

Knowledge Management: Managing Legal Information Via the WWW and Intranet

Alfredo Cruz, Ph.D.
Associate Professor
Department of Electrical Engineering
Polytechnic University of Puerto Rico
alcruz@pupr.edu

ABSTRACT

The legal profession is an industry that has yet to exploit the Web to its fullest extent. In an industry that revolves around documents, issues surrounding their creation, delivery, storage and management will have important ramifications, not only on productivity, but also on profit. Web-based technologies (intranets, extranets, enterprise information portals), and groupware in particular, have given firms the ability to access and organize information, share (explicit) knowledge, and communicate and collaborate in ways that were difficult, if not impossible, previously. The premise is that people will act more effectively and intelligently if they have access to the right knowledge at the right time. Therefore, there is the need to assess where tacit and explicit knowledge resides in the organization or group, and map the ways it may be shared within the firm. Keeping up with what is happening and emerging is not optional, but fundamental to survival.

SINOPSIS

La profesión legal aún no ha explotado la Red a capacidad. Los adelantos pueden tener grandes ramificaciones en la productividad y ganancias de la firma legal, ya que es una industria que resuelve las problemáticas valiéndose de documentos, su creación, envío, almacenamiento y manejo. Las tecnologías orientadas a la Red (como lo son internet, intranet, extranet y los portales empresariales) y en particular el "groupware" (programación para grupos de trabajo), le han brindado a las firmas la habilidad de acceder y organizar información, compartir el conocimiento explícito, comunicarse y colaborar de maneras jamás imaginadas hace unos años atrás. Partimos de la premisa de que las personas actúan con mayor eficiencia e inteligencia si tienen acceso al conocimiento correcto. Por ende, existe la necesidad de reconocer donde es que reside el conocimiento explícito y tácito dentro de una organización o grupo, y poder delinear la forma de

compartir ese conocimiento dentro de la firma. Mantenerse al día con lo que sucede en la tecnología y las estrategias gerenciales que emergen no es una opción, sino algo fundamental para la sobrevivencia de las firmas legales en nuestros tiempos.

I- INTRODUCTION

The discipline of Knowledge Management (KM) has yet to exert sufficient influence on the thinking of lawyers. Although it is hard to imagine a more knowledge-intensive and knowledge dependent field, the reality is that lawyers has not yet managed to create internal cultures that support rather than inhibit the sharing of collective experience. In this concept, lawyers lag behind other professions such as accountants, scientists, and engineers. Spite of the valuable assets that KM supports, and the competitive edge that can be obtained through the KM process, there are still many barriers encountered such as lack of leadership, limited vision and the resistance to change have been barriers that affect an organizations ability to capitalize on KM assets. This situation is not sustainable any longer.

The goal will be to share and have these knowledge assets available to everyone in the group. The premise is that people will act more effectively and intelligently if they have access to the right knowledge at the right time. Therefore, there is the need to assess where tacit and explicit knowledge resides in the organization or group, and map the ways it may be shared within the firm. Keeping up with what is happening and emerging is not optional, but fundamental to survival.

II- KNOWLEDGE MANAGEMENT

Knowledge Management is the process of capturing a company's collective expertise wherever it resides (in databases, on paper or in people's head), and distributing it to wherever it can help produce the biggest payoff. One of the simplest definitions and perhaps the best: Knowledge Management is getting

the right information to the right people at the right time so that they can make better decisions [1].

An informal KM culture now exists within the law. Concurrently, they learn to cultivate the acquaintance with other practitioners, so that when venturing into an unfamiliar courthouse or in front of an unfamiliar judge, they can exchange with associates in order to gain a bit of knowledge on how things work [2].

Knowledge access comes in two forms:

- 1- Explicit, and
- 2- Tacit.

Explicit or codified knowledge is found in standard documents and work products, procedural best practices, legal books and printed resources, e-mail systems, brief banks, and litigation support databases among others. Almost anything put on tangible medium that can be searched is explicit knowledge. It is the bread or butter of law firm life. Explicit knowledge enables firms to reuse previously acquired knowledge and know-how rapidly and effectively.

