

THE IMPACT OF KNOWLEDGE MANAGEMENT ON SME's

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“Since we cannot know all that is known of everything, we ought to know a little about everything”
Blaise Pascal (1623-1662)

1 Introduction

In the past two decades, the world has witnessed the emergence of effective forces¹ which seek to reshape the economic and organisational communities, and has precipitated fundamental changes in the organisational strategy. These forces are represented by globalisation, the emphasis on product and service quality, new technology, changing economic and political structures, deregulation, and the competition for the dollar, euro, and a new breed of sophisticated customers who have changing requirements and expectations. This new breed of customers, if well harnessed, can distinguish a firm from its competitors². These driving forces have lead individuals and organisations to appreciate the important role of knowledge in an increasingly competitive world market. These forces have also driven organisations in all varying structures to be more adaptive and responsive to change in order to guarantee their survival^A. The current focus and study of knowledge management is not for the sake of academics only, but a realization that knowing about knowledge is critical to business growth and business survival. Knowledge, if properly utilized and leveraged, can drive organisations to become more competitive, innovative and sustainable, examples of such organisations are Dow Chemical Corp (Dow is a leader in science and technology, providing innovative chemical, plastic and agricultural products and services to many essential consumer markets) and Skandia (A Swedish company that has developed from an insurance company working primarily with property & casualty insurance into a leading provider of long-term savings products and specializing in the selection and evaluation of fund managers, and product development). Both companies have set the example in adapting knowledge management practises and the use of their intellectual capital to become more competitive and sustainable. Skandia AFS was capable of making use of its human knowledge to develop “prototype concepts” that allowed the company to distribute its services globally and take advantage of the deregulation of insurance and financial services.³

This interest in organisational sustainability and growth has created much discourse on the methods of improving and developing organisational performance, for example process re-engineering, innovation, and providing superior customer service^B. Furthermore, several strategies appeared to tackle these improvements; among them was the concept of downsizing,

a prevalent strategy in the 80's⁴, and was created under the pressure to reduce expenditure and to increase profitability. The effects of this strategy were the loss of vital knowledge workers, who had accumulated years of experience and knowledge, and who were forced to leave the organisation because of the downsizing policy. By leaving the organisation, they took valuable knowledge with them. The departure of experienced workers proved to be a costly exercise, ' a specific example of this corporate amnesia can be found at Ford, where new car developers wanted to replicate the success of the original Taurus design Team. But no one remembered, or had recorded, what was so special about that effort. A similar experience occurred at International Harvester when Russian officials approached the company about building a new truck factory. They contacted Harvester because it had built a plant in Russia twenty years earlier. Alas, there was not a single soul still in the organisation who knew anything about the previous project'. ^{2p.xix} The loss of valuable knowledge was the main reason why organisations sought to seek methods, and approaches for capturing, and storing knowledge that is in people's head, and it is this line of thinking, that has given birth to the concept of knowledge management.

The objective of this paper is to gain an understanding of knowledge management, and the way in which knowledge management impacts upon current organisations. After an introduction on the background of knowledge, a brief comparison will be given of data, information, and knowledge. What follows is an analysis of the impact of knowledge management on the three main corporate building blocks, which are corporate strategy, corporate culture, and systems. The impact of knowledge management on the three corporate building blocks is important in that it paves the way to formulating an understanding of knowledge management and its role within organisations.

A brief comparison will be made between SMEs (small medium enterprises) and large enterprises. The comparison will focus on advantages and disadvantages, their strengths and weakness, in the implementation of knowledge management.

2 What is knowledge all about?

Knowledge is not a new concept, from very early times people have transferred knowledge by succession to the next generation. In ancient cultures, this has taken the form of narratives and songs, which were intended to teach the new generation new skills and survival techniques. 'Early on, Indian mathematicians built upon generations of knowledge to develop mathematics that is sophisticated even by today's standards. Phoenicians were implicitly concerned about how knowledge about trade logistics, and merchant practises was built, transferred to employees and applied to make operations as successful as possible.'^{1p.7} The theory of knowledge (epistemology)^c focuses on a number of arguments that take us into questions, like the following: Does knowledge always have to be based on secure foundations? If you know something, will you always know that you know it? Will you always be able to prove that you know it? Does "knowledge" mean the same in the philosophy classroom as it does in ordinary settings? What are the connections between knowledge and evidence? Nevertheless, what is new is the concept of knowledge management within organisation, which was not defined until a decade ago, and a concept which today, still differs among managers.¹

The term data, information, and knowledge, have been used as identical terms, and have resulted in confusion on what the terms mean. It is important to point out that the terms data, information and knowledge are not the same concepts. The section that follows makes a brief description and comparison between the three concepts and provides an explanation of how the concepts relate to one another. Some authors like to combine higher order concepts for example wisdom with knowledge², whereas other authors view wisdom as a higher order concept separate from knowledge. Figure 1 provides a comparison between the three concepts.

