in practice which measure is adopted, for most measures are highly correlated with each other. The European Union (Commission of the European Communities, 1996) and Small Business Service (2004) consider small firms as organisations which employ less than 250 employees. In relation to law firms, Schoenberger (1995) in section 2.3 of this study outlines the following four organisational modes for legal practice: the mega-firm having more than 1000 lawyers, medium size firms with 10 to 200 lawyers, small firms with 2 to 10 lawyers and the sole practitioner. Using the above distinctions as a rule of the thumb, all the law firms in Botswana are mainly small size firms because they have less than nine lawyers or less (section 2.3 table; 6.13, 48.5% agreed).

Most studies on knowledge management reveal a considerable insight into knowledge management strategies adopted by large firms (section 4.3; Nathanson & Levison, 2002; Curve Consultant Survey Report, 2003). There is very little writing on knowledge management in small and medium size enterprises generally and there is hardly any writing on knowledge management in small law firms. One may argue that this situation has prevailed because large firms generally have more knowledge assets and intangibles to be managed and hence, a predominant focus on them seems appropriate. In addition, most large corporations comprise of many different business units, which can be scattered across different countries and locations and thus, they need to implement knowledge management to facilitate the sharing and transfer of knowledge across their various sites. Also, large firms tend to have larger budgets for consulting and technology (Campbell, 2002). Besides, there is a feeling that small and medium size enterprises tend to be regionally or locally focused with a narrower scope of business and pay less attention to other issues.

In order to appreciate the concept of knowledge management in small law firms, this study draws on the limited literature of knowledge management in small and medium size enterprises from other organisations. Most of these publications on knowledge management in small and medium size enterprises are case studies conducted to examine their perception towards knowledge management and their practices and developments in the area. This study adopts a triangulation of qualitative and quantitative methodology and draws from the few studies that have been carried out on knowledge management in small and medium size enterprises to establish guidelines for knowledge management in small law firms in Botswana. McAdam & Reid (2001) compared the perception of knowledge management in both large organisations and small and medium size enterprises. The main finding from their study suggests that while knowledge management understanding and implementation was developing in large organisations, small and medium size firms suffered from certain drawbacks. They point out that small and medium size firms appeared to have a more mechanistic view and a limited vocabulary of knowledge, less systematic approaches for embodying and sharing knowledge and their perceived benefits of knowledge management were targeted towards the market rather than towards the improvement of internal efficiency.

In another study case study of three small businesses operating in Singapore and Australia, Lim & Klobas (2000) investigated the extent to which six factors drawn from the theory and practice of knowledge management can be applied in small organisations. These factors are: balance between need and cost of knowledge acquisition; the extent to which knowledge originates in the external environment; internal knowledge processing; internal knowledge storage; use and deployment of knowledge within the organisation; and attention to human resources. They concluded that differences were apparent in the value placed by small and large organisations on systematic knowledge management practices, especially in the adoption of computer-based knowledge storage systems. Hence, they felt that the greatest need for small businesses was to build an effective knowledge repository.

A longitudinal case study of organisational learning in the small business sector of the United Kingdom economy was conducted by Matlay (2000). In essence, he found that the frequency of formal learning in these firms increased in direct proportion to their size. Learning was incidental and occurred sporadically throughout routine tasks. Knowledge management in terms of acquiring, transferring and using learning-based new information did not feature high on the agenda of most of the small businesses.

Egbu et al. (2005) case study presents and discusses the challenges and benefits of knowledge management for sustainable competitiveness in a small and medium size enterprise in a knowledge intensive construction company using semi-structured interviews. The paper concludes that managing knowledge assets in small and medium size firms is an integrated and complex social process which has culture, people, finance, technology and organisational structures at its core.

A qualitative study to explore the knowledge management features of small and medium size firms was carried out by Sparrow (2001). He underscored the need to recognise the different “mental models” of individuals and to share their personal understanding in the development of knowledge management processes. He also noted that the development of a knowledge-based system in smaller businesses should be based on the fundamental understanding of its role and basic principles.

An overview of the literature of knowledge management in small and medium size enterprises in the preceding paragraphs indicates that knowledge management issues in small businesses are not simply scaled-down version of large firms’ experiences simply because most knowledge management studies have focused on large firms. Or as Sparrow (2001) aptly puts it, small businesses are more than “little large businesses.” The size, distinct characteristics, ideals and experiences of small firms all combine to present several unique challenges for knowledge management. For example, small firms are constrained by their resource scarcity in terms of finance, time, capital, labour, equipment and physical commodities (Lim & Klobas, 2000; Sparrow, 2001; Yewwong, & Aspinwall, 2004; Egbu et al., 2005). Due to lack of resources these firms are often weak in terms of financing, planning, training and the use and exploitation of advanced information technology (Egbu & Botterill, 2002). They often lack time or resources to identify and use important external sources of scientific and technological expertise (Egbu et al., 2005). Most of these organisations either cannot afford, nor do they want to commit themselves to the expensive consultancy services used by larger firms, and in hiring dedicated information professionals or staff (Yewwong & Aspinwall, 2004).

