A review of the Knowledge Management Centre

Conducted for the Economic and Human Development Department

City of Cape Town

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Under the auspices of the UCT Knowledge Co-op

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Following a study of the resources and services of the Knowledge Management Centre (KMC) of the Economic and Human Development Department (EHD) and a survey of a sample of users and potential users, the conclusion is that the KMC is NOT operating in a Knowledge Management mode; it is operating as a small special library, in a demand-driven mode (page 7).

Interviews with the sample of users indicate that a Knowledge Management mode of operation would be more appropriate for supporting the work of the EHD (page 9).

It is proposed that the two mutually supportive KM initiatives of *leveraging information content* and the *development and utilisation of knowledge communities* should form the core of the EHD's KM strategy (page 13).

A set of integrated actions are recommended to implement a Knowledge Management Programme and capacitate the KMC at the EHD (pages 15-18).

A job description for a post of Knowledge Officer is provided (pages 19-20).

Executive summary

Introduction

The Knowledge Management Centre (KMC) was set up by a Project Consultant, Steve Anderson, in 1998, with the aim of providing a largely self-service resource centre to store and disseminate relevant and up-to-date information relating to economic development and tourism.   The KMC database, which holds the records of all items in the collection, was originally created with LibWin software and was converted to InMagic DB/Textworks in 2001. When the use of MS SharePoint was introduced by the City of Cape Town, a decision was taken to transfer the KMC database into a format suitable for use in that environment.

The KMC has been managed on a part-time basis since its inception; the incumbent ceased this responsibility in June 2011 and, since then, the service has been unstaffed. The responsibilities of the KMC manager have covered acquisition of materials identified by the staff of the EHD Department, processing and addition to the database, including the assignment of a Dewey Decimal Classification class number but no subject metadata. Service to users has included question answering, identifying items of stock required, conducting searches of the KMC database and other sources via the internet and liaison with other information services within the Cape Town municipal structure.   Some current awareness was also undertaken through the medium of a monthly newsletter, sent by e-mail to a list of those requesting it.

The communities served include external bodies: Wesgro, Department of Trade and Industry (Cape Town), Provincial Government of the Western Cape, Cape Film Commission, the Cape Town Destination Marketing Organisation (now absorbed into Wesgro).   The KMC also responded to requests from casual users on an ad hoc basis. Links were also maintained with Business Support Centres at Khayelitsha and Milnerton and with Library Business Corners.

The Project objectives

The aim of the Project is briefly to assess the current operations of the KMC and to determine whether these continue to address the needs of its present clients and of potential clients within the City of Cape Town municipal services sector; additionally, to ascertain whether the KMC is sufficiently aligned with modern information service delivery techniques. This "As is" assessment is compared with current global best practice in Knowledge Management (KM) for information services of a similar scope and kind to identify a "To be" cluster of facilities and services. A gap analysis identifies areas of change, skill acquisition and suitable strategies for closing the gaps.

The product is a job specification for a KMC manager to run and to develop the KMC in accordance with the "To be" plan.

The aim is to develop an improved service for the existing clients and to provide services potentially-attractive to other clients within the same sector. At a later and, as yet undefined, stage it may be possible to extend similar services outside the municipal structure to allied services such as schools, public libraries and information services and NGOs; no consideration has been given to such extension in the present project report.

Research methods

1. Summary identification of the information needs of the existing and potential client bases through a short questionnaire, using the external survey platform SurveyMonkey™.
2. In-depth identification of the information needs of the existing client base through a series of focus interviews of selected staff, this amounting to a 10% sample based on a list of candidate respondents supplied by the EHD Department.   The focus interviews were conducted individually, each lasting about 20 minutes.
3. Review of existing resources: shelf and category count.

4. Review of existing services: examination of work records covering enquiry responses, requests for information from clients, circulation list of newsletter and current awareness information.
5. Identification of existing client base from work records and circulation lists.
6. Identification of potential client base from consideration of the staff lists of the EHD Department, other appropriate departments within the City of Cape Town and the list of Councillors.
7. Desk research to identify international best practice for knowledge management in the operating environment of organisations similar to the EHD Department.
8. Gap analysis and desk research to map the information resources and skills necessary to reconfigure and run the KMC in accordance with the best practice identified.
9. Desk research to prepare a job specification for a person to reconfigure and run the KMC.

The conduct of the research has been discussed with the EHD Department, notably Alison Goldstuck, formerly Manager for Economic Information and Research, Dilshaad Gallie and Nicole Mack, also of the Department. Some compromises and adjustments have been necessary, the most notable being reduction in the interview schedule form focus groups to individual focus interviews, this necessitated by the practical difficulty of agreeing on meeting times mutually-acceptable to all potential group members. Analysis of the KMC catalogue and other records had to be deferred until later in the Project schedule because of delays in providing network access for the researchers; fortunately, this was resolved by Alison Goldstuck and Dilshaad Gallie in sufficient time not to compromise progress.

Deliverables

A report of up to twenty pages containing

1. "As is" assessment – up to five pages.
2. "To be" blueprint based on global best practices – up to five pages.
3. Gap analysis and recommendations for closing the gap.
4. Job specification for KMC manager.

A PowerPoint presentation summarising the Project report.

The consultants have also agreed to be available as part of a team to consider applications for the post of KMC manager, should this be considered necessary. This will take place independent of the Project schedule and at no additional cost.

"As is": the KMC stock and services

The KMC is operating as a small library covering economic and social development, including some aspects of tourism. It is *responding* to requests from its community of users rather than anticipating, or promoting, needs. As such, therefore, it operates in the background of the work of the EHD Department and relies upon cues from the user community as to what information sources and services should be supplied.

