

knowl·edge (n.)

The act or state of knowing; clear perception of fact, truth, or duty; certain apprehension; familiar cognizance; cognition. That which is or may be known; the object of an act of knowing; a cognition. That which is gained and preserved by knowing; instruction; acquaintance; enlightenment; learning; scholarship; erudition. That familiarity which is gained by actual experience; practical skill. Scope of information; cognizance; notice.

man·age·ment (n.)

The act or art of managing; the manner of treating, directing, carrying on, or using, for a purpose; conduct; administration; guidance; control. Business dealing; negotiation; arrangement. Judicious use of means to accomplish an end; conduct directed by art or address; skillful treatment; cunning practice. The collective body of those who manage or direct any enterprise or interest.



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Editor's Note

"Knowledge management" is another one of those phrases that mean different things to different people. Seems like we've all got some knowledge, and it would stand to reason that we'd want to manage the stuff. I appreciate the many and varied offerings by our guest contributors to this white paper. You'll find a good mix of articles, each taking a slightly different approach to the specifics and the applicability of KM. Enjoy, acquire knowledge and go forth to manage same!

Randi Mayes, Editor

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About the Authors

Shirley Crow has served in a number of senior IT positions with various law firms. Most recently she held positions as CIO of Zevnik Horton, then a seven-city firm with major offices in Chicago, Los Angeles, and New York, and as director of systems development with Ater Wynne, a regional Pacific Northwest firm. Her professional emphasis has been on the design, implementation, and operation of major IT systems that improve a firm's underlying economics. She's currently working on similar projects on a consulting and advisory basis.

Dan C. Felean is a principal of PensEra Knowledge Technologies, the developer of TimeKM (www.timekm.com) and other Web-based knowledge tools for law firms and law departments. Felean has more than 25 years of experience in law and technology, both as a practicing attorney and as a consultant.

Dr. Herbert Roitblat is the inventor of the core DolphinSearch technology. He was a professor for 7 years at Columbia University and for 16 years at the University of Hawaii, where he studied language understanding and memory and modeled dolphin echolocation performance. He has published more than 75 papers and book chapters on cognitive science and dolphin echolocation.

Kingsley Martin has 25 years of experience in the legal field, including 15 years dedicated to law office technology. He started his professional career as a lawyer, having graduated with law degrees from Oxford University and Harvard Law School. He practiced law in the United Kingdom and the United States for 5 years, specializing in tax law. In the late 1980s, Martin started experimenting with computer technology to improve the efficiency of his practice. He is currently working as a consultant focusing on knowledge management. He is a frequent speaker on law firm technology and has authored numerous articles on the subject.

Jim Flateboe is the Director of Consulting Services at ProVantage Software, Inc. He has over 30 years of experience in designing financial and legal software as well as management consulting with Deloitte & Touche and his own company. Jim was previously in charge of designing and managing the LAS time and billing system with ProVantage Software. He is currently responsible for the design and management of various business intelligence applications. Jim holds a BS in Mathematics and an MBA in Finance from the University of Washington.

Rick Klau is vice president of vertical markets at Interface Software. Prior to joining the company, Klau was director of industry marketing for iManage (NASDAQ: IMAN), a provider of e-business content and collaboration software platforms and applications. Klau also held a key position at TrialNet, developer of private Internet-based networks for litigation management, where he was vice president of marketing and development. Klau is a graduate of Lafayette College and holds a J.D. from T.C. Williams School of Law at the University of Richmond.

Kathleen T. Masterson is the knowledge manager for Solution 6 North America. Her background includes more than four years with CMS OPEN time-and-billing software and an additional seven years in the legal industry, working with small to medium-sized firms. Kathleen holds a bachelor's degree in management and an MBA from Florida State University. She is a Certified Public Accountant and has achieved the designation Certified Knowledge Manager from the Knowledge Management Certification Board. In addition to her role at Solution 6, she also teaches business and accounting courses at Florida's Flagler College, a four-year private college.

Knowledge Management: Is the Technology Emperor Dressed Yet?

by Shirley Crow

When I began working in law firms, our primary document production technology consisted of typewriters. Every secretary had one. She spent most of her time using it to prepare in readable form the documents written by lawyers. That writing was done in one of two ways: either literally, with pen and paper, or by recorded dictation. I've been around law firms a long time, but not long enough to have personally witnessed much but the tail-end of the personal dictation system that preceded Dictaphones. Some of you may not be aware that any such thing ever existed, but I can tell you that technology change met resistance just like any other—lawyers who are still practicing today have actually been known in this lifetime to say, “Why on earth would I dictate into a machine when I can talk to a pretty girl?”.

Sometimes the typewriters broke, as mechanical things will. It took specialized skill to fix them, so the phone number for the typewriter repair shop was usually taped to every machine. Specialized skill costs money, of course, so there was expense associated with keeping the technology working. Sometimes the typewriters were on maintenance contracts, to ensure predictable cost and obtain quantity discounts, but always the function was “outsourced,” as we say today.

It took a long time to type all those legal documents, especially in the days when copies were made with carbon paper. A single typing error could mean retyping an entire page, and a substantial revision required starting over completely. Cutting and pasting skills learned in first grade became highly useful when photocopiers came along—if you were careful, the copy wouldn't show the lines around the revision you pasted over the earlier draft.

Our Brave New World

The tools we have nowadays make all of that seem quaint, not to mention burdensome, cumbersome, and mind-numbingly tedious. I'll spare you descriptions of the wonders I can perform with the system I'm using to write this—you know all about that. I would not want to go back to my father's word processor.

Nor would I care to forfeit my contact database, my electronic calendar (with which I can easily schedule recurring events and make appointment changes without getting white-out splatter or eraser bits on my desk), or the accounting software that replaced duplicative manual entry and green twelve-column paper. Please, don't make me do payroll by hand! The ability to communicate instantly with anyone in the world including my mother is a priceless miracle all by itself; my gratitude for the international community I have developed as a result knows no bounds.

The improvements are obvious, the benefits unmistakable. But what a price we've paid! Where we had typewriters with outsourced maintenance contracts, we now have wiring and servers and switches and routers. It is perfectly normal for law firm staff to include network engineers and administrators, technology trainers, help desk personnel, PC technicians, database administrators, developers, programmers, and technology project managers, with all of their work overseen by IT directors. We worry about, or pay people to worry about, the proper ratio of IT staff to end users, remote access, system security, frame relay vs. point-to-point, T1s and T3s, VOIP, and getting attorneys to attend training. We are regularly compelled to “upgrade” key systems to be compatible with external parties whose business needs for technology solutions are completely and fundamentally different from our own. We are bombarded with spam.

What were we thinking when we argued that getting a network would save money? That dog won't hunt—or at least it's a futile debate, impossible to analyze and quantify. You say macro, I say macro virus. You say track changes, I say metadata removal software. And so on.

All along, we've had a free-floating anxiety about whether we're using our technology to best effect. While many lawyers understood that the computer should somehow be able to help them be more effective, fondness for change has never been a distinguishing characteristic of members of the legal profession. As a consequence, while our methods and processes have changed radically, our fundamental way of operating has stayed very much the same. We probably write far less carefully now that we can

edit far more easily. And we tend to value action more highly than contemplation—there's an unspoken perception that if we aren't tapping on a keyboard we aren't working. (And perhaps a parallel perception that we are working whenever we're at the computer?) Lawyering is still an intellectual pursuit and a service business, with elements of creativity, originality, and even art. So far, in spite of vast technological change and advancement, no legal equivalent of the Ford moving assembly line has been invented. We bill by the hour, thank you very much—art is not a commodity, and thought processes are not a product.

Our realization that we should be able to better leverage our technology investment has led us down some paths with interesting implications. Perhaps we should have foreseen some of the obstacles that limited our success.

Document assembly systems are a wonderful enhancement to our productivity. It takes 15 minutes to prepare the documents that used to take two hours. Of course, if we continue billing by the hour, being more productive means being less profitable. And how do we make sure the source forms comply with current law? Technology can't do that by itself, and the lawyers who are qualified for the task are unmotivated, since they are rewarded for billable hours and not for form maintenance.

When we wanted our work product to be easily accessible to others in the firm, we bought document management database systems. Every document in the database is profiled with essential information, including what client and matter it was prepared for, what type of document it is, what area of law it addresses, and who wrote it. It's a simple matter to search for all the documents prepared for a certain client or every pleading containing the words "construction defect." Unfortunately, it is still true that database output is only as good as database input, and most end users lack motivation to ensure their documents are profiled adequately to allow others seeking prototypes to locate them.

When we discovered our information systems were too bloomin' hard for normal people to use, we experimented with various user interfaces and methods for integrating our applications. Case management software gave us systems that used a desktop metaphor for presenting information. I think they mostly succeeded in making us feel stupid.

Extranets were the hot topic a couple of years ago. We'd have a Web-based collaboration space accessible from anywhere anytime, and all the frustrations of document-sharing would disappear. With threaded discussions and case calendars, everything we needed would be all in one place. Unfortunately, that isn't how we work or even how we want to work. Our e-mail systems handle electronic discussions nicely, it's inconvenient and inefficient to keep multiple calendars, and the process of taking documents out of our document management databases to put them on an extranet was enough by itself to cover the concept in a wet blanket.

KM Systems: Do You Have One? Do You Need One?

The latest trend that has us all flutter is knowledge management. With KM, our investment in technology and our intellectual capital are going to converge and get leveraged once and for all. That sounds good, but what does it actually mean?

A search for the definitive answer turns up quite a lot of data. There are numerous vague but scholarly articles full of fancy phrases but no practical information about application of the concepts under discussion. There are many energetic manifestos insisting knowledge management is where it's at, and if you don't have it your firm will die sooner rather than later. They often promote a particular technology or product that provides the complete

solution to knowledge management, except the parts it leaves out. One can find quite a few press releases announcing that this or that important firm has chosen a particular product as its knowledge management solution. Apparently KM is something U.K. law firms and all big businesses have had for a long time, with American law firms just now trying to catch up. Some say portals are knowledge management, especially when data warehousing is thrown in. Some say it's a client- or matter-centric view of data, others that it's work-product retrieval.

The literature I find most useful recognizes that knowledge management is a human problem that can't be solved by throwing technology at it. We've become pretty good at data delivery, but we're finding out that isn't enough—there's a big difference between data and information.

So what's my own definition of knowledge management? I'd distill it into two parts: Sharing available knowledge and information with those who would benefit, and getting the shared knowledge and information in a useful way to those who need it.

We're pretty good at the second part, actually. There's nothing wrong with the document assembly, document management, and work-product retrieval technology we've implemented. It's the first part of the problem that unravels our solutions. Effective sharing of useful information is by far the more difficult task for law firms, and the one I think we're trying to address with our latest trend-speak and bout of free-floating anxiety about the usefulness of our technology. Neither human nature nor our reward systems provide adequate motivation for us to go forth and share our intellectual capital with our colleagues. We humans just aren't good at sustaining our energy for the greater good.

A KM by Another Name . . .

Are there ways to pull all the threads together and make it work? I think there are. In fact, I've seen it done. I participated in design and implementation of a document assembly system that blew right by all the usual roadblocks.

How did we do it? Not by building a new information and data management system, in which the human issues would be solved by exhorting compliance. Instead we designed the system to solve the human motivational problems. The need for information management was easily addressed by integrating a number of excellent tools already available. We called our KM system the Template Accounting System.

With all due respect for art and intellect, lawyers do some things that are repetitive and lend themselves well to standardized forms. For example, the formation of a corporation involves a fairly standard set of fairly standard documents. The variables are sufficiently obvious that a developer could probably create an automated system for producing them without much help from a lawyer. But that raises some interesting questions, doesn't it?

If the first client paid for 20 hours of work to form a corporation, what should we charge the next client who needs the same document set? Our investment in development of legal work is valuable to us and to our clients. We are able to give better and faster service to our clients when our collective experience and work product are easily accessible, but we bill by the hour—if we work faster, we make less.

Who will make sure the documents stay up-to-date with changes in the law? The lawyers are all busy making sure they bill 2,000 hours this year. If I ask them for regular review of the forms used in assembly systems, they groan and make promises they won't keep.

How do I make sure the forms are properly used? What if I need a new associate to prepare an incorporation—will that associate have enough

information to do the project properly? It would be simple enough for the assembly system to include "Help" screens with explanation and instruction, but once again that requires assistance from a lawyer who is worrying about billable hours.

