Knowledge audit: findings from a case study in the energy sector

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Citation: RAGSDELL, G. ... et al., 2013. Knowledge audit: findings from a case study in the energy sector. In: Janiunaite, B. and Petraite, M. (eds.) Proceedings of the 14th European Conference on Knowledge Management, Kaunas University of Technology, Lithuania, 5-6 September 2013, pp. 584 - 593.

Additional Information:

- This is a conference paper. It was presented at the 14th European Conference on Knowledge Management, Kaunas University of Technology, Lithuania, 5-6 September 2013.

Metadata Record: [https://dspace.lboro.ac.uk/2134/13259](https://dspace.lboro.ac.uk/2134/13259)

Version: Accepted for publication

Publisher: ACPI Ltd.

Please cite the published version.
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Knowledge Audit: Findings from a Case Study in the Energy Sector
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Abstract: Knowledge audits are important processes through which organisations can understand what knowledge is needed, available and used for their current activities. They can also identify what knowledge is missing and how this omission restricts the organisation’s activities. Hence, knowledge audits can surface initiatives to improve the knowledge management (KM) processes of an organisation and, in turn, improve efficiency and effectiveness. An iterative cycle of knowledge audits allows for the organisation’s changing environment to be taken account of and for appropriate modifications to be made to the knowledge base. Despite the importance of knowledge audits, literature relating to their undertaking is sparse. This paper addresses the scarcity of such literature and reports the findings of a knowledge audit commissioned by an organisation that brings together public bodies and private organisations with the aim of maximising the collective knowledge, expertise and experience of its diverse members to address a nationally recognised research agenda.

The audit included collecting qualitative data from a series of in-depth interviews with a representative sample of employees from the four main departments within the organisation. Interviewees were asked about their own roles, procedures and knowledge needs; they were also asked about their department’s knowledge requirements and about knowledge interfaces with external partners. Views about the culture and structure of the organisation were also sought.

Results were analysed at a departmental level to form two knowledge maps per department – one illustrating the knowledge required by the department, the knowledge shared with other departments and the mechanisms for sharing this knowledge; the other illustrated knowledge flows with external partners. The maps were then used in conjunction with the interview transcripts to identify the strengths and weaknesses of each department’s knowledge activities. This process focused on the impact of organisational culture and structure as well as the effectiveness of technological and ‘soft’ solutions for knowledge sharing. Following from the departmental analysis, a cross department comparison enabled best practices and company-wide weaknesses to be identified.

Seven resulting recommendations were made that would support the sharing of departmental best practices and address organisational weaknesses:

1. Developing a holistic approach to knowledge sharing
2. Nurturing the organisational culture
3. Clarifying the strategic message
4. Improving the organisation of information
5. Improving the availability of staff
6. Developing inter-departmental communication
7. Commissioning future knowledge audits

In addition to reporting the outcomes and outputs of the process, the paper also highlights challenges of the process and includes reflections on the suitability of the selected data collection and analysis methods for a knowledge audit.

Keywords: Knowledge, audit, maps, case study
1. Introduction
Knowledge audits are important processes through which organisations can understand what knowledge is needed, available and used for their current activities. They can also identify what knowledge is missing and how this omission restricts organisational activities. Hence, knowledge audits can surface initiatives to improve the knowledge management (KM) processes of an organisation and, in turn, improve efficiency and effectiveness. An iterative cycle of knowledge audits allows for the organisation’s changing environment to be taken into account and for appropriate modifications to be made to its knowledge base. Despite the importance of knowledge audits, literature relating to their undertaking is sparse. This paper addresses the scarcity of such literature and reports some of the findings of a knowledge audit commissioned by an organisation that brings together public bodies and private organisations with the aim of maximising the collective knowledge, expertise and experience of its diverse members to address a nationally recognised research agenda.