The second member of the knowledge duo is tacit. Tacit knowledge is unstructured, loose and generally uncodified. Such informal knowledge transfer or undocumented expertise accelerates and enriches organizational learning. It lies buried throughout the practice and in people's heads, obtained through experience, in most cases. Tacit knowledge is often exchanged in "watercooler encounters" or other transient events, in e-mail or on-line forums, or in discussions at meetings. This kind of knowledge generally has a higher value than explicit knowledge. It can be used to drive the organization towards innovation. It can differentiate the firm in an, otherwise, homogeneous but nonetheless competitive global legal services market. Examples of useful tacit knowledge are:

- 1- The demeanor and tendencies of a particular judge
- 2- The knowledge of how a particular client likes to communicate and work
- 3- Memory of how a similar matter was handled previously

The hard part of capturing tacit knowledge in the legal sector is the reward system of law firms. Some firms are starting to realize that the way they pay their lawyers and other resources has to change if they realistically expect the firms to change.

In order to convert knowledge from individual level to the group, organizational and

interorganizational level, it is necessary to recur to the "tacit to explicit" conversion process. Convincing recall narratives had been proven to be the best way to codify knowledge [3]. Structuring and focusing recall narratives through the adoption of knowledge exchange protocols can make the transformation process faster than usual. This would resolve one of the most unrevealed dilemmas of Knowledge Engineers; knowledge conversion from tacit to explicit. The lack of knowledge conversion can greatly affect an organizations knowledge creation process. The Subjective, Objective, Assessment, Plan (SOAP) is used by medical students as a component of the clinical teaching process. It is used to evaluate clinical assumptions that result in tacit knowledge derived from scrutiny. Hershel felt that this protocol could be integrated in the corporate knowledge conversion.

With the proper combination of explicit and tacit knowledge, knowledge assets grow in value for the organization. When these assets are applied to support business objectives, a competitive advantage is achieved [4]. Therefore, there is the need to assess where tacit and explicit knowledge resides in the organization or group, and map the ways it may be shared within the firm.

A- E-COMMERCE

International Data Corporation predicts the amount of overall e-commerce, including business-to-business (B2B) transactions conducted on the World Wide Web, will exceed 1.3 trillion by 2003. Conducting e-commerce is not simply a technology reserved for large organizations: it is a fact of life in the Internet age. Law firms must embrace e-commerce if they wish to compete and survive.

Some of the benefits that e-commerce can provide are:

- 1- Reduced turnaround time and costs of transactions
- 2- Increased profitability through efficiency
- 3- Reduced customer service time and related costs
- 4- Increased customer loyalty through better service
- 5- Ability to achieve higher levels of collaboration with partners
- 6- Ability to reach customers with targeted offers
- 7- Ability to bring new products to the market quicker

A case example is Xerox Corporation. It developed an e-commerce solution to lower operating costs and the removal of cumbersome paper forms. This concept improved productivity by streamlining

organizational procedures and decreasing the delivery time of internal goods and services throughout Xerox. Xerox has hundred of business units offering products and service to each other. So even though no money was leaving the company, an enterprise-wide-e-commerce model made the most sense [5].

For the modern law firm, keeping up with clients that utilize systems and technologies such as these, mean that they must be educated on the inner workings of e-commerce technologies as well as on the legal terminology of the contracts that will arise from these types of transactions.

III- BARRIERS FOR DESIGNING A KM SYSTEM

The impediments to achieving a true Knowledge Management System (KMS) are more organizational or sociological than they are technical. In states that the most important issue and the largest obstacle for implementing KM is cultural and social [6]. Changes, adjustments and understanding required of business and education users, are the main requirements.

Not surprisingly, there are obstacles for developing a KMS such as resistance to change, psychological factors, cost, training, among others. These are discussed in the next sections

A- PSYCHOLOGICAL BARRIERS

A major barrier for implementing a KMS is that knowledge is an essential component of legal practice, so it follows that the more knowledge one has, the greater one's stature. It's particularly true for a profession such as law that revolves entirely around intellectual product. As a result, in many law firms and law departments, knowledge is hoarded. To share information is to relinquish control over something of value. Just as partners within a firm often jealously guard their clients, if individuals in an organization are too jealous of each other or too insecure to share knowledge that underlies or defines their individual status in that organization, it will be difficult, if not impossible, to create an effective, functioning knowledge system.

