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# Knowledge Management

2Q 2000



## Customer References

Internal Experience

KM Education

Thought Leader

Consulting

R&D

Products

Volume I, July 2000

# Preface

Greetings,

Knowledge Management is one of the most exciting areas of our business today. Equally exciting has been the opportunity to work with some of the leading KM thought leaders at IBM and Lotus. We appreciate their contributions to the creation of the success stories that fill these pages.

We would like to express our gratitude to the IBM and Lotus customers—representing business of all sizes and industries—who were willing to make time in their busy schedules to support us in this endeavor.

Special thanks goes to The NAVAJO Company, the PR firm who was our vendor-partner on the project.

Best regards,

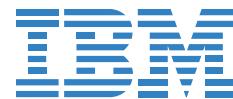
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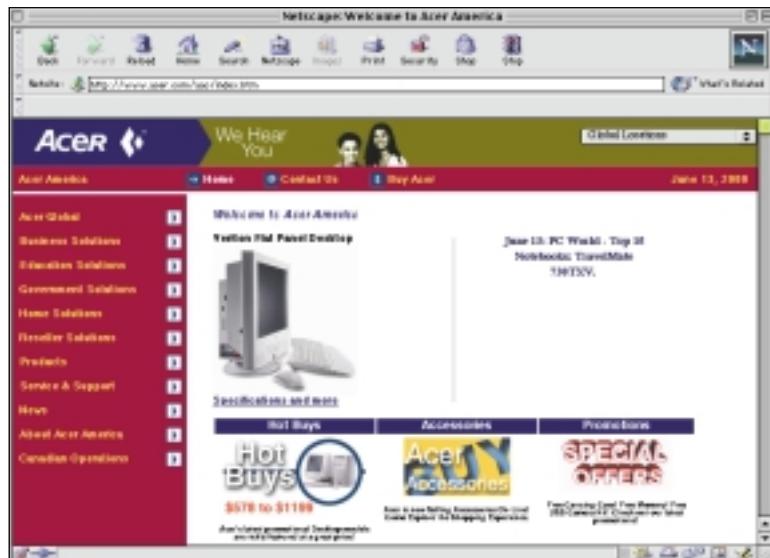


# *Acer bridges geographical gaps by offering online employee training.*

Established in 1976 in Taiwan, Acer is one of the world's largest computer manufacturers. From high-end, multi-user servers to notebooks and computer components, the \$6.7 billion company has built a strong global presence, with 32,000 employees in 176 organizations under its umbrella. Throughout its history, Acer has found that there is indeed strength in its size—but there are also the challenges of running a smooth enterprise when employees are located in 42 different countries.

This challenge has been painfully evident in the company's employee training programs. In just one year, Acer has been able to offer more than 600 internal training courses across its global business units, enabling employees to maintain their high skill levels. But the cost of sending instructors to Acer sites around the world—to set up and deliver the same courses—became cost-prohibitive.

For Acer, the obvious solution to its dilemma could be found in the very domain that fuels its own business—IT. The company figured that by leveraging the Internet and providing training classes online, it could reach its employees in a much more affordable and flexible manner.



*Faced with training thousands of employees on a multitude of evolving products and processes, Acer turned to Lotus knowledge management solutions.*

## Business Challenge

Provide an efficient and effective means to train employees located throughout a global enterprise

## User Community

32,000 employees in 42 countries

## Knowledge Management Solution

Knowledge transfer: Online training system developed with Lotus® LearningSpace®

## Business Value

Extensive savings in training costs; enhanced employee proficiency

*“[LearningSpace] enables the preservation and sharing of knowledge and experience among our employees.”*

*—Thomas Chiu, Training Administration Director, Acer Global Institute of Education*



Working with Lotus Business Partner Webtrans Software Development Co. Ltd., Acer launched an enterprisewide online training system created with Lotus LearningSpace. Today, Acer delivers timely and consistently high-quality courses to all of the employees across its enterprise, while eliminating the costs and risks associated with sending instructors overseas.

