
**COMPETITIVE LEGAL PROFESSIONALS' USE OF TECHNOLOGY IN LEGAL
PRACTICE AND LEGAL RESEARCH**

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COMPETITIVE LEGAL PROFESSIONALS' USE OF TECHNOLOGY IN LEGAL PRACTICE AND LEGAL RESEARCH

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1 Introduction

Advances in the information and communication technologies have led to the availability of a range of primary and secondary legal research publications online via the Internet or the World-Wide Web, rather than on other storing devices such as compact discs or publications in the print media.¹ Not only has information and communication technology (ICT) impacted on the availability of legal information resources, but its effects are also noticed in various law-related areas such as legal practice management, legal education, corporate governance and the law *per se*.² The question addressed by this article is

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1 See amongst others Germain <http://www.lrx.com> 30 Nov; Robertson *et al* *Legal Research Skills*; Du Plessis 2007 *PER* <http://www.puk.ac.za/> 15 Jan; Tjaden *Legal research and writing*; Teshima <http://www.lacba.org/> 27 Nov.

2 Zittrain conceptualises the Internet as a “generative grid” that includes vast networks of computers as opposed to an “open network indifferent to the configuration of its endpoints”. Zittrain 2006 *Harv LR* 1974. Granat and Lauritsen further defined lawyering in the Internet age as “all the ways in which lawyers can do their work using the Web and associated technologies. These include new ways to communicate and collaborate with clients, prospective clients and other lawyers, produce documents, settle disputes and manage legal knowledge. Think of a lawyering verb – interview, investigate, counsel, draft, advocate, analyze, negotiate, manage and so forth – and there are corresponding electronic tools and techniques.” Granat and Lauritsen 2004 *Law Practice Magazine* 36. Cf detailed discussions on ICTs in law by Yu 2007 *Harvard Journal of Law & Technology* 374-395; Bierman and Hitt 2007 *Indiana Journal of Global Legal Studies* 29-34; Anon 2008 *Harv LR* 1387-1409; Granat <http://www.directlaw.com> 18 Feb; Terrett 1998 *Journal of KM* 72; and Van der Merwe *Computers and the Law*; Oliver 2007 *RMJ* 82-93; Lustri, Miura and Takahashi 2007 *TLO* 186-202; Garratt 2007 *PMM* 189-196; Forstenlecher and Lettice 2007 *Equal Opportunities International* 823-833; Forstenlecher *et al* 2007 *PMM* 146-156; Hinson 2006 *LR* 311-322; and Roos *et al* *Intellectual capital*. Its reach in the South African context can be seen in, eg, the *South African Judicial Education Institute Bill* 2007; SAQA <http://www.saga.org.za> 29 Nov; DoJ Integrated Justice System 374-375; IoD *King II Report* and the future *King III Report* (draft report open for comment on 1 October 2008); *Electronic Communications Amendment Act* 37 of 2007; *Electronic Communications Act* 36 of 2005 as amended; *State Information Technology Agency Act*

whether the application of ICTs has an effect on the practice of law, and specifically whether information and knowledge management affects the processes of legal research in modern legal practice. Various issues are considered in this regard, including what the concept of knowledge management (KM) entails in a law firm and what the current KM trends in South African law firms are. The article investigates global trends in the application of ICTs for legal research purposes, what the specific applications of KM in support of legal research may be, how information technology applications and KM systems and strategies can support the legal research process, and what the benefits of KM are to legal research. It finally discusses the impact technology has had on the skills required of competitive legal professionals.

2 Skilled legal professionals

Most law students enter their careers as candidate attorneys and associates in law after completing the higher educational requirements of the profession³ and are admitted to the profession under regulation of the *Attorneys Act*⁴ as amended. As aspirant attorneys they will be expected to be able to handle many different tasks including clerical tasks, word-processing, research assistance, *et cetera*, and will also be introduced to legal practice time management and the billing practices typical of law firms. As they advance, their responsibilities will increasingly include the many aspects of giving legal advice, which is the core function of lawyers: the using, manipulating, and conveying of legal knowledge.