Understanding the concepts

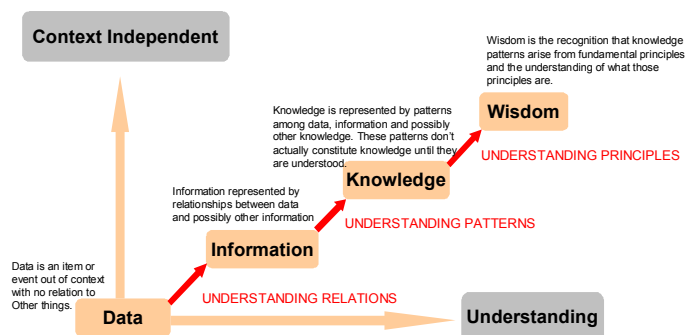


Figure 1 Clarifying data, information, knowledge, and wisdom

2.1 Data, Information

To getting an understanding between the terms data and information, let us take the example of a patient who visits the doctor for treatment. As the patient describes the problem to the doctor, the doctor begins the process of gathering information from the patient, some of this information gathered is important for the doctor to be able to diagnose the problem, and some of the information gathered has nothing to do with diagnosing the sickness, this takes the form of data. The doctor then begins, to connect the bits of information he has collected, with the knowledge base that he has acquired, in order for him to be able to diagnose the sickness, and to provide the appropriate treatment for the patient. When the doctor does not find sufficient information, to assist him in diagnosing the sickness, the doctor requests that the patient undertake a number of medical examinations. By undertaking the medical examinations, the doctor is seeking to acquire more information that will help him, to support or, to refute the assumptions regarding the diagnosis of the sickness. The information provided by the medical examination could also assist the doctor to discover that the original data provided by the patient provides evidence in diagnosis the sickness, after it has been connected to the examination results from the laboratory. Simply stated data is an item that is out of context with no relation to other things, whereas information has meaning.

2.2 Knowledge

There have been many definitions made on the topic of knowledge within organisations and as discussed earlier a variety of philosophical discussions on the true meaning of knowledge. Davenport and Prusak offer working definition of knowledge within organisations, as follows: 'Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knower. In organisations, it is often becomes embedded not only in documents or repositories but also in organisational routines, processes, practises, and norms.'^{2p.5}

When examining one's own experience, knowledge is much more obscure than definitions allow. 'Knowing is a *human act*, whereas information is an *object* that can be filled, stored and moved around. Knowledge is a *product of thinking*, created in the *present moment*, whereas information

is fully made and can sit in storage. To share knowledge, we need to think about the current situation, whereas we can simply move information from one mailbox to another. However, knowledge is more than you think. Knowledge settles into our body. It is a kind of “under the fingernails” wisdom, the background know-how from which we draw. Most of us find it hard or impossible to articulate what we know; whereas information can be written or built into machinery. We acquire knowledge by participating in a community-using the tools, ideas, techniques, and unwritten artifacts of that community; whereas we acquire information by reading, observing, or otherwise absorbing it.’ ^{5p.110}

Organisations have a wealth of knowledge which, is embedded in people’s head, work practises, and systems. The challenge for organisation is to be able to capture that knowledge and to leverage it throughout the organisation. This challenge has driven organisation to codify knowledge. Codification describes the process of converting knowledge into a form which is accessible, easy to find, and portable. Knowledge within organisation can be classified into two types^D, one which is *structured explicit*-formalized and expressed knowledge and the other *tacit knowledge*-complex, resides within the individual, difficult to articulate or communicate adequately, and is based on practical skills and actions⁶. This dynamic process of converting tacit to explicit is the basis for knowledge creation within organisation. The need to codify, transfer and leverage knowledge within organisations, is one of many tasks that organisations need to undertake.

