Survey of information and knowledge management in South African law firms

T. du Plessis
Centre for Information and Knowledge Management
University of Johannesburg
Johannesburg, South Africa
tf@rau.ac.za

A.S.A. du Toit
Centre for Information and Knowledge Management
University of Johannesburg
Johannesburg, South Africa
asadt@rau.ac.za

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1 Introduction

The practice of law is in its core the provision of specialized knowledge and services in a variety of ways. This knowledge is acquired from internalizing valuable information gathered during legal studies, legal research and legal experience. The processing of information to knowledge is a personal, subjective process emerging from previous experiences and current events (Roos, Roos, Dragonetti and Edvinsson 1997:25). With the

advent of sophisticated technologies, such as today's information and communication technologies (ICTs), the amount and accessibility of data and information have proliferated exponentially. Several studies have shown that in the most recent years advances in the ICTs are transforming the methods that lawyers use to access, retrieve and process information in order to deliver legal services to clients (Susskind 2003; Van der Merwe 2000:265–269).

Conducting legal research traditionally implies the use of printed legal information in the form of statutes and cases that, in the legal environment, serve as the primary authorities; and the use of secondary or complementary sources (Garratt 2001:8–11). Nowadays the Internet can also be seen as an additional 'library' or 'information channel' from where some statutes, regulations and cases reported by countries worldwide as well as secondary sources may be retrieved either freely or on a subscription basis (Barratt and Snyman 2002; Brown 2002). Pacifici and Skalbeck (1999) and Kennedy (2001) are of the opinion that in legal research the focus will increasingly be on the collaborative elements of research through the use of ICTs, together with a sound information and knowledge management (IKM) strategy as foundation (Curran and Higgins 2000).

The aim of this research was to examine the degree of impact the changing legal information environment has on the legal research process and to find out what benefit legal research will gain from IKM. The research also looked into the process of legal research and investigated the skills that lawyers, who are successful legal researchers in the print information environment, would need to also be successful researchers in a digital information environment.

2 Information and knowledge in the practice of law

Legal knowledge, that is, knowledge on law and its application, is used to procure, produce and manage legal work. Except for the primary sources, legal information constitutes secondary sources, such as legal reference works, digests, indexes, law reviews, legal periodicals, academic works of legal researchers, commentaries, books and articles from specialized law publications (Feiertag 2000:15–24).

In addition to the primary and secondary sources of law, lawyers also need organized access to the information generated in the course of their relationships with clients. Client information includes that which is generated in the firm's day-to-day business, for example the client's personal details, and billing data needed to control the time and resources that lawyers dedicate to a particular matter (Rodríguez, García and Pizarro 2002:52). Client information also refers to the 'work done for clients' and this information (cases) is related to the practice of the profession. Case information is mainly found in the documents that lawyers generate and should be locatable at all times, since it could be used again in other cases, or required in future claims relating to the same case.

From this case information, which could be categorized under the generic name of 'the experience of lawyers', evolves what is known as 'forms and precedents'. Experienced lawyers create forms, which include comprehensive annotations and practical comments that serve as models for the type of documents that are required repeatedly in the firm's daily practice. Thus, information on previous client work may provide useful precedents for faster and more efficient handling of related future work. This type of information is typically tacit knowledge, for example, tips at drafting pleadings or documents; or leads from experts; or hints at arguing motions and applications that have been acquired over time. In the practice of law, this type of knowledge is sometimes guarded over by individuals and not readily shared with others.

Furthermore, many lawyers also require information about the firm, the current business environment and the industries in which the business has to operate competitively. They may, for example, use the information that appears daily in the press or in official registries or gazettes. All of these resources can generally be categorized as being administrative, declarative, procedural or analytical types of legal knowledge (Gottschalk 2002).

3 Managing legal information and knowledge

Knowledge management (KM) in a law firm is about providing the firm's lawyers and staff with cost-effective tools to support the daily processes through which an understanding of 'the law', 'the world' and 'the client' is created and shared. Some, but not all, of these tools are technology based (Kull 2000). In law firms, information and knowledge is often stored in various formats and many different applications are used for this purpose, for example word processing programmes combined with document assembly systems and document management systems. Law firms also apply financial management systems for the purpose of time billing and accounting, and information on clients and matters are kept in case management systems. These systems are often integrated with other practice and business information management systems and make up part of the KM environment (Rusanow 2001).