88 of 1998 as amended; *Companies Act* 61 of 1973 as amended; *Electronic Communications Security (Pty) Ltd Act* 68 of 2002; *Electronic Communications and Transactions Act* 25 of 2002; *National Advisory Council on Innovation Act* 55 of 1997; *Skills Development Act* 97 of 1998; *Higher Education Act* 101 of 1997; *National Environmental Management Act* 107 of 1998; *Financial Intelligence Centre Act* 38 of 2001; *Spatial Data Infrastructure Act* 54 of 2003; *Promotion of Administrative Justice Act* 3 of 2000; *Promotion of Access to Information Act* 2 of 2000.

3 That is, in the South African context. Garratt *Accountability* 11.

4 *Attorneys Act* 53 of 1979.

In time, and with practice, trial and examination, lawyers are considered competent once they have assimilated the relevant skills, attributes and values associated with conveying legal knowledge in a manner appropriate to each matter undertaken on behalf of a client. The competent lawyer thus has knowledge of general legal principles and procedures and extensive knowledge of the substantive law and procedure for the areas of law in which the lawyer practices. He or she is skilled in investigating facts, identifying issues, ascertaining client objectives, considering possible options, and developing and advising the client as to appropriate course(s) of action. Also, he or she can confidently implement the chosen course of action through the application of appropriate skills.⁵ These skills include a problem-solving ability, legal research, analysis, application of the law to the relevant facts, negotiation, and writing and drafting, as each matter requires.

In addition, modern legal professionals require general and business management skills including client relationship and development skills, information literacy skills, and computer literacy skills such as the use of presentation technologies and digital lawyering tools.⁶ Some elements of information and computer literacy in legal practice are identified in Table 2.1 (listed on the next two pages)⁷ but this list is not comprehensive.⁸ The table categorises three groups of skills, namely:

- *Category 1: Problem identification and analysis*
The skills related to understanding the problem.
- *Category 2: Using appropriate source(s) of law*
Working with the problem and the sources of law.

5 See in this regard Tjaden *Legal research and writing* 3; Collins *Computers in Legal Education*.

6 Galves 2000 *Harv Journal of Law & Technology* 165-301; Chitwood and Gottlieb <http://www.alanet.org/periodicals/article.html> 29 Nov; Perlin 2007 *Canadian LLR* 18-21; and Jackson 2001 *KM* 34.

7 Tables cited in this contribution, see Du Plessis *Information and knowledge management*.

8 For more comprehensive discussions on the topic see, *ia*, Clinch *et al Teaching legal research*; Callister 2003 *LLJ* 25; Boyle *et al Lawyering skills*; Halvorson *Law of the super searchers*; Holborn *Legal research guide*; Berring and Van den Heuvel 1989 *LLJ* 431-449.

- *Category 3: Information search and retrieval*

Using supporting mechanisms to find and research the law.

1. Problem identification and analysis	3. Information search and retrieval
<ul style="list-style-type: none"> a) Determining the objectives of the client or person/entity who gives instruction; b) Considering the legal entities involved; c) Knowing the facts and identifying the issues; d) Analysing the issues raised by the case; e) Identifying which questions of law have to be answered; f) Identifying and analysing factual material; g) Identifying the legal context and jurisdiction in which the factual issues arise; h) Considering time periods that are relevant; i) Determining when further facts are required; j) Considering other legal jurisdictions; k) Applying relevant legal provisions to facts, etc. 	<ul style="list-style-type: none"> a) Identifying key words to enable effective and efficient use of search tools; b) Selecting the most appropriate information retrieval tools, eg print index, database, online catalogue, proprietary systems, web search engine, invisible web, etc; c) Planning and developing a search strategy; d) Applying different approaches to formulating a search strategy; e) Applying associative or bibliographic link searching; f) Knowing when to use print and when to use electronic resources, eg applying rules of thumb such as: <ul style="list-style-type: none"> ▪ known item > primary source > electronic full-text; ▪ subject search > secondary source > print source;
2. Using appropriate source(s) of law	
<ul style="list-style-type: none"> a) Identifying sources for investigating relevant facts; b) Using primary and secondary materials: <ul style="list-style-type: none"> ▪ Using case law and statutes; ▪ Using treatises, periodicals, digests, etc; c) Using research tools, eg indexes, noter-ups and citators; d) Using digital research tools; e) Distinguishing between relevant and irrelevant sources and materials; f) Extracting the key points from, and correctly cite, those sources and materials; g) Annotating, summarising or paraphrasing relevant material; h) Internal and external cross-referring to other material for currency checking and completeness; i) History-searching of cases and statutes; j) Applying association techniques for distinguishing among kinds of information problems; k) Using document delivery or interlending services if required information is not locally available; l) Ensuring that the answer is correct, ie the solution is properly arguable with a reasonable prospect of success; m) Citing different source formats correctly and accurately; n) Working with statistics if the case or matter requires this; o) Transferring electronic information, ie copy and paste, for further analysis or manipulation; 	<ul style="list-style-type: none"> g) Considering limits on billing; h) Accessing commercial databases; i) Seeking partnerships with information intermediaries or librarians when questions arise; j) Knowing how to effectively build a search strategy, eg keywords, synonyms, Boolean or other search operators, fields, etc; k) Distinguishing between natural language searching and controlled vocabulary searching; l) Using taxonomies or classification schemes for information retrieval; m) Performing conceptual and contextualised searching, eg KWIC, VAR-KWIC; n) Being thorough in citation analysis, eg performing "more like," "find similar" searches. o) Understanding the dynamic underlying the process of search innovation, eg the subject catalogue technique, mapping and clustering; p) Knowing what type of legal and related information is available digitally; q) Considering the cost-implications of digital searching; r) Considering the multi-format features of digital legal information, eg RTF, DTD, HTML, PDF; s) Assessing the relevance and authenticity of the material found; t) Knowing how to refine a search when initial searching does not yield the desired results; u) Using special database features, eg relevancy ranking, limiting, sorting, etc; v) Knowing how to download, print, and email from online information systems; w) Knowing how to set alerts for current awareness