For the most part, small businesses lacked an understanding of knowledge management processes and are just beginning to understand how knowledge management might assist them. Most of the activities and operations in small firms are governed by informal rules and procedures (Ghobadian & Galleary, 1997; Egbu & Botterill, 2002). Hence, small firms are likely to inhibit the implementation of formal, prescriptive and comprehensive

knowledge management systems and programmes. Employees may be reluctant to capture and store their knowledge formally and knowledge sharing programmes may be conducted haphazardly. In addition, the lack of formal procedures may hinder the efficient working of a knowledge management system or programme, even when it is implemented (Yewwong & Aspinwall, 2004). Learning is at best informal, incidental, and reactive (Matlay, 2000). These firms cannot afford or are unwilling to commit resources to conduct research, acquire knowledge from environmental scanning and cannot afford time for trial and error activities since their investments are largely targeted on their core operational processes (Lim & Klobas, 2000; Yewwong & Aspinwall, 2004). For these very reasons, these firms lack the capacity to maintain a knowledge repository of the same depth and breadth as large organisations (Lim & Klobas, 2000; Egbu et al., 2005).

Apparently, small firms do not have knowledge identification, capture, mapping, dissemination and knowledge creation processes well thought out or embedded in daily practices. Egbu et al. (2005) observes that elements of knowledge management in the small construction firm are practiced in an *ad hoc* fashion. Furthermore, a very small percentage of small firms are using the intranet to share knowledge and informal face to face social interaction was the most frequent form of communication. McAdam & Reid (2001) noted that the creation of new knowledge in small and medium size enterprises is less advanced than in larger firms. In addition, small firms possess considerable weaknesses in their knowledge management storage process. The documentation of key knowledge is rare and it is normally not properly stored in a readily retrievable format due to their less formal working systems and procedures (Egbu et al., 2005). One other reason why knowledge tends to be passed on without any associated records or documentation is that the communication culture in small firms is usually verbal informal and “in the corridor” (Yewwong & Aspinwall, 2004).

The owners and partners are often managers of small firms. They oversee the decision-making process in every aspect of their business and are frequently constrained by time to take care of every aspect of their business (Lim & Klobas 2001; Yewwong & Aspinwall, 2004; Egbu et al., 2005). This is unlike large firms, where top management has more time to think and be involved in knowledge management because some of its roles and responsibilities can be distributed to lower level managers. There is little wonder that most owner-managers lack a proper understanding of knowledge management and its potential, and are often slow in adopting formal and systematic knowledge management practices.

McAdam & Reid (2001) asserts that knowledge management does not feature highly as an important agenda in most small and medium size firms.

The owner-manager's personality can also become a main obstacle in the accomplishment of knowledge management in small firms since they have a strong dominance in the firm. An owner-manager who is dictatorial can be problematic when implementing new initiatives (Matlay, 2000; Egbu & Botterill, 2002; Yewwong & Aspinwall, 2004). Yewwong & Aspinwall, (2004) point out that, an owner-manager with a personality that hoards knowledge, controls every aspect of his/her business, and punishes mistakes may well impede the building of a knowledge friendly environment. Sparrow (2001) opines that owner-managers may tend to limit the sharing of knowledge for fear of losing control. They may resist providing knowledge by deliberately avoiding training and development opportunities for employees in certain areas pertinent to their own personal expertise. The experience and judgment of owner-managers may play an important role in the process of using knowledge. For example, many managers started at the bottom and have worked upwards the "hard way," usually through learning-by-doing and so, believed strongly in their own experience and opinion (Yewwong & Aspinwall; 2004). As a result of this, they will usually depend on their personal experience, opinion and "own world view" when it comes to making key decisions and utilising knowledge.

Another problem that may confront small firms is the low degree of employees' specialisation in their jobs (Yusof & Aspinwall, 2000). Small firms tend to have mainly generalists performing a variety of tasks who may be termed, according to the old adage, "Jack of all trade and a master of none." Generally, low specialisation tends to result in lack of a thorough comprehension of a specific task.