In recent years, some law firms have implemented intranets or even more sophisticated technologies, such as enterprise information portals and context-based searching tools. But, rather than being technology-based, KM centres on individual participation and it is therefore important to develop a KM culture. This culture encourages and invests in the sharing of both explicit and tacit knowledge. Managing tacit knowledge is more difficult and costly, though Rusanow (2001:5) regards it as the most valuable element of KM to a law firm. Because KM is expensive, it is recommended that law firms consider the value of the knowledge to the firm versus the cost of making it available.

4 Why information and knowledge management are critical to the success of a law firm

The work product that lawyers create, for example every legal document, pleading, deposition, trial and appellate brief, memorandum, letter, e-mail and spreadsheet, could be or is an important knowledge asset and ought to be properly managed. If managed well, knowledge is leveraged to alleviate further work production and knowledge creation. To lawyers, this is not a new concept. However, with technological advances and changes in the legal industry, KM could play a significant role in the future success of law firms. In determining why KM is regarded by some as crucial to the success of a law firm, the following questions could be considered for direction (Farrell 2001; Deya 2001):

- How easy is it to locate relevant documents or information in a timely fashion?
- Do lawyers in the law firm suffer from too much or too little information?
- How up-to-date are all law firm employees with relevant information?
- When a lawyer leaves the firm, is that expertise then lost?
- How much time goes into 'reinventing the wheel'?
- How fast can the people who have the required knowledge be identified and consulted?
- How effectively is cycle time reduced from receipt of client instructions to delivery or reporting on the completed task?
- Is technology appropriately used to deliver high quality services?

- Is innovation required to improve client service and satisfaction?
- Are all employees eager to learn and continuously improve services?

Some of the factors that could lead to change in the practice of law include economic conditions and globalization issues; the courts and clients; the impact of the Internet; disintermediation; and the flexibility and immediacy brought along by the information and communication technologies (Susskind 2003). These and other factors such as the effect technology has on productivity and innovation, dematerialization, the expectations of digitally skilled lawyers with diverse work patterns, legal risk exposure, the law firm's reputation, the multi-office and multi-practice work environment, collaboration and communities of practice, and the increasing problem of information overload and knowledge attrition are some of the many reasons why lawyers should consider KM in their daily practice.

5 Lawyers and legal research

Legal research is one of the critical skills that lawyers employ on behalf of their clients (Leckie, Pettigrew and Sylvain 1996:173). Although certain areas of law do not require the same amount of research as other areas, competency in legal research is essential to any lawyer, regardless of area or type of practice (Best 2003). Legal research should not be considered only as information seeking; rather it is a combination of a variety of information and knowledge-related activities (Dempsey, Vreeland, Sumner and Yang 2000:254). Nowadays some sophisticated legal researchers might experience skill inadequacies because they are confronted with a large variety of commercial databases as well as an enormous array of Internet and other electronic information resources that are constantly expanding. Publishers of electronic information resources are frequently adding new search functionalities and other enhancing features to their products. These features often differ from product to product, requiring researchers to acquire or adapt skills for successful information retrieval (Underwood 2001). Though the primary skill that characterizes the legal profession will remain intellectual capability, lawyers as legal researchers must also be able to effectively manipulate the modern tools of information technology and KM (Jackson 2001:34).

Since the law is a profession and professions have an assumed expertise in a body of knowledge, lawyers are considered as knowledge workers who are defined by their relationship with information. As knowledge workers lawyers adhere to a minimum standard of professional competence and the premise is that lawyers have a professional responsibility to research and know the law to serve in a client's or the public's best interest. A lawyer's duty to research and know the law has a strong ethical component. Equally important is the application of malpractice standards to not only traditional legal research, but electronic research as well (Adams 2002:58–59). For example, currently the Internet provides access to information resources that previously would not have been readily available and this requires modern lawyers to possess a high level of electronic research skills to find, amass, manage, evaluate and use all readily available relevant information to serve a client's case or matter. The question is whether lawyers, as knowledge workers, that is professionals, recognized as having knowledge and skill superior to that of the ordinary person, can be expected to be more skilled and proficient than the average layman in their use of, for example, the Internet for legal research. In terms of professional responsibility, the answer is 'yes'. In the information era lawyers cannot claim to be knowledge workers without effectively using the ICTs, the Internet and other electronic resources for legal research if the situation so requires.