Of course, we could change our entire compensation system to provide incentives for lawyers to create and maintain forms. But we all know how enthusiastic law firms are about radical change, don't we? What was good enough for my father is good enough for me, don't fix what ain't broke, this is a profession not a business, we bill by the hour and that's what we've always done.

So let 'em bill by the hour! The system we devised encourages lawyers to become document sponsors by allowing them to bill the time spent creating and maintaining standard form documents. The only difference is that they bill the time to a document matter instead of to a client matter. The billable time is shown on all the usual reports exactly the same as client time.

I know . . . there's more to it than billing time. The actual money comes from clients, not documents. What good does it do to bill time to a document if you can't collect any money for it? Well, that's where it gets really interesting. Automating the solution involved an enhancement to our accounting system, but there are certainly other ways to achieve the same results.

Let's return to forming a corporation. In our system, when incorporation forms are prepared for a particular client, the timecard entered on the system is slightly different from usual. Instead of hours spent on the project, the timekeeper enters the number of "units" of corporate formation provided (obviously usually one). The timecard form includes a field for the activity code assigned to corporate formation. The fee to the client is automatically calculated by the software—incorporation forms are provided to the client for a standard flat fee. The narrative for the client bill is also standardized, and automatically inserted when the activity code is entered.

When the client pays the bill, the document sponsor whose time went into creating the incorporation forms gets the appropriate collection credit. If there are multiple sponsors for a particular project, the collections are allocated in proportion to contributions.

It turns out that the lawyers respond very well to doing what they've always done and getting compensated for being more efficient, and a number of other benefits are notable:

Since each form set has a flat fee, clients know in advance what they will pay and what they will get for their money. They like that! No single client is required to pay the cost of initial development, and each client is charged the same amount for the same services. The firm's lawyers are encouraged to think of work product (intellectual capital) as real and valuable, rather than giving it away because "it's just a form." The reports on the document matters give hard data to determine whether the fees received for standardized services are covering the cost of the time spent on developing them. And when the law changes, you have an easily accessible list of clients to contact to offer updated documents.

What Will We Think Of Next!

With the document assembly problem solved, the same concepts and mechanics could probably be applied to other aspects of work product retrieval. Your firm may yet build the brief bank you've always talked about. Perhaps your lawyers will become so accustomed to the idea of sharing their knowledge that proper DMS profiling will become what they've always done (and perhaps not). Could it be that you'll look back in ten years and realize that the only questions left are how to get attorneys to training, and whether yet another variation on Microsoft Bob [remember him?] will eliminate the need for it?

Treadmill vs. Windmill

Making Knowledge Management a Self-Sustaining Process

by Dan C. Felean

PensEra Knowledge Technologies

Knowledge for Sale! The daily practice of law is highly dependent on the use (and reuse) of “knowledge” in one form or another. Most of what a lawyer has to offer to clients is based on knowledge, whether it consists of a particular skill, an acquired experience, or other methods to acquire and apply information (what is called know-how, know-what, know-who, and even know-why). So it makes sense that the more a lawyer can use personal knowledge and the collective intellectual capital of others in the firm, the more productive and valuable that lawyer becomes.

In practical terms, knowledge management (KM) is a process to leverage what the organization collectively knows. Some say that a KM process simply delivers the *right* knowledge to the *right* person at the *right* time. It may take the form of using in-house research or document precedents to eliminate redundant effort and lower costs. It could mean identifying the best person to do a particular project, or drawing on a collection of skills, experience and best practices to achieve a better result or faster response. Or it could be as simple as sharing client or case intelligence within a team to develop new business or improve service and relationships.

The better the firm manages these knowledge assets, the greater the financial benefit for all involved. Put another way, the failure to reuse what you know means that you will be always reinventing the wheel at the expense of your client, your profitability and your competitiveness. Law firms sorely need a better way to leverage their collective knowledge as a business asset.

If a rich internal repository of information, skills and experience were easily available in your firm, is there any doubt that lawyers would use it as readily as picking up a case digest? Lawyers are trained to work with multiple information sources, references and precedents, so the use of knowledge resources should fit their natural work process. However, the challenge is to create a natural KM process that suits the culture and enhances the operations of the lawyer and law firm.

To date, most attempts to create an effective, sustainable KM process in law firms have had limited success. Law firm KM managers have come to equate their role to that of the mythical character Sisyphus, who was condemned to ceaselessly roll a rock to the top of a mountain, whence it would fall back of its own weight.

Yet a new generation of knowledge processes is starting to connect with lawyers on their own terms to produce tangible results. These processes attach to and channel the existing work process to gather and distribute knowledge. In this article, we will look at the factors necessary for creating a successful and sustainable KM process.

The Myth that Lawyers Will Not Share

When law firm KM initiatives fall short of expectations, many are quick to attribute the failure to the lawyer's inherent unwillingness to share. It is true that many lawyers are accustomed to a lone wolf style of practice.

However, the vast majority are ready and willing to share or exchange knowledge—given the right scope, environment, control and circumstances. Sociologists and anthropologists maintain that it is a force of human nature to help one another in need (they call it the *altruistic impulse*).

If you walked into a lawyer's office in your firm with an urgent question requiring specialized information or expertise, wouldn't your colleague try to help you—or at least point you in the right direction, time and circumstances permitting? Is the question in context of what the lawyer is doing, and will the answer stay in context? Are you familiar with the area and experienced enough to under-

Special thanks to Mario D'Amico, chief technology strategist at PensEra, for his contribution of the KM process analysis and knowledge funneling concepts in this article. For more resources on knowledge management, knowledge funneling, co-benefiting, knowledge feeds, expertise location and designing technology for lawyers, visit the Resource Center at <http://www.pensera.com>.

stand a quick answer? Is the lawyer much too busy at that moment, or does it look like you are just trying to avoid doing hard work? Is this information sensitive or too complex to convey without substantial time and effort? What incentive or advantage does the lawyer obtain or lose by sharing? All these questions and more go through every lawyer's head with every request to share or exchange information.

Lawyers are no different from any other busy knowledge professionals. They juggle weighty responsibilities and are subject to tremendous demands on their time. If sharing involves an extensive commitment outside the scope and control of their immediate obligations, it becomes inherently difficult to participate.

Some characteristics of lawyers may even increase the attraction of some KM systems. Being known as an expert creates recognition and prestige and can open more business possibilities for the lawyer. Therefore, KM expertise systems that recognize individuals as "go-to" people may appeal to a lawyer's business and personal motivations.

So blaming the "lawyer culture" for the failure of a KM process is much too simplistic. It is but one factor to be considered and massaged as part of any KM initiative. It should not be a deal-breaker.

As with most new technology or business projects, we have to recognize that if the user doesn't embrace KM, the problem is likely not with the user but with the failure of the process to engage, accommodate or benefit the individual. KM requires a shift in firm culture, but much can be done to create the proper circumstances for self-sustained sharing.

Early KM Efforts: Disruptive, Dissipative and Controlling

With the benefit of hindsight, we can learn from some of the setbacks of early KM initiatives (in both law firms and other industries). A KM process usually originates as a top-down management initiative. Management identifies the knowledge it wants, and users are asked (read: required) to supply it on demand. The supplementary process typically requires the users to interrupt their work (or worse, stay late), learn a separate system, and offer up their most precious knowledge, out of context, for the nonspecific benefit of the greater organization.

In addition, users are often required to categorize, polish and profile the knowledge before the KM system will accept it. Then organizational resources and infrastructure are required to support and sustain the initiative. This often includes a KM department and KM staff: sifters, researchers, profilers, updaters, publishers and more.

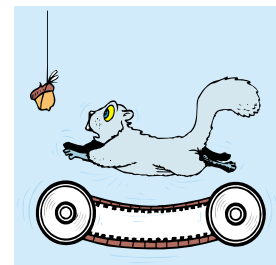
It is easy to see why these projects encounter such resistance. In the horizontal organizational structure of a law firm, piling tasks on busy attorneys will always be a nonstarter. Requiring more training for the use of a new system for no direct benefit is also counterintuitive.

If the individual lawyer contributes as required, not as inspired, contribution will always be a hurdle. In law firms, this process is typified by the "precedents campaign" launched once or twice a year to convince and persuade lawyers to identify and part with precedents or templates for best practices. The campaign does produce valuable results, but it requires a lot of energy and pressure to sustain it. As soon as the pressure from above ends, the program quickly dissipates and loses effectiveness.

Finally, these early KM processes often require knowledge workers to contribute regardless of personal or professional ramifications. When knowledge is contributed on this controlling basis, the individual source has no further ownership over the context or extent of distribution. Needless to say, this can greatly inhibit contribution.

Top-Down Knowledge Process

- **Active**
(separate tasks, resources)
- **Dissipative**
(continuous push, or ...)
- **Controlling**
(dictates duties, rewards)



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Figure 1: Taken from presentation by Mario D'Amico of PensEra to KM World 2000

Some firms have tried to overcome reluctance by offering financial incentives for contribution—or penalties for the lack thereof. Such KM processes often work like a treadmill, whose operation is strictly dependent on continuous external effort.

The active, dissipative, and controlling nature of the early KM processes need not be viewed as an insurmountable problem. Instead, it provides good lessons for development of a more passive knowledge process that retains its momentum without continual need for external pressure.

Treadmill vs. Windmill

Knowledge management will not thrive as a separate process. Most KM experts now predict that KM will soon lose its separate identity, as it becomes embedded or "baked" within existing work systems. Mario D'Amico, chief technology strategist at PensEra Knowledge Technologies, describes this "knowledge funneling" approach as resembling a windmill rather than a treadmill. "Instead of constantly prodding the user to contribute tremendous effort (the treadmill), we must attach or embed the means for contribution and usage within existing lawyer work processes, so knowledge is funneled naturally from work," he says. "By blending KM contribution and consumption with the daily attorney workflow, the process can gain more participation and become self-sustaining, propelled by natural processes—like a windmill."

Knowledge Funnels

– Bottom-up directly to the source

- **Passive**
(Technology does most of the work)
- **Self-Sustaining**
(Knowledge captured as part of daily work process)
- **Empowering**
(The knowledge worker benefits)



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Figure 2: Taken from presentation by Mario D'Amico of PensEra to KM World 2000

Scope, Target, Measure

The first challenge in any knowledge management process is to define and select the knowledge that you want to manage. Implementing a knowledge process has ramifications that will affect most aspects of your business and practice. If the organization does not first take the time to determine what is valuable, tangible and exploitable by its knowledge workers, everything that follows may be diminished.

Targeting the knowledge goals and expected results at the outset will help determine how you measure your return on investment, an essential starting point. To justify the costs, a knowledge management system must improve productivity or financial opportunities. It must make lawyers' jobs easier, enhance client relations, improve the work or increase work satisfaction.

Potential KM activities cover a broad spectrum, and these days everybody is laying claim to KM. Building expert databases, establishing best practice libraries, building practice group areas, mini-portals, training programs, and the like can be valuable, provided you know your audience, their needs, the value of the information and, of course, your targets.

What Do YOU Consider Knowledge?

Traditionally, experts dispute the distinction between mere information and knowledge. But one man's information can be another man's knowledge in the right context.

KM experts generally categorize knowledge in two principal categories, *explicit* (know-what) and *tacit* (know-how). Many references are available on the distinctions between the two and whether tacit knowledge can be captured. Suffice to say in a law firm practice, explicit knowledge is usually the work product, data, notes or information that have been structured, patterned and packaged so as to be useful to others in the firm. Law firms usually address tacit knowledge with some form of expertise locator processes that point to the people who have the knowledge in the organization.

Most law firm KM projects start with finding and classifying documents, since preexisting work product is the most tangible source of potential knowledge. They also find it is easier to bypass lawyers and deal directly with their work product. By culling through opinions, pleadings, agreements, e-mail messages or other tangible work product, a law firm can build elaborate KM repositories. CRM and Time & Billing are other core process systems where useful knowledge can be gathered or contributed as part of the daily work flow.

There is no denying the benefit of precedent and document repositories, but a firm must weigh the effort against the objectives. A document culling process often requires a dedicated task force to find that percentage point or two of reusable knowledge contained in the vast volumes of law firm work product. Publishing a precedent requires careful verification and constant attention to context and potential circumstances requiring revision. Then there is a serious question of whether a document alone fully conveys the sophisticated levels of knowledge, such as tax or negotiating considerations, contained within.