The lack of human resources is a stumbling block to implementing knowledge management in small law firms. Staffing constraints mean that the appointment of multiple new roles and positions is less practical since these firms may lack highly educated and experienced employees or expert professionals to initiate such a programme (Yewwong & Aspinwall, 2004; Egbu et al., 2005).

Notwithstanding the above limitations of knowledge management in small and medium size enterprises, these firms still have the potential to benefit from the flexibility of knowledge management. Several arguments have been put forward as to why small firms can benefit so much from knowledge management. It has been observed that managing the knowledge assets and intangibles in small firms is vital because it provides a way for them to leverage

most, if not all of the benefits of knowledge management (Lim & Klobas, 2000; Yewwong & Aspinwall, 2004).

In contrast to the bureaucratic structure in large firms, the structure in small firms is simple, less hierarchical with fewer levels of bureaucracy in the vertical that puts them at an advantage over large firms when it comes to implementing knowledge management (Lim & Klobas, 2000; Yewwong & Aspinwall, 2004). Functional integration both horizontally and vertically makes it easy for small firms to facilitate initiatives for change across the organisation. Egbu et al. (2005) noted that small and medium size enterprises have efficient and informal communication networks. They also point out that they have shorter and direct communication lines thus allowing for a faster discourse on knowledge management issues within the organisation.

A unified and fluid culture with fewer interest groups and a corporate mindset that emphasises the company as a single entity rather than a department is more salient in smaller firms (Ghobadian & Gallear, 1997). Arguably, with an organic and fluid culture, it will be easier to achieve cultural change in the small business environment.

Small firms are at the advantage when it comes to implementing new initiatives because they have simple systems and less red tape in place (Ghobadian & Gallear, 1997; Yewwong & Aspinwall, 2004). Their systems are in the main, people-dominated and their processes are often more flexible and adaptable to the changes taking place around them. The fact that small firms comprise of fewer employees than their larger counterparts certainly gives them a distinct advantage. Yewwong & Aspinwall (2004) observed that in small firms, employees normally know each other more intimately and have face-to-face contact with one another, and it is thus easier to get all the employees together to initiate and implement a change. This is unlike larger firms that often have to cope with complex systems and processes, which makes them more rigid and slower when it comes to abandoning them.

Small firms are in a better position in terms of acquiring customers' knowledge because their managers and employees tend to have close and direct contact with customers and other organisations (Yewwong & Aspinwall, 2004; Egbu et al. 2005). In fact some managers and employees may even know the customers socially and personally. Yewwong & Aspinwall (2004) assert that a close contact between firm and customers will enable a more direct and faster knowledge flow. They suggest that it will allow them to obtain information such as competitors' actions and behaviour, market trends and other developments. In contrast, large firms tend to have indirect contact with customers as they mostly rely on large-scale



surveys and consulting firms to provide them with relevant customers' knowledge.

The considerable amount of tacit knowledge generated in small and medium size enterprises remains the most important form of knowledge for organisational success (Lim & Klobas, 2000; Egbu et al., 2005). Yewwong & Aspinwall (2004) feels that it is simpler for small firms to organise tacit knowledge (profiling employees or setting up a corporate listing of employees who are knowledgeable in a particular area), because they have fewer employees and most of them know each other and have a better idea of the level of expertise and know-how of their colleagues, and who to consult if they need certain information.

However, the fact that small and medium size firms are highly susceptible to the loss of employee's knowledge underscores the need for organisational sustainability in small firms and the importance of capturing individual knowledge. A Small Business Service (2004) statistics reveals that only 64% of businesses registered in 1998 were still going three years after registration. The implication is that 36 % perished after three years for a variety of reasons such as, business ceased to be lucrative, the death or retirement of the proprietor and changes in the personal motivation and aspirations of the owner. Lim & Klobas (2000) also suggest that small and medium size firms are highly susceptible to the loss of employees seeking better compensation packages and higher prestige associated with larger firms.

From the discussions in this section one can conclude that although most studies on knowledge management have focused on large firms, small and medium size firms still have the flexibility to benefit from knowledge management. In addition, these firms are facing unique challenges underscoring the need and importance for knowledge management. However an awareness, understanding and sensitivity to their size, ideals and characteristics is crucial in order to ensure effective implementation of knowledge management. Clearly, small businesses could ill afford such an all out approach to knowledge management. Knowledge management in small firms should be implemented at a rate that is commensurate with their level of resources and their capacity. It suffices to say that be it large or small, all firms that wish to stay competitive have to develop their ability to maintain, improve, organise, use and reuse the employees' knowledge.

