An Intranet to Facilitate Managing Knowledge and Knowledge Sharing

Udo Richard Averweg

Abstract
In organisations in South Africa there is increasing use of information technology for internal communication and collaboration. An Intranet, which is based on Web technology, is well suited for use in managing knowledge and knowledge sharing in an organisation due to its ability to support distribution, connectivity and publishing of data and information. An Intranet should be seen as integral to an organisation's Knowledge Management strategy and should be tailored to suit and enhance an organisation's managing knowledge and knowledge sharing processes. The question arises: To what extent does an organisation's existing Intranet facilitate managing knowledge and knowledge sharing processes? This question is explored by selection of a large organisation – eThekwini Municipality, Durban – as the field of application. Derived from a mixed methodology approach, the results of a survey suggest that there is limited managing knowledge and knowledge sharing using the Intranet in the selected organisation.

Keywords: Intranet, knowledge management, knowledge sharing.

Problem Statement, Objectives and Research Question
In organisations in South Africa there is increasing use of information

technology (IT) for internal communication and collaboration. The World Wide Web (the Web) technology has provided a common technological infrastructure to support the collective managing of knowledge and knowledge sharing in organisations. The Intranet, which is based on Web technology, can provide useful and people-inclusive knowledge management environments (Stenmark, 2002). In such environments, an Intranet can be tailored to suit and enhance an organisation's managing knowledge and knowledge sharing processes. Knowledge sharing is a process through which knowledge is exchanged in an organisation. In organisations, IT plays an important role to give effect to the managing and sharing of knowledge. If IT, such as an Intranet, is not effectively managed, knowledge and knowledge sharing in an organisation will not be facilitated. Investigating whether an Intranet facilitates knowledge and knowledge sharing in a selected organisation in South Africa is the objective of this paper.

An Intranet (or internal Web) is a network designed to serve the internal informational needs of an organisation (e.g. a municipality) using Internet concepts and tools (Turban, McLean & Wetherbe, 2004: 130). The cost efficiency of utilising Internet technology has opened the door for organisations to use this same technology to share information within the organisation (Botha, 2004). Given that advances in IT have made it easier to acquire, store and disseminate knowledge than ever before, many organisations are employing IT to facilitate sharing and integration of knowledge (Kankanhalli, Tanudidjaja, Sutanto & Tan, 2003: 69). One important IT resource in an organisation is an Intranet.

An Intranet is an application of technology within an organisation for the purpose of information dissemination, communication, integration and collaboration (Telleen, 1997). Such processes are important to give effect to managing knowledge in an organisation. There is thus a need to evaluate the existing benefits, design, usability and content of an Intranet to ensure that they enable knowledge sharing in an organisation. Intranets are regarded as a key platform for knowledge sharing (Hall, 2001: 139). The research question arises: To what extent does an organisation's existing Intranet hold benefit and its design, usability and content facilitate managing knowledge and knowledge sharing? This research question is explored by selection of a large organisation, eThekwini Municipality, as the field of application.

This paper is organised as follows: Background to the research is presented. Thereafter a literature review of the main concepts is given. The eThekwini Municipality is briefly described. The research methodology, which includes data collection and data analysis, is then presented. Finally a conclusion is given.

Background

The exchange of information among organisational employees is a vital component of the knowledge-management process (Cabrera and Cabrera, 2002). IT is available to support and enable such exchanges across distance and time barriers. Knowledge sharing processes are generally supported by knowledge management (KM) systems. KM consists of a dynamic and continuous set of processes and practices embedded in individuals, as well as in groups and organisational levels. At any point in time and in any part of a given organisation, individuals and groups may be engaged in several different aspects and processes of KM (Alavi & Leidner, 2001). These processes include creating, preserving, using and sharing knowledge (Warkentin, Bapna & Sugumaran, 2001).