Traditionally the legal profession is associated with and given control over a particular body

of knowledge and when lawyers use technologies it is not simply for the sake of convenience, rather it is used to maintain control over information and to improve service provision (Muir and Douglas 2001:177–178). This control in the legal information service market sets the legal profession apart in the sense that it is a profession identified with a theoretical body of specialized knowledge, which assumes academic training as a requirement in order to master this information (Katsh 1994). Also, it is a profession that regulates itself and which forms associations that allow members to share information and to establish rules for the profession. Typical to this profession is the relationship between professionals and clients, with the belief that the professional is equipped with the necessary skills to serve a client's interests and the public good.

In the current paradigm lawyers, as professionals, are used to unpredictable situations and skilled in, for example, confronting complexity and anticipating potential problems or negatives, and viewing matters from as many angles as possible in dispute resolution or in arranging agreements. They thus already have skills that are essential in a highly active and volatile information environment, or, in what Katsh (1996) calls the digital world. This is a world of digital communications, transactions and transferring of electronic information, a world of digital relationships and interaction in virtual societies with virtual rules. In this type of world, it might be required of lawyers to partly shift their mindset to an environment where, in general, time is accelerated and distance is compressed, where change is rapid and continuous, and relationships are quickly formed but of uncertain duration, where information verification is uncertain, and where anonymity rules and hacking prevails. It is in such a world where lawyers will gradually be expected to practise as digital lawyers, that is professionals who effectively apply IT to every aspect of their practice (Katsh 1995:79).

Many legal researchers nowadays do not ignore the change that was brought forward by the advent of the Internet, computerized legal databases, CD-ROMs and other electronic media channels. Rather, they emphasize that legal research encompasses using and mastering both print and electronic resources. In terms of electronic resources, this implies skills and knowledge of information resources that are either subscription-based, for example Jutastat, Butterworths/LexisNexis and WestLaw, or freely available, for example SAFLII, Polity or Concourt for South African court decisions and legislation, bills and regulations, and Cornell LII, AUSTLII, BAILII, CANLII, WORLDLII, and Courtsnet for international cases and legislation. Then there are also a variety of directories and search engines, for example Horters, the online directory of SA legal professionals, FindLaw with access to the West Legal Directory of legal professionals, and Google or Yahoo for general information searching.

Applied to the situation where, for example, a lawyer is presented with a legal problem in an area of the law with which the lawyer is unfamiliar, print sources will typically aid the lawyer in analysing the facts; evaluating what legal concepts may be relevant; finding concepts in secondary sources; identifying primary authority; synthesizing the principle contained in the primary sources; and applying the principle to the legal research problem. However, in a digital information environment, researchers might follow different approaches and search for information in *ad hoc*, tailored ways, for example, extracting key terms while analysing the facts and using these terms as search terms in performing computerized searches to locate cases with similar facts and other applicable primary sources, or to find secondary resources that will direct the researcher to primary resources (Bast and Pyle 2001:297; Halvorson 2000:132).

A general observation in comparing research in the different information environments is that with print sources legal researchers start quite broad and typically move from the facts of the research problem to general concepts and then to the specifics. In digital research, research usually commences with narrow or focused searching for something very particular

or looking for cases specific to the fact pattern, followed by reading the internal references and the noting-up of relevant cases.

6 Empirical survey

The purpose of the empirical survey was to investigate the current situation with regard to IKM in South African law firms.

6.1 Methodology

The survey methodology consisted of questionnaires that were distributed to the sample group. Participants were selected according to the general criterion that they are South African lawyers, that is, law firm attorneys, advocates of the various South African bars, or members of the South African judiciary. The study sample included 160 attorneys, 20 advocates and 20 judges, that is, a total of 200 lawyers. As the size of law firms might have an impact on the results, a random stratified sample was selected. This sample was generated from the Hortors electronic directory of law firms in South Africa (Horters 2003). The attorney section of the sample was made up of 100 attorneys from firms with 50 or more directors, 50 attorneys from firms with between 11 and 50 directors, and 10 attorneys from small firms or solo practitioners. Every effort was taken to ensure that the sample covered a wide area of the Republic of South Africa in order that the figures would not be biased with regard to city practices and rural practices, though this sample was accordingly stratified. Furthermore, the selection criteria discerned attorneys from law firms with reputable Web sites to constitute 50% of the sample and, therefore, of the 200 lawyers, 100 names were selected from law firms with Web sites.