#### **4.7.7 Language**

Generally, knowledge management theorists suggest the need for a common language to communicate analogies and metaphors and to externalise tacit knowledge hidden in

individual mental models, viewpoints, paradigms and beliefs (Nonaka, 1994 & Haldin-Herrgard, 2000:361& 21). Law firms may lack a common language to communicate and externalise tacit knowledge hidden in individual paradigms and beliefs.

The next section explores the different measures for overcoming the barriers of knowledge management in the law firm that would result in the effective implementation of knowledge management.

#### **4.8 Factors critical to the success of knowledge management in law firms**

One of the key challenges to knowledge management in the law firm is not so much that of finding the knowledge, but rather overcoming the main obstacles to capturing, mobilising, and effectively facilitating or enabling the timely exchange and transfer of knowledge. Although lawyers are supposed to be sophisticated managers of knowledge, the state of the art of knowledge management and the challenges to knowledge management in law firms examined above, indicates that several factors need to be considered to ensure the effective management of knowledge in law firms. The following sub section identifies some of the factors critical to the success of knowledge management in the law firms.

##### **4.8 1 Encouraging a culture of knowledge sharing**

An open, non-secretive, and cooperative culture is necessary for knowledge management to flourish (Maiden, 2002). Aadne et al. (1996) define cooperative culture as a horizontal and vertical connection within the firm that shares compatible goals, strives for mutual benefits and acknowledges high level of mutual interdependence. A major cultural shift from “individual knowledge is power” to “collective knowledge is competitive advantage”, where the benefits of sharing information and knowledge are seen as real, is required. Though financial incentives and other initiatives may change the lawyer’s attitude and behaviour, without a culture of knowledge-sharing, the expectations to create the spirit and willingness to share information and knowledge may still be low. Law firms need to address cultural barriers in their business processes such as compensation systems, career progression model and budgeting system. Kofoed (2002) noted that firms have now started introducing fixed contracts as opposed to hourly rates, while other firms are offering “no win no fee services” and some clients are asking for electronic connections to the firm. Risk-based premiums, contingency fees and equity in lieu of fee arrangement are other ways of generating income. Nahapiet & Ghoshal (1998) observed that the success of the American law firm, Wachtell, Lipton, Rosen and Katz is largely due to the emphasis on

cooperation, on open disclosure of information and the building of loyalty to the firm. Amidst increasing competition within law firms and the need to improve the quality and productivity of work, working together without holding back or protecting vital pieces of knowledge will result in more productivity and innovation than any one could reach individually. The next section examines the different ways of encouraging a culture of knowledge sharing in law firms.

#### **4.8.1.1 Rewards and incentives as a means of encouraging a culture of knowledge sharing**

Rewards and incentives may be used as an extrinsic motivation to lawyers to encourage knowledge sharing. An exploratory study by Bock & Kim (2002) on what actually motivates people to share knowledge suggests that a positive organisational attitude towards sharing and expectations of benefits from the organisation provide better results than external reward. Drawing from the expectancy theory, Davenport et al. (1998) reported that, the strength of the willingness to contribute to the knowledge management systems depends on the strength of an expectation that contributing to the system will be followed by a given outcome and on the attractiveness of that outcome to the contributor. One type of incentive in the law firm is for the staff performance evaluation to include a review as to how well a lawyer participates and supports the knowledge management process (Leibowitz, 2002; Platt, 2003). An awareness that working with knowledge management will be considered when performance evaluation comes up or in any future career decisions is important in law firms where traditionally, performance management have been based solely on the ability to produce billable work, and few firms have so far rewarded individuals based on how well they shared their knowledge. It has been observed that assigning billing codes to lawyers for productive non-billable hours such as writing articles, or submitting an important piece of know-how to the database, is an important way of encouraging knowledge sharing in firms (Maiden, 2002; Leibowitz, 2002). By so doing, lawyers will feel acknowledged that they have somewhere to record the time invested in knowledge management, and will therefore feel encouraged to share more knowledge. Kofoed (2002) observed that the challenges in terms of incentives is bigger in a law firm than in any other type of organisation because an expert with knowledge in a particular area may not want to share his/her knowledge with colleagues because he wants to make himself /herself indispensable to the firm by enhancing his /her bargaining power when remuneration and possibilities of partnership are discussed.

