



KM past and future: closing the knowledge loop

By Judith Lamont, Ph.D., - Posted Jan 1, 2010

Over the past decade, KM solutions have become effective at managing content, automating business processes and analyzing data, but information was not always easily shared across different applications and functional areas. The result was that valuable insights were lost and decision-making lacked empirical support.

Now, however, organizations are closing the loop on knowledge sharing. In some cases, the connections are coming from application integration (see "Tighter integration" sidebar), and in others, from rethinking underlying processes. Either way, the enhanced information flow is supporting better decision-making and promoting continuous improvement.

Although emerging technologies such as social networking are contributing substantially to greater exchange of information, much of the progress can be credited to mature KM solutions that are being used more effectively. Organizations are taking significant steps in gathering and synthesizing information to ensure that it ends up where it will do the most good.

From self-service to product development

Many software products are available to track customer interactions on self-service Web sites, but collecting information is not enough. Blue Coat uses InQuira not only to help customers find answers, but also to guide the inclusion of new information into the knowledgebase and provide feedback that is incorporated into product development. InQuira's solutions provide answers to Web self-service customers and contact center service agents through intelligent search, information management and analytic tools.

Blue Coat produces hardware and software that facilitates the application delivery. One product offers visibility into application performance. Another accelerates and secures the delivery of business applications while mitigating the impact of undesired applications. Analysis of customer cases indicated that 30 percent of calls were requests for information.

"We needed a way to help our customers maximize their use of our products," says Chuck Flood, senior manager of support infrastructure at Blue Coat, "so we started looking into KM solutions that supported this effort with a robust knowledgebase." Flood analyzed KM providers and selected InQuira as the best match for Blue Coat's needs.

Initially, Blue Coat aggregated all its technical literature, documentation and spec sheets into the knowledgebase. Customers access the knowledgebase through a portal and use InQuira's natural language capability, which enables them to find the most relevant information.

"We are also getting started on intent-based search, which associates certain words with likely target information," Flood adds. Subject matter experts distilled about 250 priority words down to 60 central concepts based on product features and capability. In addition, if numerous customers are seeking information on a particular topic, the search results can be tweaked so that the most relevant document comes up first.

InQuira has a robust set of analytical tools, Flood says, and Blue Coat is exploring ways to measure the

effectiveness of the portal. For example, the company is examining queries that were being placed but not answered, to identify areas where more information might be needed.

"We publish a list of the top 10 questions for our staff, because it provides insights into how customers are using the product," Flood adds. Blue Coat is also building a feedback loop to the product management staff, so they can use the inquiries as a guide to making product improvements.

Maintaining a high level of customer service is a primary driver for the use of Web self-service. "Keeping an existing customer happy is critical for protecting brand reputation," says Santi Pierini, CMO of InQuira. When used effectively, information derived from those customer interactions can also improve the company's performance. "Not only does InQuira let customers get relevant information quickly," Pierini says, "it also supports continuous improvement."

Empowering the patient

Nowhere is the need for closing the loop more pressing than in healthcare. By all accounts, healthcare information exists in huge quantities in many different databases, but it's not always put to good use. Interoperability remains a challenge. Some software companies, however, are bridging the gap and delivering major value-added to insurance companies and consumers alike.

[The TriZetto Group](#) was formed to provide software and related services to make the healthcare supply chain more efficient. "The healthcare supply chain is complex, and there is no single fix," says David MacLeod, VP of R&D at TriZetto, "but we can make much better use of the information that is already sitting in silos."

MacLeod also points out inconsistencies in the current reimbursement scheme, such as payment for procedures rather than for outcomes. "Neither physicians nor patients are presented with compelling incentives for improvement in healthcare management," he says. Until complete feedback to doctors and patients becomes routine, the appropriate course of action may remain unknown.

FACETS, TriZetto's flagship product, processes claims for many major healthcare insurance companies, including the majority of Blue Cross/Blue Shield companies. In addition, FACETS provides real-time adjudication to determine the costs of procedures so that physicians can see the payment information prior to carrying them out. MacLeod, who previously worked for a Medicare claims processor operated by a large affiliation of Blue Cross and Blue Shield organizations, was responsible for selecting TriZetto's product at that organization, to replace almost a dozen antiquated enterprise administration and healthcare claim reimbursement systems. "We picked it because of its maturity, scalability and flexibility," he explains.

An innovative software option in FACETS helps families select the best healthcare insurance plan for their needs. "Our system knows what plans each participating employer offers," says MacLeod, "and it also knows the employees' medical histories. Employees can go through a 'what-if' process and see which of the plans offered in the next year would optimize their benefits, based on a known medical history."

That link between patient, plan and history previously has been unavailable. In addition, TriZetto provides technology for online patient forums, which is another way to get patients actively involved in their own healthcare. The forums are particularly valuable for patients with chronic diseases such as diabetes, where patient compliance plays a critical role in outcomes.