<p>p) Communicating the results of research;</p> <p>q) Presenting the answers(s) clearly and concisely;</p> <p>r) Appropriately using technology to communicate ideas or present an argument;</p> <p>s) Defending in argument the answers that have been reached;</p> <p>t) Understanding the ethical use of information;</p> <p>u) Understanding the consequences of inadequate research, ie malpractice, etc.</p>	<p>delivery, eg push technologies;</p> <p>x) Knowing how to find information in other disciplines if necessary, eg medicine, etc;</p> <p>y) Knowing when to continue searching and when to stop searching;</p> <p>z) Knowing the features of legal information published on the Web, eg currency, authority;</p> <p>aa) Critically evaluating open Internet and invisible Web resources;</p> <p>bb) Considering the different features of print and electronic versions of the same publication;</p> <p>cc) Recording the research process for future reference, etc.</p>
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Table 2.1 Elements of information and computer literacy in legal practice

In addition, some of the business and management skills required of modern lawyers are listed in Table 2.2, which continues on the next two pages.

Business management skills	
General business skills	Client relationship skills
<p>a) Accounting and finance for lawyers, eg, balance sheets, etc;</p> <p>b) Private and public financial markets and institutions, eg. stock markets, etc;</p> <p>c) National business and industry structure;</p> <p>d) Decision-making practices in business and industry;</p> <p>e) Basic statistical analysis.</p>	<p>a) Delivering high-quality value-added legal services efficiently;</p> <p>b) Listening, to hear what the client is really saying;</p> <p>c) Providing timely and accurate information to clients;</p> <p>d) Identifying efficiencies and communicating them to clients;</p> <p>e) Assisting clients in clarifying goals;</p> <p>f) Working to identify and achieve client goals;</p> <p>g) Building working relationships, ie returning calls, being available, etc;</p> <p>h) Learning how and when to say yes and no appropriately to clients;</p> <p>i) Understanding the clients' competitive environments.</p>
Firm operations and procedures	Client development skills
<p>a) Firm structure and corporate governance;</p> <p>b) Firm finances, ie revenues, expenses, profit and compensation, etc;</p> <p>c) Learning the firm culture, eg norms, values, practices;</p> <p>d) Learning the firm practice areas, eg major clients, industries, specialties, etc;</p> <p>e) Firm fee structures for different clients;</p> <p>f) Time sheets, billing and write-off procedures;</p> <p>g) Profitability analysis of engagements;</p> <p>h) Understanding the firm's competition in the legal marketplace.</p>	<p>a) Identifying, qualifying and working with a prospective client;</p> <p>b) Understanding what a client is looking for in a law firm;</p> <p>c) Developing appropriate interpersonal skills;</p> <p>d) Structuring and drafting a response to a request for a proposal (RFP);</p> <p>e) Developing a personal business development plan;</p> <p>f) Developing a section business development plan;</p> <p>g) Developing a potential business network;</p> <p>h) Acquiring presentation and public speaking</p>

