The rapid evolution of information and communication technology in recent years has seen knowledge management become a key tool for the success of a variety of institutions. Many international organizations have developed knowledge management programs as key to their future development strategies. The number of international organizations that have identified knowledge management as one of their core management tools or formed a new knowledge management department is growing every day. Thus, the IFRC (International Federation of Red Cross and Red Crescent Societies), ILO (International Labour Office), United Nations and IMF (International Monetary Fund) have now created knowledge management divisions within their structures. Yet despite its growing popularity, knowledge management in international organizations remains a complex and challenging task. It calls for the management and integration of knowledge bases across national boundaries, in diverse cultural settings, and within organizations that may possess distinct values and sets of priorities. This study attempts to explicate the importance of including an information professional in all the systematic processes of knowledge management. The objective of the study is accomplished through a case study of the IFRC. It explicitly identifies the roles through which the librarians’ professional training can be leveraged for knowledge capturing, organization, and dissemination in an organization such as the IFRC.

Introduction

The rapid evolution of information and communication technology in recent years has seen knowledge management become a key tool for the success of a variety of institutions. Many international organizations have developed knowledge management programs as key to their future development strategies. The number of international organizations that have identified knowledge management as one of their core management tools or formed a new knowledge management department is growing every day. Thus, the IFRC (International Federation of Red Cross and Red Crescent Societies), ILO (International Labour Office), United Nations and IMF (International Monetary Fund) have now created knowledge management divisions within their structures. Yet despite its growing popularity, knowledge management in international organizations remains a complex and challenging task. It calls for the management and integration of knowledge bases across national boundaries, in diverse cultural settings, and within organizations that may possess distinct values and sets of priorities. This study attempts to explicate the importance of including an information professional in all the systematic processes of knowledge management. The objective of the study is accomplished through a case study of the IFRC.
national Federation of Red Cross and Red Crescent Societies. The Federation’s history, organizational structure comprising of the Secretariat in Geneva, 60 delegations and 185 diverse National Societies, and the potential strong knowledge base among the National Societies owing to their long-term existence, make this an interesting case. The study explores the roles through which the information professional’s training can be leveraged for knowledge capturing, organization, and dissemination in such a complex organization.

Methodology

Information gathered from personal interviews with key IFRC staff is the primary source of data for this case study. Data collection was by means of face-to-face interviews with the IFRC staff associated with the library and knowledge management units, using semi-structured interview schedules. In depth face-to-face interviews lasting between one to two hours were conducted. The real names and designations of the people interviewed have been omitted to protect their privacy. A structured interview schedule was formulated, and mailed to participants in advance. Interviews were recorded and transcribed for subsequent analysis. Data was also gathered through repeated online browsing of the IFRC virtual library and public web site and the non-participant online observation of the Federation Network (FedNet) and the Disaster Management Information System (DMIS) extranets for over a month, tracking inter-participant ex-changes in these sites’ relevant sections.

Defining Knowledge Management (KM)

Several researchers have proposed a number of definitions to explain the concept of KM. Some authors (e.g. Pauleen 2007, 325) categorize KM as the management of information, with a view of “knowledge as objects that can be handled by information management systems.” For this approach KM is driven by technology, with the notion that “technology harnessed to a great volume of information will make KM work” (Pauleen 2007). However recent studies (Ichijo & Nonaka 2007, 323; McNabb 2007; Figueiredo 2006; Sinotte 2004; Tiwana 2001) concur on the fact that knowledge management is not simply a matter of managing information with technology. The concept of KM, with technology as an enabler not a driver, involves all management processes that gather, organize, share, and analyze an organization’s knowledge base (Figueiredo 2006). It includes deep social processes, which takes into account human and social factors as well as cultural issues (Pauleen 2007). In this study therefore, KM is simply defined as “any systematic activity or activities related to the capture and sharing of knowledge by an organization” (Earl 2003). It involves “…getting the right knowledge to the right people at the right time and helping people share and put information into action in ways that strive to improve organizational performance” (O’Dell, Grayson, & Essaides 1998, 238).

In most instances, where knowledge management is discussed, inferences to information management are also made. The relationship between knowledge management and information management is crucial to this study. The differentiation between information and knowledge is of fundamental importance. Table 1 below underscores some of the contrasting factors between the two concepts (Tiwana 2001, 315).