Understanding the firm's organizational culture is the key. The firm's culture needs to change to make a successful KMS.

B- RESISTANCE TO CHANGE

Lawyers are also trained to operate independently. The competitive nature of law school strengthens the urge to operate on their own. It should be no surprise

to anyone that in practice, lawyers have some difficulty seeing their roles as members of a team devoted to developing a collaborative solution to a problem, and that sharing information and knowledge is a preferred approach to analyzing and solving clients' problems.

Despite these difficulties, it is possible to overcome some of these by crediting individual attorneys for efforts to share their knowledge and information with others in the organization. People are generally proud of sharing their ideas. Studies repeatedly indicate that what truly motivates knowledge workers is not money, but being recognized and appreciated for their thinking [7].

C- TRAINING AND COST BARRIERS

Considerable time, effort and expertise are required to launch and maintain a sophisticated Web-based knowledge management application. A successful training program will contribute in eliminating barriers concerning intranet use and technology. Ideally, it will result in the intranet becoming part of the resource portfolio routinely used by attorneys [8].

Tools work best in the hands of people who know how to use them. Trying a number of alternatives can be relatively inexpensive and produce great results. For example, including intranet training as part of the firm's orientation program for new attorneys, summer associates and legal assistants, is highly recommended [8].

IV- JUSTIFICATION OF A KMS

Any organization that faces repetitive situations over the same intellectual ground or tasks needs a knowledge system. Any organization that has uncontrolled legal expense is likely attributable (at least in part) to an inadequate management of knowledge. In essence, an inability to identify and apply it to new problems or issues is the characteristic of an organization that does not have a functioning Knowledge Management System (KMS).

Organizations, such as law firms, that develop great expertise in specific areas (such as corporate transactions, real state law or will) are in the greatest need of sharing, within the organization, the expertise and depth of knowledge they have developed to avoid continually reinventing the wheel.

The benefit in question can be of any variety. It might consist of case-specific data. It may reside in well-drafted documents from prior transactions. It might include information gathered from external sources in addition to internally generated information.

There are many benefits that derive from a good KMS. An organization can achieve improved consistency in positions that it takes on different matters, and can do so with greater efficiency.

A- IMPACT OF THE INTERNET, INTRANET AND EXTRANET AS KM TOOLS

The Internet and intranets are excellent tools for information and knowledge access. Internet technology and protocols enable interorganizational communication and internal information sharing using corporate internal networks. Intranets are essential in order to gather, manage, distribute and share knowledge inside and outside the law firm.

One potential impact in the development of an Intranet within the law firm sector is a perceived change in both the culture of the law profession and the way in which it operates. Law firms are often subject to the difficulties of cross-site working, resulting in problems establishing effective relationships between members of staff at different offices. The development of an Intranet can assist in improving the communication between offices and subsequently improve working relationships. Lawyers equate information and knowledge with power. Sharing their knowledge is an activity, which might be seen by them as weakening their power. However, providing the opportunity for distributing information via the Intranet (particularly that which is pertinent to their needs) may result in a change of opinion about sharing information.

The desire is there, but it is not going to be necessarily easy to introduce Knowledge Management concepts and ideas.

Training is vital to the success of the intranet and it must be ensured that all staff receives some instruction. Once the user has been trained on intranet procedures, they can search a range of data sources through this single front-end without additional assistance.