This was an exploratory study that involved lawyers as a particular group of information and knowledge workers and sought to gain a better understanding of legal research in practice and the current KM systems utilized by lawyers. The questionnaire contained 85 questions divided into a section applied to questions aimed at demographics information; a section on legal research; and an IKM section. Questions were generally constructed with either fixed alternative items, for example the participant has to respond by indicating 'Yes' or 'No'; or a Likert scale in terms of items to characterize their features and performance. Participants received the questionnaires via post with an accompanying letter and prepaid envelope. A period of ten weeks was allowed for response to the questionnaires before analysis was undertaken.

The data from the questionnaires were processed by the Statistical Consultation Service at the University of Johannesburg, which used SPSS, version 11.0, for the input, management and statistical analysis of the data that were collected. This was then put into spreadsheets with statistical graphics for a visual presentation of the results.

6.2 Findings

The questionnaire response was received from 144 lawyers, which equates to a 72% success rate. Of those responding to the survey, 11% of the participants were from small law firms or were solo practitioners; 22% were from small to medium-sized law firms; 27% were from medium to large-sized law firms; 30% were from large law firms; and 10% represented the other segment of the sample, namely, judges or advocates.

Most lawyers, 77%, indicated that their law firms had intranets, though 7% of the participants were unsure. Only 5% of the participants indicated that their law firms did have

an extranet and 42% of the participants were unsure. With regard to the current use of specific KM applications in law firms, the results were as follows: On average, more than 60% of law firms used KM systems. For example, 73% used records management systems; 72% case management systems, 42% expertise databases, 42% customer relationship management, 68% forms and precedents databases, 60% research archive databases, 52% systems for managing procedures such as best practice guides, and 67% in-house developed databases. The high percentages of lawyers responding as 'unsure' might indicate a lack of knowledge or awareness with regard to these systems, or it could be an indication that these systems were not used in the law firms (Table 1).

Table 1 KM systems used in law firms

IKM systems used	Yes	No	Unsure
Systems for managing records or documents	73%	10%	17%
Systems for managing cases (client files)	72%	13%	15%
Systems for managing expert knowledge	42%	29%	29%
Systems for managing customer relationships	42%	22%	36%
Systems for managing forms and precedents (checklists)	68%	21%	11%
Systems for managing research archives	60%	21%	19%
Systems for managing procedures	52%	24%	24%
Systems for managing in-house developed databases	67%	20%	13%

The lawyers who did have access to the Internet either considered it fairly easy to use the Internet as an instrument for information retrieval (41%); or easy to some extent (31%). Only 1% of lawyers did not consider it easy to use the Internet and 27% found it generally easy to use the Internet for information retrieval. Interestingly, on average, lawyers who found it easy to use the Internet for information retrieval also considered the Internet as an effective legal research tool, that is, 28% found the Internet very useful as a research tool, 34% fairly useful, 34% useful to some extent and 4% not useful at all. The reasons for having a Web presence included: because clients or the community required the law firm to have a Web site (77%); because younger lawyers considered it necessary (68%); because senior lawyers considered it important (64%); and because the IT department considered it necessary (59%).

The reasons for having and using an intranet included: to gain access to resources, for example brief, bank or library resources (88%); to gain access to precedent information (76%); to be provided with links to legal or factual information (74%); and to automate administrative processes, for example billing (64%). However, only 39% of lawyers indicated that their intranets provided them with expert information, while 34% said that the intranet did not provide expert information and 28% were unsure. This could indicate a lack of expertise databases available or law firm expertise, or unawareness or lack of knowledge with regard to what these databases were. Participants who indicated having an extranet used it to communicate draft work product with clients (60%), but were generally unsure as to whether it was used for calendaring purposes (40%).