While documents represent one source of knowledge, law firms should not overlook the rich source of knowledge that is constantly flowing through the firm from attorney activity. Each day each attorney in a firm acquires new bits of knowledge from interaction with clients, handling cases, researching issues, exchanging e-mail and participating in the legal process. This daily flow of case and client information, business intelligence, and practice insights represents a dynamic, tangible and leveragable source of knowledge that can be tapped.

So what are the right circumstances that facilitate vigorous lawyer contribution and participation in the KM process? Let's look at the five most important factors: Timeliness (When), Proximity (Where), Simplicity (How), Control (How Much) and Payback (Why).

1. *Timeliness: Contribution and Consumption When You Think of It*

Knowledge contribution cannot be isolated from the daily workflow or separated from people. It should not be limited to a one-time collaboration or an annual collection of greatest hits. To be relevant and effortless, contribution must be immediate, while you are thinking of it.

What does this mean in a legal context? We know that the one moment when a lawyer is thinking about the client, the case, the practice, and the law is when doing or recording the work. Therefore, any technology that allows the contribution or capture of knowledge to take place while working and when it is freshest in the mind of the contributor is likely to produce the broadest, most accurate range of contribution.

Similarly, access to knowledge must be available to the lawyer right when it's needed. In a recent Harvard Business Review article, noted KM specialist Thomas Davenport refers to this as "Just in time delivery comes to Knowledge Management."

2. *Proximity: Contribution at the Intersection of Thought*

The best place to gather knowledge is when it arises in context—at the "intersection of thought." The physical location is not as important as positioning KM in close proximity to the lawyer's work and thought processes. Therefore, the most effective strategy is to provide the lawyer with an easy means to contribute and consume knowledge from within the core processes and normal workflow.

For example, while working on a document, can the lawyer tag it as a precedent? While recording activity, can the lawyer jot down any new insights about the client, the case or the practice? While communicating by e-mail, can the lawyer retain or forward a copy to the knowledge base?

Physical proximity is also a consideration. Knowledge processes cannot be confined to your office. Mobile lawyers should have the means to capture or tap knowledge wherever they go. Fortunately the advancements in mobile and wireless computing will make this increasingly easier.

3. *Simplicity: Less Work Means More Participation*

To build broad participation, the KM process must be clear, concise, simple and quick to use. Simplicity reduces the need for training. It also facilitates a quick-in, quick-out usability that does not disrupt the lawyer's work.

Unfortunately, most KM projects result in elaborate, time-consuming profiles, taxonomies and questionnaires that discourage participation. Yet the most effective KM system is one that attracts daily contribution and use. Lawyers should be encouraged to jot down knowledge notes whenever they think about it. They will be more likely to do this if they retain control (as discussed in the next section). Categorizing and profiling knowledge is important to the firm, but that part of the process should not be a requirement for individual contribution. KM organization can take place behind the scenes as needed.

Simplicity also applies to the ease of consumption. Entering valuable knowledge in a database may be pointless if attorneys remain unaware of it. We cannot count on busy attorneys' being curious enough to search out information from these new, unexpected sources. Therefore, "push technology" concepts, such as knowledge subscriptions, daily knowledge feeds, and summaries and special alerts can help draw attention to new knowledge and improve the knowledge distribution process. Subscriptions

allow the firm to put relevant new knowledge in front of interested parties without disrupting their work processes.

4. Control: Respecting Privacy Primes the “Knowledge Conversation”

Granting a lawyer the absolute right to keep personal knowledge private may sound like the antithesis of knowledge management, but it is a fundamental stepping-stone to knowledge sharing. This is not a question of ownership but of participation.

One of the principal impediments to participation is the time and effort necessary to compose, edit and refine a contribution for internal publication so that it can be clear to all potential readers. If you post a note about your specialty (say, your practice) for your own use, it can be short and cryptic. If you know that only trusted senior members of your practice group will see it, you may be a little more thorough, but you still have confidence that others of equal experience will understand it. However, if the note is broadcast to a firmwide membership, it now must be explicitly and meticulously clear. This means investing much more time and effort for no immediate benefit. Moreover, since the note represents your “best practices,” it is tempting to hold back since others may hold it up for scrutiny or misunderstand its complexity.

It is easy to see how the casual exchange of knowledge can often be stifled by unrestricted enterprise publication. Will a lawyer frequently participate in this publication process without being able to control the range of circulation? Not likely.

For lawyers to fully participate, the organization must respect the lines between personal, group and corporate knowledge. It must empower the individual to contribute so as to benefit from the process without the inhibition and chilling effect of blanket dissemination. Knowledge sharing is not going to take hold in an organization overnight no matter what approach you take, but it will never happen if contributors have no privacy control. By building a knowledge conversation from the ground up, the organization can build a longer-lasting and more sustaining knowledge-sharing culture.

5. WIIFM? Payback to the Contributor

Every system that hopes to attract voluntary use has to answer the fundamental user question: “What’s in it for me?” A self-serving system is also a self-sustaining KM process. Lawyers will more likely contribute to a KM system if they derive a direct benefit from the results. This goes beyond performance incentives. If a lawyer is to be motivated to enter knowledge notes, the primary beneficiary should be that lawyer. The process should reward the lawyer through better efficiency, empowerment, better work and more free time. By facilitating both personal and enterprise zones, the law

firm can provide a lawyer with a means to record, organize and access knowledge that first and foremost provides a personal benefit, while secondarily building knowledge assets for the firm. This is the concept of “Co-benefiting.”

For example, when a lawyer or assistant jots down knowledge about the case, a client or an area of practice, the knowledge system should help classify and organize the information for use on that case (or with that client or area). Although it starts as a personal information organizer for the enterprise, the knowledge is now anchored to the organization and sharable by choice. If the lawyer shares some or all of the information with the firm, then all can gain from collaboration. Similarly, if a team contributes multiple knowledge notes on a file, each member can stay abreast without extra effort.

This direct benefit can and should be supplemented with tangible rewards for knowledge sharing, or significant disincentives for the opposite, or both. Incentives should reward both contribution and use, since robust participation is the key to sustaining and improving the system.

How Do You Know It’s Working? Participation

Like the sound of the proverbial tree falling in the vacant forest, you can’t be sure you have knowledge management if nobody is there. Participation is the only true measure of success, and that means broad participation both in contribution and in consumption of knowledge. If only a few people contribute, you may have an expensive research and publication system, but you have not tapped the full potential of collective knowledge in your firm. If only a few people use the knowledge, you may break even or do even better from just a few incidents, but the potential of the system is still wasted.

If you ignore the KM process for a month or two, will it keep going on its own or come to a halt? Only by creating a process for multilevel contribution and multilayered use can a law firm achieve sustainable success in KM.

KM Perseverance Has Great Rewards

It is often said that knowledge management requires a cultural change by the organization. But the art of knowledge management is also evolving and adapting to the business context and needs of the professional. The myth that lawyers will not share will soon be refuted by a new generation of knowledge-gathering tools geared to suit the work and thought processes of the professional. A grassroots KM process that captures and delivers knowledge where and when work is being done will attract greater participation and produce greater rewards for all parties involved.

Knowledge Management Strategies

by Herbert Roitblat, Ph.D.
DolphinSearch

In an information economy, an organization's most valuable asset is the knowledge held by its employees. The inability to manage this knowledge for the benefit of the company has been estimated to cost billions of dollars per year—costs that can be avoided through the appropriate use of knowledge management tools. Legally mandated retention policies can also have important implications for knowledge management.

Law firms and their clients are discovering increasing needs for knowledge management. Clients are reluctant to pay for research that the firm has already done. They are reluctant to pay for drafting documents from scratch when similar documents are already available. Documents written by former employees and the research that went into preparing those documents are valuable assets that largely go unused because they have not been managed.

Over time, most companies have worked out ways of managing their physical assets. It seems obvious that a company would be foolish to buy new filing cabinets when perfectly good ones are sitting empty in the storeroom. These same companies have not been as effective at managing their information assets. In one well-publicized case, a major communications firm is reported to have spent nearly \$80,000 to gather information that was publicly available for \$13, and even that would have been too much to pay because people inside the organization had the information already.

Past knowledge management efforts have failed because:

- They place too much emphasis on technology rather than people
- They separate knowledge management work from real work
- They place the burden of effort on the producers of knowledge rather than the consumers
- They falsely assume that the information needs of information consumers can be anticipated

There are many challenges associated with identifying knowledge assets and using them effectively. One cannot just slap a barcode on a document, as one can with capital equipment, and expect that it will be used effectively. **The traditional barriers to enterprise knowledge reuse include:**

- The need for an enterprise-wide vocabulary to ensure that the knowledge is correctly understood
- The need to identify and explicitly represent knowledge
- The need to coordinate information stored in different kinds of documents, prepared with different applications, and different kinds of users
- The need to create a culture that encourages knowledge sharing

Traditional approaches to knowledge management place the burden on the creators of knowledge. **Authors must:**

- Modify their writing style to adhere to the standard vocabulary
- Categorize their documents according to the organization's taxonomy, even when it does not fit perfectly with what they are doing
- Pause in their jobs to analyze and formalize the information they produce
- Risk giving away the asset that makes them uniquely valuable to the organization: their knowledge

Although some technological tools can help address the knowledge management problem, knowledge management is more about collaborating, sharing, reusing, and building expertise than it is about the technology. With the heavy burden placed on knowledge producers by traditional approaches to knowledge management, it is little wonder that persuading them to support the effort is so difficult.

One of the biggest problems of the standard approach to knowledge management is the separation between knowledge and work. Traditional approaches to knowledge management depend on the efforts of participating experts to make explicit the implicit

*Knowledge is
the most
profound form
of competitive
advantage*

knowledge that guides their daily work. They have to stop producing the reports and proposals and other things required for their job and think instead about how to categorize each document into a taxonomy, how to describe in words the implicit and intuitive thinking process that went into creating the document. Typically this description process is more like a rational reconstruction than a true description of the real thing. The output describes how the author thought the process should have happened, rather than how it did. It captures only the most superficial aspects and neglects the really essential parts. For example, one can easily describe how to perform the perfect golf swing. Golf magazines are full of such descriptions. Still, knowing the descriptions is just not enough to be able to perform a perfect swing. Something more, something implicit is necessary.

The traditional approach also fails in that it forces a separation between work and knowledge sharing. Some firms try to reward their employees for sharing their best practices, hoping to motivate them to translate some of their implicit knowledge into a formal, explicit form. To do that, however, they must stop producing the product for which they were hired and produce some other product instead. This forced dichotomy between getting actual work done and getting knowledge work done is probably the biggest source of failure for knowledge management projects. No matter how you bribe your employees, their real interest is usually in getting their real job done, not in writing about it. And just because people are good at doing their jobs does not mean that they are good at writing about them. Many consultants and managers think that this failure stems from inadequate motivation of the participants, when in reality it is the result of forcing them to do a job for which they are ill prepared—a job that is very hard to do.

Even simpler forms of knowledge management force employees to move outside of their area of expertise and perform uncomfortable tasks for which they are ill prepared. Many document management systems force authors to fill in forms about each document that they create. These forms include information about the author, date and time, maybe information about the client for whom the document was prepared, and other things. That doesn't sound overly burdensome, but some firms report that even these simple data are inconsistently entered. Where the problem really comes in, though, is when the document retrieval system forces the author to write keywords or a summary for the document.

Writing keywords well is a very difficult task. A good set of keywords will allow a document to be found later on. They take a lot of thought. Studies have found, however, that people are highly variable in the keywords they assign to documents. If you ask 100 people to assign a keyword to a specific short document, you will get approximately 30 different suggestions. Authors often avoid the stress of producing these keywords by entering whatever will let them get past the data entry form. If the document retrieval system depends on keywords to find relevant documents, documents without adequate keywords are simply lost.

Another part of the forced dichotomy between real work and knowledge management work is the requirement that the authors actively publish what they think will be useful to others, which requires making an arrogant judgment that a given piece of work will be useful. Beyond the difficulty caused by individual differences in the judgment of the value of any given piece of work, this procedure places the burden for knowledge sharing on the person with the least interest in it. An author who has produced a document no longer has need of that specific information (at least for the time being). Making it accessible for others is an altruistic act that does not support the author's immediate needs. People may do the work necessary to publish information to the knowledge management system either for explicit rewards (such as bonuses) or because they can anticipate that someday they may need something back from the system, but distant rewards are always less valuable than immediate rewards, and the most

immediate reward is finishing the project. Knowledge management work simply interferes with this immediate reward.