	skills; i) Being sensitive to business development opportunities with current clients.
Management and supervisory skills	
Self-management skills	Supervising skills
<ul style="list-style-type: none"> a) Planning, organising and managing one's own time; b) Setting work priorities; c) Running an effective meeting; d) Recognising a potential work crisis and heading it off; e) Identifying firm resources to get work done efficiently; f) Keeping up with new information; g) Estimating assignment time and budgets for one's own work; h) Communicating ideas effectively to partners and clients; i) Analysing and selling one's own skills and abilities to partners and clients; j) Learning the politics of the section and the firm; k) Acquiring information literacy skills (cf Table 2.1) l) Recognising one's abilities and interests in one's own career planning; m) Taking responsibility for a case, eg, developing a case plan and, if applicable, reviewing it with the partner; n) Thinking creatively; o) Being competent with computers, eg word-processing, spread sheets, presentation programs, etc; p) Taking initiative in securing assignments; q) Being an effective team member. 	<ul style="list-style-type: none"> a) Planning and organising subordinates' time, eg secretaries, paralegals, junior associates, etc; b) Monitoring and evaluating subordinates; c) Estimating individual assignment time and budgets for others; d) Recognising one's subordinates' potential work crises and assisting in heading them off; e) Managing crises arising during assignments or projects or cases; f) Delegating and giving an assignment effectively; g) Motivating colleagues and subordinates; h) Building effective teams; i) Giving supportive and critical feedback.

Table 2.2 Business and management skills of legal professionals

The above skills are tabled in order to emphasise the need for information and knowledge management skills. IKM skills allow the lawyer to understand that the modern legal world consists of a network of information and knowledge resources that support the everyday tasks of lawyers in legal practice. This includes a set (or sets) of databases, both internal and external to the firm, containing information on clients and prospective clients, cases, documents and the prior work product of the law firm, legal information databases, other proprietary databases, law firm experts and other experts, judges, courts, financial information, market and competitor information.

Modern legal professionals who are skilled in IKM are efficient in using electronic search tools designed for searching legal information databases, including commercial databases, the Internet and other systems. They know how to evaluate, use and report the results of the searches in a variety of formats and contexts; for example, if the report is a list of critical documents at a trial or a list of critical receipts in a client's tax audit, or an industry analysis that is the basis for a new law firm marketing strategy. Moreover, they know how to use presentation, simulation and imaging programmes to make an argument or build consensus.

In becoming more efficient, the modern lawyer increasingly uses electronic communication tools, for example email, to communicate with clients, other lawyers, courts and agencies. This not only includes the basic skills, for instance, knowing how and when to use email, but also how to set up facilities that address the specific needs of the law firm's clients. This could include using telecommunications in combination with other communication technologies such as Web conferencing, mobile, Wifi, VoIP or Skype-based communication in client relationships. Providing electronic notice of events important to the client, managing unstructured information in emails, and communicating in the client's preferred method connotes competence. Furthermore, the modern legal professional has electronic publishing skills such as the capacity to produce multimedia legal documents and 'file' or deliver them electronically to clients. Also, modern lawyers have reasonable fluency in the use of programmes that produce legal work. For example, in litigation practice using automated litigation support tools and methods might become a required skill and the lack of this skill might incur malpractice liability if the lawyer loses a case to a lawyer who does use litigation support technologies.

In legal practice it is expected of legal professionals to maintain certain standards of professional competence and ethical behavior. Throughout their careers it is required of lawyers to ensure that they keep current regarding the law in their practice area and maintain the knowledge and skill necessary to fulfill their professional responsibilities. These skills may include the application

of technology for the purposes of information and knowledge manipulation, business management, enhanced firm operation and procedure, practice management and quality control of services, client relationship management and development, product analysis and development, and marketing of services. If lawyers could be equipped with these skills early in their careers they would develop into legal professionals who could, for example, be charged out to clients at a higher rate.

If one considers that time is of the utmost importance in the business of a modern law firm, then the successful lawyer is the one who applies skills to make time as productive as possible.⁹ Thus, in applying all of the above skills, the most important issue to lawyers is the effective use of time. In many ways technology and the application of KM principles will enhance the work of lawyers and save their time. These skills, including the application of KM in legal practice and legal research, are investigated in the following sections of this article.