"LearningSpace has not only proven effective in delivering training, but has also increased staff productivity as it does not interfere with the employee's work schedule in the way classroom-based training does," says Thomas Chiu, training administration director at the Acer Global Institute of Education. "Besides, it also enables the preservation and sharing of knowledge and experience among our employees."

### **Sharing knowledge, expanding skills**

Webtrans helped Acer develop its first online course, called "The Development Standard Process for C Systems Products," in just three weeks. This course helps employees understand Acer's production cycle and their responsibilities at each stage.

Having demonstrated the success of its first LearningSpace course, Acer is currently developing online classes on intellectual property law, communication skills and time management. Each of these courses, accessible from Acer's corporate intranet, is designed to be lively and interactive with multimedia features. Employees can learn at their own pace or from their colleagues and use LearningSpace to track their progress.

Like classroom-based training, an instructor tracks employee progress using LearningSpace and offers help when the learners need it. Employees can pose questions and receive replies from the instructor through the course room feature of LearningSpace.

In its LearningSpace solution, Acer also has an easy way to manage its vast array of training materials, capturing and organizing this knowledge to disseminate to its employees expeditiously.

### **Consistent, up-to-date information**

In addition to developing the first LearningSpace course, Webtrans also provided knowledge transfer to Acer's instructors in the areas of course design and multimedia tools, enabling them to create future online courses themselves.

With a distributed learning foundation in place, Acer is poised to keep its large employee population well-informed and up-to-date with the latest skills needed to do their jobs. Says Chiu, "Through efficient knowledge transfer, any barriers we may have had due to geography are erased. All of our employees, no matter where they are located, have convenient access to a consistent source of information that will help them drive Acer's success."

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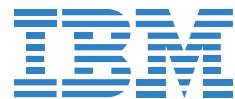
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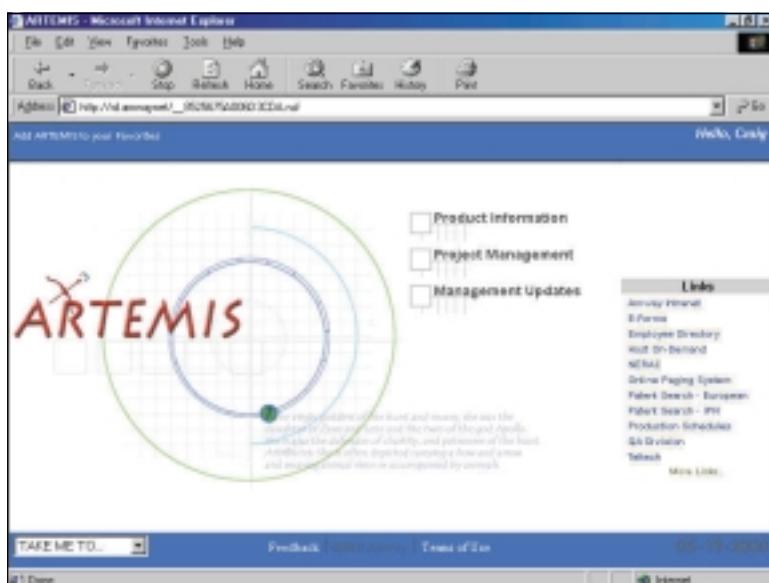


## *Amway portal gives researchers fast track on hunt for data.*

From soap to pots and pans to weight-loss drinks, Amway sells many of the products that enrich our lives. As one of the world's largest direct-selling companies, based in Ada, Michigan, Amway generates \$5 billion in revenue and has 12,000 employees worldwide. Three million independent distributors sell Amway products around the globe.

With 450 Amway-brand products and thousands of others available through its catalogs, the company considers product development and time-to-market critical factors in its success. Consequently, employees in its research and development (R&D) department must have access to the latest information on product formulas, costs, market forecasts and more, so they can make informed decisions.