#### **4.8 1.2 Recognition of ownership**

The provision of personal recognition of ownership from peers and from superiors when one contributes to a knowledge database or actively participates in knowledge sharing has been successful in enhancing knowledge sharing in many organisations (Kofoed, 2002; Disterer, 2003). Generally in the academic world for example, the recognition of ownership has been a major driver for knowledge sharing through publishing. Most academics earn little or no monetary benefits for the contribution of articles in a journal, but good articles or a series of articles from an individual will earn him/her academic recognition from peers and may even lead to promotion in the academic profession. Therefore, if lawyers are personally recognised for sharing their knowledge, they get the message that their knowledge is valuable and valued, build up a reputation and fame, thus sending a message to other colleagues for positive working habits.

##### **4.8.1.3 Trust and concern**

Generally, trust reduces the fear that others would act opportunistically. Krogh (1998:136) refers to trust as “care” and defines it as, leniency in judgment, courage to voice opinions, the feeling of concern and interest for different view points and experiences within the organisation. An attitude of trust and concern amongst members of the firm is a precondition for knowledge sharing (Chester, 2002). Law firms need to strive for a culture of accepting mistakes and a climate of constructive conflicts that gives members a chance of “falling forward” and of experimenting and taking risks. A lawyer should also develop the ability to trust the information he/she receives through enabling technologies. Such information is considered as second hand information and in most cases is not perceived to be as reliable as that which is received face to face (Ellis, 2001). Face to face access to knowledge or real time equivalents such as chat rooms allows for dynamic and responsive searching while access to data base is static and tend to be one sided.

#### **4 8.2 Knowledge management needs a solid technological platform**

It was observed in section 3.10 that although technology is not a panacea for knowledge management, technology has generally played a key role in managing knowledge in organisation (Davenport & Prusak, 1998; Bloodgood & Salisbury, 2001:61; Gottschalk, 2002). Therefore, a thoughtful implementation of information communication technology for the knowledge management process in a law firm is a great way to invigorate a knowledge management initiative. Functional, technical, cultural fit and costs are major variables to

consider in the selection of the appropriate technology for each law firm. Lawyers can no longer afford to be illiterates in the use of information communication technology. Short courses on the use of information technologies for knowledge management should be carried out and every member sensitised on the importance of information communication technologies. It is also crucial for law firms to consider offering short courses on knowledge management to lawyers in order to promote the adoption process of knowledge management in law firms.

#### **4.8.3 Knowledge management initiatives should extend beyond information communication technology**

Quite clearly, good technological tools are expected to make big strides in achieving knowledge management by providing the means to create, share, and use knowledge more effectively. However, if a group of people are not sharing knowledge and interacting with each other, information technology is not likely to create it. Knowledge management requires a mix of technical, organisational and interpersonal skills.

#### **4.8.4 Management must be in front of and behind knowledge management**

Generally, top management commitment towards a project in an organisation is an efficient lever to the success of the project (McDermott & O'Dell, 2001:78). It therefore stands to reason that if a managing partner in the law firm sensitise the firm that knowledge management is critical to the future growth of the firm lawyers would start to pay attention to knowledge management. If the managing partner addresses the cultural barriers to knowledge management, lawyers will begin to adopt knowledge management in their daily work practices. Generally organisational slack permits and allows time for individuals in an organisation to network (Wiig, 1997; Krogh, 1998). The managing partner in the law firm should provide time for communication and make it possible for members in the firm to network with each other. They should fund and support knowledge management activities, recognise and appreciate lawyers' efforts and achievement in the area of knowledge management and positively communicate the importance of the need to nurture, enhance, and care for knowledge initiatives.

#### **4.8.5. Organisational structure**

Knowledge management theorists suggest flexible and non-hierarchical structures as the most suitable for encouraging sharing and collaboration across the organisation (Gold et

al., 2001; Disterer, 2003). Law firms may seem very suitable for knowledge management because they are professional bureaucracies where the lawyers enjoy a high degree of professional autonomy with less stringent regulations and hierarchies (Kofoed, 2002). Nevertheless, in order for knowledge management to thrive in law firms, the commitment of top management as well as the involvement of all members in the firm is crucial in shaping the overall direction of the firm.

A good organisational design will likely foster inter-organisational collaboration and knowledge sharing within a firm. The knowledge management literature reveals that in order to reduce formal communication and bureaucracy, modern offices and layouts should be designed in such a way that the offices of professionals and executives are close to each other (Soliman & Spooner, 2000; Disterer, 2003). Skyrme (2002) reported that Scandinavian architects have shown the importance of good office design that takes account of people flows and provide informal areas for knowledge exchange. Therefore, it is important that modern law offices are designed with open space and layout that reduces the distance between law offices and management. Such a layout will foster *ad hoc* informal and face-to-face communication between lawyers, reduce bureaucratic tendencies and ensures easy accessibility to law firms by employees and clients.