An analysis of the contents of the KMC database indicates a wide range of information sources:

Grand Total	6 607	%
Pamphlets, fact sheets and files	2 355	36
Articles	1 183	18
Snippets (newspaper clippings)	1 136	17

Electronic Documents	589	9
Books	537	8
Internet sites	302	5
UNISA Bureau of Market Research (BMR) Reports	158	2
Annual Reports	113	2
Presentations	94	1
CD ROMs and other audio-visual materials	85	1
Journals	39	1
Reference materials	16	0

Table 1: Composition of KMC stock

The distribution of sources is unsurprising for the stock of a special library, the focus of which is typically on semi-published and unpublished materials (often termed "grey literature" because of its lack of bibliographic identification and the informal nature of its publication). The low percentage of books is also not unusual because information in books is often dated and these sources are considered of secondary importance in comparison with journal articles and similar sources. The large proportion of "Snippets" (mostly clippings from newspapers) indicates a purposive approach to adding to the stock in accord with the needs of the community of users.

Extending this analysis to cover the age distribution of the material indicates that there has been a marked decline in the level of acquisitions from 2009 onwards. No material has been acquired since June 2011, the Librarian of the KMC no longer being in post.

	Pre-2000	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total	%
Grand Total	1 712	274	304	305	434	576	555	603	515	426	123	400	147	6 607	
Pamphlets, fact sheets and files	1 263	196	232	185	205	171	42	21	18	9	5	5	3	2 355	36
Articles	3		1		4	153	212	199	190	150	118	113	40	1 183	18
Snippets	0			43	122	106	123	167	114	137	149	126	49	1 136	17
Electronic Documents	19	3	6	7	31	20	74	96	114	76	47	58	38	589	9
Books	236	46	34	27	30	33	28	44	19	17	7	12	4	537	8
Internet sites	3			2	19	41	41	46	35	15	13	79	8	302	5
UNISA Bureau of Management (BMR) Report	114	12	13	19										158	2
Annual Reports	54	11	8	8	13	3	1	3	2	5	1	3	1	113	2
Presentations	0			1	1	41	15	9	14	5	4		4	94	1
CD ROMs and other audio-visual materials	13	6	6	10	2	6	16	9	3	4	8	2		85	1
Journals	5		4	3	2	2	2	4	5	6	4	2		39	1
Reference materials	2				5		1	5	1	2				16	0

Table 2: Acquisitions of the KMC by year

The decline in the rate of acquisitions is highlighted if the data is represented in the form of a chart (see Figure 1) in which the acquisition of the most populous media are noted. Whilst it would not be surprising to find that there had been a shift in the pattern of acquisitions from printed sources to electronic, such is not the case: there has been a reduction in the rate of acquisitions in all categories. The reasons for this reduction are two-fold: tighter control over the approval for acquisitions by the Department and a reduction in the volume of requests for new material. It is the latter effect that is of most concern: the KMC is a "demand-driven" service and there is evidence that demand is declining.
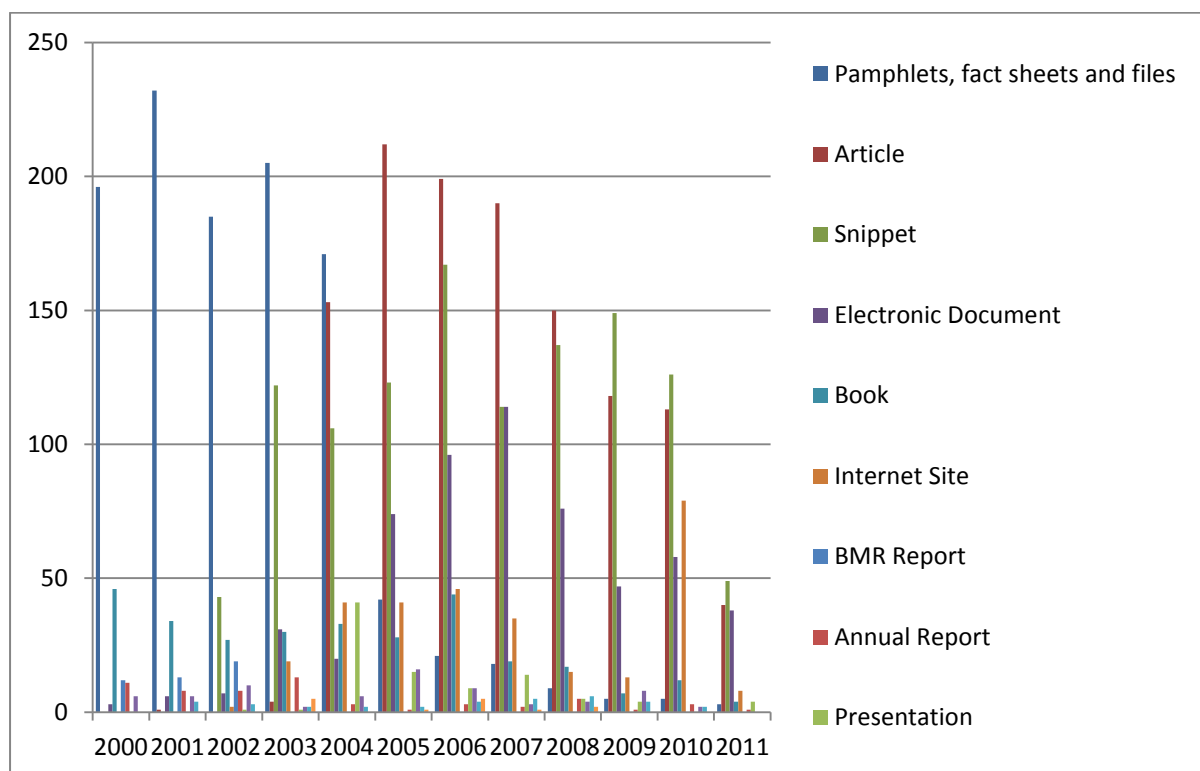

Figure 1: Acquisitions of selected sources by the KMC by year

There are 290 people registered with the KMC, only a small percentage of whom can be regarded as regular users of its services. One measure of this is an analysis of the records of loan of material from the KMC. Records of loans of material from the KMC do not go back further than 2006 -- the year in which the KMC database was transferred to the MS SharePoint system. Over the period 2006 to 2011, 448 loans are recorded, these being distributed by year thus:

2006	2007	2008	2009	2010	2011	Grand Total
1	4	10	103	226	104	448

Table 3: Loan records

It seems very likely that, at the point of conversion, records for 2006 were partly or completely lost, so the number of loans for that year is probably an underestimate. Additionally, it is possible that some material has been borrowed without a loan record being created: the Librarian was working part-time so it is possible that "informal loans" took place during these periods.