Until now, getting that information was no easy task. Much like Artemis, the Greek goddess of the hunt, R&D employees had to search through a dozen disparate databases, or spend hours tracking down elusive facts by calling associates, just to compile the reports they needed. This hunt for information often took several days, and even then, the researcher might have missed crucial bit of data hiding in a remote repository.



*Successful products are built on past experience as well as projected market conditions. Enabling developers to tap into both with ease is what Amway's knowledge management solution is all about.*

### Business Challenge

Provide a consolidated information platform that reduces research time and shortens product development time

### User Community

550 R&D and quality assurance employees

### Knowledge Management Solution

Knowledge discovery and business intelligence: Artemis, a Web-enabled information portal, providing access to product development data and other resources housed in a data warehouse

### Business Value

Search time for product information reduced from several days to 10 seconds; average savings of 165 hours per week in research time; potential cost-saving opportunities from \$10 million to \$20 million

*“Our information portal is helping our R&D team see things they wouldn’t normally see about our products.”*

*—Craig Abbott, Group Leader, R&D IT Support, Amway*



To facilitate product development and reduce time-to-market, the Amway IT team that supports the R&D department knew they had to find a way to consolidate information resources to make access faster and easier.

The components to create this consolidated platform were already in place—a corporate data warehouse and an intranet developed with Lotus Notes and Lotus Domino. Working with Lotus Premium Business Partner Whittman-Hart, Amway leveraged these technologies to create Artemis, a Web-based information portal that enables employees to conduct in-depth product information inquiries and receive answers in as little as 7 to 10 seconds.

“We’re saving about 165 hours a week in research time,” notes Craig Abbott, group leader of R&D IT support at Amway. “As a result, our researchers are free to pursue other, more strategic opportunities that will help us get products to market faster.”

### **Developing a culture of collaboration**

Designed to evolve with user’s needs, Artemis currently features links to product costs, specifications, and marketing data; product management, status reports and accounting information on current and future projects; and management updates, which enable supervisors and managers to assess team performance and accurately evaluate Amway’s market position.

Now, instead of interrupting their colleagues to ask for information, or spending countless hours wading through data, employees let Artemis lead the hunt. “We’ve had users consult Artemis for cost-saving ideas and opportunities, and they’ve found hypothetical opportunities to the tune of \$10 million to \$20 million,” notes Abbott. “While we haven’t implemented all of these ideas yet, without this knowledge management tool, the ideas might never have occurred, or even been proposed.”

### **New insights found in information portal**

The next phase in Amway’s knowledge management initiative involves integrating Artemis with the company’s document management system to give employees Web access to operating documents containing product formulas, specifications, test methods and other mission-critical information.

“Our information portal is helping our R&D team see things they wouldn’t normally see about our products,” concludes Abbott. “With the insights they’re gaining, they’re in a better position to help drive down our product development cycle and enable Amway to achieve its goals.”

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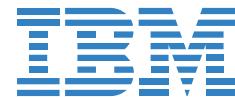
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# *AT&T developers use knowledge management to ride the waves of change.*

To an outsider, the tenacious growth of AT&T may merely seem a sign of the times. For John Moro, AT&T Division manager of the company's Integrated Customer View division, riding the waves of change has been a highly challenging but ultimately rewarding experience.

The Integrated Customer View division was tasked with developing a business-critical customer information warehouse. But when Moro joined the 150-person group, it was lacking the skills needed to meet the company's objectives and deadlines.

Within a year and a half, the picture had changed completely. The division's efficiency and competency levels improved significantly, even though headcount was reduced by 50 percent. At a time when numerous other development projects were being outsourced, Moro's in-house team was considered a strategic asset to the company.