Bigger than Intranets but smaller than the Internet, extranets are restricted-access networks. The key difference between an extranet and a web site is that an extranet is secure. No one gets access unless permitted. An extranet offers the same things a private network offers; efficiency, improved work quality and enhanced communication among people working together. A legal extranet isn't simply desirable; it's essential. Extranets are becoming popular as a way for co-counseling to collaborate on complex litigation matters. It enables lawyers to quickly access all of a firm's good practices, those documents and ways of doing things that lawyers want to reuse and pass on

to their peers. By going to a secure, private site on the Internet, co-counsel can share information, discuss cases, work jointly on projects or documents and stay up-to-date on case developments. Extranets have a potential to both aid in collaboration and to help save money. Some firms even permit certain clients to tap into their extranet systems. The beauty of an extranet is that the clients require no technology other than a computer, an Internet connection and a browser. And they can access the extranet from any place they can access the Internet.

V- LAW LIBRARIAN, ARCHIVIST'S AND RECORD MANAGERS

Law librarians are being lured to assume the role of Web Managers for their respective firm intranets. This is due to the fact that most are skilled in the use of Web technology applications as well as in using the firm's network to directly deliver value-added services to attorneys. Law librarians often find themselves as the nexus of delivering crucial information services within a firm, and it is their experience that will prove vital in selecting research content for the intranet. They assist their law firms in the essential enterprise of mining information on behalf of their users and their clients.

The skills that are most advantageous in terms of contributing content are not exclusively the technical skills of HTML or database management. As systems become more complex, technical skills will be an integral part of the profession [8]. Overall, the same responsibilities of selecting and evaluating research materials remains, as does the need to provide research services to lawyers and other information users within a firm.

Archivists and record managers are information providers and data managers. Their traditional line of work in record centers is as information collectors and keepers. Their focus has been on non-current information, and record centers usually work independently one from the other in large organizations. Geographical barriers prevent knowledge from being distributed evenly throughout the workplace, which causes uncertainty as to what information; data or even knowledge exists [9].

Information overload is also a big problem. Providing clients with many options is not necessarily the best way to provide data for information needs [9]. It is necessary to involve record management professionals in the knowledge creation process so they can get involved with individuals and provide the most appropriate presentation form for that specific need. Because of the advantage that record

management professionals have due to their record specific activities, they can play a key role in the development of the knowledge base and KM processes. Knowing what data, information and knowledge exists and where, puts the record managers in a valuable and powerful situation.

VI- METHODOLOGY FOR CREATING KM

In order to understand and appreciate the immense quantity of data, which comes from all directions, we must establish a distinction between "information" and "knowledge." According to Raisinghani, knowledge applied to tasks that we already know how to do is called productivity [6]. Knowledge applied to new and different tasks is called innovation. These are two important business goals.

A fundamental task in the practice of law is the collection and dissemination of information. Law can be seen in many ways, but in every incarnation, information is the fundamental building block that is present and is the focus of attention at almost every stage of the legal process. Legal judgments, for example, are actions that involve obtaining information, evaluating it, storing it, and communicating it. Lawyers have expertise in, and have control over, a body of legal information. That is, attorneys must apply their experience and knowledge to each matter that comes before them. Knowledge and experience are ultimately converted into communicated information. The information is then stored within the firm's information system. Not too many years ago, this "information system" consisted of little more than the firm's paper files. Today, that information can be stored in a firm-wide computer system, where the opportunities for Knowledge Management (KM) are almost unlimited [10]. The goal is to make knowledge more accessible in the firm [11]. Lawyers are building KMS not because they want to, but because they have to.

Many people, when considering how to introduce KM, are eager to look for new sources of information to present to users. The reality is that there is already a huge amount of data stored in a firm's network, and the first step in introducing knowledge management is to identify that data, distill the high-value, quality information, and present it using a simple interface [12].

The basic steps in creating a KMS are:

- 1- Decide, categorize, and prioritize.** It is both impossible and unnecessary to capture everything. The first principle is to decide what to capture, categorize it and then prioritize in terms of where

the firm will give the time and resources.

- 2- Reward a Knowledge Sharing Culture.** Providing the opportunity for distributing information via the Internet (or intranet) may result in a change of opinion about sharing information. The goal is to share and have knowledge assets available to everyone in the firm.
- 3- Promote KM as a firm wide way of life.** Constant promotion of KM must be a firm way of life. Law firms that reward secretive or territorial behavior may be more susceptible to rejection when talking KM. An open, nonsecretive organizational culture is essential for KM to flourish.
- 4- Add technology to the plan.** When considering new technology it is important to be sure that any new technology chosen can be properly maintained and supported.