The distribution of loans over the period shows that there were 35 borrowers (these have been identified by capital letters to preserve confidentiality). Analysis of the 448 loans (see Table 4) indicates that there is a small pool of eight people (labelled A-H in the table below) responsible for

almost 75% of the loans. This corresponds quite closely with the 80/20 rule of thumb, where 20% of the borrowers are responsible for 80% of the loans.

What is thought-provoking is the very uneven distribution typical of the pattern of loans by each individual. Inspection of the table indicates that the pattern for an individual tends to be "bumpy", with some years having high activity, followed by relative inactivity. Individual "B", for example, shows a low rate of borrowing over the years 2007-2009, with a peak in 2010, followed by a falling-off in 2011.

User			User			User		
A	88		**I**	17		**T**	4	
	2009	66		2010	13		2009	3
	2010	19		2011	4		2010	1
	2011	3	**J**	10		**U**	4	
B	87			2009	2		2010	4
	2007	3		2011	8	**V**	3	
	2008	7	**K**	10			2011	3
	2009	3		2010	6	**W**	3	
	2010	51		2011	4		2008	1
	2011	23	**L**	9			2010	2
C	40			2010	3	**X**	2	
	2010	38		2011	6		2011	2
	2011	2	**M**	6		**Y**	2	
D	30			2011	6		2011	2
	2010	20	**N**	6		**Z**	2	
	2011	10		2008	1		2010	2
E	25			2010	3	**AA**	2	
	2006	1		2011	2		2011	2
	2007	1	**O**	6		**BB**	2	
	2008	1		2010	4		2010	2
	2009	2		2011	2	**CC**	2	
	2010	20	**P**	5			2011	2
F	22			2010	5	**DD**	1	
	2009	1	**Q**	5			2009	1
	2010	12		2009	2	**EE**	1	
	2011	9		2010	3		2011	1
G	21		**R**	5		**FF**	1	
	2009	21		2010	2		2011	1
H	21			2011	3	**GG**	1	
	2009	1	**S**	4			2009	1
	2010	15		2011	4	**HH**	1	
	2011	5					2010	1

Table 4: Loan records for users between 2006 and 2011

Several reasons may be adduced for this behaviour. Need may be linked to involvement in a project, for example, with the peaks coinciding with a year of intensive activity. It may also be that in-KMC use (which is not recorded) has been substituted for borrowing in the inactive years -- or it may be that information sources elsewhere have been used. Whatever the reason, it underlines the demand-driven nature of the KMC business.

Another measure of impact is the volume of requests made by users to the KMC. For the period 2001-2011, analysis of the records in the KMC database indicates that the majority of users were infrequent requesters rather than regular, repeat, "customers".

Requests per user	1-5	6-10	11-15	16-20	20+
Number of users	128	20	7	2	10

Table 5: Volume of requests per user over the period 2001-2011

The "top ten" users made between 18 and 176 requests over the period.

Collectively, this suggests that the KMC has some purposive users (about 6% of the total number of requesters) making regular and repeated requests but that there is also a "long tail" of low-use clients; again, this is not unusual except in being considerably less than the "80/20" rule would suggest. Thirteen users have registered to receive "current awareness" messages by e-mail regarding their specific areas of interest.

The KMC published a newsletter from 2002 to mid-2011 when the incumbent left. Ninety-two issues were produced, initially six being issued a year and increasing to eleven in 2004. Each issue included brief descriptions of new items acquired or accessible, sections covering news and information, a list of recent acquisitions, forthcoming events and feedback. The circulation list included 210 people. A partial record was kept of the requests received:

	2002-3	2003-4	2004-5	2005-6	2006-7	2007-8	2008-9
Number of requests per year	5	2	36	32	44	54	41

Table 6: requests arising per year from issues of the newsletter

This suggests, once again, a low level of response. It is not possible from the records to determine if substantially the same people were making these requests.

Summary of "As is"

The KMC has been operating as a small library with a limited range of physical stock, a much larger range of electronic resources such as Internet sites, and a small group of users. Its services have been largely characterised by reaction rather than pro-action, the newsletter being an exception. In making this assessment, it is also important to remember that the incumbent was very responsive to requests; comments gained during the survey (described later) that forms part of this Report included many appreciative comments about background knowledge, understanding and willingness to assist.

However, it must be concluded that the Knowledge Management Centre is, most emphatically, *not* operating according to the principles of Knowledge Management.

Survey of users

To assess attitudes to the services of the KMC and ascertain what users might need of a re-configured service, a survey was conducted at two levels. An electronic-format questionnaire was sent to a "population" selected by Alison Goldstuck, Dilshaad Gallie and Nicole Mack of the EHD Department; this list consisted of 39 names, split into two tiers: Tier 1, of 22 members all deemed to be "highly-significant" users and Tier 2, of 17 members, deemed "important" users. From this same population, eleven members were chosen for a focus interview, using a random proportional sample.