3 Lawyers and legal research

Legal research is one of the critical skills that lawyers employ on behalf of their clients.¹⁰ Although certain areas of law do not require the same amount of research as other areas, competency in legal research remains essential to any lawyer regardless of the area of specialization or type of practice. Legal research should not be considered only as information seeking. It is in fact a combination of a variety of information- and knowledge-related activities. Currently, legal researchers may perhaps at times experience skill

9 See also Rusanow 2007 *Information Outlook* 30-34; Rusanow *KM and the Smarter Lawyer*; Rusanow 2001 *KM* 1-11; Susskind <http://www.subtech.warwick.ac.uk/> 14 Nov; Susskind *Transforming the law*; Susskind *Essays on technology*; Susskind *Future of law*; and Susskind *Expert systems in law*.

10 Legal research as a lawyering activity is widely researched, eg, Maisel and Greenbaum *Introduction to law and legal skills*; Best <http://www.legalresearch.org> 15 Jan; Leckie, Pettigrew and Sylvain 1996 *LQ* 173; Dempsey *et al* 2000 *IPM* 254; Underwood "Avoiding the breakers;" Jackson 2001 *KM* 34; and Snyman and Barratt <http://www.llrx.com/features/southafrica.htm> 15 Jan.

inadequacies because they are confronted with a large variety of commercial databases as well as an enormous, constantly expanding array of Internet and other electronic information resources. In addition, publishers of electronic information resources are frequently adding new search functionalities and other improvements to their products. These features often differ from product to product, requiring researchers to acquire or adapt skills for successful information retrieval.¹¹

Since the law is a profession and professions have an assumed expertise in a specific body of knowledge, lawyers are considered as knowledge workers. Knowledge workers are defined by their relationship with information. Lawyers as knowledge workers 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 not only to traditional legal research, but also to electronic research.¹² For example, the Internet currently 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 and authentic information to serve a client's case or matter. The question is whether lawyers – professionals who are recognised for having knowledge and skill superior to those of the ordinary person – can be expected to be more skilled and proficient than the average layperson in their use of ICTs. In terms of legal 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.

11 For a more elaborate discussion on legal research in the digital information environment see Du Plessis *supra* n 1.

12 Adams 2002 *Trial* 58-59.

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 but to maintain control over information and to improve service provision.¹³ This control in the legal information service market sets the legal profession apart in the sense that it is a profession identified with a specialized body of theoretical knowledge, which assumes the acquisition of the academic training required in order to be able to master this information.¹⁴ Also, it is a profession which regulates itself and which forms associations that allow members to share information and to establish rules for the profession. Typical of the profession is the relationship between professionals and clients, which is based on 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 are used to unpredictable situations and skilled, for instance, in confronting complexity and anticipating potential problems or negatives. For example, lawyers view 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 Katsh¹⁵ calls the digital world. This is a world of digital communications, transactions and the transfer of electronic information, a world of digital relationships and interaction in virtual societies with virtual rules.¹⁶ In this type of world it is sometimes 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 often uncertain, and where anonymity rules and hacking prevails. It is in such a world that lawyers will increasingly be expected to practise as digital lawyers - that is,

13 Muir and Douglas 2001 *MSQ* 177-178.

14 Katsh 1994 *University of Pittsburgh Law Review* 1141-1175; and Katsh *Law in a Digital World* 79.

15 Katsh 1996 *Journal of Computer-Mediated Communication* Part 2.

16 One avant-garde example is SecondLife, a (mostly lawless) virtual world where avatars interact, and its impact on the law.

as knowledge workers who are skilled in effectively applying IT to every aspect of their practice.

Many lawyers nowadays do not ignore the change that was brought forward by the advent of the Internet, computerised legal databases and other electronic media channels. They recognise that legal research encompasses using and mastering both print and electronic resources. In the area of electronic resources, this involves the acquisition of skills and the knowledge of information resources that are either subscription-based, such as Jutastat, Butterworths/LexisNexis and WestLaw, or freely available, such as SAFLII, Polity or Concourt for South African court decisions and legislation, bills and regulations, and Cornell LII, AUSTLII, BAILII, CANLII, WORL DLII, and Courtsnet for international cases and legislation. Then there is also a variety of directories and search engines, such as 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, as also the invisible Web and its vast resource potential.