Technology is an important tool for capturing, storing and accessing organizational knowledge. But technology alone cannot and will not change a company culture. Culture is a very strong factor in organizational life, and to effect a change towards a knowledge driven organization all depends on the acceptance of the employees. Technology is just a helping hand that supports information retrieval in the KM environment for searching (through taxonomies), categorizing and analyzing unstructured data and information.

A- KNOWLEDGE TRANSFER

Knowledge creation, storage and dissemination were and has been, in many cases, underestimated and poorly financed. The under-investment of intangible and intellectual assets that generate future growth has been overlooked too often [13]. By focusing entirely on the financial aspects of the firm, certain limitations can be imposed on the resources. Strategic management that seeks more productivity by reducing the opportunities for casual exchange between employees of knowledge or every day work related legal situations, (even limiting coffee breaks or chats over the water cooler) can endanger and limit the opportunities for sharing information and knowledge about the firm, its clients and new ways of thinking about legal problems [14]. A senior lawyer might show a first year associate the nuances of a certain transaction over lunch. Such information can consist of knowledge about people and how to deal with those people, institutional methods of accomplishing certain tasks or previously conducted research.

In summary, knowledge has little value if employees cannot take advantages of it. Collaborating, debating, and questioning all become part of a successful KM environment. Recording and sharing results help people add value through experience and interpretation, and this is what transforms data and information into knowledge. People who share objectives recognize the benefits of sharing what they know.

B- DEVELOPING AND MANAGING KNOW-HOW SYSTEMS

Three recent and significant developments could affect the future of information professionals in the legal sector. Know-how, intranets, and KM. Capturing know-how is one aspect of KM, and an aspect that for many years has been practiced to a greater or lesser extend by some law firms.

Through the intranet, attorney and staff, with security in place, so only those who have a need to see the information have access to:

- 1- **Best Practice** – An attorney work product system that includes briefs, research memos, pleadings, transactional documents, forms, etc.
- 2- **Resumes** – A system where resumes for attorneys and staff are maintained that allows others to identify expertise that would, otherwise, not be known. It could also be used to track memberships held by individual's attorneys and any other information that may be useful to know.
- 3- **Client Information** – Access to articles/news about the client, information on cases transactions (contacts matters, docket, etc.), information on marketing efforts involving the client, time and billing information, etc.
- 4- **Variety of systems depending on needs** – Expert witness database, litigation support services directory, judges biographies, and many other databases that are created and maintained in house or purchased from vendors and accessed via the Internet. All of these databases have one thing in common: they provide lawyers and staff with information that makes their job easier

Know-how systems are internally generated information produced by lawyers. But information is not always generated on events that are not successful. It can be easily argued that unsuccessful cases must also be captured in order for knowledge management to succeed.

C- KM TOOLS FOR LAW PRACTICE

CaseMap is a database application that offers a template into which a lawyer or legal team can enter information easily. The program then links information about people, facts, issues, an even the lawyer's questions [15].

TimeMap creates chronological timeliness for use during hearings or trials. After entering the key facts and dates, TimeMap automatically generates a timeline graphic. It creates a proportional time scale and positions fact boxes above the dates on which facts occurred. These timelines can be customized and enlarged for use before judges and juries. TimeMap is a stand-alone product or can be used in conjunction with CaseMap.

There are two recently KM tools: DepotCast and DepositoryDirector that allows a lawyer to send video, audio and real-time transcripts from a deposition over the Internet. Lawyers not present at the deposition can "sit in" on depositions in remote locations. A section of the transcripts can be bookmarked as it rolls by and allow the lawyer to e-mail or call the lawyer given the deposition to give his input into the deposition.

D- THE ROLE OF THE INFORMATION PROFESSIONAL IN KM

There has been a debate as to whether information professionals are able to carry out "legal research". Most information professionals are of the opinion that in carrying out legal research they do make some forms of judgment or interpretation of the findings, but only as to their suitability for the task on hand, and that they are not (in fact) interpreting the law.