A copy of the results of the questionnaire is available as a separate file from the Consultants. Of the 39 people included, responses were received from 18, a response rate of 46%. It should be noted that many respondents chose to skip questions, so the comments below should be treated as tentative.

The impact of the KMC is moderate: just over 60% of respondents knew that it existed and, of these, 73% used its services, through a personal visit or an e-mail request. The majority made of use of its services irregularly. Respondents used the KMC service to borrow books, periodicals, newspapers and reports; as a location within which to read books or periodicals and magazines; to request books, periodicals and magazines, newspaper clippings, and database and Internet searches.

Comparing a list of the subject areas covered by the KMC collection and the interests of the respondents, there is a moderate match, with economic development (local and national) and city

development being nominated most often. Tourism, major events management and management generally were not nominated. However, the majority of respondents chose not to answer this question. This may indicate that whilst the collection development policy of the KMC may once have met the needs of its clientele closely, it now needs reconsideration to bring it more in line with current interests.

The newsletter (when it was still being produced) was received by 62.5% of respondents and valued mainly for its selection of news and new acquisitions lists.

A significant point of the questionnaire was to attempt to determine the perceived value of the services of the KMC. The contingent valuation method, a technique that has been used several times in seeking the economic value of libraries[1], was attempted. However, the number of responses to this part of the questionnaire was very low and it would be unsafe to draw firm conclusions. From the few comments offered, the value placed upon the present KMC services was quite variable. An interesting suggestion by one respondent was that services and resources shared with another entity could result in greater benefit.

The results of the questionnaire survey highlight the demand-driven nature of the services of the KMC, the need to address visibility of the service and to adjust the profile of collection development.

The focus interviews were conducted individually with eleven of the candidate respondents suggested in the list mentioned earlier. The interviews were conducted in a venue and at a time convenient for each respondent.

The design of the interview used the "critical incident" method, whereby respondents are prompted to describe and discuss recent incidents where searching for information has had to be undertaken in connection with their jobs. Apart from those in a position of sufficient seniority to be able to delegate searching, the majority chose to conduct the search themselves using, in order of preference, resources available in their offices or those of colleagues, Internet searches and external sources. When prompted, most agreed that being able to pass such enquiries to a service such as the KMC would have been useful in many instances. The point was made that the success of such searches is highly contingent upon the context and nature such requests being clearly understood by the searcher to whom they are delegated. The original enquirer must remain the arbiter of what is relevant information, a role that often requires some sensitivity and a willingness to spend time in understanding the nature of the request.

Respondents were also asked to rate how well they believed the need for information was being met at both a personal and at a departmental level. The majority felt that at neither level was effective information provision being made. When prompted about the role of the KMC, several mentioned the need for its services and resources to be more actively marketed.

Turning to the use of information generally within the City of Cape Town municipal structure, almost all respondents considered that the knowledge and information seeking culture was poorly-developed or barely existent. Several volunteered the view that the culture was largely that of the "silo", with very limited evidence of cooperation and information-sharing between departments. The importance of this was underlined with several anecdotes about money wasted on duplicating research already completed by other departments.

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[1] Chartered Institute of Library and Information Professionals, Information and Advice Team. 2011. Demonstrating the value and impact of special library and information services. [PDF] Available: http://www.cilip.org.uk/get-involved/advocacy/special-library-information-services/Documents/Value%20and%20Impact%20of%20Special%20Libraries%20and%20Information%20Servic es%20%28long%20list%29%20May%202011.pdf (site visited 13 March 2012).

The role of the Strategic Development Information and GIS Department (SDI&GIS) and its Information and Knowledge Strategy (IKS) was mentioned by several respondents. From discussions with the SDI & GS it is evident that the IKS has considerable potential to supply the "missing link" as far as the KMC services are concerned.

What is also evident is that there is a need to consider whether a policy of improved coordination of information provision and services across the municipality rather than developing small and often isolated information services in various directorates and departments in addition to those already in place.

Gap analysis

Engineers and planners are notoriously reliant on personal rather than formal, corporate, sources of information.[2] Studies of information-seeking behaviour tend to show that the same may be concluded about many professional people.[3] It is unsurprising, then, to find that respondents in the surveys did not place the KMC high on their list of potential sources of help and information. However, the complexity of the management of a modern city, such as Cape Town, and the increasing pressure from stakeholders (including rate-payers) that financial resources be demonstrably put to good and appropriate use, combines to promote the importance of developing an information-rich and information-sharing culture. in terms of the well-known model of Greiner[4], the City has reached the crisis point of "co-ordination", the ills of which can be alleviated through development of collaborative approaches.

The KMC "specialised library" approach may have been adequate as a model of information provision until a few years ago; when its services were combined with those of the centrally-maintained service that used to provide information to municipal departments it was probably able to satisfy many needs[5]. The development of direct searching of the Internet and databases has made information sources directly-accessible by municipal employees and the survey results indicate that they have begun to shift, or have already shifted, their information-seeking to these new modes.

There is, however, recognition by several respondents that searching for information can be a complex process and that professional help may be both appropriate and necessary. This argues the case for the retention of the information-seeking and supply functions of the KMC and, in view of the increasing complexity and inter-connectedness of City projects, the need for their expansion.

Similarly, several respondents suggested the need for the KMC to have higher visibility and, in particular, to offer a more pro-active approach. This would raise the profile of the KMC service but require a quite different approach to service provision: in summary, a properly featured and co-ordinated Knowledge Management approach -- a matter that will be outlined in the next section.

The analysis indicates that there is a manifest gap between present KMC service provision and what the respondents -- and, by implication, the staff of the Department -- need.