According to Moro, effective knowledge transfer and sharing were pivotal factors in raising the skill level of employees, training new hires and avoiding the repetition of previous mistakes. "We have come a long way since the middle of last year," Moro says. "And the IBM knowledge management team has significantly contributed to that."



Helping to manage the evolution of AT&T's Integrated Customer View division: Foreground (L to R): Barbara Zaharioudakis, Jose De Lavalle and Diane Porcaro; Background (L to R): Allan Gruchy, John Moro, Bryan Rae, Judy Slusar and Greg Sheridan.

## Business Challenge

Enable smooth knowledge transfer while restructuring organization, improve organization's image for quality and timeliness

## User Community

Customer information data warehouse development organization

## Knowledge Management Solution

Developed KM strategy; defined opportunities for action; identified subject matter experts; established programs, databases and metrics for after-action learning and knowledge partnering; instituted good KM practices

## Business Value

Improvement in performance; retention of development organization; cut training time by 50%; increased productivity by over 200%; measured cultural improvements

*"The real value of the IBM knowledge management team was their professionalism, attention to detail and .... passion for making these projects a success."*

*—John Moro, AT&T Division Manager, Integrated Customer View Division, AT&T*



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## **A fortuitous meeting with IBM**

Through prudent management, Moro had made considerable headway in addressing operational issues—such as excessive server downtime—that were affecting the division's information warehouse development schedules. However, the staff proficiency problems persisted. Around this time, Moro had a chance to participate in an IBM knowledge management presentation, where he recognized many of the solutions he was looking for.

"Just before the presentation, an internal survey had indicated that our overall skill level was a meager 1.2 on a scale of 1 to 5," Moro recalls. "And then I heard the IBM folks talking about knowledge management, building high-performing teams, increasing the knowledge level—all the things I knew we needed."

## **Knowledge partnering alleviates staff reduction**

The IBM knowledge management team stepped in and, after a thorough assessment of the division, proposed a list of opportunities for action. The first two programs Moro decided to implement were knowledge partnering and after-action learning. Knowledge partnering facilitates the transfer of knowledge and skills from veteran developers to less skilled staff and new hires.

The first step in the program involved identifying all the experts in the division. "In-depth interviews by the IBM knowledge management team uncovered many subject matter experts I wasn't aware we had," Moro notes. IBM then worked with Moro and his core team of designated knowledge management advocates to set up procedures for knowledge partnering, including a "contract" that defined a mentoring relationship. IBM also developed an intranet Web site and assisted AT&T in developing a database application to capture knowledge from the subject matter experts and provide access for self-study.

The knowledge partnering program came at just the right time. "We were about to lose 40 contractors, so we had to transfer the work and the knowledge to our remaining people," Moro recalls. "The knowledge partnering program and the contract IBM developed enabled us to perform this transfer smoothly."

## **Learning from experience**

It is impossible to avoid mistakes entirely, but smart organizations find ways to learn from past errors and develop best practices. The tough part is to methodically perform these assessments whenever mistakes occur and apply the lessons learned when encountering similar situations. To instill such methods at AT&T, IBM set up an after-action learning procedure, as well as a database with templates to capture the lessons learned.

Through all these knowledge management projects, the IBM team became an integral part of Moro's organization, as it helped the staff internalize these new knowledge management practices. "The real value of the IBM knowledge management team," Moro says, "was their professionalism, their attention to detail and their ability to motivate us to make these programs an integral part of our professional lives. Most of all, it was their passion for making these projects a success."

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E-Manager: Smart Communication Strategies for an  
E-Business Era* (New York: McGraw Hill, January 2001)

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# *Business & Advanced Technology Centre digitizes knowledge assets.*

Considering the workforce potential inhabiting their lecture halls, universities have become key resources for the business community. At the Universiti Teknologi Malaysia (UTM) in Kuala Lumpur, for example, professors—encouraged by the country's government—are making every effort to support Malaysia's largest industries, including electronics, petrochemicals and manufacturing.

