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Expertise Management: Who Knows About This?

By Debra D'Agostino

On a Tuesday afternoon last May, Brad Anderson found himself stumped. As an international trade specialist for the U.S. Commercial Service division at the Department of Commerce, it's Anderson's job to help American corporations conduct business overseas. But when a U.S.-based software company called with a question, he didn't know what to advise. The company wanted to close a deal with a customer in Poland, but the buyer wanted to charge the U.S. company a 20 percent withholding tax, a tax it attributed to Poland's recent admission into the European Union. Was the tax legitimate?

To find out, Anderson turned to the DOC Insider, an expertise location system that the department had recently purchased from Bellevue, Wash.-based AskMe Corp. After typing in his question, Anderson first found some documents that were related to his query, but they didn't explain the EU tax code completely. Anderson next asked the system to search the 1,700-strong Commercial Service for a real "live" expert, and, within seconds, he was given a list of 80 people in the department who might be able to help him. Of those, he chose the six people he felt were most qualified and then forwarded his query.

Before the DOC Insider was in place, Anderson says, it would have taken him about three days to answer the same question. "You have to make a million phone calls and deal with time zones," he says. Thanks to the expertise location system, however, he had three responses within minutes, a complete answer within an hour, and the sale went through the following morning. Anderson estimates that he now uses the system for roughly 40 percent of the work he does.

The DOC Insider is an invaluable tool, Anderson says, and it's helping his division meet its mandate. In 2002, the organization conducted 150,000 counseling sessions with U.S. companies and helped orchestrate more than $23 billion in business. In fiscal 2003, those figures increased to 165,000 and $34 billion, respectively—and demand has continued to grow in 2004. The DoC won't say how much of its increased business the DOC Insider supports, but program director Laura McCall thinks the tool is vital enough to provide to other units at the agency. In the nine months the system has been in place, she says, it has saved her department more than 1,000 man hours.

Nor is the DoC alone in having success with an expertise location system, or ELS. Thanks to greater bandwidth, plummeting storage costs and new tools such as enterprise instant messaging, companies large and small—from consumer package goods manufacturers to pharmaceutical companies to law firms—are turning to ELS to help foster collaboration and knowledge sharing. There's even talk that ELS might redeem investments in knowledge management.

For the most part, knowledge-management databases have depended heavily on employees to volunteer data. These repositories also lacked management and workflow processes needed to support the system and keep it up to date. What's more, there was no way to find information unless you already had a good idea of what you were looking for. Databases relied on simple keyword searching of documents, and little else. In short, before you could search effectively, you had to know where to search. ELS, on the other hand, lets employees find and connect with colleagues—whether they're across the country or across the room—to solve critical business problems, and it can identify potential experts even if they haven't recently updated their skills profile in a database.

Think of it as a dynamic company directory: a search engine that lets you ask a question and then hunts down the right person to answer it for you, instantly. The software trawls through your company's e-mails and documents, looking for specific search phrases to determine who's most knowledgeable about certain topics. From that data, the software decides who's the best person to ask and automatically contacts that person. Once the query has been answered, the software logs the information and adds it to its ever-growing knowledge database. This way, if the same question is asked again, the expert won't have to answer it a

second time.

If that doesn't sound all that new, well strictly speaking, it isn't. ELS has been around for a few years. But, as they say, it's all in the execution, and ELS has been getting renewed attention of late as companies looking to improve business process management report compelling results. In fact, Forrester Research Inc. only recently began tracking the space formally. And while niche vendors such as Tacit Knowledge Systems Inc., AskMe, Participate Systems Inc. and Entopia Inc. are leading the way, major players such as IBM Corp. and PeopleSoft Inc. are sharpening the expertise location systems in their toolboxes, too.

Falling somewhere between human capital management and enterprise content management, the market for expertise location software is still small—less than $100 million, according to Gartner Inc. analyst French Caldwell. But analysts like Caldwell see real potential for ELS to improve corporate efficiency and speed to market. What's more, regular searches of a knowledge database enables executives to determine where their staff's knowledge and skills are lacking.

The Cod Liver Oil of IT

Because expertise management promises to deliver where knowledge management hasn't, it will have to overcome some bad PR. In fact, KM has been so disappointing that many CIOs cringe when they hear the term. "It's like saying, 'Here's some cod liver oil, swallow it,' " says META Group Inc. Senior Vice President Mike Gotta. "KM has failed to live up to its promise because of the oversold expectations about what 'out-of-the-box' IT solutions can deliver," says Dr. Yogesh Malhotra, chairman of the Brint Institute in Syracuse, N.Y. "KM rollouts fail because the major challenges are in implementing and sustaining systems, not procuring technologies."

Few cringe more at the mention of knowledge management than Ron Remy, the deputy CIO of the space systems division at Lockheed Martin. "You say those words and people's eyes glaze over," Remy says. And he should know: After successfully piloting an ELS program (which he calls TeamNet) at the company's Advanced Technology Center in Palo Alto, Calif., Remy wanted to gain support to install the system throughout his division. He called together several of Lockheed's scientists in order to demonstrate a new ELS system, but quickly realized his spiel wasn't sinking in. At a meeting, he recalls, laughing, "I almost put them to sleep with what I thought were some very good charts."