Table 1: Information Vs Knowledge

<table>
<thead>
<tr>
<th>INFORMATION</th>
<th>KNOWLEDGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processed data</td>
<td>Actionable information</td>
</tr>
<tr>
<td>Simply gives us the facts</td>
<td>Allows making predictions, casual associations, or predictive decisions</td>
</tr>
<tr>
<td>Obtained by condensing, correcting, contextualizing, and calculating data</td>
<td>Lies in connections, conversations between people, experience-based intuition, and people’s ability to compare situations, problems and solutions</td>
</tr>
<tr>
<td>Evolves from data; formalized in databases, books, manuals and documents</td>
<td>Formed in and shared among collective minds; evolves with experience, successes, failures, and learning over time.</td>
</tr>
<tr>
<td>Formalized, captured, and explicated; can easily be packaged into a reusable form</td>
<td>Often emerges in minds of people through their experiences</td>
</tr>
</tbody>
</table>

Table adapted from Amrit Tiwana Differentiating information from knowledge (2001)

From the above table, information can be summarized as processed data that has been equipped with meaning. This is remarked on by McNabb (2007) who concluded that “information does not
become knowledge until it is used by someone”. Knowledge on the other hand comes in two dimensions, tacit and explicit knowledge. Tacit knowledge, (dormant or more actively acquired for example through experiences), resides in people’s minds, while explicit knowledge represents knowledge that has been codified and is held in books, manuals, databases etc. (McNabb 2007). One of the key factors to knowledge management success is therefore attributed to the degree to which organizational tacit knowledge can be captured and transformed into explicit knowledge. Furthermore the knowledge process, as defined by Lena Aggestam (2006), should be able to capture both tacit and explicit new knowledge. In order to achieve this, organizations should have a culture or “climate that encourages individuals to both contribute with their own knowledge and to value others” (Aggestam 2006, 46).

The Organization

The International Federation of Red Cross and Red Crescent Societies, based in Geneva, Switzerland, is one of the world’s largest humanitarian organizations. Founded in 1919, the Federation comprises some 60 regional and country delegations around the world and 185 member Red Cross and Red Crescent Societies with a mission “to improve the lives of vulnerable people by mobilizing the power of humanity”. The Federation’s Secretariat in Geneva, coordinates and promotes cooperation between the 185 National Societies. The Federation has observer status with the United Nations, so it has the status of an international organization in meetings of the United Nations General Assembly, OCHA (Office for the Coordination of Human Affairs), UNHCR (United Nations High Commissioner for Refugees), WFP (World Food Programme), WHO (World Health Organisation), etc.

The Library and its place in the Organization

As shown in the organizational chart presented in Figure 1, the Library and Archives Unit falls under the Administrative Department of the Secretariat. The unit consists of the library, the publication distribution and sales, the mailroom, and archives and records management. It is also tasked with developing a common file classification system for the Secretariat and delegations.

In 1990 the Federation, with the support of the Canadian International Development Research Centre, the Canadian International Development Agency and the Canadian Red Cross embarked on a project to revamp its Geneva library. This was hailed as a very important initiative, putting the library on the strategic agenda of the senior management. However the emergence of Information Communication Technologies (ICTs) has posed both challenges and opportunities for the Library and the Information professionals who manage it.

With the wide availability of information on the Internet, the very idea of the library as a “place” is being questioned by some. Library clients increasingly want to use the library’s services and collections without being present in the building. Lately, library managers have noticed a significant decline in the number of users physically visiting
the library. In response the library has created a virtual library which can be accessed from FedNet. In addition, the library’s resource catalogue is available online, using WEBLIS, an information management system developed by UNESCO. All in all, the number of library users visiting the library in the virtual arena has been increasing steadily. But since the adoption of Strategy 2010 which identified “knowledge sharing” as one of the Federation’s four main business process areas, the Library’s defined role in KM initiatives has been rather confusing, to say the least. For instance in October 2000 the library was included as one of the four departments comprising a newly established “Knowledge Sharing Division.” However after further analysis and review, in 2003 knowledge sharing was placed under the preview of the Communication & Resource Mobilization Department, thereby removing direct influence in KM by information professionals.