Altruism is a fine virtue, but many organizations engender a culture in which efforts at altruism seem implicitly counterproductive. In such organizations, employees' professional standing depends or at least appears to depend on what they know that others don't. Sharing information with other departments might mean that the other department gets more money next year while their department's budget is slashed. Whatever lip service is paid to collaboration, the return on information sharing efforts must be made as clear and immediate as possible for it to have any lasting impact. Collaboration needs to be the norm rather than the exception.

Basic human principles include the idea that systems should work along with people rather than against them. They should support people's weaknesses and build on their strengths. Placing the burden of knowledge management on the producers is just bad human factors. Incentives such as money and recognition can sometimes reduce this problem, but they cannot eliminate it. The best way to implement knowledge management is to minimize the burden of using the system and to place that reduced burden on the people who perceive themselves as benefiting from the knowledge. Contrary to conventional wisdom, it is more effective to organize the retrieval of information than its storage. People who need information right now are willing to work to resolve that need; people who have information are far less willing to work to resolve some unknown person's need at some possible later time. Effective incentives are an organic part of the actual work that someone is doing rather than being imposed from outside. Traditional knowledge management technology, thus, is designed upside down.

Still, barriers often block the effective utilization of knowledge. Scientists customarily build their work on the efforts of their predecessors. Isaac Newton typified this outlook when he said, "If I have seen further it is by standing on the shoulders of Giants." Unfortunately, this scientific outlook has to work doubly hard to overcome lessons learned earlier in school about cheating. For many people it seems to be cheating to use other people's work. It damages their feeling of self-worth if the best ideas in a document have come from someone else in the company. That person might deserve the credit, but if the other work is unknown, then it is obvious to whom the credit belongs now. They prefer to reinvent the wheel than to use one designed by someone else.

The solution for this problem is to make raises, bonuses and other rewards contingent on the quality and quantity of the work output rather than on the source. The organization benefits when workers collaborate, so the value of collaboration must be explicitly recognized in the reward structure. People should be rewarded for reusing rather than recreating information because reuse directly affects the organization's bottom line.

Another barrier to employees' using knowledge resources is a naive theory of creativity. Workers are familiar with stories like the one about a boy who suggested that removing air from the tires would free a truck jammed under a bridge. All the adults suggested radical solutions, including cutting the top off the truck, jacking up the bridge and so forth. The boy was supposedly ignorant of the techniques used by experts and, as a result, suggested a naive but sound solution. There seems to be a widespread belief that ignorance of the past is a basis for creative solutions.

Although there is evidence that people can get into ruts or thought habits, effective creativity depends very strongly on thorough background knowledge. Stories like that about the boy and the bridge are apocryphal. Real creativity depends, instead, on knowing as much as possible about the problem. Following thought habits is more likely in the absence of a

thorough grounding in the problem than when its history is well known. There is truth to the cliché that a little learning is a dangerous thing. There is also truth to Edison's claim that invention is 1 percent inspiration and 99 percent perspiration. The perspiration is the effort needed to get the necessary background information.

For knowledge management to succeed:

It must address the needs of the organization and of the members of that organization.

The incentives and the burdens must be an intrinsic part of the employees' real work rather than irrelevant to it or, worse, a hindrance to it.

The organization must recognize and reward the value of reusing knowledge and the managers of the organization must demonstrate their commitment leading by example.

Employees must be educated about creativity and the need for and value of information.

Anticipating how others will use your work is extraordinarily difficult and part of what makes picking keywords so difficult. Instead of organizing documents according to how they are created, effective knowledge management organizes documents according to how they are used. When offices depended on filing cabinets to store documents, each document had to be in a specific place. Unless one knew the schema by which documents

were placed in drawers, and unless the documents were faithfully placed according to the schema, they would be impossible to find. Computers are not limited in the same way, but traditional approaches to knowledge management act as if they are. Retrieval-based knowledge management solutions do not impose rigid constraints on how the documents need to be arranged because the system can spontaneously reorganize them in any way that user finds helpful.

This novel approach to organization is discomforting to some because finding a place for everything and putting everything in its place is what we have learned it means to be organized. The same kind of discomfort probably occurred when libraries changed from having rows and rows of card catalog drawers to using a computerized online public access catalog. The card drawers just felt more organized than the computer terminals did. The librarians and the users could point to the organization in the cards and feel reassured. As it turned out, however, online catalogs are much more useful than the old-fashioned card catalogs.

Retrieval-based knowledge management can be a major feature in your firm's and your clients' knowledge management plan. The technology is only part of the solution, however. An effective knowledge management solution must incorporate both software and behavioral engineering. The best technology is worthless if people don't use it. The most important thing the managers of a knowledge organization can do is to support the culture of knowledge sharing and lead by example.

"Progress, far from consisting in change, depends on retentiveness. Those who cannot remember the past are condemned to repeat it."

- George Santayana

Show Me the Money

Measuring the Return on KM

by Kingsley Martin

Valuing technology investments has confounded many organizations. It is especially complex for law firms given prevailing compensation systems. Lawyers and administrators are rightly questioning rising technology budgets but often lack the tools to evaluate software decisions effectively. In the absence of proof, many firms have held back investment in knowledge management (KM) technology and, as a result, have not taken advantage of new technologies designed to improve efficiency.

Fueling concern is the well-documented observation that few knowledge management initiatives succeed unless firms are willing to invest substantial resources to collect and organize research material. But most firms in the United States are unwilling to invest nonbillable time in this effort, especially when the benefits of such investment are uncertain. To help law firms evaluate their KM strategies, this article proposes a framework to measuring return on investment (ROI), the *cost of information (COI)*, and proposes tools to evaluate alternative knowledge-sharing strategies.

The first point that should be made is that advanced knowledge management tools must be justified on a different basis from that applied to technology used to support the firm's operational needs, such as word processing, communications and even document management. Basic operational software is increasingly required to conduct business, and can therefore be justified as a cost of doing business. Knowledge management technologies, like other advanced systems, are justified if they reduce expense, improve productivity or enhance value.

What methods are available to law firms to measure, and more important, recover the cost of their investment? How can the firm and its clients feel comfortable that the costs of the technology are justified and offer value for money? The answer to these questions can be found by considering two different charge-back mechanisms available to law firms—cost recovery through disbursement charges and cost justification through overhead expense.

Cost Recovery

The cost recovery method allocates the cost of the software to the firm's clients based on a prorated or fixed-usage charge. This method is, for example, used by many firms to charge clients for the costs of online research on matters that concern them. In the case of online research, these firms presumably believe it is more equitable to charge the specific costs of research incurred in connection with a representation than to treat the cost as an overhead expense effectively incorporating the cost into the billable-hour charge and, therefore, charging to all clients whether or not online research was used in a particular matter.

The factors that a firm may wish to consider in determining whether to charge an expense are the degree to which the charge can be shown to increase the value of representation (from the client's viewpoint), can be accurately calculated, and can be allocated to the client on an equitable basis. Many other factors should also be considered: Are clients willing to pay for research costs? Will disbursement charges restrict usage? Can the firm adjust the billable rate to capture the costs of the technology?

All technology costs are ultimately charged to the firm's clients, whether they are paid out directly or captured as part of the firm's overhead and recovered through the billable-hour charge. For example, in a similar circumstance, most firms have determined that it is more equitable to charge the exact number of photocopies made by the firm in connection with a particular client representation than to apportion a pro rata charge based on the entire costs of operating the firm's photocopy system. Accordingly, while law firms have not generally distributed charges for use of technology systems, this circumstance is primarily attributable to the fact that most technologies lack the capacity to calculate usage charges fairly.

Cost Justification

Some law firms may alternatively decide to treat the cost of KM technology as an internal expense. Irrespective of the decision regarding charge-back, all firms need tools to effectively evaluate their technology investments.

Investment in KM is justified if it reduces expense, improves productivity or enhances value.

Internal Expense

The benefits of KM can be directed at reducing internal costs or enhancing profit. Looking first at internal expense, it is well understood that maintaining document collections is a significant expense for organizations. In fact, many recent studies have shown that the introduction of technology has yet to reduce the expense of filing systems. Forrester Research, for example, estimates that more than 80 percent of a corporation's business-critical information is locked in unstructured formats. A study commissioned by Lucent Technologies found that the volume of unstructured information in large organizations doubles every two months. More important, other studies have illustrated the inefficiencies of existing electronic document storage and retrieval systems.

Records Management Quarterly reported that 80 percent of the electronic data on a typical network has not been retrieved or used in 30 days; more than 50 percent has not been accessed in several months; and only 20 percent of network storage is active data, while the remaining 80 percent is inactive.¹

Tony McKinley, in an article titled "Managing All Information Assets," claims that 85 percent of documents filed are never retrieved, while 50 percent or more are duplicates.²

A study by the multinational firm BAE Systems discovered that 80 percent of employees waste an average of half an hour per day retrieving information, while 60 percent are spending an hour or more duplicating the work of others.

Effective knowledge management tools can help firms reduce internal costs of maintaining electronic filing systems and reduce the administrative expense of locating documents. By itself, however, increasing internal efficiency may not justify the cost of knowledge management because it is difficult to effectively translate efficiencies into reduced labor costs.³ But when combined with improvements to the firm's bottom line, such internal efficiencies offer additional incentive to better manage electronic files.

Increasing Profit

KM can also be targeted to improve law firm profit margins. First, effective knowledge sharing has been shown to substantially increase productivity. Virtually all documents drafted in law firms are based on precedent contained in explicit documentation or tacit knowledge. Unfortunately, in many cases, attorneys cannot quickly locate useful material and must accordingly reinvent the wheel, working from inadequate precedent or occupying the nonbillable time of others through broadcast e-mail messages requesting sample forms.

Second, just as efficiency can improve profitability, leverage can have the same effect where knowledge transfer enhances the quality of work performance and therefore its value. In this context, leverage is the ability to delegate work to the most cost-effective resource. The transfer of knowledge is, in fact, the essence of knowledge management. While many commentators have touted the productivity goals of KM, the true value of knowledge sharing will likely be found in its ability to leverage knowledge and enhance the value of professional services. Using knowledge management technologies to capture prior work product, exemplars and other materials developed by senior and skilled practitioners, it becomes possible for law firm associates, legal assistants and nonattorneys to perform valuable client work and charge a rate commensurate with their enhanced performance. Accordingly, the application of leverage is simply recognition of the fact that billing rates increase with experience, and such experience can be gained through hands-on practice, training and *the use of technology*. As a result, computer systems are being enlisted as part of professional development to supplement mentoring programs and provide training opportunities for attorneys. In addition to such broad-based skill development, KM initiatives can focus knowledge transfer on specific

practice areas, developing the skills of associates, legal assistants and nonlawyers to perform higher-level work through the development of forms, practice guides and document assembly.

Measuring "Hard" Returns

The primary tool used by businesses to measure the value of technology acquisition is the return on investment, or ROI. In financial circles, ROI is a measure of a company's performance. It is the company's total income (before interest, taxes or dividends) divided by its total capital. However, most business managers think of ROI as the return (or incremental gain) from a project minus its cost. Additional precision can be achieved by discounting the return to its present value, reflecting the fact that future income is less valuable than current income, because money can be invested and generate interest. The formula for ROI can be expressed as follows: $ROI = \text{Present Value (Incremental Gain)} - \text{Total Cost of Project}$

An alternative measure of technology investment is known as the *payback period*, defined as the period required to recover the cost of an investment. In practice, this measurement device is an example of a rule of thumb stating that value is maximized and risk is mitigated if the payback period is reduced. Frequently, this tool is used to compare alternative investments. Applying this standard, it can be generalized that projects based on manual coding will likely have a longer payback period than initiatives that rely more heavily on technology, because large numbers of documents are not required to be annotated before the system attains critical mass.

Projecting Costs: The costs of a KM initiative can be calculated, although in some cases certain expenses must be estimated. Where the project is based on in-house development of KM systems combined with manual document collection and profiling, expense calculations must total hardware acquisition, software development and the ongoing cost of lawyers or content managers to organize research archives. Alternatively, law firms can build their KM initiative on a turnkey program that provides the software and maintenance for a fixed per-user charge.