3 The impact of knowledge management on the corporate building blocks

Corporations sit on a wealth of knowledge that sits in people's head and scattered through various information systems within the organisation. These information systems consist of databases, documents, policies, procedures as well as unarticulated expertise, and experience held by individual workers. To access this scattered knowledge, requires technology to consolidate these systems, a corporate culture that aims to motivate, encourage people to sharing knowledge, and to make use of systems within the organisation. Therefore, to understand knowledge management, one needs to understand the impact of knowledge on the three corporate building blocks, which can be explained as follows:

- **Corporate strategy:** is concerned with the organisation's direction for the future: its goals, finances, its interaction with customer, and employees. Assessing which products are profitable, and which are not. The need to anticipate, the threat from existing, and new players in the market, and to devise strategies to deal with other threats such as the bargaining power of suppliers and the threat of competitor's products and services. Based on these factors a mission statement and future goals are established.
- **Corporate Culture:**^E Difficult concept to identify, it can be characterised as the norms, values, and views shared among employees within the organisation, Mullins explains organisational culture as 'the way things are done around here'⁸. This refers to the managerial styles, organisational processes, and common practises.
- **Systems:** refers to the information systems, procedures, instruments that provide timely, appropriate, understandable, accurate, and directed information to support the operational, tactical, and strategic functions of management. This requires that organisations have the right technology, and tools to be able, to share, retrieve, and distribute knowledge within the organisation.

3.1 What is knowledge management?

Knowledge management is the management of information within the organisation by influencing the three corporate building blocks in the following ways:

- **Corporate strategy:** Corporate strategy relies on having reliable, accurate, and dynamic information, in assisting organisations in decision-making, which ties up with the discussion

of information systems and the technologies that support them. More importantly, knowledge management imposes a new way of thinking about fixed products and services, as Stewart explains 'IBM gets more revenue from selling computer services than from selling computers; Ryder doesn't just rent trucks but also sells logistics management.'^{3p.22} This new approach to organisational strategy introduces innovative ways of thinking about intellectual capital and the way it can assist organisations in increasing profitability, free financial resources and increase corporate agility.³ This implies that corporate strategies need to introduce new measures of success that show the true value of knowledge more completely than basic balance sheet accounting.

- **Corporate Culture:** Knowledge management is linked within the culture of organisations. Organisations are a collection of people who share information and knowledge as part of their daily routine. The challenge is in creating knowledge management strategies that focus on developing knowledge sharing systems that are dependent on employees. In addition, if, knowledge is power, than the owners of that knowledge will be protective of their knowledge, in the belief that they benefit more from hoarding their knowledge than sharing it. Therefore, strategies need to be created that encourage and reward knowledge sharing. For knowledge markets to work effectively requires that trust be visible throughout the organisation 'members of the organisation must see people get credit for knowledge sharing. They must directly experience reciprocity. There must be direct evidence of trust; a declaration of the importance of trust in the corporate mission statement is not sufficient'.^{2p.34} The biggest challenge in most knowledge management efforts lies in changing people's work habits. The challenge lies in getting people to articulate and share knowledge face to face. The set up of communities of practise are essential in allowing individuals to exchange knowledge, which contributes the development of social capital.⁹ The structure of an organisation is also important and studies have shown that, there are advantages in implementing knowledge management in simpler, flatter and less complex structures. Furthermore the 'communication line is often shorter and direct, thus allowing a faster discourse on knowledge management issues within the organisation'.¹⁰ (See section 4 which makes a comparison between SMEs and large organisations).
- **Systems:** Information is one of the most important corporate resources which require, a strategy that is geared, to its development, and management. This necessitates an

understanding of management requirements, as well as the strength and weakness of the organisations competitors. Therefore the development of information systems, needs to be based on the corporations strategic planning objectives.¹¹ Because knowledge is the key resource which organisations need to develop, it is imperative therefore that systems reflect user requirements within the differing management levels. Furthermore, processes and procedures that support information systems need to be simplified, adaptable, and flexible to meet the changes in user requirements. Maintaining competitive advantage in a global market, places more demand on information systems to provide accurate and reliable information to strategic, tactical, and operational levels of management. ' The complexity and investment of the information system will also depend on the level of management and decision making that is required.'^{11p.188}

From the discussion on the three corporate building blocks, it is easy to see why there have been many definitions, and varying views, applied to knowledge management, from both practitioners, and academics. One of the reasons, among others, for these differing views, is due to the fact, that the parties interested in knowledge management, are members of differing faculties of learning for example, psychology, management, sociology, economics etc. This implies that knowledge management is a multidisciplinary concept, which further adds to its complexity.