#### **4.9 Knowledge management strategy in law firms**

Given the technologies for knowledge management, the available techniques, and the awareness of the potential benefits of knowledge management, firms may tend to indulge in knowledge management without adequate preparation and thinking on the basis that knowledge management is useful. In order to increase the chances of the successful implementation of a knowledge management strategy in the firms the following subsection examines some of the factors that must be considered in the project plan.

##### **4.9.1 Clear and articulated business objectives**

In response to the challenges to the changing legal environment in chapter 2, the practice of law is becoming more business-oriented. Therefore, to enable a firm measure and evaluate the success of the knowledge management initiative, a clear and articulated business objective of the law firm is essential. A law firm should have a vision of where it is, and where it wants to go, and the resources that are needed to reach there. In defining a firm's business objective, an audit analysis of the internal and external business environment of the firm is essential to determine the firm's competence, strength, opportunities and weaknesses.



An internal analysis involves assessing the function of the business and how business resources such as human resources, information resources, and technology support these functions, while external analysis determines and understands the conditions, forces and changes in the firm's business environment (Synman & Kruger, 2002). No two firms respond to the uncertainties of the delivery of legal information in the same way. Therefore, a firm's business objective is unique and cannot be implemented by looking at what a competitor is doing. After identifying the firm's business objectives, the next step will be to identify the firm's knowledge strategy.

#### **4.9.2 Defining the knowledge management strategy**

Generally, for knowledge management to be successful, the knowledge management strategy should be defined, and integrated into the clearly articulated business objectives of the firm (Apistola & Oskamp, 2001; Nathanson & Levison 2002; Rusanow, 2003; Leibowitz, 2004). Therefore, the value of knowledge management in the law firms should be aligned with the business strategy. If a knowledge management strategy is not linked to the business strategy, the knowledge management initiative will not likely accomplish the anticipated goals. A knowledge management strategy provides a framework within which an organisation manages new initiatives aimed at leveraging the intangible assets of the organisation. It also outlines the processes, techniques and technology required for knowledge to flow effectively (Synman & Kruger, 2002).

#### **4.9.3 Types of knowledge management strategies for knowledge transfer**

Identifying a firm's knowledge management strategy will determine its knowledge management campaign. In section 3.7.3 codification and personalization were identified as the two types of knowledge management strategies often used (Sanchez, 1997; Hansen et al., 1999; Butler, 2003). These two different business strategies grounded on the nature of knowledge, address cultural issues differently. Codification focuses on explicit knowledge and centres on information technology while personalisation tends to focus on tacit knowledge and addresses the storage of knowledge in human minds shared through person to person interface such as story telling, personal meetings and personal contacts. Personalisation and codification approaches in the law firm therefore need to be integrated so that the benefits of both tacit and explicit knowledge can be gained.

#### **4.9.4 Knowledge management should be prioritised and implemented in phases**

Successful knowledge management initiatives in the law firm have generally been approached with a selection of priority areas from a discrete high impact pilot programme to a mid term phase and then the final phase (Platt, 1998; Maiden, 2000; Nathanson & Levison, 2002; Rusanow, 2003). The pilot phase is a relatively small, cheap, and manageable programme aimed at laying down the foundation of knowledge management. Most often, in firms where knowledge management efforts have been tried with unsuccessful results, there is often reluctance to try again and the tendency to dismiss and criticise the whole notion of knowledge management rather than analysing where the prior project failed in order to develop more effective new projects. The pilot phase would enable knowledge managers to educate themselves, learn from their mistakes and raise awareness about the concept and benefits of knowledge management to the rest of the organisation. This is probably the most difficult period and Buckler (2004), refers to the pilot phase as a period of faith. If the pilot phase is successful, the mid term phase will focus on addressing the fundamental challenges to knowledge management. At the final stage, the knowledge management organisation directs the firm to specific knowledge management initiatives aligned with the business objectives of the firm.

#### **4.9.5 Knowledge management requires the right staff**

It has been observed that the knowledge management team should constitute a team of competent and flexible members with formidable breath of mind and experience and high level of tolerance and patience for long-term sustainable transformation into knowledge management organisations (Soliman & Spooner, 2000; Chauke & Snyman, 2003). Similar to other organisations, the composition of the knowledge management team in the law firm should be derived from a cross section of disciplines such as information technologist, library and information professionals, lawyers and human resource experts so that the differing needs across practice groups can be addressed. Above all, a senior executive with title of “chief knowledge officer” should be chosen to provide central leadership in the direction and implementation of the knowledge management strategy.