Projecting Revenue: The gains or benefits of KM comprise "hard" or financial returns and "soft" or intangible benefits. Depending on the firm's specific knowledge management goals, it may target and measure expense reduction, productivity gains or leverage improvement, or focus on the "soft benefits" of knowledge management.

The application of ROI to law firms, where compensation is largely based on the billable hour, requires some modification to the basic profit formula. Moreover, once they understand the formula, law firm administrators will see that only a small level of improvement in efficiency or enhanced value of services is needed to offset the cost of a knowledge management system. As shown by David Maister, author of *The Trusted Advisor* and other books on law firm management, profitability is calculated by the following formula:

$$\text{Net Profit Per Partner} = (\text{Leverage} + 1) (\text{Billable Rate}) (\text{Utilization}) (\text{Realization}) (\text{Margin})$$

Where:

Leverage is the ratio of nonpartner professionals (associates, paralegals and of counsel who have billable hours) to partners.

Billable Rate is the average billable rate of all fee earners.

Utilization is the average number of billable hours for fee earners in a year.

Realization is the percentage of work done that is billed and collected.

Margin is the ratio of gross income to net income, calculated by subtracting expense for each partner from gross revenue received for each partner, and expressing the net income as a percentage of the gross income.

This formula demonstrates that law firms can achieve positive financial results from one or more of the following: (a) increasing utilization (shorthand for working longer hours); (b) increasing billing rates; (c) increasing leverage either by adding associates or by delegating work to least-cost personnel; (d) improving realization; and (e) decreasing expense. For example, consider a firm with a leverage ratio of 2, an aggregate billable rate of \$250, working on average 2,000 hours per year, having a realization rate of 93 percent and an expense margin of 43 percent. In these circumstances, net profit per partner (NPP) will be \$599,850.⁴ If the firm were to focus on realization rates and, through improvements in productivity and knowledge sharing, realize a small increase in realization (say, from 93 percent to 95 percent), then NPP will increase by \$12,900.

In many cases, however, it is difficult to measure ROI derived from technology projects. A number of studies have shown no direct correlation between profitability and technology investment.⁵ The relationship is complex and indirect. First, analysis must account for causation, because in most situations, technology serves a role within a larger context of numerous other processes, and its cause-effect relationship cannot be considered in isolation. Second, any measurement tool must handle the issue of equivalency, because many of the benefits—the so-called “soft benefits”—cannot be easily converted into financial value.⁶ For this reason, a comparative measurement tool called the *cost of information* is proposed and described in the following section.⁷

Soft Benefits and Comparative Evaluation

In addition to applying ROI as a measure of technology value, a firm can also focus directly on the effectiveness of the investment in generating intellectual capital by measuring the rate at which technology expense is converted into valuable information assets. This computation, called the cost of information, calculates the expense of knowledge sharing by comparing the per-document cost of the system to the average rate of document reuse. The formula can be expressed as follows:

Cost of Information = Document Preparation Cost / Rate of Reuse

Where:

Document Preparation Cost is either the unit cost of profiling each document or the total cost of the system divided by the number of documents organized by the system.

Rate of Reuse is the average number of documents in the system divided by the total number of times a document is reused in a designated period, such as a year.

The formula allows law firms to determine how much it costs to prepare a document for reuse. For example, if a firm spends on average \$30 to prepare a document for inclusion in the firm's work product retrieval system, and documents in the system are used on average three times in one year, the cost of information is \$10, or, in other words, the law firm is effectively spending \$10 for each occasion the document is reused.

As experienced strategists understand, a successful knowledge-sharing program requires an understanding of three main components: the technology platform, the information structure, and the work flow process. The last element, sometimes referred to as the “cultural” aspects of KM, has proved to be most challenging. In fact, it has prompted many observers to note that “KM is not about technology.” In fact, all three elements are critical to sustaining a successful strategy. Moreover, by automating the work flow process, law firms can likely reduce the impact of such cultural barriers and become less dependent on manual labor. The effect can be seen by comparing various strategies.

Bibliographic coding: The cost of efforts to code documents with bibliographic data can be estimated based on the experience of litigation support

systems. A number of companies offer services to code or profile documents produced in the discovery process of litigation. The coding of bibliographic information may record the author, date, title, recipients and other objective data about the document. Depending on the number of items of data collected and the average length of the documents, the cost may range from \$2 to \$10 per document. While litigation support systems serve vital roles in the process of document production control, thereby justifying the cost, it can be fairly observed that few attorneys use the software. We may therefore conclude that low as the costs of bibliographic coding are, the value in the opinion of attorneys may not justify the expense. For example, if coding costs were \$5 per document, but attorneys use only one in five documents, the cost of information would be \$25. This analysis partially explains why a document management system containing bibliographic information alone has not become a viable platform for work product retrieval.

Subject matter and context coding: Law firms that have been successful in developing work product retrieval systems have generally relied on trained lawyers with no or low billable-hour requirements to collect and maintain precedent collections. Documents in these systems are profiled with subject matter and context information. Estimates of the cost of document preparation range from \$25 to \$35 per document.⁸ We can therefore assume that firms continuing their investment in such work product systems consider the value to be returned. In fact, despite the higher document preparation cost, the firm's COI may be lower than bibliographic coding systems. Based on the costs stated in this example, and assuming documents are used on average five times per year, the firm's COI would range from \$5 to \$7.

Advanced search tools: Finally, COI analysis can also be applied to advanced search technologies that may be used to provide access to very large document collections. The cost of document preparation can be computed by dividing the number of documents maintained on the system by the total cost of the search technology. For example, if the search system costs \$300,000 to install and provides access to 1 million documents, the unit cost per document will be 30 cents. But given the breadth of the collection, it may be assumed that only a portion of the documents will be retrieved and used. If 100,000 documents are retrieved and used, the COI will be \$3.

Although the analysis uses hypothetical values, the comparison shows first that cost is relative when compared to usage. Second, a firm can maximize its return on information by combining breadth of information sources with high usage.

Conclusion

By examining law firm profit models, the costs of KM systems, and document reuse statistics, law firms can better understand the value of knowledge-sharing systems and develop sustainable strategies. While the analysis cannot yield definitive answers, it can more clearly illustrate the benefits of KM, allowing firms to focus their KM strategies. Working through the analysis, many firms will discover that the value of knowledge sharing is its ability to leverage the skills and capabilities of law firm personnel and enhance the value of professional services.

Endnotes

¹ *Records Management Quarterly* became *The Information Management Journal* as of the January 1999 issue. It is available online at http://www.arma.org/publications/journal/journal_about.cfm.

² Available online: <http://www.infologics.com/media2.htm>.

³ It can be argued that law firms have been able to reduce secretary-to-lawyer ratios by using technology. However, in most cases, reduced secretary ratios

are more attributable to lawyers' undertaking work previously performed by secretarial staff than to technology-driven improvements in staff efficiency.

⁴ For firms that are less highly leveraged, for example, having a leverage ratio of 1, NPP will be \$399,900 and a 1 percent increase in realization will yield additional profit in the amount of \$8,600. However, a firm with a lower leverage ratio can spread the cost of the KM system over a smaller number of users to calculate the per-user expense.

⁵ *American Lawyer Technology*, March 2000, pp. 23-27.

⁶ Some studies have suggested that soft benefits should be discounted to better quantify the returns. However, any such discount factor is necessarily arbitrary.

⁷ Because of the difficulties of evaluating causation and equivalency, a number of ROI studies performed for law firms leave the reader unconvinced.

⁸ Based on the assumption that a content manager is valued at the rate of a junior associate and can process three to five documents per hour.



Business Intelligence (BI)

by Jim Flateboe
ProVantage Software, Inc.

What constitutes a business intelligence (BI) system? If you are currently producing meaningful management reports out of your accounting system or you occasionally run an ad hoc SQL analysis to answer a specific question regarding billing or collections, then you already have the beginning of a BI system. The difference between these simplified examples and a true BI system is one of degree, ease of use, response time, the availability of advanced business metrics and particularly the flexibility to design your own presentations.

In brief, a business intelligence system extracts information from your accounting and other systems, refines and transforms it where necessary and finally aggregates it into a flexible format useful for making strategic business decisions.

No doubt you've already noticed the propensity of the IT community to coin new jargon in an attempt to displace older, already-understood terms. You will find a BI system referred to by a multitude of names, including but certainly not limited to the following: Executive Inquiry Systems (EIS), Decision Support Systems (DSS), OLAP (Online Analytical Processing), ROLAP, MOLAP, Management Information Systems (MIS), Data Warehousing, Data Marts, Data Mining, Multi-Dimensional Analysis, Multi-Dimensional Cubes, Executive Dashboards, Management Scorecards and Knowledge Management. Good luck! But the terminology you favor is irrelevant as long as the end result is obtaining the information you need to manage your business.

What Makes a BI System Successful?

The attributes of a successful BI system are: **effectiveness, sound data base architecture, efficiency, accuracy, flexibility, minimal training requirements, and rapid deployment.** They are provided to assist you in determining whether you need a BI system and if so, how you might evaluate your alternatives. Aside from the first, they are not necessarily listed in order of importance.

Effectiveness

A successful BI system must first and foremost meet the overall objective of providing the right knowledge in an appropriate style to proactively support both strategic and tactical business decisions. It must efficiently transform the mounds of data stored in your accounting system into information specifically designed to help you gain new intelligence about your business and ultimately become more profitable when used in conjunction with sound judgment, prior experience and business intuition.

Executives must be able to easily monitor the firm's key performance indicators (KPIs) such as profitability, realization and billing lag and identify both unacceptable and desirable trends and seasonalities. Optimal system effectiveness enables users to do the following:

- “Slice and dice” business metrics by various dimensions and time frames on a calendar or fiscal basis.
- Drill up into more highly summarized data or drill down into more detailed presentations.
- Compare periods side by side in the presentation style most appropriate to the audience, including grids, charts, reports and spreadsheets.
- Easily identify the firm's top 100 clients for profitability and the bottom 10 billing timekeepers for slow billing.
- Determine which practice groups have high profit margin percentages with billing levels that can be expanded.
- Add new KPIs as the management style of the firm evolves.
- Easily generate an ad hoc analysis of BI data.

And the users must be able to do all this without assistance from IT personnel!

Sound Data Base Architecture

Accounting System Design. Your accounting system should meet the requirements to be classified as an OLTP (Online Transaction Processing) system. Basically this means that a variety of financial transactions including time entry, billing and payments are entered throughout the business day that subsequently update a relatively high number of tables. Typically within

the span of a few seconds, the effect of each separate transaction immediately becomes available for inquiry and further use. The accounting system may also update a limited number of summary tables in real time (such as client, matter and working timekeeper metrics).

Your accounting system also needs to provide the majority of data used to build your BI knowledge database in an Online Analytical Processing (OLAP) architecture. Consequently, a time and billing system must be designed to provide more than just its primary burden of efficiently performing accounting and financial functions. It must further provide the breadth of data to be manipulated and summarized into an architecture specifically designed to support strategic business decisions. And it must be developed to transfer and transform its millions of rows of OLTP data into an OLAP summary architecture repeatedly and efficiently.

Some of the attributes of a sound OLTP accounting design are obvious. The integrity of the data is foremost. Inaccurate accounting data does not serve well as the basis for BI. Next comes breadth or completeness; the more dimensions available for slicing and dicing, the better. And the more of these dimensions that are date effective the better. The more metrics (measures) available for aggregation and analysis the better. The more dates that are tracked in the accounting system the better.

The most commonly used dimension for BI analysis is time. The most atomic unit of time available in the aggregation process is called the granularity of time. A BI system should allow a choice of several time granularities including monthly, quarterly and yearly on either a calendar or fiscal basis. Users should also be able to track appropriate business metrics on a worked date, billed date, applied date and reversed date basis. For example, if you were interested in billing realization for 2001, you would want to view this KPI on both a worked-date and billed-date basis. The former would include an analysis of all billed fees *worked* during 2001 (any date billed) while the latter would include all fees *billed* during 2001 (any date worked).