The best way for UTM to support these industries is through its most invaluable asset—knowledge. But that's also where the challenge lies, since a university's knowledge resources are so vast, encompassing not only published research but the boundless intellectual capacities of its professors and students.

To capture, organize and share its knowledge assets, UTM—with financial support from the government and various industries—developed a digital library at its Business & Advanced Technology Centre (BATC). Designed and implemented by Mesiniaga Bhd, an IBM Business Partner, the digital library uses IBM Content Manager (formerly IBM DB2 Digital Library) and IBM DB2 Universal Database for AIX to provide students and corporate researchers online access to the BATC's vast stockpile of information.



*A powerful digital library at the Universiti Teknologi Malaysia's Business & Advanced Technology Centre is keeping industries up-to-date on changing market conditions.*

## **Business Challenge**

Be able to offer manufacturers timely industry information to fuel their business decision-making; offer courses online

## **User Community**

Corporate researchers, 28,000 students

## **Knowledge Management Solution**

Knowledge transfer: digital library for providing online access to courseware, research and publications, developed with IBM Content Manager and IBM DB2® Universal Database™ for AIX®

## **Business Value**

Increased revenue opportunities in industrial and international markets; decreased research time; scalable foundation for online learning

*“With our knowledge management solution, we have an expedient means to supply [manufacturers] with the timely information that supports their decision-making.”*

*—Professor Dr. Zainal Ahmad,  
Director of the Business & Advanced  
Technology Centre, Universiti  
Teknologi Malaysia*



“Our objective is to share our leading-edge intellectual capital—in the form of courseware, research and publications—with manufacturers to help them succeed globally,” says Professor Dr. Zainal Ahmad, director of the BATC. “With our knowledge management solution, we have an expedient means to supply them with the timely information that supports their decision-making.”

### **Helping students and businesses succeed**

BATC’s digital library can be accessed through Web browsers at [www.mold.batnet.edu.my/bact](http://www.mold.batnet.edu.my/bact) by the institution’s more than 28,000 students—many of whom already work for Malaysia’s major industries. By sharing precise, focused information, the digital library makes it convenient for industry employees to stay current on changing world market conditions—either from campus or a PC at their workplace. Subscription fees that students pay for Internet access to the library are used to purchase publications for the university’s archives.

So far, BATC has captured journals and research reports related to manufacturing as well as course notes for master’s and doctoral degrees in engineering and business management in the digital library. Research performed at BATC as well as at other universities will also be stored in the library.

Notes Zainal, “We’re making it more convenient for students to earn the advanced degrees that can contribute to career advancement and, at the same time, we’re helping businesses grow without having to devote their resources to industry research.”

### **Ready for future knowledge management projects**

BATC’s digital library is supported by a cluster of IBM RS/6000® servers. One server runs Content Manager and the object server, and another runs IBM Content Manager VideoCharger.™ The object server uses DB2 to maintain the index of document images. Archived images are stored in an optical jukebox. IBM Cryptolope® technology ensures secure Internet delivery of the digital content.

“When Mesiniaga demonstrated Content Manager, we were impressed with its scalability. That was an important factor because we wanted to be sure we had a solution to support future knowledge management projects, such as our online degree programs,” says Zainal.

In fact, in its digital library, BACT has a model for digitizing its main library, as well as a foundation for its online learning programs. Down the road, BATC and Mesiniaga plan to market their knowledge management solution to the corporate community.

“It takes a sophisticated solution to facilitate the sharing of intellectual capital,” says Zainal. “IBM has demonstrated that it has the technological talent to support a knowledge management undertaking of this scope.”

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# *Caterpillar turns intellectual capital into business advantage with IBM.*

For Caterpillar—the world's largest manufacturer of construction and mining equipment, diesel and natural gas engines and industrial gas turbines—business is global and product lines are continuously evolving. Thus, Caterpillar needs a reliable way of coordinating business planning across multiple internal business units as well as a worldwide independent dealer network, each serving a unique market profile. At the same time, the company must continuously improve on its ability to execute flawlessly.