It is important, though, that any development in the direction of a Knowledge Management service should be co-ordinated with the Information and Knowledge Strategy (IKS) being developed by the municipality. Whilst there is evidence that the staff of the Department are in favour of retaining the

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[2] See, for example, Du Preez, M. 2008. Information needs and information consulting behaviour of Consulting Engineers: a qualitative investigation. Master of Information Science dissertation, University of South Africa. Unpublished. [PDF]. Available: http://uir.unisa.ac.za/bitstream/handle/10500/1941/dissertation.pdf?sequence=1 (site visited 13 June 2012).
[3] Leckie, G. J. 2006. General model of the information seeking of professionals. In K. E. Fisher, S. Erdelez, and L. McKechnie (Eds.), *Theories of Information Behavior* (pp. 158–163), New Jersey: Information Today.
[4] Greiner, L. 1998. Evolution and revolution as organizations grow. *Harvard Business Review* 50(4:May-June): 55-67.
[5] This point has to be conjectural because no records from this earlier period exist.

resources and services of a KMC that is located in the Department, this does not mean that it should operate in isolation or at "arms-length" from a co-ordinated City-wide strategy.

Knowledge Management -- a new strategic approach

In essence the concept of *knowledge management* refers to a management approach that focuses on the deliberate nurturing, enrichment and exploitation of an organisation's knowledge and information resources and assets. It creates the necessary platforms to successfully capture, process, disseminate, use and manage both *tacit*[6] knowledge (i.e. that which is embedded in individual experience) and *explicit*[7] knowledge or information (i.e. that which can be articulated in formal language and transmitted). Knowledge management approaches adopted by organisations can range from those where the emphasis is on the management of explicit knowledge (i.e. information); to those that emphasise connecting people to facilitate new knowledge development and tacit, people-to-people, knowledge transfer and exchange; to the judicious balance of the two approaches. Most organisations in fact apply both approaches in varying degrees and the emphasis on the approach adopted is generally determined by the prevailing organisational culture.

Knowledge management thus provides procedures to harness human capabilities, leverage intellectual assets and identify and eventually develop core competences in the organisation. It recognises the value of people's knowledge, experience, skills and know-how, and the contribution that these can make to an organisation's operations and effectiveness, particularly if effectively transferred and applied (this relates to all levels of staff and all categories of work). By promoting knowledge sharing and networking, KM thus fosters idea generation, knowledge creation, and systematic innovation (i.e. where new ideas are conceived, evaluated, introduced and applied in the form of new processes, products or services). Knowledge management and innovation are clearly intricately related processes and part of the same cycle through which the organisation generates, manages and benefits from its intellectual capital.

Knowledge management practices when implemented should be integrated with the business processes of the organisation. It should further be recognised that KIM is a direct function and responsibility of leadership at all levels, and when implemented, it leads to changes in the way that staff relate and collaborate in the organisation through joint knowledge acquisition, sharing and application.
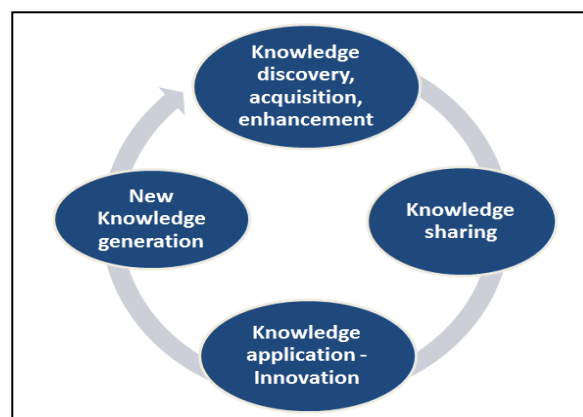

Figure 2 Key Knowledge Management processes

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[6] Tacit knowledge is knowledge which is personal and held by a person as convictions, ideas, experience, etc. It is influenced by values, training, observation and imitation. Tacit knowledge is considered to be "sticky" – in other words, difficult to explicate and share accurately. Hence the sharing or transfer of tacit knowledge requires a shared "code" which could only be acquired by means of lengthy processes of training and/or collaboration.

[7]Explicit knowledge on the other hand is the result of the externalisation or explication of tacit knowledge through speech, writing or other media which could be captured, and stored in text, electronic media and other means of codification and hence retrieved, copied and transferred through documentation.

The objective of introducing Knowledge Management practices and processes into an organisation is to create an environment where all the knowledge assets of the organisation are effectively managed, preserved, and leveraged to the benefit of the operation. All relevant knowledge, both explicit (i.e. information) and tacit (contained within individuals), is assessed, captured, and organised in a single repository or series of linked repositories. Online access is then provided to all the knowledge resources by means of a single point of access. The main driver, however, of such a system is the recognition of the importance of its human capital and that human expertise should be nurtured. Knowledge networking, communication and collaboration should thus be encouraged and facilitated.

The value of implementing Knowledge Management is that it institutes processes to harness human capabilities, leverage intellectual assets and develop core competencies. It promotes knowledge sharing, dynamic interaction and collaboration and this in turn leads to knowledge creation, idea generation and innovation. In short: ``*The management of knowledge resources is essential to the ability of … organizations to change, adapt, and seize new opportunities as they compete in this fast changing global environment"*[8]

Knowledge Management Objectives

A knowledge management initiative thus creates a knowledge-conscious environment where it is recognised that

1. An organisation's value is directly related to its knowledge assets.
2. Organisational success depends on the ability to manage, preserve, and leverage these knowledge assets.

To achieve these objectives the organisation should

1. Foster collaboration, a knowledge sharing culture and and continuous learning.
2. Facilitate the flow of information throughout the organisation and create a Knowledge Map of all tangible and intangible knowledge assets.
3. Integrate scattered databases and repositories of information and knowledge.
4. Capture and organise knowledge from disparate electronic sources (e.g. e-mails).
5. Provide adequate content management of resources.
6. Discover and disseminate new knowledge in internal and external knowledge sources.
7. Provide access to sources of 'know-how' and experience by identifying subject experts, integrating them in informal networks, and encouraging knowledge exchange among and with them.
8. Create effective knowledge search and retrieval services.
9. Support innovation, idea generation and exploit organisational "thinking power" by capturing and disseminating insight and experience.