#### **4.9.6 The scope of knowledge to be managed**

Understanding the value of the knowledge the lawyer uses to run a practice is an important step in ensuring that knowledge management supports the business as well as practice. For each type of knowledge a firm creates or seeks to capture there is a corresponding

knowledge management initiative. As already stated in section 4.2, tacit knowledge, explicit knowledge and knowledge of the business of law are the different types of knowledge in the law firm. Knowledge resides in many different places from databases and filing cabinets to print material to the lawyer's mind. Law firms need to know what knowledge they possess in order to better manage it and derive the best value from it. An information and knowledge audit will unveil the existing knowledge in the firm and detect existing knowledge gaps in the firm's repositories. It will also assist knowledge managers to understand and identify the tacit knowledge that sometimes flows between individuals. The results of the information and knowledge audit will then be mapped to chart how information flows through the firm's various business processes, how knowledge is transferred throughout the firm, identify who knows what in the firm and detail what information and knowledge exists (Roberts, 2000:6). According to Skyrme (1997), the first main thrust of creating a knowledge-based organisation is to "know what you know" and then to share and leverage it throughout the organisation. A successful knowledge solution will pull all the knowledge resources together in a way that would improve productivity, make the lawyers' work easier and result in greater job satisfaction for the lawyer engaged in transactional work.

#### **4.9.7 Information and knowledge need of lawyers**

A critical analysis of the information and knowledge needs of the legal practitioner and the law firm is important because it will reflect in the different types of knowledge management initiatives, tools and supporting architecture used by a lawyer and the firm. It will also enable the firm to decide on the type of information and knowledge to categorise and prioritise for the knowledge management project. The information and knowledge needs of a lawyer are the knowledge that a lawyer desires and demands to enhance his/her performance in legal practice and meet the legal needs of the clients.

Lawyers' needs are diverse, constantly changing, and not amenable to generalisation and are most often reflected by the needs of a particular client and the kind of work a lawyer does. It may not reflect the information and knowledge need of the wider law firm because all lawyers and law practices are not the same. Leckie et al. (1996) observe that within the universe of potentially relevant information, what is required by a particular lawyer would vary and individual demographics such as age, specialisation, professional development, frequency of need, importance of the issue at hand, and complexity of the problem will also influence the needs of the lawyers. The needs of a litigation lawyer are different from those of an office-based lawyer such as a draftsman or commercial lawyer.

Office-based legal work such as drafting, commercial agreements, deeds and wills, do not involve serious legal research. Litigation matters for trial before the High Court and Court of Appeal require a lot of reading and adequate preparation because a lot is often at stake (Otiike & Mathews, 2000; Kuhlthau & Tama, 2001). The issues before the High Court and Court of Appeal often involve highly sensitive matters, sometimes concerning a life at risk, such as the penalty for a capital offence. It may require a considerable amount of money and sometimes may involve media coverage. It may present lawyers with opportunities to market their services because winning cases in the superior court may accord lawyers with considerable publicity such that they might not need to scout for business.

Cohen (1969) identified three reasons why lawyers need information and knowledge. First, as counsellor to determine what the law is on a particular problem or how the court would act if the problem before it were ever litigated in order to advise his/her client on some proposed course of conduct. Second, as an advocate, he/she needs information to support an already determined position in order to persuade the court of what the law should be; what law is to be applied and how the law should be applied. Third, lawyers need information to support the client's position or a legal rationale for a proposed plan of action. Feliciano (1984) observed that lawyers sought information in order to provide specific information needed for work in progress and to provide introductory information needed for work in progress. Studies have revealed that lawyers expressed the desire for keeping abreast with recent developments in the law, the latest decisions in the superior court, and to acquire and apply legal know-how, as their greatest information need (Kidd, 1981; Haruna & Mabawonku; 2001). Lawyers may need information to keep up to date with the law because of the complexity and dynamism of the legal literature. Lawyers may keep up to date with changes in the law through attendance at lectures, seminars, and workshops, reading current legal periodicals and through conversations and discussions with colleagues within and out of their establishment.