That's where Business Development Services (BDS) comes in. With 28 consultants—24 in Peoria, Illinois and 4 in Geneva, Switzerland—BDS works with each of Caterpillar's business divisions and independent dealers, helping them with everything from mission statement development to strategic planning and project management.

As much as BDS knew the business value nested within its intellectual capital, the consultants continued to wrestle with how to share their knowledge groupwide. Working in pairs, the consultants, who come primarily from the Caterpillar ranks and typically serve two- to three-year stints, spend the bulk of their time with their clients, rather than



Caterpillar's internal consulting group is enhancing its collaborative environment with a knowledge management solution developed with Lotus technology.

## Business Challenge

Caterpillar's internal consulting group, Business Development Services, lacked a way to leverage their collective knowledge and project documentation

## User Community

28 internal consultants

## Knowledge Management Solution

Strategy and action plan implemented with Lotus® Notes®, Lotus Domino™, Lotus Domino.Doc, Lotus Enterprise Integrator

## Business Value

Leveraging of knowledge and intellectual capital to improve service delivery; better capturing and sharing of best practices

*“Our main driver for pursuing knowledge management is to significantly improve our services. Once our clients have done business with us, I want them to say, ‘Wow, these guys really know what they are doing’”*

— Jay Dawson, Business Manager,  
Business Development Services,  
Caterpillar



interacting with each other. The group also lacked a system to facilitate knowledge discovery and collaboration. Consultants stored work documents on a shared local area network (LAN) drive, but searching it rarely yielded the desired results.

Just when BDS began discussing a knowledge management project, a former IBM consultant joined the group and connected them with two IBM Knowledge Management Consulting Services consultants, Rich Azzarello and Tom Short. In only three weeks, they delivered a knowledge management strategy and a two -to three-year action plan.

“We began our engagement with educational workshops,” explains Azzarello. “Then, we conducted several focus groups and individual interviews to better understand their culture, issues and which knowledge management areas were critical to them. From these meetings, we developed a strategy that will help them manage their collective knowledge.”

### **Leveraging a collaborative culture**

From their meetings with BDS, Azzarello and Short recognized that the organization already had a collaborative culture. But BDS needed a searchable, easily accessible repository where each consultant could upload relevant information and also seek insights to develop and share best practices.

Based on the knowledge strategy jointly developed by IBM and BDS, BDS has worked with Caterpillar’s IS department to develop a comprehensive knowledge management system using Lotus Notes, Lotus Domino, Lotus Domino.Doc and Lotus Enterprise Integrator. This system contains various components:

- An historical archive of engagements.
- A toolkit containing tools and techniques used by consultants. These could include PowerPoint presentations on strategy development, boilerplate examples and sample documents.
- Knowledge profiles that capture who knows what, what projects individual consultants have been involved with and seminars attended as well as client profiles. These will help BDS send the most qualified consultant to each engagement.
- A segment containing after-action reviews and lessons learned, enabling consultants to search for advice to apply in their future engagements.

Acting on a recommendation from IBM, BDS has also hired a knowledge coordinator, who is responsible for driving the initiative.

### **Strengthening the competitive edge**

“Our main driver for pursuing knowledge management is to significantly improve the quality of our services,” says Jay Dawson, business manager of BDS. “Once our clients have done business with us, I want them to say, ‘Wow, these guys really know what they are doing.’ That’s quality to me.”

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# *Christian Brothers Services enjoys benefits of knowledge sharing.*

Christian Brothers Services (CBS) serves the Catholic Church by developing and administering quality cooperative programs that are innovative yet cost-effective. Through these programs, CBS helps religious institutes, dioceses, schools and other Catholic Church organizations enjoy the professional expertise and economic benefits that result from collaborative efforts.