2. Knowledge audits – an introduction
Debenham and Clark (1994:201) described a knowledge audit as “a well-defined, highly technical, structured report containing an overall, high-level description of a restricted section of an organisation's knowledge resource and a description of identified individual "chunks" of knowledge in that section”. In more recent times, there has been less emphasis on the output of knowledge audits and a stronger emphasis on the related activities. The dynamic nature of knowledge audits has been recognised along with the benefits of following such a process. According to Levy et al (2010:114), knowledge audits are deemed as the “first critical step for implementing knowledge management (KM) practices in organisations”. This is a view that is supported by Liebowitz et al (2000) who acknowledge a knowledge audit as the first stage of an organisation's KM strategy, where its purpose is to lay a concrete foundation (Choy et al, 2004) and enable evaluation of all areas of KM processes (Biloslavo and Trnavačevič, 2007). Burnett et al (2004) suggest that a knowledge audit can help organisations to determine and illustrate the knowledge they possess, where this knowledge resides and how it flows through the organization. Furthermore, the knowledge audit allows mapping and proactive transference of organisational knowledge (Mearns and Du Toit, 2008) and, according to Biloslavo and Trnavačevič (2007), the results of the audit enable an organisation to identify the intrinsic strengths and weaknesses of its KM processes and give the ability to unveil and exchange best practices between different parts of the organisation.

2.1 Knowledge audits - methods and techniques
Several approaches have been taken to conduct knowledge audits; a variety of methods and techniques have been used in organisations.

2.1.1 Questions
Firstly, the types of questions that are typically asked during knowledge audits could be put into two categories, (1) identifying the knowledge that currently exists and (2) identifying the knowledge that is missing (Datto and Galup, 2007; Liebowitz et al, 2000). In addition, some studies have also designed certain knowledge audit questions around subjects such as individual characteristics of the participant, effectiveness of KM processes (Biloslavo and Trnavačevič, 2007), KM implementation problems, organisational culture (Gourova et al, 2009), tacit perceptions and cultural barriers (Levy et al, 2010), general barriers and problems (Burnett et al, 2004), and the degree of knowledge sharing interest in participants (Perez-Soltero et al, 2006). However, a more common theme that has guided knowledge audit questions is the use of information technology systems and communication tools to support KM activities (e.g. Gourova et al, 2009; Reinhardt, 2003; Bontis et al, 2003; Debenham and Clark, 1994).

2.1.2 Questionnaires and Interviews
The use of questionnaires is a common method of acquiring data in a knowledge audit, often used in the preliminary phase or as part of multiple tools (Burnett et al, 2004; Choy et al, 2004; Hylton, 2002).
However, questionnaires have also been used as the primary tool for data collection (e.g. Liebowitz et al, 2000). Though questionnaires can be a useful tool in knowledge audits for collecting structured or semi-structured data, they can have limitations in terms of the quality, depth and context of qualitative responses. Therefore, Hylton (2002:7) argues that interviews are an essential part of a knowledge audit “to gain a deeper and more qualified insight into the true and objective knowledge management position of the company”. Furthermore, the use of semi-structured interviews is an effective tool for finding KM needs and opportunities, whereas open-ended interviews offer further opportunities to gain insights and understanding of participants’ perceptions (Gourova et al, 2009). Various knowledge audits such as Levy et al (2010), Mearns and Du Toit (2008), Burnett et al (2004) and Choy et al (2004), have employed either semi-structured or structured interviews to acquire detailed responses from participants.

2.1.3 Maps
The central activity of a knowledge audit is often the creation of a knowledge map that shows the “knowledge stock” (Dattero and Galup, 2007: 216). According to Wexler (2001: 250), a knowledge map is a graphically presented communication channel that provides excellent means to “capture and share explicit knowledge”. Knowledge maps have been adopted in various knowledge audit studies: for example, Bontis et al (2003) depicted the flows of codified knowledge via e-mails, Choy et al (2003) combined knowledge maps with social network analysis to display knowledge exchange between individuals and Burnett et al (2004) produced individual knowledge maps per participant which depicted knowledge flows, sources and bottlenecks.