Some authors have defined knowledge management as '*Powerful environmental forces are reshaping the world of the manager of the 21st century. These forces call for a fundamental shift in organisation process and human resource strategy. This is knowledge management*'^{7p.231}

'Integrated, systematic approach to identifying, managing and sharing all of an enterprise's information assets, including databases, documents, policies and procedures as well as previously unarticulated expertise and experience held by individual workers'.

What is clear from these definitions, and the discussion on the three, corporate building blocks, is that knowledge management is a philosophy that effects the entire organisation, processes, culture, people technology, systems, structure, roles, size, and external forces. All of these factors need to be taken into account in implementing knowledge management successfully. Another way of looking at knowledge management is to say that, knowledge management imposes a rethinking of how the organisational building blocks are structured and how they inter-relate to one another in achieving the benefits of knowledge management which include,

amongst others, improved competency, efficiency, decision making, learning, innovation, and increase in revenue.

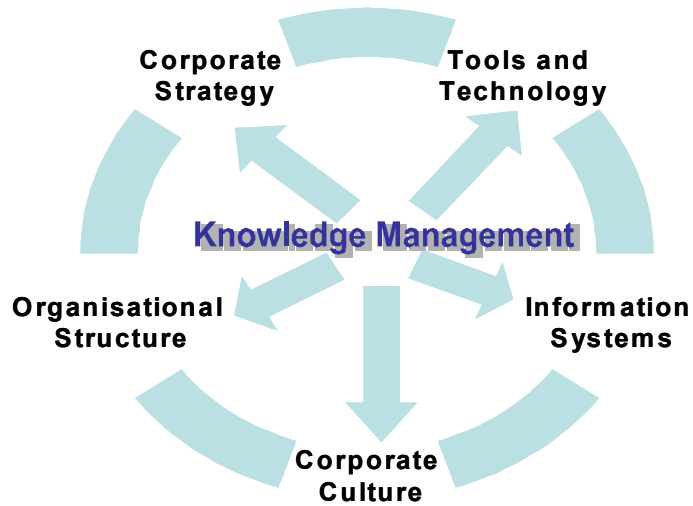


Figure 2 The impact of KM on the corporate building blocks.

There are also unique features and characteristics of knowledge management applications in small and large size organisations. The next section makes a brief comparison between SMEs and large organisations.

4 Comparisons of Knowledge Management in SMEs and large enterprises

There has been much literature on the practise of knowledge management within large organisations and little information available on SMEs (small-to-medium-sized enterprises). This section aims to make a brief comparison between SMEs and large organisations. The comparison will primarily focus on the following:

Management: In SMEs, the managers are in most cases the owners, which imply that decision-making is centralized, and fewer layers of management. This means that decision-making is shorter than in large organisations.¹² The advantage for the owners in SMEs, is that they become the key drivers for knowledge management implementations, assuming of course that they appreciate the importance of knowledge management. Another distinction to be made is that management of SMEs have to look after every aspect of the business which gives them limited time to focus on the strategic issues relating to knowledge management. Senior management in larger organisations in contrast have the power to delegate some of their responsibilities to lower management, thus freeing their time to focus on knowledge management strategies.

Structure: SMEs have an advantage over large enterprises in respect to their structure, in implementing knowledge management. 'They have a simple, flatter and less complex structure, which will facilitate a change initiative across the organisation since functional integration both horizontally and vertically is easier to achieve and fewer complications will be encountered'.^{10p.50} Whereas larger organisations have a bureaucratic structure, making them slower and less flexible in creating new schemes. One of the advantages that larger organisation have over SMEs is the level of specialization in their roles, which gives them better expertise in implementing knowledge management.

Culture: SMEs tend to have a more organic and fluid culture, than larger organisations.¹² Smaller number of people are usually united under common beliefs and values, which implies that it easier for smaller organisations to change and implement knowledge management. It is easier to create a knowledge sharing culture in smaller organisation than in larger ones.¹⁰ In smaller organisations the cultural values and beliefs of the employees can be influenced by the owners. This can be a problem if the owner does not trust his employees or does not encourage the culture of sharing and transferring knowledge. In this case, the owner can obstruct the development of knowledge rather than develop it.

Human resource: SMEs have a problem in attracting high calibre, experienced employees. These experienced people, tend to go to larger organisations, where they will be paid higher salaries and bonuses. Furthermore it also a problem for SMEs to retain, specialised employees, because of limited opportunities for career progression, and the constant appeal of larger organisations, who can provide better prospects. SMEs are mostly seen by some employee as a stepping-stone to move to larger organisation. The departure of highly knowledgeable employees is a major threat to SMEs, unless that knowledge is captured, codified, and transferred throughout the organisation.