Knowledge management at the IFRC

The Federation’s actions from the years 2000 to 2010 are enunciated in a document entitled Strategy 2010, which identifies KM as one of the core strategic initiatives of the Secretariat in Geneva. Since the adoption of Strategy 2010 the Federation has been working on strengthening knowledge management and institutional learning both in the Federation Secretariat and within the Federation at large. Its focus has primarily been on enabling the communication or sharing of knowledge among National Societies. From an information management perspective, the IFRC approach has been 3 pronged, (1) the Federation’s public website; (2) the organizational extranet, FedNet; and (3) the Disaster Management Information System (DMIS). Knowledge management efforts appear to be more pronounced in the latter two initiatives, the FedNet and the DMIS. These two systems are described below.

FedNet knowledge extranet

FedNet is described as the “Federation’s extranet – a private web site for sharing information” (FedNet 2007a). Delivered in four languages (English, French, Spanish and Arabic), FedNet is open to all National Society staff and volunteers, all Federation staff in Geneva and delegations, and ICRC staff. Its aim is to bring “under one umbrella” several extranets that had been created within the Federation in the last few years (e.g., the Disaster Management Information System (DMIS), the Financial Management system (CODA), the events calendar (Eventrix), and the Appeals, Pledges Management System (APPLE)), thus eliminating the need for different web addresses and passwords. Through this online platform, IFRC employees and volunteers worldwide are able to “share information easily and communicate securely with...
FedNet usage patterns

Since 2003 FedNet has registered a remarkable increase in the number of users. As of May 2007 FedNet had 8,041 registered users, a 436% increase since the end of 2004.

As shown in Figure 3, 74% of the registered users were from National Societies, 21% from the Secretariat & Delegations, and 5% from the ICRC. However, an analysis of the daily login data during the months of May and June 2007 revealed that most of the daily visits to the site were from the Secretariat and Delegations. It is evident, from Figure 4, that despite the gradual increase in registration numbers from National Societies employees and volunteers, their daily participation rates are still quite low, averaging 37% of the total logins per day.

Unique features embedded on FedNet include discussion forums, and customization tools such as “My FedNet Links”, which allow users to bookmark their favourite or regularly used FedNet pages. The site does not have any integrated notification or alert system to push new information quickly to the users. The email notification system is used primarily for public relations and marketing of FedNet resources by the FedNet Team. A search engine on the site enables users only to search for information from the web pages and not from attached documents such as those in Microsoft Word, Excel and PowerPoint and Adobe PDF (Portable Document Format). These documents can be searched separately by using the
Documents search function, a tool that has not been working properly for some time.

Efforts to make FedNet more interactive have not been very successful. For instance, since 2003 the FedNet has had a Discussion Forum, but as one participant commented in 2005, this most interactive part of the system could be characterized as almost dead. A number of participants commented on this, citing reasons such as “the small number of FedNet users, promotional issues, a user unfriendly format and site organizational impediments.” As of June 1st 2007, the most popular forum only had 47 postings with 17 threads.

The Disaster Management Information System (DMIS)

The Disaster Management Information System was developed in 2001 as a Web-based working tool that was accessible only to IFRC employees working in National Societies, delegations and Geneva headquarters (About DMIS 2007). It is now also available to Field Assessment and Coordination Teams (FACT) and Emergency Response Units (ERUs) members, as well as staff and volunteers of the International Committee of the Red Cross (ICRC). It contains daily-updated disaster information in a variety of formats including disaster monitoring, mapping, field reports, information exchange on disaster response operations, country data sheets, fact sheets and other resources, procedures and guidelines for disaster response practitioners in the field.

Although the basic goal of FedNet, as stated before, is to bring “under one umbrella” several of the IFRC extranets including DMIS, currently DMIS is still a stand-alone system. A link is provided from the FedNet site to DMIS but users still have to login with a different username and password.

DMIS appears to have been a reasonably well received KM tool, providing quick, up-to-date information on disaster management as confirmed by Bastien Vigneau’s 2006 evaluation of DMIS. As of August 2006 most of the DMIS users (67%) were from the National Societies with “about 30% of the users in the month of June 2006 spending only 30 seconds on the site (Vigneau 2006). Evidence shows that, as a coordinating tool in the Red Cross and Red Crescent rescue programs, the DMIS has proven to be invaluable. One of the most applauded system features are the field reports and the alert notification system, described by one of the users as the “flagship of the system.” Another user wrote that for the rescue programs DMIS has been “very useful for our work. ... We have organized our alarm-system on your DMIS field report notifications.” Other users refer to DMIS as ”one stop shopping, the only place where we can get “real-time” information on the daily work of the RC/RC” (DMIS user feedback 2005). In other words DMIS speeds up emergency response by providing decision makers and practitioners in the field with up to date information and knowledge from the IFRC network throughout the world (About DMIS 2007).