There is a need for practices in the workplace to enable managers to promote managing knowledge and knowledge sharing to allow the organisation to acquire and retain intellectual capital. For example, eThekwini Municipality is 'committed to using Information Technology to make a real difference … municipal decisions have to be based on sound research and information management in order to ensure [service] delivery' (eThekwini Municipality, 2006: 28). There is also a need to evaluate existing processes (e.g. benefits, usability and content areas of an Intranet) to ensure that they enable an organisation's managing of knowledge and knowledge sharing processes towards its KM strategy.

KM initiatives in organisations are increasingly becoming important as organisations are making significant IT investments in deploying KM systems (Hahn & Subramani, 2000: 302). Given these investments it therefore seems appropriate to investigate whether the Intranet in the selected organisation (eThekwini Municipality) facilitates managing knowledge and knowledge sharing.

Intranet and Intranet Technology

The term 'Intranet' first appeared in *Digital News & Review* (19th April, 1995) in an article by Lawton (Lawton, 1995). An Intranet (or internal Web) is a network designed to serve the internal informational needs of an organisation (e.g. a municipality) using Internet concepts and tools (Turban, McLean & Wetherbe, 2004: 130; Averweg, 2007). An Intranet is a technical infrastructure and as such its business value is contingent on the content that it holds in terms of information resources. An Intranet should hold benefit, be appropriately designed, usable and have relevant and reliable content so that it permits 'the integration of key business applications and tools' (Hall, 2001: 139).

An Intranet 'can be regarded both as an information and strategic management tool' in the context of KM (Edenius & Borgerson (2003: 124). Tiwana & Ramesh (2001) contend that the Intranet is well suited for use as a strategic tool within the domain of KM owing to its ability to support distribution, connectivity and publishing. According to these authors, the Intranet should be seen as integral to an organisation's KM strategy and should therefore be designed and tailored to enhance an organisation's managing of knowledge and knowledge sharing processes. This rationale raises the question whether an organisation's existing Intranet facilitates managing knowledge and knowledge sharing processes. The exploration of this question creates an opportunity for research within a field of application that seems particularly appealing: a metropolitan municipality—eThekwini Municipality in Durban. The appropriate context and appeal arose from the fact that the author (an IT Research Analyst) and as an IT practitioner is situated within the organisation's Information Services Department. This research may be viewed as an IT practitioner-based inquiry. Furthermore eThekwini Municipality's Integrated Development Plan (IDP), Plan 5 deals with 'Empowering our Citizens'. Within this plan, Programme 7 deals with improving KM within the municipality:

> The retention of institutional knowledge is a key factor in the development of an organisation and this long term programme intends to increase the general awareness of the meaning and value of knowledge management within the municipality (eThekwini Municipality Integrated Development Plan, 2007: 65).

Given the author's position and eThekwini Municipality's IDP, this exploratory study was considered pertinent and relevant. In surveying the parameters of the question, the overriding premise was established as follows: If knowledge is used effectively, it may well provide meaningful utility to the organisation.

Intranets create a common communications and information-sharing system. Brelade & Harman (2003) suggest Intranets can be used on a 'push' basis, where information is presented to employees, and on a 'pull' basis, where employees may seek out and retrieve information for themselves. These mechanisms are described as follows:

- 'Push' technology is used when it is important that certain material is presented to employees at their workstation. It ensures that no other function takes place until all the information is correctly accessed; and
- 'Pull' technology allows employees to decide when to pull down information from the Intranet that they wish to view. The 'views of the end users are more important than in most other studies' (Skok & Kalmanovitch, 2005: 736).

To provide a seamless experience between viewing pages on the Web and viewing information on an Intranet, access is usually via a standard Internet browser. The commonly used Internet browser in eThekwini Municipality is Microsoft Internet Explorer.