Notes

(A). Although our scope of study focuses on knowledge within organisations, it is important to point out that countries are also setting goals to becoming a knowledge-based economy. There are a variety of initiatives being adopted by the European Union, for example the Lisbon Special European Council (March 2000), was designed to invigorate the communities policies, in tackling globalisation, the growing importance of information, communication technologies (ICT), and aims to becoming a knowledge base society and to adapting to the new technological challenges. (Please see, The Lisbon Special European Council (March 2000):” Towards a Europe of Innovation and Knowledge”). <http://europa.eu.int/scadplus/leg/en/cha/c1024.htm>.

(B).The concept of “customer intimacy” was a slogan adapted in service-oriented organisations and in particular to the telecommunications sector. The idea was to develop a detailed profile of the customer, within the CRM (Customer Relationship Management) systems mainly used within call centres. The advantage of this was two fold. One advantage was to be able to cross-sell, and up-sell, and the other to create customer loyalty. There is much literature on the topic and benchmarking studies to identify best practises in “customer intimacy”. (Please see Customer Intimacy Benchmarking Association). <http://www.benchmarkingnetwork.com/cusint/>.

(C).Philosophical discussions on human knowledge is a topic which was discussed by imminent philosophers such as Plato, Aristotle, Al-Kindi and in the 18th Century, the likes of David Hume, Descartes, and Kant to name a few. Plato divided knowledge into to classes, the one dealing with the noumenal, the other with the phenomenal world.The first, he called real knowledge, the second opinion. (See the Rational Theory and the Empirical Theory). <http://www.worldwisdom.org/additional/ancientlandmarks/PlatoAndAristotle.html>.

(D). I have listed two types of knowledge for simplicity, however there are other classifications of knowledge for example Blackler’s framework lists five types of knowledge that can exist in organisations:

- **Embrained knowledge** depends on the conceptual skills and cognitive abilities.
- **Embodied knowledge** is action oriented and is only partly explicit.
- **Encultured knowledge** refers to the process of achieving shared understanding through the development of an organisational culture.
- **Embedded knowledge** resides in systematic routines.
- **Encoded knowledge** is information conveyed by signs and symbols.

(E). Since corporate structure is also an area which is discussed within the corporate culture, this has been lumped within the corporate culture framework.

References

1. WIIG, K. M. "Knowledge Management: An introduction and Perspective". The Journal of Knowledge Management, Vol.1 No.1, 1997.
2. DAVENPORT, T.H. and PRUSAK, L. Working knowledge how organizations manage what they know. Boston, MA: Harvard Business School Press, 1988.
3. STEWART, T.A. Intellectual capital the new wealth of organizations. London: Nicholas Brealey Publishing, 1998.
4. Dr. AL WANNI, H. Knowledge Management, meaning and theoretical discourses, 2000 [WWW]
<http://unpan1.un.org/intradoc/groups/public/documents/ARDO/unpan006095.pdf> (accessed on the 23 October 2004).
5. MCDERMOTT, R. "Why Information Technology Inspired But Cannot Deliver Knowledge Management". California Management Review, Vol. 41 No. 4, 1999.
6. NONAKA, I. and TAKEUCHI, H. The Knowledge Creating Company-How Japanese Companies Create the Dynamics of Innovation, Oxford: Oxford University Press, 1995.
7. MCADAM, R. and REID, R. "SME and large organisation perceptions of knowledge management: comparisons and contrasts". Journal of Knowledge Management, Vol. 5 No. 3, 2001.
8. MULLINS, L. Management and Organisational Behaviour, London: Pitman Publishing, 1999.
9. LESSER, R and PRUSAK, L. WHITE PAPER Communities of Practice, Social Capital and Organizational Knowledge, 1999 [WWW]
<http://www.foundationknowledge.com/library/readings/IBM%20whitepaper.htm> (accessed on the 11 October 2004).
10. WONG, K, Y. and ASPINWALL, E. "Characterizing knowledge management in the small business environment". Journal of Knowledge Management, Vol. 8 No. 3, 2004.
11. WILLIAMS, L, T. "Planning and managing the information system-a manager's guide". Industrial Management & Data Systems, 97/5, 1997.
12. GHOBADIAN, A. and GALLEAR, D. "TQM and organisation size". International Journal of Operations and Production Management, Vol. 17 No.2, 1997.