More specifically, the KM objectives identified as being relevant to the EHD are to:
• Support the planning, decision making and operational processes at EHD by providing timeous access to appropriate information and knowledge.
• Leverage and stimulate innovation by means of knowledge networking and the provision of relevant information and knowledge inputs.
• Promote a learning environment that supports an informed and high performing employee base.
• Promote knowledge collaboration and exchange in and between units and divisions with due consideration to security of information. This should improve the development, sharing and retention of organizational knowledge and intellectual capital.

[8]Albanna, S. 2000, www.csc.com/ solutions/knowledge

- Implement appropriate organisational structures and processes to promote effective collaborative knowledge creation, sharing and application, and to enable the EHD to move away from working in silos.
- Capture its institutional data, information and tacit knowledge and improve its institutional memory and organisational learning processes. There is a need to capture knowledge before employees resign, retire, or move to other positions within the department in order to prevent the loss of skills and valuable expertise.
- Provide effective access to all relevant information and in the process '*prevent reinventing the wheel*'.
- Improve, standardise, document and benchmark organisational processes.
- Institute good change management practices and procedures for KM.

Knowledge Management (KM) Implementation Considerations

KM is primarily about people and all the elements constituting a good KM programme are in some way or another related to the people in the organisation, various stakeholders and the processes and structures that affect them. This IS largely dependent on the organisation having an enlightened knowledge leadership who have a shared vision of how the organisation can benefit from creating, sharing and applying knowledge to support its objectives and performance. Top management should therefore take the lead in articulating and sharing this vision with staff and motivating them to put the vision into action. The organisational culture promotes KM if it values, promotes and rewards knowledge contributions from the staff. The organisational culture should foster knowledge development and inter-and intra-unit communication, knowledge sharing and collaboration (e.g. by means of forums such as "Communities of practice") – that is, establish a knowledge management supporting culture.

Organisational structures that are rigid or very hierarchical and which have restrictive boundaries inhibit knowledge creation and sharing. Staff should be encouraged to collaborate and share knowledge not only within their units and divisions, but also across divisional/unit boundaries, subject to appropriate considerations of confidentiality. Organisational processes should be designed to benefit from interdisciplinary and cross-functional collaboration, knowledge creation and knowledge sharing.

A further important factor to consider is that information communication technology (ICT) should be fully utilised to create effective repositories of EHD's collective knowledge and information resources and fast access should be provided to these repositories. Information communication technology (ICT) tools and processes, including social media, should further be harnessed to promote inter-personal communication, knowledge collaboration and sharing within the organisation's firewall as well as between the organisation and its stakeholders where applicable. These practices should be informed by appropriate policy.

Knowledge management measures should be developed and the state of KM practices regularly evaluated. The performance assessment procedures at EHD should include KM as an important factor in its assessment of staff. The most important factor, however, is that the Knowledge Management practices should be congruent with and effectively integrated with the business processes of the EHD and should work towards achieving EHD's vision, mission and organisational objectives.

The following aspects should be considered before implementing a KM initiative for the EHD

- How the implementation of appropriate KM practices would
  - o provide better and more timeous access to appropriate knowledge and information
  - o create better awareness of all knowledge resources within and beyond organisational

boundaries

- more effectively leverage employees' tacit knowledge and intellectual capital, and how this would benefit the organisation by, amongst others:
  - increasing levels of knowledge
  - improving effectiveness, performance, problem solving and decision making capabilities
  - enhancing EHD's core values (e.g. learning and growth, nurturing its people's skills, competency, etc.)
  - reducing costs and time that arise from repetitive actions because of the lack of a comprehensive institutionalise knowledge base
  - capturing and retaining individual's tacit knowledge and preventing loss of knowledge when employees leave the organisation
  - stimulating innovation and growth
  - improving the EHD' governance and compliance.

- Deciding on the balance between increasing knowledge resources in a particular area by new research (knowledge creation) or leveraging existing but underexploited knowledge resources (*creating vs. accessing and re-using knowledge*).
- Establishing whether the primary sources of knowledge required are created and owned internally or are external to EHD.
- How best to promote and enable knowledge sharing and communication in EHD within and between divisions and units of the EHD.
- How best to promote a learning environment and culture in the EHD.

It is suggested that the implementation of a fully functional KM facility at the EHD is contingent on achieving the following:

- **Identifying the Core Competencies** required to achieve EHD's objectives. These core competencies point to the knowledge which needs to be managed first.
- **Understanding the Organisational Culture** and other cultural issues. Cultures and sub-cultures shape assumptions about what knowledge is and what kind of knowledge is worth managing; who should control information; who should share it, and who can hoard it; the context for social interaction; how knowledge is used in particular situations; and the processes by which new knowledge is created, legitimised, and distributed across an organisation. By being aware of cultural problems and how they can affect human behaviour the KM entity will be better equipped to overcome typical implementation obstacles that are based on cultural issues.
- **Promoting the KM programme to Leadership** and amongst all employees in the EHD: A promotion campaign will need to be developed to run concurrently with the strategy implementation. Existing communications and public relationship channels can be used.
- **Instituting Change Management principles and procedures** in the KM initiative to ensure the seamless and effective adoption of KM.

KM-related Recommendations for the EHD

The need has clearly been established for the implementation of an integrated Knowledge Management system for the Economic and Human Development (EHD) Department, City of Cape Town.