So Remy took a different tack and asked the scientists present to share a problem they were working on. One posed a question about insulating a spacecraft from a high-temperature nuclear power source, an issue the team considered a significant challenge. Remy entered the question into TeamNet, and, within seconds, the program returned the names and contact information of 20 Lockheed scientists that it had determined might be qualified to answer the materials question. Within 24 hours, the team had received six solid responses to their query.

What impressed Remy and the Lockheed team most, however, was the source of the answers. One key response came from a scientist who, after the Cold War, had researched how to dismantle Russian solid-rocket motors in a facility that required the use of insulating material similar to the one the physicists had questions about. "It was like that Arthur C. Clarke television show about mysterious connections," Remy says. "I mean, who would have made the connection with burning rocket motors?"

Learning from the mistakes of previous knowledge management tools, ELS allows you to apply rules to make sharing simple and to automate tasks, such as deciding who's an expert on what. Rules can also be applied to determine how questions are answered, and by whom. For example, a call-center rep would likely have his billing question answered by a business-unit head, not the CFO. Meanwhile, the "experts"—those answering the questions—have the option of passing on a query if they're too busy to help (the query is then routed to another expert). The aim is to protect top talent from constantly having to answer the same questions.

That was the problem at Caremark Rx Inc., one of the largest prescription-benefit management companies in the U.S. Although the Nashville, Tenn.-based company employs more than 11,000 people, a small group of about 150 experts within the company found themselves besieged with the same questions day after day. Moreover, the company had no way to put its stamp of corporate approval on the answers its experts were sending out.

"We wanted to streamline the process and minimize our risk," says Mark Ciamarra, Caremark's director of opportunity management. Last November, the company installed a sales intelligence database for 250 of its salespeople and account management staff. Since then, the system, which they call EPIC, has logged more than 2,300 questions and saved thousands of hours in employee time. "We have literally gone from taking days to search for something to seconds," he says. Ciamarra expects his investment of $350,000 to pay off by the end of the summer. In addition to the time savings, Ciamarra says, the business value is in freeing up the experts to focus on essential work. Plans are under way to roll out the program companywide.

Ciamarra's experience parallels that of other companies in various fields where freeing up talented people to focus on innovating, rather than on answering old questions, has been a big selling point. And some companies say the ability to provide employees with immediate answers saves them millions in lost hours and productivity. Although determining actual dollar figures is difficult, some vendors do offer functions that allow users to write in how many hours they saved thanks to the software.

A typical installation costs a few hundred thousand dollars, as did Remy's at Lockheed, but he insists it's money well spent. "You demonstrate the value of the system one time and people say, 'Why am I even pestering you with how much money you're spending? Because if you can get one more win it will pay for this system for the next five years.' And that's the IT person's dream." Remy is currently rolling out TeamNet to 5,000 technologists in the space systems division.

Tomorrow Never Knows

One persistent challenge to knowledge management tools of all stripes has been how they "learn," or adapt over time. For example, Mary over in the records department might be focusing on Sarbanes-Oxley compliance this summer, but a year from now she might have moved on to another company issue—and department.

Here again, expertise location systems present a potential solution—albeit with a catch. Some ELS software continually scans a company's data in real time and judges, by date, who is the most knowledgeable person on a particular topic at any given time. In this way, the system automatically updates itself. To download a graphic on how ELS systems work, click here. Of course, the problem with a program that crawls through every server and employee's PC is that it raises privacy concerns, as Lockheed's Remy discovered when his legal department became concerned that employees would protest a perceived invasion of privacy before the TeamNet pilot was even completed.

"We hit that problem on day one, and it stopped this project in its tracks until we solved it," Remy says. To do so, his team created a splash screen where people can learn about how the system works, and opt out if they choose. Since the pilot concluded, he says, only one person has chosen to do so.

Meanwhile, instead of an automatic search engine, some companies revert to the old model of having employees keep their own expertise search phrases up to date—a risky move, say some analysts.

Says Lockheed's Remy, "[Sharing information] is counterculture in many ways. Frankly, the people who are more traditional in their view of the old command-and-control stuff don't like this. It's peer-to-peer, so it's very threatening to the traditional organization, just like the Web was very threatening. But you've got to get over that. It's going to happen."

"Getting people to share information sounds a lot easier than it really is," agrees McCall of the DoC. "Some people are afraid to share what they know because they fear they won't be needed anymore."

To encourage participation, McCall created an incentive program. "We give a small cash award to our top users, those who answer questions as well as ask them. It takes two to tango," she says. The department also puts out a newsletter that highlights top participants.

META Group's Gotta advises against cash incentives. "Getting people to give that information up is tough, but I think direct monetary incentive taints it." Instead, he envisions linking the system with performance management. "For example," he says, "Twenty percent of your review might be how well you help others outside your department."