Some of the skills required for Information Professionals are:

- 1- The legal information professional needs to have the ability to utilize, effectively exploit and promote the resources available and recommend new technology that can help advance the KM efforts.
- 2- Knowledge and skills in information are required to enable more effective communication with individuals and between departments, particularly IT departments. They should be able to develop tailored information packages for clients
- 3- The skills to communicate effectively with users, both one-to-one, in small groups and large groups, are vital.

In summary, technology is a must for sharing explicit and tacit knowledge throughout the organization. Real time communication between individuals for information exchange and knowledge dissemination are clearly very important factors when supporting KM. Knowledge technologies need more of human interaction than data technologies.

VII- CONCLUSIONS

It is undeniable that the legal information market is undergoing a period of change and that many of these changes are being forced by the pace of technological developments. Information that previously took days or weeks to get by mail is now available electronically in seconds.

Judges are becoming more receptive to the use of technology in the courtroom and a good number of courthouses are planning to have at least one courtroom that is designated as a "courtroom of the future." Courtroom presentation technology can dramatically enhance the impact of the arguments, exhibits, and case. As a result, it can give jurors a better experience with the legal system, something that will benefit all lawyers.

Every lawyer's product represents a considerable investment of money, time and other resources. If a company can use and reuse the thinking that was applied to those efforts, it will realize a greater return on those investments. Companies facing global competition cannot afford to re-invent the legal wheel every time a new matter is filed in a different venue.

VIII- REFERENCES

- [1] Caldwell, N., Clarkson, J., Rodgers, P., and Huxor, A., "Web-Based Knowledge Management for Distribution Design", IEEE Intelligent Systems, May/June, 2000, pp. 40-47.
- [2] Montana, J., "The Legal System and Knowledge Management", The Information Management Journal, July, 2000, pp. 54-57.
- [3] Hershel, R., Nemati, H., Steiger, D., and Iyer, L., "Using SOAP – How Knowledge Exchange Protocols Improve KM Performance", Knowledge Management Review, January/February, 2000, issue 12, pp. 8-12.
- [4] Duffy, J., "Knowledge Management: To Be or Not To Be", Information Management Journal, January, 2000, 34(1), 60-64.
- [5] Hickings, M., "Xerox Shares Its Knowledge", Management Review, September, 1999, pp. 40-45.
- [6] Raisinghani, M., "Knowledge Management: A Cognitive Perspective on Business and Education", American Business Review, June, 2000, 18(2), 105-112.
- [7] Dominique, J. and Motta, E., "Planet Onto News Publishing to Integrate Management Support", IEEE Intelligent Systems, May/June, 2000, pp. 26-32.
- [8] Pacifici, S. and Skalbeck, R. V., Intranets and Knowledge Management Solutions: Law Librarians Lead the Way, August 2, 1999, <http://www.llrx.com/features/lead.htm>
- [9] YakeI, E., "Knowledge Management: The Archivist's and Record Manager's Perspective", Information Management Journal, 2000, 34(3), 24-30.
- [10] Sprague, R., "Creating Knowledge Management Systems for Law Firms", Los Angeles Lawyers, February, 1999, 21(11), 15-18.
- [11] Dell, A., "The KM Buzz: How Three Large Firms Manage Know-How", New York Law Journal, January 24, 2000, T3, T17, and T18.
- [12] Schwartz, D. and Teeni, D., "Tying Knowledge to Action with kMail", IEEE Intelligent Systems, May/June, 2000, pp. 33-39.
- [13] Gough, C., "Appraising Your Knowledge Management Initiative", Computers and Law, August/September, 1999, pp. 19-22.
- [14] Terrett, A., "Knowledge Management Lessons for Lawyers", Computers and Law, August/September, 1999, pp. 10-12.
- [15] Kennedy, D., "Know Artificial Ingredients: Understanding Really is Half the Battle", Law Office Computing, February/March, 2000, pp. 12-15.