3. Case study organisation
The case study organisation is a public-private partnership between global energy and engineering companies and the UK Government that brings together the collective knowledge, expertise and experience of its diverse membership to address future energy challenges. More specifically, the organisation is working towards the UK Government’s long-term energy emissions reductions targets. With these targets in mind, the organisation initiates and supports projects that accelerate the development of affordable, secure and sustainable technologies. It has made investments in projects in offshore wind, carbon capture and storage, and bioenergy that bridge the gap between laboratory scale research and developments, and commercial deployment of large-scale engineering projects. By working with a range of national and international partners – multi-national companies, SMEs, universities and research organisations – the organisation is able to create project teams at the cutting edge of science, technology and engineering. Integral to the success of its projects is the high calibre of expertise and knowledge of its project partners; thus the organisation is highly knowledge intensive. The organisation had recognised the potential of effective KM practices to improve efficiency across the organisation. Hence, KM was high on its strategic agenda and the organisation has been very proactive in this respect. In fact, the development of a KM strategy was already underway when the authors were invited to undertake a knowledge audit therein.

4. Knowledge audit design
The objectives of the knowledge audit were agreed as follows:
- Map critical knowledge flows (both tacit and explicit) throughout the organisation.
- Determine what knowledge assets are most important in supporting specific organisational activities.
- Identify any knowledge gaps and bottlenecks.

The audit was to be completed within two months and the budget allowed for one full-time Research Assistant to work on the audit with some input from a small team of academics. An interpretivist paradigm was adopted for the knowledge audit and semi-structured interviews were chosen as the primary data collection tools.
4.1 Interviews
An interview schedule was designed to facilitate the collection of data and information from selected participants, focusing on the identification of knowledge inputs and outputs and the mechanisms for sharing knowledge between both internal and external stakeholders. The questions were designed to capture knowledge that could be analysed and presented as knowledge maps outlining the knowledge flows between stakeholders and the formal and informal systems by which knowledge is transferred.

The interview schedule comprised of twenty-three questions that were arranged in four sections. These four sections concerned i) knowledge required to perform the participant’s own tasks; ii) the participant’s view of the knowledge and information handling procedures required for the participant’s department to fulfill their role; iii) perceptions about the role of the organisation as a whole; iv) questions about the organisational culture. The questions were a mixture of open and closed questions and aimed to elicit individuals’ personal perspectives on various aspects of knowledge within the organisation.

4.2 Participants
An organisational chart was used to determine an appropriate set of participants; twelve participants were selected so as to best represent the four main departments within the organisation. Participant selection was based on the size of department, the individual’s role and responsibilities, and their position in the organisational reporting structure. Gender and length of experience in the organisation were also taken into account - while analysis at an individual level was not a requirement of this audit, (only departmental and organisational levels had been requested), consideration of these characteristics meant the sample more strongly reflected organisational characteristics. A pilot study involving four participants was undertaken to provide assurance of the appropriateness of the questions and minor changes to the interview schedule were made based on feedback from the pilot study. Each interview was designed to last around one hour and all participants were given the usual reassurances about anonymity and confidentiality.

4.3 Data analysis process
The twelve transcripts were organised into four matrices – one for each department. Table 1 shows an extract from the matrix for Department A. The matrices were analysed and key phrases were identified that related to four specific themes – knowledge, systems, channels and stakeholders.