KM supports government

KM has taken root in both the civilian and military agencies in the federal government, and is being sustained by several new initiatives. The U.S. Army issued a memorandum in July 2008, "Army Knowledge Management Principles," that outlined a dozen KM principles related to people/culture, process and technology. At the top of the list was "train and educate KM leaders, managers and champions." In addition, the Army is developing a KM

competency model that defines skills and knowledge required to promote KM practices.

Those initiatives are designed to address the fact that KM has great value for knowledge-intensive activities carried on at many different levels of government, but does not have a standard, recognized body of knowledge. Art Schluskel, who was serving as a KM consultant at the U.S. Army War College Center for Strategic Leadership, began work based on the first principle, to produce KM leaders. He helped create and co-taught a course to train senior leaders in how KM can be used to meet the needs of the Army.

The approaches fostered by the course, and in other education and training venues within the Army have helped promote best practices in knowledge sharing. "Students attend courses in numerous subjects, are deployed and then once they are in the field, they can comment on the utility of what they learned, according to guiding principles of knowledge sharing and dissemination," says Schluskel. "This now happens within a week or two. The Army has picked up very quickly on the value of this rapid feedback because in many cases, it's a matter of life or death."

Through the Battle Command Knowledge System (BCKS), for example, a forum provides an environment in which each command can share information. "We can get comments almost in real time and then incorporate them for the next group being trained," Schluskel explains. The collaboration backbone is provided by Tomoye (tomoye.com), and the Army Knowledge Online (AKO) platform.

In the Army War College, [Microsoft](#) SharePoint is a common collaboration tool being used as an internal portal and for course work. "Speeches and briefings, as well as classroom materials, can be captured, stored, disseminated and commented on," Schluskel says, "which provides extensibility outside the classroom and into the field." Each of 20 seminars has its own SharePoint portal site through which the faculty and students can teach, collaborate and share.

KM has a large role in military training, because it provides a variety of methods for disseminating information. "The environments people face in military conflicts are complex, and the downside of failure is high," says Eric Sauve, CEO of Tomoye. "In addition, more broadly in government, the new administration has put significant emphasis on government being open, transparent and collaborative. Both these forces create a context in which knowledge management will have a robust future."

Tighter integration

[Open Text](#) recently announced improved integration of its enterprise content management (ECM) products with applications from [SAP](#), which provides enterprise resources planning (ERP) solutions. As a result, SAP users have immediate access to the unstructured content that supports their work without having to leave their primary application.

The tighter integration supports seamless accounts payable operations from the procurement stage through payment, automatic retention management and access via SAP's customer relationship management (CRM) software to documents that provide answers to customer inquiries.

Linking people and records

Successfully closing a case often hinges on making connections among names, facts and events. PeopleMap from [West](#), which is a division of [Thomson Reuters](#), provides information based on millions of public records in numerous databases. Its ability to pull together a coherent picture of an individual's history and relationships is helping lawyers to clinch their cases.

An initial step that PeopleMap carries out is verifying the identity of an individual, because names often show variations across different records. PeopleMap then develops an authority file to start establishing connections between the target individual and other legal cases and people. Once the initial research is completed, information

is added incrementally as new events occur.

A recent innovation in PeopleMap is the ability to display connections graphically. "This visualization capability allows users to quickly see the individual's relationships with other people and cases," says Kevin Appold, senior director of new product development at West. "For many users, this presentation technique is more effective than text only, although that mode is available as well."

At [Forman & Cardonsky](#), attorney Mark Lawrence has been using PeopleMap to find connections between people to find a motive for behavior. "Many of our whistleblower cases involve some type of corruption, and we look for a connection between the person who wrongfully fired our client and a third party involved in corruption," says Lawrence.

In one instance, Lawrence reports, the people who colluded were backyard neighbors. The relationship would have been difficult to detect with text-only information, because the street names of the two people were not the same; instead, it was revealed through geospatial information presented graphically.

NHIN creates ecosystem for sharing medical information

Creating a way for patients to share their medical records across multiple healthcare providers has been an unrealized vision so far, but a government initiative called the Nationwide Health Information Network (NHIN) marks an important step in that direction. The NHIN provides the standards, security controls and governance needed to allow providers, government agencies and other healthcare entities to share electronic health records (EHRs). [CONNECT](#) is an open source software solution developed through the collaborative efforts of more than 20 federal agencies, and coordinated by the Federal Health Architecture office within the [Department of Health and Human Services](#).

Vish Sankaran, program director for Federal Health Architecture, explains, "We want to make health information exchange a commodity, with an ecosystem of buyers and sellers." About 20 vendors are now building products that work with CONNECT.

"Once patient information is broadly available through EHRs, the healthcare industry will be able to take a much more patient-centric approach," explains Sankaran. "Patients will not have to bear the burden of making sure that each provider has access to his or her medical information, for example. It will be readily available to anyone authorized by the patient. This will cut down on medical errors and expedite care."