Issues with existing KM initiatives

This study identified the main issues facing the IFRC knowledge management initiatives as relating to: (1) employee motivation and buy-in, (2) knowledge organization, (3) responsibility and boundaries, (4) knowledge sharing (5) cultural barriers, and (6) disparities in National Societies capacities. These issues are discussed below, together with recommendations on how information professionals’ expertise and knowledge can be harnessed to address some of these issues. However, it should be noted that the methodology and results from this study did not enable an in-depth analysis into the issue of disparities on National Societies capacities. More studies need to be done in this area. However, it is worth mentioning that it was evident from the interview responses that the IFRC senior management is well aware of this issue and its impact on the success of the organization’s KM.

Employee motivation and buy-in

With regards to employee motivation, a comparison of user participation on the two sites revealed an interesting observation. Users are more engaged and responsive to new information on the DMIS site than on FedNet. Emphasis is placed on up-to-date, real-time information for quick decision making. The focus and praise given to the usefulness of the DMIS alert notification system
also confirms this. This might help to explain the prevalent organizational culture at the IFRC, a culture that is defined by action. Ian McAllister (1993, 257) alluded to this fact in his book *Sustaining Relief with Development*, in which he observed that there definitely may be a culture, in the IFRC, “of ‘action-oriented’ operations” at the expense of research, institution memory-building, reflection and longer-term analysis and planning. This is not surprising for an organization such as the IFRC and the type of work it is involved in. Employees in these organizations are often driven by a strong commitment to the cause. Although this culture is understandable, with regards to KM it is important that the IFRC embraces a “broad-systems approach” in order to be effective. This approach includes a change in organizational learning behaviour as well as “the collection of data, storage, analysis, exchange of information, and of essential importance, its effective transmission to those in the front lines” (McAllister 1993).

As Elton Lawrence, a member of the Public Service Commission of Canada’s Policy Research and Communication Branch observed in 1998, the real challenge faced by organizations in the KM field is “how to go about actually transforming an agency into a learning organization” (quoted in McNabb 2007, 325). This is the same challenge that the IFRC can be seen to be faced with today. One of the answers to this challenge, as Lawrence (quoted in McNabb 2007) suggested, is for an organization to build a climate where learning is “deliberative, reflective, and anticipatory.”

Overtime libraries have emerged as symbols of learning. In addition, libraries or information centres provide the necessary stimulant for engagement and collaboration needed in KM. One of the steps that the Federation has to take in order to build the culture suggested by Lawrence, a culture that employs both “generative learning” and “adaptive learning” could be the revamping of the IFRC library as a “space.” The IFRC library at Geneva, for instance, could be reorganized to serve as the physical and virtual symbol of the search for knowledge, the physical and virtual space for groups engaging in collaborative work, and the access point or gateway to organizational knowledge. All in all the IFRC library’s “virtual” and “physical” spaces should become the collaboration, learning and “electronic hub” for the organization. This might include creating internal “learning commons” or “podcasting labs” within the library to enable employees to share with others what they learned at a recent seminar or meeting.

Results from this study also show employee participation and use of information retrieved as being inhibited by a lack of trust of the source of information. It is well established that “people judge information on the basis of who gives it” (Davenport & Prusak 1998, 199; Aggestam 2006). For FedNet, for example, what is lacking at the moment is the connection between the technology and human/social needs. Currently the discussion forums are the places where users who are facing a problem ask questions they need immediate answers for. However, the users are not getting responses from the “experts” in a timely manner. For instance, a question that was posted at the beginning of 2006 only got a response in 2007. It is very doubtful whether the person who posted the question ever read the response. There is a need therefore, to link users together rather than just refer them to stored information. As noted by Hargadon and Sutton (2000, 157), “the people who designed knowledge management systems for Andersen Consulting and McKinsey originally thought reports, PowerPoint presentations and lists of best practices would be sufficient. They supposed that consultants would be able to solve problems just by reading through databases. But consultants have found that those systems are most useful as annotated yellow pages, helping them find out whom to talk to about how the knowledge was really used and might be used again.”