The survey furthermore showed that 80% of participants viewed the use of ICTs as principally beneficial in terms of improved access to information resources. Other indications were that ICTs were moderately to greatly beneficial with regard to increased efficiency of communication with colleagues (41% to 52%); and with regard to increased efficiency of communication with clients (36% to 58%). However, 8% considered ICTs as having low value in terms of improved communication with colleagues or with clients. Because one of the main features of ICT is improved communication, the relatively high percentage of lawyers who did not consider ICT beneficial in this regard is a matter of concern. It might be

that the system did not function correctly or that there was a need, for example, for training in the use of ICTs in order to reach their full potential.

Special notice should be taken of lawyers' positive attitude towards the potential applications of IKM systems. Participants indicated an appreciation of being made aware of existing current knowledge (97%); and being enabled to distribute, share, capture and apply knowledge (94%); to work independent of time and location (93%); to collect information created by colleagues (92%); to learn new IT skills (90%); to reduce the dependence on an individual's knowledge (89%); to be part of the development of new knowledge (89%); to distribute information to colleagues (85%); and to partake in discussions within a 'community of practice' (66%). The only hesitance (20%), or unwillingness (14%) detected concerned the last facet of IKM's use. It could be because lawyers are unfamiliar with the concept, use, or benefits of a 'community of practice' or 'community of interest'.

Three questions pertaining to what was thought to be some of the main concerns lawyers might hold in terms of KM systems revealed a considerable concern regarding information security and confidentiality, computer viruses resulting in information corruption and content authenticity (Table 2).

Table 2 Lawyers' concerns in using digital information resources

Concerns regarding the use of digital information resources in legal research:	No concern	Some concern	Moderate concern	Large concern
Security and confidentiality concerns	5%	36%	36%	23%
Computer viruses resulting in information corruption	2%	28%	39%	31%
Content authenticity	4%	23%	43%	30%

Although apprehension of lawyers in using IT applications and KM systems was observed, they were however not ignorant of the convenience of these technologies. This could be seen in the results to the questions that were aimed at investigating the preferred usefulness that lawyers felt that they could expect from IT and KM systems. Most participants indicated that should they want to work from a location other than their office, they would like to be able to communicate with clients via e-mail (96%), gain access to their calendars (89%), retrieve and work on office documents (95%) and gain access to online databases for information retrieval (94%).

Next, lawyers' opinions on the competencies of legal researchers were tested and an arrangement of these skills and competencies in order of significance are given in Table 3.

Table 3 Legal researchers' skills arranged according to significance

Being a competent legal researcher involves:	Never	Sometimes	Always
Knowing how to find appropriate information	0%	5%	95%
Knowing where to find appropriate information	0%	5%	95%
Keeping up with new information	0%	5%	95%
Providing timely, accurate information to relevant people	0%	8%	92%
Written communication skills	0%	10%	90%

Problem-solving skills	0%	11%	89%
Decision-making skills	0%	20%	80%
Organizing and managing information resources	1%	27%	72%
Creative thinking skills	0%	33%	67%
Developing a personal system for finding information	2%	33%	65%
Computer competency (e.g. digital information searching skills)	0%	44%	56%
Oral communication skills	1%	53%	46%
Building working relationships	3%	60%	37%
Presentation or public speaking skills	9%	61%	30%

After testing lawyers' opinions on the skills of a competent legal researcher, enquiry was made into the methods of obtaining legal materials. From the results it seems that 35% of the participants consulted their personal contacts and/or private libraries on a daily basis and 40% of participants on a weekly basis. Online databases were used daily by 38% of participants and weekly by 35% of participants. The frequency of searching the Internet for legal materials was 21% daily; 32% weekly and 33% monthly. Only 2% of the participants consulted a librarian for assistance daily, 50% sought assistance once a week and 35% monthly. The results can also be illustrated in terms of the frequency these methods were used for obtaining legal materials (Figure 1).