Others say a mandate from the top is all that's needed. "True experts don't really worry about holding on to their information because what they are expert in is a particular field of knowledge, and they're discovering new things all the time," says Gartner's Caldwell. Caremark's Ciamarra agrees, adding that the incentive at his company "is to not be bombarded by the same questions over and over again."

What You Don't Know

Going forward, companies could use expertise location not just to figure out what they know, but what they don't know.

"Imagine a system that watches people to figure out where the gaps are and then augments people's knowledge," suggests Nate Root, a senior analyst at Forrester Research. For example, if ten questions are being asked per week about a new supply-chain tool, it may be time to host a training session. "You could tie the system to e-learning and other training initiatives," he adds.

Taking it a step further, companies could even use expertise management as a means to assemble powerhouse project groups to meet the needs of incoming RFPs. Although they haven't formally begun this process, Lockheed's Remy is already thinking along these lines. "If the TeamNet database is our supply for expertise, our demand is in our inbound RFPs," he says.

"I think it's invaluable, but it hasn't taken off the way I thought it would," says Gartner's Caldwell, one of several analysts who are underwhelmed by the slow adoption of ELS. Part of the reason for the slow deployment, aside from the aversion to all things KM, could be that it's still unclear exactly where expertise management systems fit into the IT architecture. Does expertise fall under human capital management, for example, or enterprise content management? Gotta adds that many companies don't yet understand the term expertise location. "It sounds like a people finder," he says.

If the jury is out on how the expertise location market will develop, progressive IT leaders such as Remy aren't waiting. "In our corporation, we have what we call defining moments," he says. "Those can be on the good side,

like when you launch the Atlas V satellite and it's perfect the first time and parks the payload within 10 feet of where you wanted it. On the other side, when the shuttle disintegrates on the way down, and we were involved in servicing the shuttle, that's obviously the downside. So if you can learn something from someone else about some component or some aspect of a mission that lowers the probability of failure by one percent—or even one-tenth of one percent—how do you put a price on that?"

Resources

Books

The Hidden Power of Social Networks: Understanding How Work Really Gets Done in Organizations
By Rob Cross and Andrew Parker
Harvard Business School Press, 2004

Sharing Expertise: Beyond Knowledge Management
By Mark Ackerman, Volkmar Pipek and Volker Wulf
MIT Press, 2003

Cultivating Communities of Practice
By Etienne Wenger, Richard McDermott and William M. Snyder
Harvard Business School Press, 2002

Web Sites

The Knowledge Management Network
www.kmnetwork.com

The Brint Institute
www.brint.com/press

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KM's Not Dead Yet

By Debra D'Agostino

Dr. Yogesh Malhotra, 40, is the founder and chief knowledge architect of the Brint Institute, a think tank based in Syracuse, N.Y., that focuses on corporate, as well as academic, knowledge management. According to Malhotra, KM is not a complete waste of an IT budget, but rather, a technology that requires cultural change in order to succeed. The following is an edited transcript of an interview he gave CIO Insight in June.

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CIO Insight: Is expertise location management the next wave of knowledge management?

I do not see expertise location as a long-lasting trend. It seems more of a fad, just like many other information and communication technologies (and companies) that are attempting to fulfill similar needs for matching the supply and demand of data and information. In contrast, I see knowledge management as a growing and thriving phenomenon that encompasses most aspects of expertise location management.

In my view, it is difficult to demarcate, as Gartner has done, where the expertise location market begins and ends. One could consider most consulting firms in different business technology games to also be in the expertise location game. The same is true for many freelancers, cooperatives, associations and societies who represent specific types of expertise. In a related perspective, all coaching, training and education activities would qualify for the expertise development and management sector. So it is important to distinguish between the long-term trends and short-term fads or hyperbole.

Having said that, many companies have already developed internal expertise location markets, such as corporate yellow pages, while others maintain "Rolodexes" of external experts. Having seen some of the most bureaucratic modes of handling simple RFPs by some of the largest companies (that will remain unnamed), I am not certain about large corporations' adoption of expertise location. Most large corporations tend to rely

upon their tried and tested experts.

Some analysts suggest that expertise location is filling a void left by failed knowledge management systems. I take it you disagree.

Your comment reminds me of Mark Twain's quip, adapted to say that the reports of the void left by KM are greatly exaggerated. KM seems to be doing quite well in most countries—except for in the U.S., where it has been beset by oversold expectations and by the hyperbole of the IT vendors and IT analysts.

So how can Americans make knowledge management work?

The very essence of what various IT systems can do in the context of KM begins and ends with people and processes. In absence of motivation and commitment on the part of the users, such systems cannot function.

Where do you see this market going in the future?

There seem to be a lot of possibilities for interweaving expertise management with specific enterprise applications, such as supply chain management or sales contact management. Again, the technologies that can help in developing such relationships already exist, so the primary challenges remain the strategic, socio-psychological and cultural issues.

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