In other words, the FedNet program should allow links to experts, as well as knowledge embedded in documents. Links to experts can be implemented in the form of virtual reference services offered by information professionals using chat or instant messaging tools, thus enabling real-time interactions between professionals and users within the Federation’s global community. Information professionals, with their knowledge of “who knows what,” can therefore quickly link any users facing a problem to others who might have useful knowledge. Moreover, “spreading information about who knows what is a powerful way to keep ideas alive” (Hargadon & Sutton 2000, 157). Also placing information professionals in the virtual arena to answer user questions and help users to navigate and make connections within
the myriad of sources will enhance the usefulness and acceptance of KM. As users are able to see the advantages of using the KM set-up, so they are more likely to contribute and share their own knowledge to the system.

Knowledge organization

It is well documented in a number of KM studies that, for organizational knowledge to be useful, it should be provided in a format that makes it easily accessible and meaningful to those who need it. (Harvey 2003; McNabb 2007; Pauleen 2007; Tiwana 2000, 608) Currently, the biggest challenge on either FedNet or DMIS is that knowledge resources are not efficiently organized and so are difficult to access. The knowledge structures are characterized by a high degree of heterogeneity and diversity. Documents are organized in silos with no apparent connections made between or among them, other than the “subject” classification they are grouped under. The classification system is rather limited in as far as it helps in clarifying relationships between the documents. Also organizational historical silos and boundaries are evident in the way knowledge documents are organized. Furthermore, although the information is categorized, most of it is in the form of original text documents, e.g. Microsoft Word, PowerPoint, Excel and Adobe PDF, which makes their retrieval and use in a time-critical environment infeasible. In other words most of the Federation’s knowledge is captured and buried in unconnected spaces across many formats.

To address some of the knowledge organization issues, a lower level classification structure has to be adopted. This calls for the KM managers to take a step back and look closely at their knowledge base. A knowledge audit needs to be done, determining which information is required, who needs it, what relationships exist among different sources and repositories of information, how it is going to be used, and which technologies or tools will enable knowledge use and sharing. Resulting from this will be a “knowledge taxonomy” which defines the structure to file and find knowledge, aiding future searching and browsing,” as well as a set of standard protocols for knowledge collection and process (Harvey 2003).

This is a job for which information professionals should be well trained. The valuable role of information professionals as evaluators of information for usefulness and appropriateness, as organizers of information, describing and codifying it, and as information access facilitators, creating and choosing the right tool or medium for knowledge storage and distribution, is well documented. It is therefore without doubt that, if input is sought from information professionals, the knowledge audit and the accompanying tasks can be achieved efficiently.

Cultural barriers and knowledge sharing

The IFRC organizational structure comprising of 185 diverse National Societies, the Secretariat in Geneva, and 60 delegations necessitates that knowledge has to be shared across national and cultural boundaries. In this context the issue of culture as an underlying element in the KM success or failure is heavily underscored. As mentioned before, KM is not simply about managing information, but involves deeper consideration of human, social and cultural factors. Within the IFRC, this study reveals that cultural influences affect organizational KM processes both directly and indirectly. On one hand there is the issue of the diverse national cultures of the 185 national societies comprising the IFRC, as well as the distinct organizational culture of the IFRC as an organization.

It is evident that the cultural disparities of the National societies are greatly influencing the knowledge sharing behaviour of the FedNet and DMIS site users. The behaviour of the participants on discussion forums as well as an analysis of the posted documents clearly points to this. Also the use of selected “editors” as content managers might be inhibiting participation from some National Societies members due to cultural factors. As Thiessen, Hendricks, and Essers concluded “institutionalizing explicit rules for transferring knowledge is not always an effective method for facilitating the transfer process since it is excessively focused on compliance and conformity” (quoted in Pauleen 2007). In other words the “editors” approach, which seems to be an outcome attributed to “uncertainty avoidance cultural influences”, excludes the participation of individuals from cultures that embrace uncertainty. In other words
ready and full participation by employees from uncertainty embracing cultures can be inhibited. This situation can be addressed by harnessing the skills offered by information professionals to ensure knowledge sharing success within the organization. As stated before, emphasis should be placed on the development of a knowledge base, on structure and tools that enable knowledge sharing. If the knowledge base is structured well, then the employment of an “open principle” approach using tools such as “wikis”, which allow users complete freedom and the ability to add, edit or remove any aspect of a page, might be the solution to encouraging knowledge sharing. The type of group participation, offered by a wiki, creates voluntary social connections which might inspire individuals to absorb and contribute information. (Gonzalez-Reinhart 2005) Also if the knowledge base is well established, it will make the process of creating and making available preformatted forms for adding information easy and meaningful. A good example of the usefulness of this approach can be found on the DMIS site. The form for creating field reports is made available to every registered user, a tool that has been hailed as “greatly facilitating the easy and quick publishing of key data and information on the current operational status in any country” (About DMIS 2007).