Table 1: An extract from the matrix for Department A

<table>
<thead>
<tr>
<th>Participant 1 (Time at organisation: 4 Years)</th>
<th>Participant 2 (Time at organisation: 1 Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What are the processes that you are responsible for?</td>
<td>Getting information to members</td>
</tr>
<tr>
<td>Consistency technically across projects</td>
<td>Organise presentations and seminars</td>
</tr>
<tr>
<td>Overseeing projects</td>
<td>Two way dialogue</td>
</tr>
<tr>
<td>Learning from projects</td>
<td>Understand member requirements</td>
</tr>
<tr>
<td>Feedback into projects</td>
<td>Writing headline insight documents</td>
</tr>
<tr>
<td>Engaging with members</td>
<td>Upgrade the Member Portal system</td>
</tr>
<tr>
<td>2. What knowledge do you need to use to perform your role and how do you acquire it?</td>
<td>Member Portal documents</td>
</tr>
<tr>
<td>External environment</td>
<td>Board and Technical Committee</td>
</tr>
<tr>
<td>End system look like</td>
<td>Technical Committee papers</td>
</tr>
<tr>
<td>Future requirements</td>
<td>Intranet</td>
</tr>
<tr>
<td>3. How do you organise and share the knowledge that you possess?</td>
<td>Talk to and email people</td>
</tr>
<tr>
<td>Shared drive</td>
<td>Headline insights</td>
</tr>
<tr>
<td>Advisory groups</td>
<td>Member engagement plans</td>
</tr>
<tr>
<td>Emails</td>
<td></td>
</tr>
<tr>
<td>Presentations</td>
<td></td>
</tr>
<tr>
<td>Technical Committee</td>
<td></td>
</tr>
<tr>
<td>Personal stores of information</td>
<td></td>
</tr>
<tr>
<td>4. Once knowledge has been shared and used, how do you incorporate the feedback from this into the organisation’s existing knowledge?</td>
<td></td>
</tr>
<tr>
<td>Advisory group papers</td>
<td></td>
</tr>
<tr>
<td>Technical Committee papers</td>
<td></td>
</tr>
<tr>
<td>Intranet</td>
<td></td>
</tr>
<tr>
<td>Member Portal</td>
<td></td>
</tr>
<tr>
<td>5. Which information, documents and systems do you use within your role?</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Shared drive</td>
<td></td>
</tr>
<tr>
<td>Email</td>
<td></td>
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<tr>
<td>Member portal</td>
<td></td>
</tr>
<tr>
<td>Team meeting</td>
<td></td>
</tr>
<tr>
<td>Documents</td>
<td></td>
</tr>
</tbody>
</table>
The sets of key phrases were modelled using MindNode software for Mac OS so as to show knowledge flows. Two maps were created for each department: one showed the types of knowledge that participants used and generated during their workplace activities, and the range of mediums through which the knowledge flowed; the other map showed the range of people (internal and external) with whom participants exchanged knowledge. An example of the former type of map is presented in Figure 1 for Department A so as to illustrate the format and to highlight the complexity that was represented.

![Map of knowledge inputs and outputs, and mediums](Figure 1)

### 5. Findings

For each of the four departments, the resultant maps were analysed and a narrative was developed that reflected the key departmental findings. This was followed by an identification of the strengths and weaknesses with respect to the department’s knowledge activities which led to suggestions as to how each department might improve its KM practices. The focus on Department A continues in the next section where the findings for this selected department are presented as illustrative of the audit process.

#### 5.1 Discussion: Department A

Two adjectives dominated discussion of the organisation’s culture - ‘open minded’ and ‘analytical’. In addition, there was a strong sense of respect for the technical expertise of employees and an acknowledgement that storing and accessing such expertise was important. There was also evidence of a dominant theme regarding the management of generated knowledge within the organisation. Views were expressed that either there was no evidence of a KM culture or that it was in an
embryonic form. Comments were made that stressed the organisation’s ability to generate knowledge but that it was less able to ‘decide what to do with it’.

The knowledge maps illustrated the range of systems and channels that are used to support the flow of knowledge but participants made use of these systems and channels to noticeably different degrees. The shared drive and e-mail communication were used most frequently and the organisation’s website used the least. Variable levels of use were associated with the other mediums. While the shared drive was used frequently by all respondents, in some cases it tended to be simply a storage place for information rather than a facility to access information. The reason for this mode of operation was based on the lack of user-friendliness and difficulty to search across it. A lack of structure and cataloguing was reported within this system. Despite this difficulty in searching the shared drive, most individuals described the accessibility for the required knowledge for their role as ‘good’.