Serving an expansive base of customers are 200 employees who work out of the organization's Romeoville, Illinois headquarters. Because each of its divisions operates rather independently, the big question has been, "Are we five companies or one company?" The answer, says CIO Tom Drez, is, "Both."

Operating independently has been the easy part. But coming together as one company has been a challenge because there lacked an effective, efficient means for companywide collaboration and communication. Often, different divisions were unaware when they shared the same customers. Without this knowledge, customers must manage multiple relationships with CBS, and individual CBS divisions have a very narrow view of each customer. As a result, there were missed opportunities to enroll customers in other services.



CBS's programs cover health benefits, risk management, retirement services, prescription drugs, unemployment reimbursement, vehicle purchasing/leasing and computer services.

### **Business Challenge**

Provide an efficient means for companywide communication, collaboration and sharing of customer account information

### **User Community**

200 employees

### **Knowledge Management Solution**

Knowledge discovery, collaboration: more than 100 knowledge bases and an intranet developed with Lotus® Notes® and Lotus Domino™

### **Business Value**

Increased sharing of insights and best practices; greater operational efficiencies; enhanced customer service and cross-selling abilities

*"We're in the service business, so we live and die by the knowledge that we accumulate. If we don't harness that power, we won't be here."*

*– Tom Drez, CIO, Christian Brothers Services*



And so it was Drez and his team's job to capture, organize and enable enterprisewide sharing of the company's information assets through sophisticated knowledge management solutions from Lotus. The practice of knowledge management is in its infancy at CBS, but already, the company has launched more than 100 Lotus Notes knowledge bases and an intranet, helping employees share insights and best practices. And to help them share customer account information, the IT team is developing a customer relationship management (CRM)-focused knowledge management solution.

"For us, knowledge management is all about the harnessing and publishing of information, uniformly and electronically," says Drez. "By implementing this knowledge management solution we're already seeing the benefits of having all of our people on the same page."

### **The power of online information exchange**

CBS has empowered each of its 200 employees to create Lotus Notes knowledge bases. Housing everything from ideas on streamlining processes to instructions once stored in binders, these knowledge bases are accessible from the corporate intranet, developed with Lotus Notes and Lotus Domino running on an IBM AS/400® server.

The intranet is also the place where field employees, called "Road Warriors," can access the Road Warriors Forum — a repository of messages, bulletins, threaded discussions and other posted information. Rather than sifting through paper notices, Road Warriors can stay in touch with each other and exchange ideas through their laptops.

### **Extending customer relationships**

Once its CRM-focused knowledge management solution is launched, CBS employees will have a much more complete picture of each of their customers. "This solution will prove its value when we can take advantage of the cross-selling opportunities it will reveal to us," says Drez. "For example, if a customer is signed on with the retirement planning division and not any others, we know we need to do some marketing to encourage them to utilize our other divisions, especially since they're already with CBS."

The CRM solution will also enable employees to capture, organize and share information regarding customer preferences. "If a customer likes to receive invoices by fax and newsletters by mail, then we can fulfill that request," says Drez. Taking CRM a step further, CBS plans to use its knowledge management infrastructure to support Web self-service capabilities to customers — sharing information with them online about their accounts and CBS policies.

### **Virtual meetings and more**

The knowledge management future at CBS is indeed looking bright. Along with its CRM project, the organization is also considering deploying Lotus Sametime to enable realtime online collaboration and Lotus QuickPlace for creating team workspaces on the Web. Online training courses are another possibility. Concludes Drez, "We're in the service business, so we live and die by the knowledge that we accumulate. If we don't harness that power, we won't be here."