Knowledge, Managing Knowledge and Knowledge Sharing
Knowledge

What is knowledge? Geisler (2008) suggests that this can be answered in three different yet complementary streams: (1) the way in which knowledge is structured; (2) to examine the nature of the dynamics and progress of knowledge; and (3) examine the uses of knowledge in the lives of individuals and how they apply their knowledge to their involvement in the economy and social affairs of their communities. It is argued by the author that this third stream includes organisations. Many current theories and practices indicate that knowledge (and managing knowledge) may prove useful if the scope and

utility of knowledge is aligned with an organisation's strategy. For this reason KM must have a business focus. It is therefore critical that KM aligns with an organisation's business strategy and that it is structured in such a way that it articulates with the organisation's purpose and goals. It may be further argued that knowledge should be viewed as a resource in the business and that it should therefore 'tie in' with the resource-based approach to an organisation's business strategy. Knowledge needs to be distributed and shared throughout an organisation before it can be applied and exploited. Knowledge can be distributed through processes such as knowledge sharing, knowledge seeking, searching and retrieving using an organisation's Intranet. The value of an Intranet for KM is largely dependent on the calibre of the content and tools that it provides to its users (Hall, 2001: 139).

Although this research seeks to evaluate the role of the Intranet and its contribution to managing knowledge and knowledge sharing in eThekwini Municipality, it also proposes that KM should be set on a broader scale than merely IT i.e. it is argued that managing knowledge and knowledge sharing should go beyond a narrow technical focus and encompass other less tangible themes within an organisation. Zack (1999: 125) clarifies the intangible 'as the knowledge existing within people's heads, augmented or shared via interaction and social relationships'. This paper draws together the technology, the notion of shared interaction (i.e. knowledge sharing) and the creation of an opportunity for knowledge transfer. Intellectual capital is another term often used for knowledge.

Managing Knowledge

Organisations realise the value of their intellectual capital (Turban, McLean & Wetherbe, 2004: 450). However, there is a need for organisations to better utilise and manage their intellectual capital (or assets) by transforming themselves into successful organisations that foster the development and sharing of knowledge (Turban, McLean & Wetherbe, 2004: 450). Knowledge must be exchangeable (such as in an Intranet) among employees in an organisation and it must be able to grow. Knowledge is information that is contextual, relevant and actionable (Turban, McLean & Wetherbe, 2004: 452).

While much of the knowledge that employees need exists inside an organisation, finding and leveraging it is often a challenge. Such challenges have given rise to a systematic attempt to manage knowledge. There are several processes associated with the management of knowledge: the creation of knowledge, the sharing of knowledge (or knowledge sharing) and the seeking and use of knowledge (such use as in an Intranet). Nonaka (1994) describes knowledge creation as interplay between tacit and explicit knowledge and as a growing spiral as knowledge moves among the employee, group and organisational level. Knowledge sharing is the wilful explication of one's knowledge to another individual via an intermediary (e.g. an Intranet) or directly. Knowledge seeking is the search for and use of internal organisational knowledge (Turban, McLean & Wetherbe, 2004: 457).

Knowledge Sharing

Knowledge sharing is a key component of KM systems (Alavi & Leidner, 2001). However, knowledge sharing is not well defined in the literature partially because this research area has not been very active (Bechina & Bommen, 2006). Lee (2001) suggests that knowledge sharing refers to processes of transferring or disseminating knowledge from one person, group, or organisation to another. Bartol & Srivastava (2002) define knowledge sharing as individuals sharing organisational relevant information, ideas, suggestions and expertise with one another. Employees are a key source of knowledge owned and managed by an organisation. They are the ones who create, acquire and share knowledge. IT is a fundamental enabler in the implementation of KM to store, organise and disseminate explicit knowledge and aid in externalising and socialising tacit knowledge.

Bartol & Srivastava (2002) identify four major mechanisms for individuals to share their knowledge in an organisation: (1) contribution of knowledge to organisational databases; (2) sharing knowledge in formal interactions within or across teams or work units; (3) sharing knowledge in informal interactions within individuals; and (4) sharing knowledge within communities of practice. It is contended that in all cases IT (and specifically the Intranet) can enable such managing of knowledge and knowledge sharing mechanisms in an organisation. Smith (2003) draws a clear relationship

between IT and knowledge sharing. Van der Walt, Van Brakel & Kok (2004: 4) emphasise the importance of evaluating an organisation's Intranet to ascertain its contribution to potential knowledge sharing in an organisation. IT, such as an Intranet, makes possible the 'connections' that enable knowledge sharing. An Intranet can therefore be viewed as an enabler of managing knowledge and knowledge sharing in an organisation.