It is also critical to handle bill and payment reversals very accurately, especially if your BI system is used for attorney credit purposes. Ideally you should be given the option to include or skip bills and payments that have been reversed. If you then opt to include reversals, the date billed and date reversed must be handled as separate transactions. For example, examine a hypothetical fee with an original value of \$200 worked on December 10, 2001, billed with a value of \$150 on January 7, 2002 and then subsequently reversed on February 3, 2002. The monthly granularity metrics must be adjusted as follows: the December 2001 worked value metrics increased by \$200; the January 2002 billed value metrics increased by \$150; and the February billed value metrics decreased by \$150. Once again, since the accounting system is the source of data for the BI system, its design must accurately maintain these various types of dates.

Sometimes a well-designed accounting system can be identified more easily by its lack of undesirable properties. Certain design principles should never be violated. Dimensional data (such as codes and timekeepers) must be strictly validated during transaction entry against a list of allowable values. Otherwise dimensional accuracy will be suspect when subsequently used for BI purposes. Also to be avoided is *data bleeding*, in which a dimensional data column is used to store dissimilar information. It's the familiar apples-and-oranges syndrome—an orange should not be stored in a dimensional data column intended for an apple. A common example of data bleeding is the use of dummy clients and matters in the accounting system to store firm administrative time not directly related to specific matters. The unfortunate result is that the end user must somehow constantly remember to exclude these dummy clients and matters from the many BI analyses to avoid distorting strategic information.

Dimensional data columns, which are not transaction-specific, should be stored in separate date effective tables carefully constrained to ensure contiguous but nonoverlapping coverage. For example, a poor database design might store the billing timekeeper in each of the millions of fee rows. It should instead be separately stored in its own table by matter with an appropriate coverage period. This is not only more space-efficient, it allows easy retroactive changes in a single place when the inevitable assignment errors are discovered. Similarly, dimensional data that is optional at transaction entry does not serve well for BI purposes since entry personnel will typically leave a significant percentage blank. Replication of dimensional data across multiple tables is also to be avoided (with a few exceptions to promote retrieval efficiency) since it introduces the possibility of synchronization errors.

Business Intelligence System Design. The database design principles for a BI system are not quite as apparent as for an accounting system. Obviously, accuracy and completeness are required. The prerequisite is accuracy and completeness in the accounting system. You can't make something out of nothing.

Many proprietary design techniques and principles compete for attention, all claiming to be most effective for aggregating and storing your dimensional and metric BI data. A thorough comparison of these is beyond the scope of this brief white paper. Once again it is perhaps easier to recognize a poor BI design. For example, if your BI system does not make it fast and easy to retrieve the KPIs you need today and in the future, then its design fails to meet its objectives. If your BI system cannot provide both calendar and fiscal basis analyses, then something is missing. If your aggregated BI data is any way encrypted or difficult to find or understand, then again it doesn't make the grade. If you can't label your KPIs by the names recognized in your firm, then an unwanted barrier has been erected in front of your executive users. If your BI system requires that you make an appointment with your IT staff each time you want to make a change to a presentation or create a new KPI, then . . . well, you get the idea.

Flexibility and ease of use are *absolute* requirements for an effective BI system, and are probably the most difficult rabbit for the BI designer and developer to pull out of the hat. Flexibility requires a more complex and deeper database design with dimensions and metrics not necessarily needed during initial deployment. It must also contain well-designed metadata (data about data) to transform the BI software output into the style of presentations most appropriate to your firm and even to individual user preferences. Ease of use is more a user interface issue in the presentation software (your IT people will talk about "UI"), but is impossible without a well-designed BI database.

The BI system must also be designed to carefully restrict access to sensitive business information. Specific users must optionally be granted access only to those dimensions such as office or practice group for which they have formal responsibility. Access to presentations that include sensitive KPIs such as profitability or realization must also be tightly controlled and limited only to authorized users.

Efficiency

Fast Response Time. No one likes to sit and wait for information. If response time is slow, users will quickly lose interest and their analytical thought process will be hampered, consequently, successful implementation of your BI system is jeopardized.

However, if the database is properly optimized and appropriate indexes used for maximum efficiency, then response time will be less than the psychological maximum, which is about four or five seconds for predesigned and ad hoc queries of the summarized BI tables.

Fast response time is also a by-product of proper network and application software design. In a client server architecture, a *thin client* model is the most efficient. In this model, the server, the much more powerful computer, provides the heavy-duty data manipulation and metric calculations in Structured Query Language (SQL) while the client (say, your PC) primarily handles the presentation duties.

Building BI Multi-Dimensional Summary Tables. In addition to rapid response time during the BI users' business day, the process of extracting, loading and aggregating your business metrics and KPIs into multi-dimensional summary tables must similarly be efficiently designed. The bulk of this BI building process occurs on a scheduled basis during the off-peak hours of nights and weekends. However, this off-peak window for BI processing is limited and a great deal must be accomplished to turn your accounting data into useful BI information.

Since the time frame covered by your BI summary tables typically spans several years, it's very efficient to have the option to periodically refresh your summary tables for only the more recent months. However, in the event you make any significant accounting adjustments to prior months, a full refresh must be available as well.

The concept of filtering is a very efficient technique for producing your various multi-dimensional BI analyses. This is characterized by transferring and aggregating the detailed accounting data ideally just once during the refresh process since this step is the most complex and intensive and therefore the most time-consuming. It is much more efficient to use a single summarized data mart as the filtered source for multiple analyses rather than repeatedly going back against your detailed accounting transactions. This technique is not only significantly faster but also reduces undesirable contention for resources with your accounting users.

Accuracy

I have already mentioned accuracy as a necessary attribute of an effective BI system under the topic of database design. It's hardly controversial to highly value data integrity in the accounting system as a prerequisite to accuracy in the BI system it feeds. Such accuracy cannot be gained without hard work and solid design architecture, and there are certain guiding principles that must be followed. For example, the strict validation of dimensional data at transaction entry is an absolute prerequisite for accuracy.

However, attention to accuracy is also required within the BI system and its various available presentation styles. Without the availability of SQL, the data manipulation language of BI systems, the designer could not attain such a high degree of accuracy (and flexibility, whose virtues form the topic of the next section). As stated earlier, it is very efficient to use a single summarized data mart as the source for building multiple BI analyses rather than repeatedly going back against your accounting system. Fortunately, this technique is also more accurate and consistent, as the data mart represents a static source of repeatable, reusable information. In contrast, the accounting system is a *twinkling* database, meaning that it's a moving target subject to constant change.

Flexibility

Once your BI system is installed, your overall satisfaction may hinge more on its flexibility than on any other property. You will probably start your BI journey using the standard presentations that should be available upon implementation. However, as you begin to discover the types of analyses that are suddenly possible to create, your expectations will increase significantly. You will want to customize your presentations to the dimensions,

KPIs and style best suited to your firm. Your BI system must support this growth as you gain proficiency, not hinder your rapid transformation into a power user.

Flexibility begins with the availability of rich sets of dimensions (including time) and measures from which to choose in your analyses. You should be able to easily set up a wide variety of drill-down dimensional hierarchies to satisfy various analytical needs. You should be able to leverage the existing measures to produce new meaningful KPIs. These new, user-definable measures should be permanently labeled to suit your needs and expand the stable of metrics available for use anywhere in the BI system.

Once you have established rich sets of dimensions and measures, the presentation style becomes critical. You must be able to easily copy an existing presentation, make any necessary changes to its content, look and feel, colors, and chart types and permanently establish it with a new name. A choice should be offered between screen presentation such as grids and hard-copy results such as Excel spreadsheet printouts. Once you have developed a new screen presentation or hard-copy Excel analysis, you should be able to assign a name to it and store it for repeated use.

Flexibility is enhanced when the user has a choice among a variety of filters to limit the data included in the presentation to selected date ranges and selected dimensions such as fees, hard costs, soft costs or firm time. Sometimes a dimension such as *Clients* will have too many members to effectively scroll through on a screen. Here, a set of top N analyses should be available so you can more easily scan through your top 100 clients based on billing, profitability or whatever measures you choose. An on-the-fly choice between calendar and fiscal basis should also be available for various time granularities such as monthly, quarterly and annually.

Minimal Training Requirements

As noted, poor response time is a significant barrier to effective implementation of a BI system. Similarly, initial training of your executives in the use of the BI system must be accomplished in an hour or less if their focus and interest is to remain high. You want your business policymakers using the system's strategic information, not spending their time and patience looking for it. The user interface must be intuitive and easily mastered especially for occasional users. Power users typically gain proficiency quickly with continued use and will be looking more for analytical depth in the BI products, but only once they have the initial access and navigation skills down pat. Contrary to popular opinion, a Windows-based BI application is not automatically easy to use, efficient or well designed. Windows compatibility just guarantees it will run on your desktop PC in color.

Rapid Deployment

Today's law firm is faced with an ever-changing multitude of high-priority projects all competing for resources of time and personnel. The best way to steal momentum from a BI project is to make it slow to deploy and require senior-level IT staffing for implementation. Fortunately, a BI solution is additive to your accounting system and effectively sits on top of it. And since it can also be regenerated at any time, a BI system is typically much easier than a financial system to launch. A properly designed BI system can start modestly and evolve over time to meet your expanding needs for strategic business information. It should come with a starter set of pre-defined presentations that can be easily customized to fit your purposes and audience. It is much easier to change an existing presentation's style, dimensions and KPIs than to generate a new one completely from scratch. In general, deployment of a BI system should take less than a month.

KM and CRM

Exploring the Relationship

by Rick Klau

Interface Software, Inc.

Knowledge management (KM) has emerged as a major trend in professional services organizations worldwide. The notion of being able to capture a firm's collective knowledge and deliver it to the professionals who need it has caught the imaginations of management, marketing teams and IT staff alike.

At the same time, other knowledge strategies have also forever changed the way professional services firms and similar relationship-based organizations do business. Client relationship management (CRM) systems are increasingly pervasive at large organizations and are becoming so at midsize and even smaller firms.

As fierce competition and challenging economic times force organizations to reevaluate IT spending to derive the greatest return on investment (ROI), questions are naturally emerging as to the relationship between KM and CRM. Are they different? Similar? Complementary? Competitive? Can you have an effective KM strategy without CRM?

This article examines the definitions of KM and CRM and the way these two knowledge strategies interact at relationship-based organizations.

Definitions

It seems there are as many different definitions of KM as there are industry analysts, vendors and pundits. "Destination KM," the leading knowledge management e-zine, defines KM as strategies and structures for maximizing the return on intellectual and information resources. The Delphi Group, a technology research and consulting firm, defines KM as leveraging collective wisdom to increase responsiveness and innovation. Sveiby Knowledge Associates, an Australian-based knowledge management consultancy, defines KM more broadly as the art of creating value from intangible assets.

Implicit in all definitions of KM is the truth that what employees know and who employees know are assets of the organization. When these assets are utilized in furtherance of the firm's business goals, they can contribute significantly to revenue generation as well as help alleviate client defections, lost business opportunities and staff turnover.

What do these knowledge assets include?

Clients	Matters information	Conflict data	External data
Prospects	Time and billing	Judges	Web services
Documents	Experts	Outside counsel	Tacit knowledge
Legal research			

Delivering this type of information to the knowledge worker is no simple feat. Indeed the people, cultural, process and technology challenges associated with implementing a strategic knowledge management plan are significant.

Knowledge Management Basics

To be implemented effectively, KM must be viewed from a people, process, cultural and technology perspective. Eight factors must be present to ensure the success of any implementation:¹

Connectivity: Organization-wide access to KM system, Web-based applications, mobile devices, worldwide access, high performance, user-friendliness, common structure, groupware, data mining tools, and an easily administered controlling system are key prerequisites to a KM infrastructure.

Many firms have already implemented corporate portals, intranets and similar systems to provide a unified interface to information. These systems effectively mask the complexity for the end user of accessing, aggregating and managing relevant information from multiple disparate sources and presenting it logically, in context, as a unified whole.

Community: Successful KM relies heavily on communities of practice, or groups of people who work across organizational boundaries to advance a business purpose, such as client service, revenue generation, or performance. Some communities exist

naturally within many firms. For instance, members of the same practice group, client team or specialization often share their knowledge, insights, experience and expertise with one another. Other communities of practice, especially among larger firms, are less intuitive yet nonetheless critical. For instance, sharing among different practice areas, offices or geographical locations for cross-marketing and client service purposes is critical. Understanding who needs to share information with whom within the professional services firm is key to designing a system that is responsive to the needs of users and the organization.