It is thus proposed that the two mutually supportive KM initiatives of *leveraging information content* and the *development and utilisation of knowledge communities* should form the core of the EHD's KM strategy:

Leveraging information content **requires a more systematic approach to managing explicit knowledge or information and includes activities such as records/documents management,**

> **content management, portal development and managing externally generated information by means of the EHD library**
>
> *Development and utilisation of knowledge communities relates to the generation, capturing, validation, application, transfer and embedding of new knowledge /innovation harvested from individuals and related processes into the business processes of the EHD. This may include the establishment and support of Communities of Practice (CoPs), topic related forums on the intranet, cross-functional teams for cross cutting projects, incentives for knowledge discovery and sharing, after action reviews, talent management and tacit knowledge harvesting.*

Such a KM strategy should thus embrace both technological and people-based solutions and approaches. It should further establish the role that the Knowledge Management Centre should play to introduce and maintain these initiatives. It is recognised that some of these strategic interventions have already taken place at EHD, but should be reviewed in terms of the current investigation and the needs of the Department. The central question is how the EHD Knowledge Management Centre could be improved and /or upgraded to support and lead a full-fledged KM development programme and implementation.

The following is a list of factors that we suggest that if adopted would ensure the smooth implementation of KM at the EHD:

Factors that should be adopted

1. **Obtain Support**
   - Obtain the support and buy-in from EHD's leadership - they need publicly to support and motivate the KM initiative and subsequent change in the organisation.
   - A promotion campaign will need to be developed to run concurrently with the KM strategy implementation process.

2. **Expand the KM Function and Capacitate the Knowledge Management Centre (KMC)**
   The Knowledge Management Centre (KMC) should implement the proposed KM programme and should be expanded, adequately resourced and supported by senior management to achieve this.

3. **Integrate the KM Strategy with the EHD's organisational strategy**
   Outline what the KM initiative is going to accomplish, the benefits of KM for the EHD and how the KM project links specifically to the EHD's overall strategic goal and specific strategic perspectives and objectives.

4. **Organisational Cultural**
   Resolve organisational cultural factors that could impede KM implementation.

5. **Promote the KM initiative**

   Create awareness of KM's strategic value throughout the EHD (particularly among senior leadership) by ensuring that KM concepts, benefits, practices and tools (especially appropriate technology) are understood and shared by all employees, i.e. create a KM culture to ensure the success of Knowledge Management. An effective way to achieve this is by:

   - identifying role models that will champion KM implementation; these role models should include senior leadership as well as those respected in the organisation at all levels
   - developing a promotion campaign that will encourage employees to embrace KM and embed it in all their work activities - such a campaign should run concurrently with the KM implementation process and could be facilitated by using (if appropriate) existing communications and public relationship channels
   - appoint knowledge champions to promote the process, ensure its deployment and encourage all employees to employ KM processes on a day-to-day basis
   - conducting workshops and training sessions that will explicate KM, its benefits and build awareness and acceptance by all staff.

6. Address the problem areas identified in the KM Audit.

The audit that was conducted provides an overview of the current knowledge state, the management of knowledge and information and indicates what interventions should be implemented to guide future knowledge direction, decide how to get there and how to measure progress (e.g. the audit data can be used as a baseline to measure future improvements). It was seen from the audit that:

- knowledge and information needs are not particularly well met
- the EHD's level of KM maturity is currently still in its infancy and that KM practices are not being deployed in any significant way
- there are various problems relating to the EHD's organisational culture, current KM-related processes and systems – these all require remedial interventions to ensure the application of good KM practice
- there is clearly a need for the EHD to improve all aspects relating to knowledge management initiatives.

7. Outline the specific Processes and Platforms required to ensure a successful KM initiative

These will include implementing and/or encouraging:

- human-based knowledge sharing and leveraging forums, e.g. CoP's, informal meeting places, after-action reviews, coaching and mentoring
- IT-based knowledge sharing platforms, e.g. expanded use of SharePoint and other collaborative tools, e.g. using social media within the EHD firewall
- Expanded knowledge repositories, e.g. creating an expanded knowledge base and/or portal:
  - identifying knowledge repository requirements: e.g. the type of content and expertise needed;
  - deciding whether to exploit already existing knowledge and capabilities or explore new ones; whether to use internal or external sources;
  - establishing the desirable breadth and depth of content and expertise; articulate how content will be managed and maintained;
- identifying subject matter experts (SME's) and other experts and creating an expertise database; Capturing knowledge from experts (when they retire, leave and more important while still in their current positions)
- Embedding KM in all processes and integrate with all divisions and units in the EHD.

8. Outline the KM-related IT Infrastructure required

Articulate the role of technology in KM and indicate how the EHD's existing technology infrastructure should be improved. It is proposed that:

- the current SharePoint platform should be upgraded and expanded
- a portal should be developed and an overarching platform to integrate access to all information resources be developed
- SharePoint's collaboration and knowledge sharing modules as well as other appropriate Social Media applications that could be used to facilitate enhanced person-person interaction, e.g. to manage Communities of Practice within the EHD IT firewall should be investigated
- an appropriate knowledge architecture and taxonomy be developed and integrated with EHD's current ECM system

There are several integrated actions we recommend should be undertaken to implement a Knowledge Management Programme and capacitate the KMC at the EHD.

Recommendations for implementing a Knowledge Management Programme and capacitation of the KMC at the EHD

1. Actions to Commence the KM project
- The Knowledge Management Centre (KMC) to be appropriately staffed and capacitated. Obtain senior management support for the enhancement of the KM Facility. This will require adequate financial and human resource allocation
- The KMC post be upgraded to ensure that an appropriately skilled person be appointed to drive and motivate the Knowledge Management process. Success of any Knowledge Management initiative largely depends on the support received from senior management for the process and also on the enthusiasm of all other role-players. As mentioned, the underlying premise of such a system is that the value of human capital should be recognised, that a knowledge-conscious culture be engendered, and knowledge sharing encouraged
- Staff to be appointed and trained: The person appointed to the upgraded post is designated to act as the Knowledge Officer/Coordinator to ensure the practical implementation and maintenance of a fully operational KM initiative
- The operating plan for KM to be finalised
- A knowledge and information map should be created showing the linkages between all disparate pockets of knowledge and information resources as well as showing flows of knowledge in the department
- Once this has been done the SharePoint system can be used to capture or provide links to all explicit and implicit information/knowledge in the system
- KM implementation to commence.