Knowledge Management

Kwalek (2004: 23) suggests that 'the literature on knowledge management is disjointed and disconnected'. Pfeffer & Sutton (2000: 22) indicate that KM 'tends to treat knowledge as a tangible thing, as a stock or quantity, and therefore separates knowledge as some *thing* from the use of that thing'. While there are different views on what KM is, Nomura (2002: 266) suggests that the 'objective of KM is to directly enhance corporate value according to business strategy'. From a review of the literature and for the purposes of this paper, the following definition of KM will be adopted: 'KM is the organisational process for acquiring, organising and communicating both tacit and explicit knowledge (so that people may use it to be more effective)' (Gray, 2006: 118). The argument for this selection is based on the recognition that the combined knowledge and expertise of people within an organisation is what makes an organisation unique. It allows people to add value so that they become more effective in an organisation.

KM is not a centralised database that contains all the information known by an organisation's employees. It is the idea of gaining business insights from a variety of sources – including databases, websites, employees and business partners – and cultivating that information content wherever it resides into corporate value. An Intranet is only as good as its content (Curry & Stancich, 2000). Business insight emanates from capturing information and giving it greater meaning via its relationship to other information in the organisation. It should be stated that KM is not about making plug-and-play employees dispensable because all they know is recorded for the next person who fills their shoes – it is about delivering information to knowledge workers, business processes and technology to make organisations successful and employees effective. The Intranet, the in-house version of the Web browser based on Internet technology, creates a

common corporate communications and information-sharing system (Brelade & Harman, 2003).

eThekwini Municipality Organisation

eThekwini Municipality comprises six clusters/service units (Office of the City Manager, Treasury, Governance, Sustainable Development and City Enterprises, Corporate and Human Resources and Health, Safety and Social Services) and employs approximately 18,000 employees. The Information Services Department is located in the Office of the City Manager. eThekwini Municipality has some 6,000 networked desktops (personal computers, thin clients and laptops) and electronic communication (i.e. eMail) takes place via Novell's GroupWise (Client version 6.5). A total of 6,654[1] GroupWise accounts exist in eThekwini Municipality. There are approximately 1,500[1] Internet accounts utilising either Microsoft Internet Explorer or Netscape Navigator Web browsers.

Research Methodology

All research is different. Every major organisational process should be regularly evaluated and the evaluation should be purposeful and completed (Debowski, 2006: 274). One method of evaluation is a survey. Debowski (2006: 277) suggests that survey 'evaluations take a number of forms … and may be conducted via telephone, email our mailouts' and '… data should be gathered by electronic means …' and this '… is an increasingly useful quantitative data collection strategy, as it is non-invasive and low cost'. In this study, the evaluation selected by the author was e-Mail since it is non-invasive and the purpose and benefits of an eMail survey justified the cost. For this research, the mixed-methods research approach was adopted as follows:

- Knowledge claim – pragmatism;
- Strategy of inquiry – transformative procedures; and

---

[1] Count taken during survey period.

• Methods of data collection and analysis – secondary data and analysis are used.

Data Collection

The data for eThekwini Municipality's Intranet was collected by an independent research company, Ask Africa. The rationale for using secondary data was that (1) it was considered relevant to the study; and (2) there were savings of time and money by using available data rather than collecting original data.

On 13 June 2006 eThekwini Municipality employees were invited – by eMail invitation from the Communications Department – to participate in an online Intranet survey. The aim of this survey was 'to identify areas where the Intranet may need improvements' and 'to allow positive user experiences to be obtained'. eThekwini Municipality employees who expressed an interest in participating in this survey received an online questionnaire, which was eMailed to them by Ask Africa's research partner, MicroIces. Data collation was handled by Ask Africa. The data used in this research was sourced from the eThekwini Municipality Intranet Research Report (July 2006), which was compiled by Ask Africa. The reported findings inform this study.