In the situation where 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; synthesising 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, such as extracting key terms while analysing the facts and using these terms as key words in performing computerised 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.¹⁷

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

In summary, although the primary skill that characterises 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 knowledge management. The next discussion investigates KM in law firms and specifically KM activities in South African law firms.

4 Information and knowledge management in legal practice

In both information management (IM) and knowledge management (KM) the concept of “managing” refers to the handling, directing, governing, controlling, coordinating, planning and organising of all the information and knowledge processes of an organization, as well as the products of those processes. Firestone¹⁸ notes that since knowledge is a form of information, it follows that KM is a form of IM, with KM being the more robust form.¹⁹ The key to successful KM lies in applying an integrated approach²⁰ and adopting the best fit approach for the law firm and its context. The essential idea of KM is that individual and organisational knowledge, if shared and re-used in a manner that avoids starting each engagement from scratch, makes the law firm as a business function more effectively, saves time, creates efficiency, and improves the quality of service delivery.

4.1 Law firm knowledge management

The practice of law is knowledge intensive. Lawyers are generally highly skilled professionals who use and produce a wide range of types of information and knowledge. The services that lawyers offer often contain “knowledge” packaged

very particular or looking for cases specific to the fact pattern, followed by reading the internal references and the noting-up of relevant cases. Cf Snyman and Barratt *supra* n 9; Du Plessis *supra* n 2; Bast and Pyle 2001 *LLJ* 297; and Halvorson *Law of the super searchers* 132.

18 Firestone *Enterprise Information Portals* 171.

19 For instance, KM includes aspects of learning, which is not one of the major concerns of IM. Cf Johannsen 2000 *Journal of Documentation* 42.

20 An intensive discussion of KM falls beyond the scope of this article. For more information see *ia* Rusanow *supra* n 8; Du Plessis *supra* n 7; Fawcett 2002 *KM* 19-20; Staudt *KM in law firms* 2; and Gottschalk 2002 *JILT* <http://elj.warwick.ac.uk/jilt/02-2/gottschalk.html> 15 Feb.

in various formats. Some practical examples of law firm KM are listed in Table 4.1 below. These examples range from simple KM activities to fairly sophisticated KM applications.

KM activity or application	Result (example)
Word processing and document management.	Sample letters and notices for estate administrations can be saved, copied and modified for similar future transactions.
Annotation.	Record-keeping of, for example, the dates of information changes, or why particular clauses were written the way they were written, or why and when they should or should not be used in particular situations.
Creation of a computerised document drafting system.	Automatically prepares legal documents, eg. wills, trusts, and powers of attorney when information about the client's estate plan is entered.
Indexing for information searching and retrieval.	Documents containing the results of legal research or analysis can be retrieved by subject, author, keywords, etc.
Creation of spreadsheet templates.	Performs financial analysis that may be re-used for multiple clients, eg. tax analysis on entering client specific data.
Intranet content management.	All of the statutes, regulations, rulings, court rules, forms and other information that might be relevant to a particular law practice area are put together, organised with applicable metadata and made available via the law firm intranet in HTML or PDF format. This information can be accessed, shared and easily referred to by one or more lawyers without it being necessary for the lawyer to visit the offices or law firm library.
Information management through loose-leaf updating.	All forms needed for a particular type of transaction are put into a notebook, which is manually updated as new forms arrive.
Global virtual document management and online collaboration system.	Lawyers at all international branches have remote connectivity, whether using notebooks, the Internet or wireless devices, and can collaborate and share documents without time or geographical constraints.
Creation of expert systems.	Through artificial intelligence particular legal problems can be analysed and a set of complex standardised rules applied, eg. application of grantor trust rules in selecting a trustee for a trust.

Table 4.1 Examples of knowledge management in a law firm.

From these examples it can be noted that not all KM activities require expensive KM applications. It is therefore necessary to determine the value of managing law firm information and knowledge resources before initiating a costly KM programme. The value of KM can be measured in terms of its benefits, including:

- Quicker problem-solving
- Better decision-making
- Enhanced customer relations
- Improved client service
- Productivity and efficiency
- Knowledge sharing
- Developing lawyer's research skills
- Increased lawyer work independence
- Competitive advantage
- Market visibility
- Ability to direct work to skilled specialists
- Consistency of work product across offices or practice areas
- Faster delivery times

- Fewer mistakes
- Less work redundancy
- Reduced research development costs
- Quality control
- Reduced frustration in searching for documents
- Client collaboration.