While there seemed to be a shared willingness to communicate more widely in the organisation and levels of cooperation and collaboration within and between individuals in departments were generally good, there were barriers to achieving better communication at an inter-departmental level. The primary barrier stated was that of people’s availability. Secondary barriers to more informal sharing were the quiet atmosphere of the department, which restricted the likelihood of informal communication and acknowledgement of the different ways in which departments work. It was said that the latter made ‘the interface between departments difficult at times from the view of data and information exchange.’

In general, there was clear recognition of the distinction between confidential and non-confidential information; there was some uncertainty as to how the systems managed this distinction but there was a general level of confidence that ‘we have systems that organisations normally have’.

5.2 Strengths
The following positive aspects of managing knowledge were identified from analysis of the transcripts and maps for this department:

- Individuals’ information is stored on the shared drive, so it exists within the organisation’s systems.
- Information collected from groups and committees is collated into papers and made available on the intranet and on the member portal.
- Initiatives for ensuring information is communicated to and from members.
- Member engagement plans have been developed, which make explicit the communication network between the organisation’s employees and its members.
- Use of guidance notes by some individuals enables continuity of tasks.
- Working closely with the organisation’s communications team ensures accuracy of external communication.
- Individuals are aware of the distinction between confidential and non-confidential knowledge.
- Various forums and meetings for sharing knowledge take place.
- Individuals describe the organisational culture as ‘open’ or ‘open-minded’.

5.3 Weaknesses
The following were identified as areas of concern:

- The organisation is not good at expressing technical knowledge in a basic way for other, less technically minded personnel within the organisation.
- Some individuals store their documents centrally, while others tend to store their documents on their personal areas, which restricts availability.
- There is reliance on certain individuals for project data, which can cause delays.
• Individuals’ availability can be problematic.
• Structure of data and lack of cataloguing/user-friendly information search tools, on various systems can cause problems or delays.
• Lack of access to academic journals and lack of coordination of subscriptions.
• It is difficult to get access to or understand the sum of the organisation’s knowledge on a particular subject due to the information being too complex and technical.
• Most individuals felt that work was needed to improve the completeness and richness of information.
• Not knowing who has what knowledge.
• No central visibility at the department level of communication and collaboration.
• There can be duplication and inconsistency in the communication to external stakeholders at times.
• Departments are “too quiet” which can restrict informal conversations and prevent knowledge sharing from taking place.

5.4 Recommendations
The following recommendations were derived so as to maintain and support the development of current departmental strengths and to overcome the stated weaknesses:

• Continue the development of a knowledge culture including support for informal exchanges.
• Develop and implement a policy to organise and catalogue information maintained in the organisation’s most commonly used systems, such as the shared drive.
• Be mindful of the need to use layman’s terms in certain circumstances.
• Improve access to academic journals.
• Make individual knowledge-bases more transparent.
• Provide regular updates in the organisation’s Executive meetings to enable other departments to better understand the department’s work and be more proactive in communication and collaboration with other departments.

In this section, findings have been considered at a departmental level. In practice, the same process was applied to the other departments, before the process of analysis continued with a cross comparison of the four departments. While acknowledging that each department is unique, the cross-comparison enabled inter-departmental learning for KM and recommendations to be developed that contributed to the organisation’s overall KM strategy as presented in the next section.

6. Implications for the organisational KM strategy
The case study organisation’s proactive approach to managing its knowledge stems from the acknowledgement that it is a knowledge intensive organisation. Commissioning this audit is just one example of such proactivity and demonstrates that the organisation needs to maximise the benefits of working in the higher layers of the DIKW pyramid outlined below.

![Figure 2: The data, information, knowledge, wisdom pyramid (Ackoff, 1989)](image_url)
Despite this acknowledgement, the management of knowledge to support the achievement of organisational goals is complex. A combination of distinct characteristics contributes to this complexity and brings a unique identity to the case study organisation.