From the 150 eMails sent to eThekwini Municipality employees, 39 responses were received. This represents 26 per cent of the total number of employees who originally expressed interest in participating in the survey. While this is a relatively small sample, Debowski (2006: 274) suggests that response 'rates as low as 20% may still provide some sense of the issues'. The author did not participate in this online survey. Wegner (2000: 457) suggests that in the sampling process it is important on deciding 'an appropriate *sample size* to draw in a survey study … a researcher chooses a minimum sample size to achieve a *desired degree of precision* in estimation for a given *level of confidence*'. Since this research is an IT practitioner-based inquiry, there is a need to ascertain the level of precision or degree of error allowed (at an assumed 90% level of confidence) associated with the known sample size of 39 drawn in the Ask Africa survey and reported in the eThekwini Municipality Intranet Research Report. Using the formula cited by Wegner (2000: 459) to estimate the sample size for qualitative random number variables

$$n = \frac{N(\sigma^2 z^2)}{NE^2 + (\sigma^2 z^2)}$$

where

n = sample size (39 responses were received in the survey conducted by Ask Africa);

N = target population size (6,654 GroupWise accounts exist in eThekwini Municipality);

z = value associated with the level of confidence (at 90% level of confidence, z = 1.645);

σ = population standard deviation (variability (p = 0.5) and q = (1-p)); and

E = level of precision (degree of error allowed),

the level of precision, E = 0.131 i.e. the degree of error allowed is 13% (rounded). An IT practitioner interpretation of this result means that if, for example, at a 90% level of confidence and a relatively high percentage (say 87%) of respondents surveyed Agree/Strongly Agree to a statement relating to benefits the Intranet holds, the usability of the Internet or the content of the Intranet, the upper bound will be 87% + 13% = 100% and the lower bound will be 87%—13% = 74%.

Data Analysis

Extracted from the eThekwini Municipality Intranet Research Report (Ask Africa, 2006), the results are now presented. The ranking in ascending order of Agree/Strongly Agree responses to benefits the Intranet holds is reflected in Table 1.

Table 1: *Ranking in ascending order of Agree/Strongly Agree responses to benefits the Intranet holds*
(Adapted from eThekwini Municipality Intranet Research Report compiled by Ask Africa (2006: 26))

Statement	Percentage (%) of Respondents (N=19)		
	Agree/ Strongly Agree	Neutral	Disagree
Useful platform to share and access inter-departmental information	87%	9%	4%
The Intranet is an effective way to conduct organisational interaction	81%	14%	5%
Quickest focal point to disseminate and get organisational communication	77%	14%	9%
Enhances departmental communication	72%	5%	24%
Helps the organisation improve its service to customers	65%	15%	20%
Helps with productivity	63%	14%	23%
Using the Intranet is necessary for employees to perform daily work functions	50%	5%	45%

From Table 1, the greatest perceived benefit that the Intranet holds for employees using it is as a platform to share and access inter-departmental (i.e. clusters/service units) information. As outlined in the literature, knowledge must be exchangeable and must be able to grow. Sharing and accessing inter-departmental information facilitates knowledge sharing. The second highest reported benefit was as 'an effective way to conduct organisational interaction'. Robertson (2004: 1) suggests that 'interpersonal communication must be recognized as critical within organisations'.

For n = 19, N = 6,654 at a 90% level of confidence and σ = 0.5, then the level of precision E = 0.188 i.e. the degree of error allowed is 19% (rounded). This means that the results to the statement shaded in Table 1 are not statistically conclusive and the respondent's views should be regarded as 'split'.

The ranking in ascending order of Agree/Strongly Agree responses to the design of the Intranet is reflected in Table 2.