Similarly, lawyers will not have the same type of knowledge management needs throughout their career. Staudt (2003) classifies lawyers' activities into three stages of professional development as grinders, minders and finders of information. Grinders are lawyers who conduct research and dig up information on new issues that crop up in the firm, draft contracts, handle deposition and argue the motion in court. These activities are predominant in the early years of the lawyers' career. This is because senior lawyers in most law firms tend to delegate these tasks to the junior colleagues with the intention of making them self reliant at an earlier stage so that they will be able to sell their knowledge out to clients at

a rate that would yield profit to the firm. Minders are lawyers that manage clients' matters and maintain relationship with current clients. Management responsibilities in the firm are often entrusted to senior lawyers at the middle of their career. The information needs of minders would be drawn from a variety of internal sources like time and billing systems, document management systems, and external sources like LexisNexis, news reports, web updates and stock market reports. Finders are lawyers who bring in new clients. This activity dominates the third phase of the lawyers' career. When acting as a finder, a lawyer needs information and knowledge on the work process of a particular client. A client centred-portal view is more effective in meeting the information and knowledge needs of these lawyers. While this type of categorisation may be possible in large and corporate firms where each lawyers can specialise in the different functions as finders, minders, and grinders, in most small firms and in particular a one person firm, an individual lawyer does the finding, grinding and minding activities.

In the light if the above, an inventory of a lawyer's information brochure, research, objectives and transaction databases will enable project managers to choose, categorise, and prioritise information and knowledge according to its importance. An information and knowledge management audit should be able to anticipate and detect the overlapping needs of the individual lawyer and the firm so that the law firm's knowledge management initiative should be able to support and integrate the individual lawyer's needs and the firm's needs.

#### **4.10 Conclusion**

By focusing on the research questions for sub problem three, this chapter examined the basic concepts and principles of knowledge management within the context of the law firm. Law firms due to the intensity of knowledge work involved in their operations provide a fruitful arena for knowledge management research. A number of conclusions are drawn.

First, tacit knowledge, explicit knowledge and knowledge of the business of law are the three broad categories of knowledge in the law firm. The classification of knowledge in the law firm as tacit, explicit and business of law is due to the fact that elements of tacit and explicit knowledge and the notions of the business of law seem to run through all the other categorisations of knowledge suggested by knowledge management researchers. The key to implementing effective knowledge management in law firm is to pull all these different categories of knowledge together in ways that would improve the organisations performance.

Second most of the literature on knowledge management in law firms revealed that law firms tend to adopt a one dimensional technological approach to knowledge management with considerable emphasis on the use of knowledge-based systems in creating, sharing, and utilising collective knowledge. Besides, the adoption of knowledge management has been limited mostly to large firms.

Third, the tools and technologies for knowledge management ranged from networked computers, emails, telephones, repetitive automated document assembly, Internet and intranet technologies to more sophisticated technologies such as databases and software tools, collaborative technologies, enterprise information portals, expert systems and business and artificial intelligence tools.

Fourth, the main techniques of knowledge management in law firms were identified. These included “form libraries”, work product repositories, “brief banks”, professional development programmes, and legal research and mentoring programmes, and these have existed from time immemorial in the law firms though not under the banner of knowledge management. What is new and exciting about knowledge management is that as a result of the changing legal information environment, law firms are formally adopting knowledge management. Typical techniques for knowledge management adopted in recent years are in-house know-how and info-bank systems, best practices, client information, conflict management, record management, expertise locator, clause library, professional development programme, client relationship management system, third-party contact database; litigation strategy, client relation management, and conflict checking.

Fifth, it was seen that the different frameworks and models of knowledge management provided guidelines for the understanding of knowledge management in law firms. The four different frameworks for knowledge management considered were, learning organisation, knowledge markets, knowledge management process and the knowledge management strategy. The different models of knowledge management discussed are the intellectual capital model, the SECI ba and knowledge asset model and the Leavitt’s diamond organisational model (Diamond Trist) as modified by Edward & Mahling, (1997); Galbraith (1997); and Pan & Scarbrough (1999).

Sixth, it was noted that the successful implementation of knowledge management would improve the overall organisational performance of the law firm by delivering good quality services to the clients, providing professional satisfaction to the lawyers, enhance the economic profitability of the law firm and promote team work. Despite its potential benefits



knowledge management knowledge management still remains a narrow theoretical concept to many lawyers and law firms seem to be having a tough time implementing effective knowledge management. This is due to several cultural, organisational, social, technological and political barriers that need to be tackled before a conducive environment for knowledge management could be established. However, encouraging a culture of knowledge sharing, establishing a solid technological platform, extending knowledge management initiatives beyond technology, developing a common language for communication, adopting a good organisational design, a proper organisational structure and the supportive role of top management are some of the factors that can help to facilitate the successful implementation of knowledge management in law firm. The chapter ends with strategies that may enhance the effective implementation of knowledge management in law firms.

In sum, this chapter provides a knowledge management road map for law firms and by so doing provides a theoretical foundation for empirical findings on the applicability of the concepts of knowledge management within the context of law firms in Botswana. The next chapter therefore locates the methodological framework of the thesis.