Responsibility and boundaries

As mentioned before at the IFRC, KM is under the management of the Communication & Resource Mobilization Department. This means that IFRC leaders have turned to the communication professionals to lead cultural change and provide the leadership necessary to adopt and use knowledge management practice. For an organization such as the IFRC, communications managers represent a reasonable choice to facilitate dialogue across national societies and initiate cultural change. But it is this author’s contention that the communication department needs at least one “Information Professional” if the organization’s KM is going to be successful. For KM to be effective The IFRC leadership should put together the best combination of people, information, processes and technology. And the people combination should assuredly include information professionals. It is also arguable that the creation of a discrete Web Communications and Knowledge Management unit under the Communication & Resource Mobilization Department appears to be driving a wedge between the knowledge management and information management functions, when ideally they should be one. Evidence from this study suggests that they may be working to separate agendas, rather than combining to ensure the success of the KM processes. An integrated teams approach to KM should therefore be established to ensure effective leadership.

Conclusions and implications

Some changes are urgently needed to strengthen and rationalize the KM activities at the IFRC. Findings suggest that information professionals’ orientation, training and experience can be leveraged as coordinators, motivators, organizers, and facilitators during the various stages of knowledge creation, management and dissemination to ensure the success of the knowledge management initiative.

Twenty-first century information professionals are ideally positioned and trained to take up the KM challenge. They have the skills and abilities to (i) identify relevant information that is needed to fulfill the Federation’s mission, (ii) facilitate and strengthen collaborations, (iii) facilitate and strengthen life-long learning, (iv) gather, store, organize and catalogue organizational knowledge, (v) provide easy access to the knowledge when needed, and (vi) influence both organizational culture and individual knowledge sharing behaviours. There is strong case to be made at the IFRC to maintain a centralized information centre or library for the IFRC in Geneva, managed by information professionals. Having a strong information services organization means that information professionals can become the knowledge experts in the virtual space, providing help to the users at the point of need. The employment of tools for virtual reference, (e.g. chat or IM) will help to ensure interactivity on FedNet. Alternatively, the Federation’s Library virtual site should be revamped and launched as an “electronic hub” of the organization. “It is after all, the using and sharing of information to create new knowledge that defines knowledge management” (Sinotte 2004).
Even if the IFRC as an organization does learn to capture, store and disseminate its internal knowledge effectively, I would argue that this is not enough. External information provided by the library is also needed to complete the KM cycle. It is crucial that IFRC employees and managers constantly monitor the external environment for continuing changes in the world. Lane and Lubatkin (quoted by Jones, Herschel, & Moesel 2003), explained that, “competition is increasingly knowledge-based as firms strive to learn and to develop capabilities faster than their rivals.” The value of external information cannot be underestimated even to organizations such as the IFRC. Information professionals “are trained to manage information and ensure that external information products and services are aligned with the achievement of organizational objectives” (Henczel 2004). They can connect users to the most powerful external information resources that are well suited to their internal organizational needs. All in all “where a KM process is established without being underpinned by good information management, the knowledge that is created…may be substandard or inaccurate” (Henczel 2004).

It should be emphasized that the ability to progress such an agenda will depend on the standing of the information professionals in the eyes of the IFRC senior management and the organization’s recognition of the wider contribution that the information professional can make. What the information professional can contribute is, to a degree, a function of what they are allowed or invited to do by the dominant coalition in the organization. It may also depend on the organizational structure, not least as it relates to the division of labour between the library and the knowledge management units.

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