Table 2: *Ranking in ascending order of Agree/Strongly Agree responses to design of Intranet*
(Adapted from eThekwini Municipality Intranet Research Report compiled by Ask Africa (2006: 34))

Statement	Percentage (%) of Respondents (N=21)		
	Agree/ Strongly Agree	Neutral	Disagree
I am happy with the text and font used on the website	86%	5%	10%
I am happy with the colours used on the website	81%	10%	10%
I am happy with the layout and organisation of the website	67%	19%	14%
I am happy with the images and pictures used on the site	62%	19%	19%
Overall I am happy with the design of the Intranet website	57%	33%	10%

From Table 2, it appears that most respondents surveyed (86 per cent) were satisfied with the text, font and colours used, but there was some disagreement on the images, pictures and overall design of the Intranet website. For respondents surveyed, this suggests that images and pictures used on the website require improvement for eThekwini Municipality employees to obtain user satisfaction (Ask Africa, 2006: 35) and to ensure that the information is contextual, relevant and actionable.

For n = 21, N = 6,654 at a 90% level of confidence and σ = 0.5, then the level of precision E = 0.178 i.e. the degree of error allowed is 18% (rounded). This means that the results to all statements in Table 2 are statistically conclusive.

The ranking in ascending order of Agree/Strongly Agree responses to the usability of the Intranet is reflected in Table 3.

Table 3: *Ranking in ascending order of Agree/Strongly Agree responses to the usability of the Intranet*
(Adapted from eThekwini Municipality Intranet Research Report compiled by Ask Africa (2006: 39))

Statement	Percentage (%) of Respondents (N=20)		
	Agree/ Strongly Agree	Neutral	Disagree
The drop down menus are easy to use	70%	20%	10%
Overall I am happy with the functionality/usability of the site	67%	10%	24%
I am happy with the site labeling	62%	19%	19%
I am happy with the speed of the site	62%	14%	24%
I am able to navigate quickly and easily	50%	20%	30%
The site is self-explanatory – it indicates where I need to go to find the information I am looking for	43%	29%	29%

From Table 3, it appears that navigation improvements are required. Furthermore, while respondents surveyed agreed that they are able to navigate the Intranet Website quickly and easily, they felt that there was no clear direction provided. Knowledge seeking is an important process associated with the management of knowledge. The Intranet should make organisations more successful and employees more effective. There is a need for the Intranet to 'become a dynamic and living environment for knowledge-based activities' (Robertson, 2004:1). The revised navigational structure will then have better rigour and structure and should have a positive impact on employees. Debowski (2006: 169) cautions that 'the reason that many intranets are less useful than they might be – they lack rigour and structure'.

For n = 20, N = 6,654 at a 90% level of confidence and $\sigma = 0.5$, then the level of precision E = 0.183 i.e., the degree of error allowed is 18% (rounded). This means that the results to statements which are shaded in Table 3 are not statistically conclusive and the respondent's views should be regarded as 'split'.

The ranking in ascending order of Agree/Strongly Agree responses to the content of the Intranet is reflected in Table 4.

Table 4: *Ranking in ascending order of Agree/Strongly Agree responses to the content of the Intranet*

(Adapted from eThekwini Municipality Intranet Research Report compiled by Ask Africa (2006: 44))

Statement	Percentage (%) of Respondents (N=18)		
	Agree/ Strongly Agree	Neutral	Disagree
The information and content on the website is relevant	63%	11%	26%
The information on the website is reliable	61%	17%	22%
Overall I am happy with the quality of content on the website	57%	14%	29%
I am happy with the quality of the search process	57%	14%	33%
The content on the site is regularly updated	53%	11%	38%
There is a high likelihood of finding information I am looking for even though I do not know where to find it	52%	10%	38%

For n = 18, N = 6,654 at a 90% level of confidence and $\sigma = 0.5$, then the level of precision $E = 0.193$ i.e. the degree of error allowed is 19% (rounded). This means that the results to all statements which are shaded in Table 4 are statistically not conclusive and the respondent's views should be regarded as 'split'.