From an organisational perspective, it is clear that the organisation has distinctive intrinsic qualities. For example, the combination of the ‘blue skies’ nature of the business; a high level of intellectual capital; a project based mode of operating; and the need to build relationships and sustain meaningful interactions with a range of external (often competing) organisations, is a rare set of characteristics. In fact the atypical nature of the organisation makes it all the more necessary for the design and implementation of a bespoke KM strategy. While such a personalised approach limits the ability to benchmark its practices, it does mean that the strategy is specifically tailored to its requirements. In addition, the process of developing the strategy lends itself to contributing to the process of organisational learning and a commitment to continuous improvement.

From an internal perspective it is clear that the high level of complexity continues. There is diversity amongst the departments in terms of the services that they offer and the way that they function; this diversity is further complicated by the dominant organisational culture which is founded on employees of high intelligence who are resourceful but appreciate the full value of timely and accurate information and knowledge. The resultant scenario is one in which employees are independent seekers of information; in turn, this leads to the use of a great range of sources of information coupled with a variety of communication mechanisms through which to transmit and receive information. Hence, it would be very difficult to standardise processes; instead, the diversity of departments and the individuals operating within those departments needs to be respected in the development of any KM strategy.

Despite this diversity, it was evident that there was some commonality in themes that had caused concern for participants. It was felt that these commonly occurring themes would be more effectively addressed at the organisational level and, as such, form the basis for recommendations that could inform the organisation’s KM strategy. To enable the recommendations to inform the development of an actionable KM strategy and, due to the perceived challenges associated with each recommendation, each of the seven recommendations was designed to be implementable via a separate knowledge-based project. However, the interconnectedness of the cultural and technical aspects is not acknowledged in linear textual presentation – their individual listing below neither suggests a particular order of priority or implies that they should be treated as discrete entities. The success of any KM strategy is dependent on both aspects being addressed and being addressed with a holistic mind-set.

6.1 Holistic approach
It is recommended that the practice of holistic thinking underpins any further development of a KM strategy. Without a holistic stance it is possible that there will be improvement in the information and knowledge (IKM) practices of each individual department but it must be acknowledged that optimising each department is no guarantee to ensuring that the IKM practices of the organisation as a whole will be improved. In fact, by attempting to optimise each department’s IKM practices, there is a danger that there will be sub-optimisation of the overall IKM activities. This may arise if internal optimisation impacts cross division knowledge flows. Therefore, recognising the dependency of each department on another is important in adopting a systemic view of the organisation. At a practical level, each department could share its map of knowledge flows with other departments and identify the interfaces between departments. A process of enquiry about the appropriateness and ease with which each type of knowledge flows between the departments could trigger a process of improvement.

While appreciating the potential need to align technical systems with those of external stakeholders, it was deemed important to focus on the internal knowledge processes. Only when these are robust
should there be consideration of interactions with external stakeholders. This approach should make progress more evident to staff – quick wins will motivate them – and confidence will be gained for improving external processes.

6.2 Nurturing the organisation’s culture

The organisational culture, as expressed by the participants, is something for the organisation to be proud of. Open mindedness and awareness of the need to avoid the ‘silo mentality’ are key components of a knowledge culture. Supporting, encouraging and rewarding these attitudes throughout the organisation will reinforce their value until they are natural practices for all employees.

The nature of the organisation’s work means that employees are highly intelligent and are experts in their specialist field. They are also experts in sourcing information and this is an attribute to hold in high esteem. By commissioning the knowledge audit, the organisation has made a good start in raising awareness and generating a feeling of ownership towards the emerging KM strategy. Inviting genuine participation from a wide cross section of staff (if not all) in the process of developing the KM strategy will surface current good practice in the organisation and will promote commitment to the implementation of the strategy.

6.3 Clarity of the strategic message

The participants in the knowledge audit provided firm evidence that there was a need to improve internal communication of the evolving strategic message for the organisation as a whole. The organisation is currently going through a mid-term review analysing its future role, but the knowledge audit re-emphasised the importance for staff of clear strategic messages about the organisation’s purpose and future. Greater clarity will lessen confusion and uncertainty amongst employees, and result in a clearer sense of purpose, both in general terms and with respect to information and knowledge needs. In turn this will have a positive impact overall on information dissemination and on decision making in projects.