On the other hand, unless the goals of KM are defined it is impossible to measure its success in a law firm or promote its necessity in modern-day legal practice. Therefore, before lawyers initiate KM in the firm it is necessary to contemplate the form that such an initiative should take. This firstly entails identifying the type of information and knowledge to be managed, secondly assessing the value of the information and knowledge to be managed, and thirdly measuring it against the goals of the law firm before the appropriate KM applications, processes or programmes can be determined. Successful KM is based on these four fundamental steps and starts with a well-defined KM strategy.²¹

4.2 Knowledge management trends in South African law firms

An empirical survey²² was conducted to investigate the IKM situation in South African law firms. The data from the questionnaires were processed by the Statistical Consultation Service at the University of Johannesburg, which used SPSS for the input, management and statistical analysis of the data. A favourable response rate of 72% of participants was received. Of the participants, 11% were from small law firms or were solo practitioners; 22% were from small to medium-sized law firms; 27% were from medium to large-

21 Strategic planning of a law firm's KM initiatives usually includes the following elements, which should be approached in a holistic manner: Involving senior management and developing an organisational support structure; planning short-, mid- and long-term KM phases; understanding the knowledge needs of the law firm and individual lawyers; understanding the law firm as a business within the industry of legal practice; developing a learning organisational culture open to KM; and developing an appropriate KM platform. Cf Rusanow *supra* n 8.

22 The research conducted was explorative in nature and the evidence reported in this article serves an illustrative purpose only. Research data, findings and reported analyses can be obtained from the author. The limited discussion of findings in this article aims to highlight some key issues regarding KM in South African law firms.

sized law firms; 30% were from large law firms; and 10% were from the other segment of the sample, namely judges or advocates.²³

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 firms had an extranet and 42% of the participants were unsure. The high percentage of lawyers responding as 'unsure' possibly indicates a lack of knowledge or awareness with regard to these systems, or it could be an indication that these systems are not used in the law firms.

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 of some kind. These included records and case management systems; expertise databases, customer relationship management, forms and precedents databases, research archive databases, systems for managing procedures such as best practice guides, and in-house developed databases.

The reasons for law firms having and using an intranet included: to gain access to resources, for example, brief bank or library resources; to gain access to precedent information; to be provided with links to legal or factual information; and to automate administrative processes, for example billing. 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,²⁴ or unawareness or lack of knowledge with regard to what these databases were. Participants who acknowledged having an extranet used it to communicate draft work product with clients, but they were generally unsure as to whether it was used for calendaring and client notification purposes.

23 A reference to a 'participant' or 'law firm' may also include the law department of an organisation or, if applicable, individual lawyers who are not part of an organisation or firm, eg. solo practitioners. Also in some cases 'law firm' is used as an umbrella term to indicate those 'institutions' or 'associations' that lawyers belong to, which do not fall within the proper meaning of 'law firm,' such as groups of advocates.

24 Expertise databases provide directories categorised by practice area and speciality, indicating the expert's specific skills and competencies.

Not surprisingly, the majority of participants (76%) stated that a growing amount of their work product was contained in emails and email attachments. This response strengthens the necessity of using KM systems to enhance the daily activities of lawyers who, to a large extent, rely on electronic communications and the creation and transfer of electronic files. The research findings further indicated 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 question regarding the need for a common electronic location where colleagues could obtain existing work product. Participants' responses 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 in the event of their offices becoming destroyed, sufficient information and knowledge should exist in other locations for them to continue to perform their duties. The remaining participants responded to this question variously: "to a moderate extent" (13%), "to a small extent" (8%) and "not necessary" (5%). These results confirmed that there is a need to constantly develop systems and processes to manage and ensure the safety and accessibility of lawyers' information and resources.