Figure 1 Frequency of specific methods used for obtaining legal materials
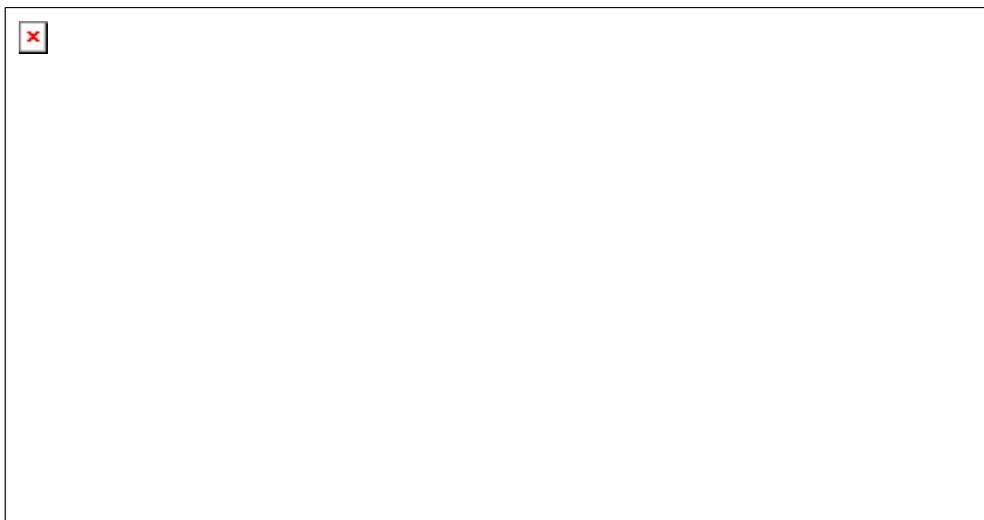
The results to the remaining KM-related questions that were asked are shown in Table 4.

Not surprisingly, the majority of participants, 76%, did find that a growing amount of their work product was contained in e-mails and e-mail attachments. This response strengthens the necessity of KM systems to enhance the daily activities of lawyers who sometimes, to a large extent, rely on electronic communications and the creation and transfer of electronic files.

The following question was aimed at determining the need for methods of enhancing the retrieval of previous work product from within the electronic environment. Based on the results it can be reasoned that, on average, almost half of the participants experienced the need for methods that would enhance the retrieval of existing work product from their electronic work environment. This assumption was further supported by the response to the next question regarding the need for a common electronic location where colleagues can

obtain existing work product.

Table 4 Lawyers' perspectives on KM-related activities

Extent to which lawyers experience the following:	Not at all	Small extent	Moderate extent	Large extent
That a growing amount of their work product is contained in e-mails and e-mail attachments (electronic files)	8%	10%	6%	76%
That it is difficult to retain previous work product from electronic files and e-mail communications	14%	44%	21%	21%
That there is a need for a common electronic location where colleagues can obtain existing work product	13%	11%	23%	53%

Specific questions were directed to investigate the need for ensuring that, should a lawyer become unable to perform his or her duties, or should the lawyer's office become destroyed, sufficient information and knowledge existed in other locations to enable work continuation. These questions were not aimed at identifying a new trend; rather it aimed at emphasizing the need for such systems or processes to also provide for the needs of lawyers who increasingly work in an electronic information environment. Participants' responses in this regard indicated that, should they personally become unable to perform their duties, 58% of participants, to a large extent, and 24% to a moderate extent considered it important that sufficient information existed for another person to know their responsibilities and perform their duties. Only 6% did not regard it as important, and 12% indicated that it was necessary to a small extent. The majority of participants, 72%, strongly indicated the necessity that should their offices be destroyed, sufficient information and knowledge should exist in other locations for them to continue to perform their duties. The remaining participants indicated 'to a moderate extent' (13%), 'to a small extent' (8%) and 'not necessary' (5%). These results therefore confirmed the necessity to constantly develop systems and processes to ensure the safety of lawyers' work and resources, including the information and knowledge work and resources that reside in an electronic environment.

7 Conclusion

Among the most notable findings of the survey was that participants in general indicated their use of IT applications and KM systems for managing information and knowledge in their organizations. However, the relatively high percentages of lawyers responding as 'being unsure' might indicate a lack of knowledge or awareness with regard to these systems, or it could be an indication that these systems are currently not used in South African law firms. Results further showed that Internet and intranet use was high, and that the uses for these technologies were valued, but the concept of an extranet proved to be mostly unfamiliar. Of some concern is the relatively high percentage of participants who did not consider the ICTs beneficial as communication tools, though the attitude of most participants was positive towards the potential applications of IKM systems.

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