6.4 Better organisation and searchability of information

It is evident from participants’ comments that huge sources of rich information are stored. However, in order to improve the current practices and maximise the benefits of this information, the following recommendations are made:

- Information needs to be organised and tagged in a more consistent way to reduce the time spent finding ‘relevant’ information.
- Individuals in all departments need to be made aware of the structure in which information is to be organised and stored.
- There needs to be better search mechanisms in place for the various systems, in particular the shared drive.
- Technical information needs to be translated into simplified summaries to enable individuals from non-technical backgrounds to develop a better understanding of the full range of projects undertaken.
- Where possible, systems, or their interfaces, should be integrated to provide a single view of information.
- Consideration should be given to creating an ‘Information Manager’ role to implement the recommended changes and improvements.
- Policies for handling confidential information differently to non-confidential information should be communicated clearly to employees across the organisation.

6.5 Face to face interactions within the organisation

It was clear from the interviews that participants benefitted from conversations with colleagues. However, there was no obvious ‘water cooler’ effect and some departments seemed to have an atmosphere that hindered informal discussion. So, although there is a good selection of
communication tools in place at the organisation, face-to-face interactions need to be prioritised and the availability of individuals needs to be increased so as to achieve this. In addition, informal discussion should be explicitly valued.

6.6 Overcome departmental communication barriers
Some participants conveyed a strong message about the lack of communication between departments. An increase in informal inter-departmental collaborations could prove beneficial. For example, more informal team activities, team days and ‘speed-updating’ sessions, would provide opportunities for individuals to learn about and ask questions to individuals in other departments and consequently improve knowledge sharing.

6.7 Regular knowledge audits
The results of this audit were intended to inform and contribute to the organisation’s KM strategy and help understand the current knowledge state. For continuous learning and improvements, it is recommended that further knowledge audits be carried out periodically. The outcomes from this audit will empower the organisation to refine further audits, and assist in identifying particular areas to focus on. It is hoped that they will also generate greater ownership of the strategy by employees and trigger a greater uptake for the data collection methods.

7. Summary
Three key principles arise from the knowledge audit process. Firstly, it is important to support and enhance the emerging knowledge culture. Successful management of ‘softer’ issues are key to any change programme – implementing a KM strategy is no different. Secondly, the recommendations highlight a need to resolve issues related to the management of organisational information. Improving information management practices in the organisation before progressing the KM strategy will raise the chances of its success. Finally, it is apparent that a greater understanding of the organisation’s strategy by all staff will enable future IKM practices to align more firmly with the overarching organisational goals.

Lessons were also learned about the process of undertaking a knowledge audit. Herein the audit has been more than Debenham and Clark’s (1994) management document; rather it is an important stage in the development and implementation of the organisation’s KM strategy, and, as such, was not without its challenges. First, there were difficulties in collecting data. Conducting interviews is an intense and time-consuming process but was made more problematic by the participants’ busy schedules. The researchers were also aware that, since knowledge audits generally involve only a sample population of the organisation, the entire organisation may not be represented accurately.

Analysis of the data is also a time-consuming process. In this instance, analysis at the departmental level proved to be an effective approach since interviewees at the departmental level tended to use similar terminology and have related roles, requirements and expectations. The knowledge maps compiled at this level were very useful in illustrating the communication channels and systems used to share knowledge. In this particular case study, composite inter-departmental knowledge maps, akin to Burnett et al (2004), were not felt to be realistic nor informative as value and meaning could be extracted more effectively at the departmental level. Despite this, the maps were useful as input to the cross-departmental analysis of communication channels/systems and helped inform the organisation-wide analysis.

Finally, when undertaking analysis at the organisational level it was important to ensure that the outcomes and recommendations could lead to an actionable strategy. Obtaining employee buy-in for KM initiatives is important and involving staff in the knowledge audit process helps engender a sense of ownership; quick wins and timely developments help communicate to employees the importance and value of the KM process.
References