From Tables 1 and 4, it appears that respondents surveyed generally felt that the information on the Intranet is relevant and reliable. However, improvements in the updating of information and the quality of information-seeking are required. This suggests that while the information on the Intranet website is generally seen to be reliable, the regular updating of content and finding information that an employee is looking for needs to be improved (Ask Africa, 2006: 45). For an Intranet to be of 'real value' to employees, the contents should be relevant, reliable, accurate, informative and up to date. In order to facilitate knowledge and knowledge sharing, employees need to be able to share organisational relevant information with one another. An important use of most Intranets is to find documents that 'point' to employees who have knowledge and expertise. By finding the information, this should result in the creation of knowledge and as a growing spiral as knowledge moves among employees, groups of employees in the different organisational levels in eThekwini Municipality.

An Intranet may be classified as a KM application since it is capable of distributing knowledge. An Intranet is seen as a tool for the more efficient

sharing and creation of knowledge within organisations, using both 'push' and 'pull' technologies. However, in the case of eThekwini Municipality's Intranet, it appears that far greater use is made of the 'pull' technology (as opposed to 'push' technology). This current trend will need to be addressed so that the 'pull' technology is also facilitated.

In summary, from the survey results there appear to be areas for improvement in the Intranet design, usability and content areas. The reported results tend to suggest that there is limited managing of knowledge and knowledge sharing using the Intranet in eThekwini Municipality. This trend will need to be addressed so that managing knowledge and knowledge sharing are aligned with eThekwini Municipality's IDP.

Conclusion

Given eThekwini Municipality's IDP, the value of knowledge for knowledge sharing is crucial at this point. Further research may need to be conducted to gauge whether improvements in the updating of information and the quality of information-seeking have facilitated managing knowledge and knowledge sharing in eThekwini Municipality. IT, with the enabling role of Intranet technology, should be seen as significantly important to enhance the meaning and value of managing knowledge and knowledge sharing in eThekwini Municipality—this will serve to augment Programme 7 of eThekwini Municipality's IDP. With intellectual capital being aligned to the organisational strategy, the Intranet will provide a sound framework to facilitate managing knowledge and knowledge sharing in eThekwini Municipality towards its KM strategy.

References

Alavi, M & DE Leidner 2001. Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues. *MIS Quarterly* 25,1March: 107-136.

Ask Africa 2006. *eThekwini Municipality Intranet Research Report*. Unpublished Report, 1-72, July.

Averweg, U 2007. Impact of Organisational Intranets on Profitability in Organisations. In Lubbe, S (ed): *Managing Information Communication*

Technology Investments in Successful Enterprises, Chapter 3: 44-78. Hershey, PA: Idea Group Publishing.

Bartol, KM & A Srivastava 2002. Encouraging Knowledge Sharing: The Role of Organizational Rewards. *Journal of Leadership and Organizational Studies* 9,1: 64-76, Summer.

Bechina, A A & T Bommen 2006. Knowledge Sharing Practices: Analysis of a Global Scandinavian Consulting Company. *The Electronic Journal of Management* 4,2: 109-116.

Botha, J (ed) 2004. *managing e-commerce*. Lansdowne, South Africa: Juta.

Brelade, S & C Harman 2003. *Knowledge Management – The Systems Dimension*. London, England: Thorogood.

Cabrera, A & EF Cabrera 2002. Knowledge-Sharing Dilemmas. *Organization Studies* 23,5: 687-710.

Curry, A & L Stancich 2000. The Intranet – An Intrinsic Component of Strategic Information Management? *Information Management* 20: 249-68.

Debowski, S 2006. *Knowledge Management*. Milton, Queensland, Australia: John Wiley & Sons.

Edenius, M & J Borgerson 2003. To Manage Knowledge by Intranet. *Journal of Knowledge Management* 7,5: 124-136.

eThekwini Municipality 2006. *Innovations – Good Practice from the eThekwini Municipality, Durban, South Africa.* Corporate Policy Unit (CPU), eThekwini Municipality, Durban.

eThekwini Municipality Integrated Development Plan 2007. *2010 and Beyond. 2007 – 2008 Review.* Corporate Policy Unit, eThekwini Municipality, Durban, South Africa, 1-120, July.