5 Competent legal researchers and competitive legal professionals

The survey also investigated lawyers' opinions on the competencies of legal researchers. Participants indicated that being a competent lawyer involves knowing how to find appropriate information; knowing where to find appropriate information; providing timely and accurate information to relevant people; developing a personal system for finding information; oral communication skills; written communication skills; decision-making skills; problem-solving skills;

creative thinking skills; presentation or public speaking skills; building working relationships; organising and managing information resources; keeping up with new information; and computer competency. An arrangement of these skills and competencies in order of significance is given in Table 5.1:

Being a competent legal researcher involves:	Never	Some-times	Always
1. Knowing how to find appropriate information	0%	5%	95%
2. Knowing where to find appropriate information	0%	5%	95%
3. Keeping up with new information	0%	5%	95%
4. Providing timely, accurate information to relevant people	0%	8%	92%
5. Written communication skills	0%	10%	90%
6. Problem-solving skills	0%	11%	89%
7. Decision-making skills	0%	20%	80%
8. Organising and managing information resources	1%	27%	72%
9. Creative thinking skills	0%	33%	67%
10. Developing a personal system for finding information	2%	33%	65%
11. Computer competency (eg. information searching skills)	0%	44%	56%
12. Oral communication skills	1%	53%	46%
13. Building working relationships	3%	60%	37%
14. Presentation or public speaking skills	9%	61%	30%

Table 5.1 Legal research skills arranged according to significance

This suggests that the legal research skills considered important by most participants includes knowing how and where to find appropriate information, keeping up with new information, providing timely and accurate information to relevant people, written communication skills, and problem-solving and decision-making skills. Another skill of importance to the respondents seems to be the ability to organise and manage resources. Of less importance were creative thinking skills, developing a personal system for finding information, and computer competency. The skills that were not essentially associated with legal research by the participants were oral communication skills, building working relationships, and presentation or public speaking skills. Yet most participants indicated that these skills are sometimes required in legal research and should therefore not be discarded in the skill-set of a competent legal researcher.

Competency in legal research is thought to be one of the key factors that influences a lawyer's, and by implication, a law firm's competitiveness. Increasingly, competitive intelligence (CI)²⁵ as an information skill is required of knowledge workers in modern legal practice. In this regard Darcy²⁶ states:

CI is quickly becoming indispensable to the forward-thinking law firm. In a rapidly evolving market the key to successfully retaining market-share is to anticipate and be prepared for changes, rather than react to unforeseen external influences.

In addition to the many skills and competencies referred to in this article, modern legal professionals now also require CI skills. Competitive intelligence involves a deeper level of legal research, including market research, informed networking, accessing company records within ethical proximities, vertical searching of the invisible Web, value-added recommendation and knowledge dissemination to decision makers and strategists, protecting the firm against industrial espionage, and creating a clear competitive advantage for the firm.

A law firm possesses a competitive advantage if it:

- Understands the perceptions and needs of its clients.
- Proactively identifies business opportunities.
- Is responsive to changes in the market.
- Understands its competitors' strengths and weaknesses.
- Manages its knowledge and leverages its collective intelligence.
- Unconventionally applies new technologies such as blogs, wikis and online social networking tools.
- Contextually analyses and efficiently communicates CI through KM-related semantic technologies.
- Invests in applicable business intelligence tools.
- Inherently remains a learning organisation.

25 CI refers to the systematic gathering of information that, when collated, analysed and synthesised, it provides a better understanding of the competitive business environment.

26 Darcy *Competitive Intelligence for Law Firms*.

- Subscribes to meritocracy in knowledge sharing.²⁷

The above discussion is by no means comprehensive in its listing of the competencies a modern-day lawyer should have in order to compete in the globalised Internet age, but the significant impact the modern ICTs have on the legal profession should now be clear.

6 Summary and conclusion

The ability to conduct legal research is one of the many essential skills a lawyer needs in legal practice. The proliferation of electronic legal resources and search tools has heightened the legal profession's awareness of the importance of research skills for lawyers. Lawyers who are often pressured for time could benefit greatly from skills that would allow them to utilise the full capacity of IT, KM and digital searching in their legal research activities. The availability of digital legal research tools has clearly influenced the threshold of the skills required for the mastery of legal research.²⁸ These include advanced proficiency in the use of technology, competency as competitive legal researchers, and astuteness in law firm information and knowledge management.

27 *Viz* rewarding high quality participation, work, leadership and input with promotion, thereby retaining lawyers as strategic competitive role players within the firm, rather than losing them to competitors.

28 Darcy *supra* n 23; Callister *supra* n 7 at 25; Hemmens 2002 *LLJ* 209.

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List of abbreviations

CI	competitive intelligence
DoJ	Department of Justice
ia	inter alia
ICT	information and communication technology
IKM	information and knowledge management
IM	information management
IT	information technology
KM	knowledge management
SAQA	South African Qualifications Authority
SPSS	Statistical Package for the Social Sciences