Culture: Support and vision from top management, shared sense of direction, trust, openness, excitement, and a willingness to continually learn from peers are key components of KM culture. If your KM strategy does not have buy-in from management and grassroots support from professionals and staff who will benefit from the system, then your best-laid technology plans will miss the mark. By the same token, a successful KM strategy must proactively address both the individual needs of the user (to overcome the “What’s in it for me?” syndrome) and the firm’s larger goals. Because effective KM involves some measure of change at the individual level, it must be obvious that the senior managers consider its adoption critical to the firm’s success. Otherwise, inertia takes hold, and the initiative struggles.

Cooperation: While a supportive culture and community are critical for your KM initiative, professionals’ willingness to share and cooperate with one another is equally important. The primary asset of all professional services organizations is the knowledge, skill and experience of individual partners and employees. Knowledge represents the bulk of your firm’s assets that *can* be managed. Absent an environment in which sharing of information is encouraged, incentivized and acted upon, a knowledge management strategy will have limited success. Management can demonstrate its commitment to the effort by ensuring that key performance measurements—including compensation and annual reviews—are consistent with the stated goals of the KM initiative.

Capacity: In addition to possessing a willingness to share and learn, an organization must have the “intellectual capital governance” capacity to take this to the next stage by building the necessary skill sets and systematically executing a KM strategy. Simply put, professionals may be open to sharing without knowing what it is that they should share or how to go about doing so. Roles and responsibilities should be clearly defined, and adequate education and training should be provided on agreed-upon processes and technology.

Marketing and incentives: Like any other strategic initiative, your KM project must be marketed well internally so that all participants understand its purpose and the benefits to them. Incentives for participating and sharing must also be aligned with the KM strategy to ensure people are getting rewarded for the right behavior.

Capital investment: The firm must understand and be willing to accept and undertake the investment that will be required to implement the knowledge management strategy. Half-measures will only cripple the project and hasten its failure. To ensure results match expectations, metrics should be established at all stages of the implementation and afterward to measure ROI and other success factors.

Content: Most significant as it relates to this article is the notion of content. An organization must conduct an enterprise knowledge audit to determine internal and external sources of valuable information. Internal and external forces come into play here, ranging from customer knowledge to commercial news, research and other data sources. Content is often cited as the most critical success factor to a KM strategy because users will not come back to the KM system once they’ve looked at it and been disappointed in the content, no matter how well all other steps have been undertaken. On

the other hand, they will forgive other shortcomings in a KM strategy if they find content that provides substantial and immediate value.

Content: Maximizing Return on Knowledge Investments

A KM interface such as a portal or corporate intranet is content neutral. That is, by design these technologies must be capable of delivering the specific information deemed important to users and the firm. Some portal vendors also develop applications with preconfigured integration into the portal, but the KM product must be capable of integrating information from all relevant data sources as defined in your KM plan.

Your knowledge audit will uncover myriad content needs and wants. It’s role is to evaluate these needs in accordance with the firm’s overall KM strategy and determine what content is desirable and practical to deliver via the KM system. A useful way of undertaking this exercise is to look at the strategic versus tactical benefits of each knowledge source to ensure integration of the most valuable knowledge assets into your KM system.

For instance, strategic knowledge has a bottom-line impact within your firm. This type of information enables professionals to uncover new business opportunities, bolster client retention and enhance service that will positively impact clients’ experience and their resulting loyalty. Maximizing strategic content in your KM system is essential for a number of reasons. First, because it has the greatest impact on firm revenues, utilizing it will provide the greatest and fastest ROI. Strategic knowledge is a crown jewel among a firm’s information assets because its revenue-generating potential is unlimited. Strategic content counts among the most difficult information to ascertain—hence its heightened value. By aggregating this content and delivering it to users via an intuitive interface, you help ensure the ongoing use of the KM system and, accordingly, the success of your strategy.

Indeed, CRM represents an important shift in the role of an IT department—and it has to do with the strategic nature of the information described above. Bob Lewis, writing in *InfoWorld*, puts it this way: “CRM . . . isn’t like traditional IT projects. It’s the next stage in an ongoing shift in the role of IT—from solution provider to enabler.”² This distinction—between strategic and tactical value—is an important one when looking at the KM initiative as a whole.

Finally, in challenging economic times, if your KM system cannot deliver demonstrable value quickly and easily, management will not see it as a success. Solutions that just offer *vitamins*—that is, content that is helpful but not essential—look wasteful in lean times. Instead, you must offer a *cure* with your KM initiative—content that helps your firm achieve its growth, revenue and client retention objectives.

Tactical content is knowledge that helps facilitate efficiency and cost-cutting measures. It reduces the time it would otherwise take to execute various job functions—from delivery of professional services to executing marketing programs to performing administrative tasks. The value of tactical content should not be understated because the level of waste, redundancy and intellectual rework is high at many professional services organizations. And streamlining operations is essential in a down economy. Yet the long-term value of tactical content is limited. Cost and labor can only be cut so much before waste has essentially been exorcised from the system. Beyond that point, tactical content will deliver little incremental value.

CRM Solutions: The Richest Source of Strategic Content

Relationship intelligence is a firmwide asset that reveals the unique and complex connections between people, companies, relationships, experience and expertise, empowering professionals to leverage who and what they

know to uncover new revenue opportunities, differentiate themselves from the competition and enhance client service. Solutions capable of delivering relationship intelligence represent the latest generation of CRM technology.

Relationship intelligence content is among the most valuable and strategic types of knowledge that a firm possesses because its primary purpose and reason for existence is revenue generation. It is designed to answer the following types of strategic questions:

Client Retention

- What is this client's history with the firm?
- Who are our top-billing clients?
- What do I need to know about this client prior to our meeting?
- What are the client's preferences?
- How can we ensure continuity and consistency when one professional leaves the firm and is replaced by another?
- Who in the firm has the specific skill and expertise required by this client?
- What mailings and other communications have we had with this client?

Preserving Firm Image

- How can we prevent different offices from pitching business to the same prospect?
- How can we make sure we're not pitching our services to a business that is already a client of another office?
- How can we ensure that all of our top clients are invited to this firm event?
- How can we avoid sending out duplicative communications or communications with incorrect or outdated contact information?

Uncovering New Business Opportunities

- Do we know anyone acquainted with this prospect that could help us secure this business?
- Has anyone in our other offices dealt with this person before?
- Who else do we know that could also benefit from our skill and expertise in this area?
- How can we accelerate the business development cycle by leveraging our best expert in the firm or accessing previous experience on a given business issue quickly?

Uncovering Cross-Marketing Opportunities

- What work have we done for this client in the past?
- What are this client's needs, and what other services could we provide to meet those needs?
- What relationships do we have with influencers in other business units within the client company?

Using CRM

How do CRM packages provide this type of content? By serving as the centralized repository for critical knowledge, integrating with other enterprise applications such as contact managers, time and billing systems, document management, HR systems and external databases that house relevant and complementary data, and delivering it to the user in the proper context. Only through its ability to transform scattered data into usable relationship intelligence and present this knowledge to the professional in context does the CRM system deliver content that is immediate, relevant and valuable.

As you evaluate CRM software to assist in your plan for leveraging relationship content, here are some features that will prove beneficial:

Automatic tracking and notification of all past and future activities and changes made to contacts, allowing the professional to identify opportunities and threats to a relationship when they arise.

Instant retrieval of names of all firm *members* that have a relationship with a selected contact, allowing professionals to leverage the firm's collective relationships for new business development.

Instant retrieval of names of all firm *contacts* that may have a relationship with a selected contact, expanding the value of the firm's relationships by revealing outside individuals that might be instrumental in securing new business.

A project list that tracks matters, deals, engagements, opportunities and internal expertise, providing visibility into the firm's collective experience and expertise, making it easier to uncover new business and cross-selling opportunities.

With these features, data is not simply retrieved, it is delivered to the user as information in context—a core attribute of relationship intelligence. Professionals have full control over defining which contacts they are interested in watching. Young associates or staff professionals might only be interested in keeping track of the clients with whom they work on a day-to-day basis. Practice group leaders or relationship managers, on the other hand, may wish to track all contacts for whom they have responsibility.

Moreover, users can also determine what types of information updates they are interested in tracking. Do they want automatic notification when telephone and address information changes? What about when a new activity has been added to the system? What about when a contact changes companies? What about when marketing communications have been sent to the contact? By letting each user define the most important information, the system assures everyone that the content being delivered is current, relevant and valuable.

Without this level of granularity and control, the content delivered by the CRM system—or any other application for that matter—could easily be disregarded by the user. When this happens the value of the system diminishes, which threatens the success of any implementation.

Conclusion

Each law firm must define for itself what content it deems critical to fuel the success of its KM initiative. Firms with modest goals and expectations may be satisfied with tactical content. However, organizations with ambitious KM goals must ensure that they fuel their systems with content that will maximize impact on revenue growth and client retention objectives.

The knowledge provided by CRM systems capable of delivering relationship intelligence is among the most valuable content relationship-based organizations possess. Developed over time through individual, one-to-one interactions with clients and contacts, it represents private competitive knowledge that is not in the public domain and to which competing organizations do not have access.

By providing a 360-degree view to all strategic relationships held by the firm, relationship intelligence serves as a primary building block for business development, client retention and client services initiatives. As such, it is a critical component of the success of KM initiatives and should be included as core content in any KM system.

Endnotes

¹ *Eight Keys to Successful KM Practice*, Madanmohan Rao, DestinationKM.com, August 23, 2002.

² Bob Lewis, "Survival Guide" *InfoWorld*, 10/23/01.

Communities of Practice

A Bridge to KM Success

by Kathleen T. Masterson
Solution 6 North America

The intellectual capital of a firm is made up of external capital, human capital and structural capital. External capital consists of client, vendor and other third-party relationships. It can be influenced but never controlled. Human capital is recognized as the primary asset of many organizations, but it is only leased for the hours when the employees are working; it can't be owned. Structural capital includes the processes, procedures and knowledgebases the organization actually does own. It is the capital over which the organization has direct control. Communities of Practice (CoPs) can allow the organization supporting them to transform tacit knowledge—that hard-to-capture *know-how* and experience in human and external capital—into explicit knowledge—the stored, accessible knowledge of the organization.

Background

Organizations keep careful watch over their financial capital. They constantly measure and evaluate it, and publish financial results that are often analyzed by owners, by taxing agencies, by the market. Today's measures of an organization's capabilities are based on past performance. Financial accounting by its very definition is historical in nature. A balance sheet represents a specific point in time, but at that point in time should the organization consider not only its history but also its current capabilities and its future potential?

The savvy organization would answer yes. New procedures are being considered with an eye toward measuring current capabilities so that future performance can be clearly outlined and achieved. Europe is far ahead of the United States in attempting to measure the current capabilities that define future performance. In Europe, intellectual capital reports are published and are considered as valid as traditional financial reports in shaping the organization's future. The European Union is well on its way to developing unified standards for reporting intangibles. Europe's interest and work in this area can be accessed through any Internet search engine with the words "intellectual capital." The search results also confirm European work in this field has been ongoing for several years.

U.S. organizations are beginning to understand the value of this concept, and many have begun to systematically capture the knowledge in human capital and turn it into structural capital through processes, procedures and knowledgebases. Then, like other commodities, the knowledge can be used, sold or stored to achieve revenue production and organizational growth. This allows the organization to remain productive even when all human elements have left the workplace. Note, however, that unlike other resources, knowledge is never used up. It may become stale or be proved incorrect, but most knowledge can be used to seed new knowledge or innovations.

Many vendors claim to have *the* knowledge management solution . . . software that will capture and store the workers' knowledge as the work is performed and as knowledge is created. Software is a tool and such knowledge acquisition software can boast many successes. But knowledge acquisition assumes the knowledge already exists. Document management systems are well known and accepted. Data mining may uncover patterns and allow large database repositories to be queried so that meaningful information can be formed from the raw data. Knowledge diffusion often deals with the publishing and searching aspects that allow organizational knowledge to be shared. Online project management systems profess increased efficiency and effectiveness as information is gathered, displayed and shared.

Be careful not to confuse traditional IT with KM. Information is data arranged in a meaningful way. It is raw facts with value. Knowledge is information that has been made "actionable and rule-based." It involves many disciplines from cultural anthropology and psychology to management science and information technology. KM is a suite of activities. IT is a valuable, even essential, tool in the management of knowledge, but the terms are not synonymous.