Geisler, E 2008. *Knowledge and Knowledge Systems.* Section 1 – The Structure of Knowledge. Hershey, PA: IGI Publishing.

Gray, P 2006. *Manager's Guide to Making Decisions about Information Systems.* Hoboken, NJ: John Wiley & Sons, Inc.

Hahn, J & M R Subramani 2000. A Framework of Knowledge Management Systems: Issues and Challenges for Theory and Practice. *Proceedings of the Twenty-first International Conference on Information Systems*, 302-312, December.

Hall, H 2001. Input-friendliness: Motivating Knowledge Sharing across Intranets. *Journal of Information Science* 27,3: 139-146.

Kankanhalli, A, F Tanudidjaja, J Sutanto & BCY Tan 2003. The Role of IT in Successful Knowledge Management Initiatives. *Communications of the ACM* 46,9September: 69-73.

Kwalek, JP 2004. Systems Thinking and Knowledge Management: Positional Assertions and Preliminary Observations. *Systems Research and Behavioral Science* 21: 17-36.

Lawton, SM 1995. *Intranets* Fuel Growth of Internet access Tools. *Digital News & Review*. [On line] Available: www.afab.com/DNR_intranets.htm Accessed: 8 July 2008.

Lee, J N 2001. The Impact of Knowledge Sharing, Organizational Capability and Partnership Quality on IS Outsourcing Success. *Information & Management* 38,5: 323-335.

Nomura, T 2002. Design of 'Ba' for Successful Knowledge Management: How Enterprises should Design the Places of Interaction to Gain Competitive Advantage. *Journal of Network and Computer Applications* 25,4: 263-278.

Nonaka, I 1994. A Dynamic Theory of Organizational Knowledge Creation. *Organization Science* 5,1,February: 14-37.

Pfeffer, J & R Sutton 2000. *The Knowing-Doing Gap: How Smart Companies Turn Knowledge into Action.* Boston, MA: Harvard Business School Press.

Robertson, J 2004. 'Knowledge sharing' should be Avoided. CM Briefing, *CMb 2004-16*, 3 September. [On line] Available: www.steptwo.com.au. Accessed: 8 July 2008.

Skok, W & C Kalmanovitch 2005. Evaluating the Role and Effectiveness of an Intranet in Facilitating Knowledge Management: A Case Study at Surrey County Council. *Information & Management* 42: 731-744.

Smith, H 2003. Instilling a Knowledge-sharing Culture. *Queen's Centre for Knowledge-Based Enterprises* 1-17. [On line] Available: www.business. queens.ca/kbe. Accessed: 19 May 2008.

Stenmark, D 2002. Information vs. Knowledge: The Role of Intranet in Knowledge Management. In *Proceedings of the 35th Hawaii International Conference on System Sciences (HICSS-35).*

Telleen, SL 1997. *Intranet Organization*. New York, NY, USA: Wiley Publishers.

Tiwana, A & B Ramesh 2001. Integrating Knowledge on the Web. *IEEE*
   Internet Computing 5,3: 32-39.

Turban, E, E McLean & J Wetherbe 2004. *Information Technology for Management. Transforming Organizations in the Digital Economy.* Fourth Edition. Inc, Hoboken, USA: John Wiley & Sons.

Van der Walt, C, PA Van Brakel & JA Kok 2004. Knowledge Sharing via Enterprise Intranets – Asking the Right Questions. *South African Journal of Information Management* 6,2: 1-12.

Warkentin, M, R Bapna & V Sugumaran 2001. E-knowledge Networks for Inter-organizational Collaborative e-Business. *Logistics Information Management* 14,1/2: 149-163.

Wegner, T 2000. *Quantitative Methods for Marketing Decisions.* Kenwyn, South Africa: Juta & Co, Ltd.

Zack, MH 1999. Developing a Knowledge Strategy. *California Management Review* Berkley 41,3: 125-146.

U.R. Averweg
Information Services
eThekwini Municipality and University of KwaZulu-Natal
South Africa
averwegu@durban.gov.za