2. Actions to establish an appropriate Knowledge Management IT platform

Start implementing the enhancements proposed, for example:
- Implement the rollout of additional SharePoint functionalities and modules, especially the Collaboration module
- Create a centralised Database / Knowledge Warehouse and Repository.

Using SharePoint all pockets of knowledge, or links to them, should be captured in a centralised database. Specific aspects that should be addressed are:
- Electronic archiving: As many of the resources as possible should be captured in electronic format and held in the centralised database, but if this is not possible, at least an indexed record of the resource and its access location should be provided so that any person can trace it. This would reduce the duplication of similar tasks
- Metadata tags should be appended to all data input into the database and uniform subject indexing done to ensure effective retrieval of the information
- A Thesaurus should be created and incorporated in the database to ensure effective subject indexing and subsequent subject searching
- Online access should be provided for all users from their desktop pc's to the database.

Clear policy guidelines are required that outline what information should be captured, who should capture it and index it, and which data/information should be housed centrally and which could be dispersed, but still linked by means of indexing / metadata information in the central database. We suggest the plan should include:
- Populating the newly implemented Knowledge Portal/Repository with the relevant information (explicit knowledge) required by the EHD
- Setting-up an expertise database (locator) by creating links to experts who are willing to share their knowledge (tacit knowledge)
- Continuously updating information and knowledge links (KMC and Communities of Practice)
- Measuring KMC IT platform effectiveness based on:

      o Usage;
      o Completeness of Information (explicit knowledge);
      o Completeness of links to Knowledge experts (tacit knowledge);
      o Quality of Information;
      o Range of Information/Knowledge within the Domain.

3. **Actions to take to establish a Knowledge Management platform that is people centred**

The main objective of a KM initiative is to leverage its human resources and know-how. To achieve this, the system should assist in identifying human expertise and making it accessible. Knowledge networking, communication and collaboration should be further also encouraged and facilitated. It is therefore recommended that:

- Communication and collaboration amongst all staff should be encouraged
- Determine which people centred KM practices to implement and how to prioritise, e.g. Communities of Practice (CoP), knowledge harvesting activities, knowledge sharing, leveraging and generating forums, informal meeting places, after-action reviews, coaching, mentoring, identifying subject matter experts (SMEs) and other experts and creating an expertise database / locator; capturing knowledge from retiring experts and expert's presentations
- Communities of Practice (COP's) and other formal/informal networks should be encouraged and facilitated. Such COP's would amongst others provide a forum to exchange information about 'lessons learnt', and particularly assist the exchange of information between divisions and also with other stakeholders in other departments in the City.

Information sessions should regularly be implemented to create a platform for staff to meet and share what they've done, what's interesting and what to look out for and what changes need to be implemented.

A database of human expertise should be created on the SharePoint system.

Debriefing should be implemented to ensure that staff share valuable know-how they have before they leave the service. This intangible knowledge should be captured, made explicit and recorded in the SharePoint database.

Decide on knowledge harvesting, sharing and leveraging techniques to use:

- Prioritise initial strategies to use
- Establish which techniques are already in place at EHD and investigate their efficacy (e.g. After-action-reviews; Exit reviews, etc.)
- Initially start by identifying subject-matter experts and developing an expertise locator (in conjunction with the IT platform development).

JOB DESCRIPTION

JOB TITLE   :   Knowledge Officer

POST LEVEL :   to be determined

PURPOSE OF POST

To manage the Knowledge Management Centre for the Economic and Human Development Department of the City of Cape Town

KEY ACTIVITIES & RESPONSIBILITIES

Effective and efficient all knowledge management services and systems which incorporate:

- Establishing expertise databases and assisting with establishing communities of practice in order to create and enhance interaction and communication amongst colleagues
- Maintaining effective content management of all resources, which includes appropriate classification and keyword assignment for all resources
- Maintaining and updating the new thesaurus
- Maintain an effective online retrieval system
- Effective organisation and centralised bibliographic control of independent collections scattered throughout the Department
- Maintaining an effective centralised and integrated online database / electronic archive
- Maintaining access to electronic resources locally, nationally and internationally
- Organisation and content management of all in-house reports and special documents
- Providing a proactive information dissemination service, i.e. a customised information 'push and pull' service
- Establishing and maintaining a proactive collection development policy
- Updating information profiles at regular intervals
- Liaison with all users on matters pertaining to the function of the upgraded KMC
- Managing the KMC budget
- Establishing the foundation for a sound organisational memory by capturing tacit and explicit knowledge, indexing content, creating a unified electronic database and providing access to the database
- Ensuring efficient functionality of the Knowledge Management Centre
- Journals administration
- Information retrieval
- Collection building

SKILLS PROFILE

Educational requirements

Appropriate Knowledge Management (or equivalent Library and Information Science qualification with a significant KM component) ; preferably Honours level

Experience

At least two years appropriate experience in Knowledge Management (or equivalent Library and Information Science practice)

Knowledge

Extensive knowledge of Knowledge Management

A good knowledge of web pages & database maintenance in the context of knowledge management

A basic knowledge of budget management

A good knowledge of SharePoint

Personal Characteristics

Initiative and enquiring mind

High service orientation

Innovative thinking and actions

High problem solving abilities

Driven by deadlines

Ability to work independently or in a team, without supervision

Skills

Good communication skills: verbal and written

Good analytical thinking and logic skills

Report writing skills

Multi-tasking ability

END OF REPORT