Software solutions have very limited success with knowledge creation. Available tools include point-counterpoint drills and random thought exercises designed to spur innovation and knowledge creation. Instead of looking for the one-size-fits-all electronic solution, look to the unique originators of knowledge—the human side—for creation, and then use the electronic solutions as tools

for others to acquire and share it. But don't limit yourself to electronic tools for acquisition and diffusion. Use the human side there as well: the Communities of Practice that already exist within every organization. Uncover them, support them and use them to achieve the organization's goals.

What Is a CoP?

A working definition for a CoP is "A group bonded by a *common* set of ideas or problems . . . with a *common* set of practices and tools and a *common* means of communication . . . held together by a *common* sense of purpose." They are groups that "learn" and as such they evolve more creative practices. Taking an exclusionary approach, Communities of Practice can be defined as groups that are not project teams, task forces or Communities of Interest; and not unions, professional associations or informal networks either. They can form and learn from such groups, but it is useful to focus on the aspects that set them apart.

CoPs are

- Usually self-organizing and self-directing
- United by experience and passion
- Forward-looking and highly cohesive
- Naturally present in all organizations
- Able to contribute to the organization's success

A CoP may be as small as two individuals, or (especially online) it can have thousands of members. The supporting organization can benefit under either of these extremes, but something between is more manageable. People find themselves drawn to the community as long as they continue to share that common bond. If it ceases to be of interest or if the community's direction changes dramatically, members may self-select themselves out of the group.

Although it does not meet the strict definition of a CoP, the World War II Manhattan Project had many of the characteristics of such a community. Diverse personalities were drawn together under the charismatic leadership of Robert J. Oppenheimer. There may be great controversy over the stated purpose, but it is clear the members banded together, united by their passion, and accomplished their goal under a difficult set of circumstances and against incredible odds.

Today's CoPs may form around several areas. Groups may unite around a profession (how to best meet continuing education requirements), around a product (how to solve problems related to software common to users within an organization or within an industry) or around an idea (how to develop anticorruption strategies and assess associated threats or opportunities). The group may converse on an e-mail discussion list, it may publish its efforts and findings on an organization-sponsored Web site or it may integrate itself into a CRM (customer relationship management) solution. Look below the surface. Once you understand what a CoP is and that CoPs are already present in your organization, you will begin to notice them everywhere.

Who Benefits?

CoPs form because the participating individuals perceive some benefits for themselves and for the group. But strong benefits also accrue to the organization that supports the groups and implements a systematic process for extracting organizational value. What are the benefits?

Benefits to Individuals

- Accelerates transfer of know-how; promotes additional involvement in collaboration; improves problem-solving skills

Leverages opportunities for growth and change; amplifies capacity for knowing; extends professional commitments

Fuels access to resources; transfers lessons learned; increases flexibility

Benefits to Group

Accelerates use of best practices; enhances access to just-in-time expertise; exercises knowledge sharing

Leverages capabilities for virtual work; provides additional access to resources; spreads risk; increases exposure of expertise within the organization

Fuels access to resources; transfers lessons learned; increases flexibility

Benefits to Organization

Accelerates collaboration across the organization; increases the speed of innovation; assists in quality decision making

Leverages the investment in human capital; coordinates the management of knowledge; improves organizational learning

Fuels performance of individuals and the organization; expands capacity for managing complexity; enables the organization to understand its environment

Roles of CoPs

Each CoP has several roles that need to be filled. Certain members may take on more than one role and would be required to do so with a very small group, but for groups with many participants, the roles are often adopted naturally by the individual most suited to the task. If not, the CoP will figure this out and make adjustments. The most common roles are as follows:

Integrator	Events Tracker
Community Leader	Question & Answer Tracker
Core Member	Technologist
Facilitator	Coordinator
Cybrarian or Scribe	Champion and Sponsor

The organization should serve as the sponsor and provide the champion, but it should not otherwise attempt to direct the CoP or assign roles. Such direction may cause the community to disband, reform elsewhere and exclude the organization from its valuable output. The CoP will best serve itself and the organization if it is allowed to follow its own road. The organization should appoint an appropriate champion—an individual who is accepted within the community and who shares an interest in the community's values but who also understands the organization's needs. The champion can ensure the CoP and organization are in alignment. If they are not, the champion may suggest the organization redirect its efforts elsewhere. The champion cannot force opinions upon the group. As with anything, compliance may be mandated for a policy, procedure or idea, but true acceptance can never be forced.

The organization, as sponsor, can:

- Send continuing messages of reinforcement
- Provide information and encouragement
- Support professionals within the organization
- Seek out and promote desired results
- Share time

Furnish an infrastructure

Allow for face-to-face or virtual interactions

Leverage outside events

It is imperative to promote an environment of trust. Some organizational environments are shaped to build trust and others to destroy it. An organization that operates on fear and intimidation is unlikely to be one that creates or sustains knowledge sharing and spurs innovation.

While the roles cannot be assigned from outside the community, the organization sponsoring a CoP should ensure there is a scribe to record the events and ideas that the community intends to share with the organization.

Who, What, When, Where, How? The CoP Development Model

Whether the CoP is aware of them or not, the following questions are answered as the community develops its unique reasons for existence. But before the community delves into these questions, it first asks, *Why are we forming?* This is the conception stage. The organization may be involved in the birthing experience or it may enter the picture after the CoP is fully formed. Guiding the CoP during its formation can be beneficial. Once the community agrees on its purpose, it moves to the following:

Who will participate? This involves connecting people—the heart of knowledge management—the right people at the right time with the right information and in the right context.

What will we share? Is the community interested in turning tacit knowledge into explicit, codified knowledge? Are the deep subject matter experts helping those with broad knowledge and ideas?

When will we meet? Are regular meetings appropriate? How often? Are there considerations that span several time zones?

Where will we make an impact? This is the collaboration facet. Beyond the impact the members of the group perceive, the organization expects direct impact for its own goals (strategic, departmental, financial).

How will we interact? Face-to-face versus virtual meetings involve trust issues. How comfortable is the group with the forum and the trust level? Trust is a central theme in sharing.

Bear in mind that too much output from a CoP can be as detrimental as too little. The community may become overwhelmed at one extreme and bored at the other. A steady, continuous flow is the most desirable state and all the members of the CoP will be continuously evaluating the flow of knowledge to be sure it still meets their personal needs.

Value Metrics

The Department of the Navy has developed a model of value metrics for CoPs. Basically the model suggests the organization supporting a CoP should:

ID the business objective.

Establish which KM methods and tools should be used.

ID the stakeholders.

Choose the best framework.

Determine what should be measured.

Agree how to best collect and analyze measures.

Assess the results.

This is an iterative process and the organization continuously evaluates whether it should remain formally involved in sponsoring the community. The organization should conduct internal interviews of members, provide questionnaires or surveys and review personnel records of various CoP members to determine if value is gained from the organization's sideline participation in the community.

Consider Effectiveness

The worth of the CoP can be evaluated from several standpoints by considering worker, enterprise and strategic effectiveness.

Worker Effectiveness

Increased worker effectiveness can be tracked via a knowledgebase. How many problems are avoided or resolved by use of information from knowledgebase articles? In turn, are workers growing? Have the client and the workers moved to the next level of understanding? Brief banks can be an indicator of worker effectiveness. Whatever the measure, a feedback mechanism must be incorporated so that useful contributions can be highlighted and ineffective ones can be archived to provide warnings for the future.

Enterprise Effectiveness

The focus is on overall productivity. This can be tracked by monitoring employee satisfaction (retention and turnover statistics), improved processes (reduced time to perform a costly act), innovations resulting from collaborations (captured in data on the number of patents and copyrights) and customer satisfaction (as evidenced by measures such as surveys).

Strategic Effectiveness

Has the organization developed the ability to reduce the time to win new clients or customers? Are the organization's contracts being negotiated more quickly up front, with less misunderstanding between parties later? Is there growth in high-value associations? Measures such as these are the ones upper-level management is most likely to notice.

CoP Tools

How does sharing occur within a CoP or elsewhere? A well-known method of sharing knowledge is through *education*—from expert to novice. Teachers, mentors, masters, parents and even peers assist in the learning process. Education in a CoP can be formal or informal. Storytelling is viewed by some as a lost art, but true knowledge sharers understand its pivotal role. *Storytelling* incorporates more than one sense in the learning process, and people learn through different methods—through different senses (visual, aural, tactile). Storytelling can stimulate the imagination and thought production. Once knowledge is shared it can be preserved through *publication*. Writings are captured in books, in public records and on the Internet; audio and video recordings are also considered a means of publication. A relatively new approach is to *engineer* a knowledge-sharing environment. The typical office layout of placing executives, professionals or managers in closed-door offices around the perimeter of the building while a pool of clerks shares a common area is outdated. Virtual meetings are able to break these boundaries, and some organizations design specific areas or even the entire facility to assist knowledge-sharing efforts.

Additional CoP tools include methods or processes for thinking and techniques for generating ideas and building relationships that promote knowledge flow and transfer. Here are several popular tools:

Action Learning. Learning by doing involves identifying the task, planning the attack, performing the task ("doing"), reflecting on its success or failure and then sharing the results. The organization should store such results in a best practices repository. Learning from failures can be even more valuable than from success stories.

Ad Hoc Sessions: These are quick brainstorming sessions often through avenues such as Instant Messenger, e-mail, conference calls, Web-ex meetings or traditional (physical) meetings. The organization can supply the meeting space or place and capture any nuggets of knowledge.

Collaborative Problem Solving: This method involves problem exploration and definition, analysis, then idea generation, followed by brainstorming. It ends with one solution selected. Store the session and results in a best practices repository.

Event Intermediation: With a goal of improving horizontal and vertical knowledge sharing, the community serves as a vehicle for communicating information about and support for certain events that coincide with the CoP's purpose or passion. The organization can also lend support to such events by coordinating with the champion.

Knowledge Capture: A method of capturing best practices within the community, it should include at a minimum a relevant date, the point of contact, appropriate members, the problem or issue statement, relevant background, the alternatives considered and the alternative selected. The organization can easily track CoPs by this method.

KM Road Map: This comprehensive tool provides a framework for building and is generally more appropriate for larger, well-defined communities. It includes taking a knowledge inventory, determining a process, building the framework and targeting efficiencies and inefficiencies. It is an excellent tool for the organization to consider.

Ladder of Inference: Under this model an individual's mental process of observing situations, drawing conclusions and taking action are noted. The ladder deals with the basic concepts of ADD, MAKE, BUILD. Humans add meaning (from personal and cultural experiences), make judgments and inferences or draw conclusions, and then build beliefs, new assumptions and mental models over time.

Locator of Expertise: Much like the "Yellow Pages," this tool allows members to link with the deep subject matter experts and broad-based communicators to get the information needed.

Social Network and Knowledge Flow: This tool tracks advice, trust and communication networks by developing a diagram linking appropriate lines of communication, identifying gaps and suggesting corrections.

Systems Thinking: This is an approach for managing complexity. The tool aids decision makers in understanding the cause-effect relationships between data, information and individuals. It helps identify patterns that recur.

Conclusion

It's important to reiterate that knowledge in firms behaves like any tangible commodity—it can be exchanged, bought, bartered, found and generated. What's the price? The main price is the expectation that one will receive valuable knowledge in return for giving it. There are also time, money and status factors, and the knowledge may have either present or future value for parties to the transaction. Remember this idea as you consider the give-and-take in a sponsored community.

The organization sponsoring a CoP should request the community to record the following:

Name of community

Purpose and scope of the community

Contact information of the functional sponsor

Contact information of the community leader and other significant roles

Contact information of the core group members

Member profiles (including experience, fields of expertise, project experience, education, training, certifications and publications)

A listing of (or link to) the community's knowledge assets

A periodic progress review (from the community's perspective)

Store and track this information across communities and over time.

There are *knowledge nuggets* out there: practical ideas and even existing knowledge that can be further developed and refined. Conduct a knowledge audit to determine your current state. ID the gaps. Use CoPs to help bridge the gaps and achieve organizational objectives by capturing the human capital, leveraging it and storing the knowledge as structural capital. Support communities and allow them to help deliver those increasing returns.

References

Department of the Navy, Cport CD, *Building Communities of Practice, Creating Value Through Knowledge Communities, a Practitioner's Guide, v1.0.*

Innovation Management Institute International, Inc. Web site (http://www.metainnovation.com/elearning/Software_Tools/Software_Tools.asp).



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