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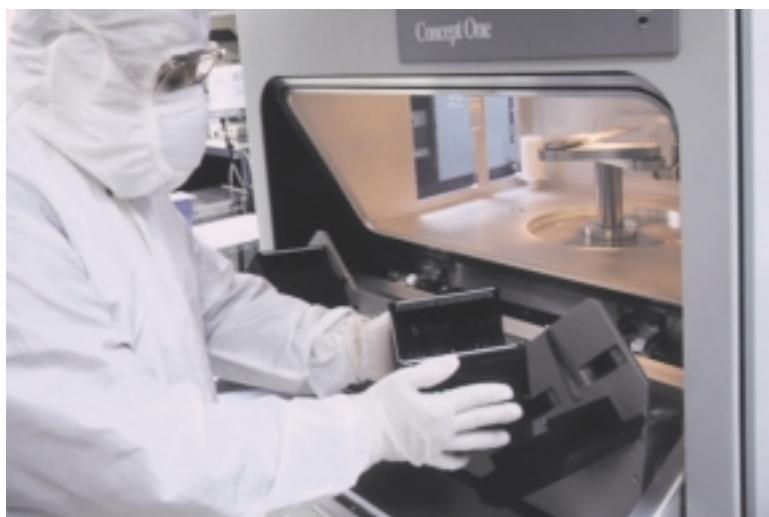


# *IBM Component Knowledge speeds cycle time for design wins.*

All things being equal, selling electronics components to original equipment manufacturers (OEM) hinges on timing. Typically, there's just a brief window when a component manufacturer or distributor learns of a selling opportunity—and needs to act quickly to capture that design win. Traditionally, this process has been hindered by knowledge sharing gaps.

Many individuals at a component manufacturer—from engineers to sales representatives and marketing professionals—play a role in getting the component adopted into an OEM's product. That means these teams need to know in advance what types of projects the OEMs have coming down the pipeline, so they can sway these potential customers toward using their components. Some track this information using multiple extranets, while others use groupware applications. But none of these solutions has been effective in giving the sales teams the complete, timely information needed.

None, that is, until IBM Component Knowledge was launched. A managed Web service, Component Knowledge brings together the entire electronics component selling chain, providing each organization their own password-protected portal for registering design wins and tracking new business opportunities. As a testament to its growing popularity, the new service attracted 500 clients by the end of its third month.



*California Micro Devices is using IBM Component Knowledge to keep on top of its OEMs' short design windows.*

### Business Challenge

Electronics components sellers have a difficult time tracking business opportunities due to knowledge-sharing gaps

### User Community

Sell chain in the electronic components industry

### Knowledge Management Solution

Component knowledge: a managed Web service for registering design wins and identifying new business opportunities; developed by IBM Global Services

### Business Value

Increased design win velocity, reduced cycle time between new business opportunities, efficient means to capture and organize knowledge and facilitate collaboration

*“The value of Component Knowledge goes up exponentially with every additional company besides your own that uses it.”*

*—John Rector, Global Offering Manager,  
IBM Component Knowledge,  
IBM Global Services*



"The attractiveness of a system like Component Knowledge is that it utilizes one of the Internet's greatest strengths—instantaneous, many-to-many communication," says Jeff Kalb, president and CEO of California Micro Devices. "There are other systems that have elements of this, but we haven't found anything quite like Component Knowledge."

### **Eliminating communication mistakes**

California Micro Devices, a Milpitas-based manufacturer of integrated passive devices and semiconductor products, expects to have hundreds of people in its selling chain using Component Knowledge once it is fully implemented. Keeping abreast of business leads is paramount to the success of the company, which records about 60 design wins each quarter. That's because OEMs can have design windows as short as six weeks, and passive components are usually adopted near the end of an OEM's design process.

"We tried using groupware applications, but they couldn't be accessed by any external parties," says Kalb. "By having a system that's essentially time-independent for communication, we can go a long way in getting inside customers' design windows."

### **Providing a collaborative environment**

Component Knowledge is the brainchild of John Rector, global offering manager at IBM Global Services. While working in sales at IBM, Rector had sold an extranet solution to a component manufacturer. "It wasn't the right solution because it didn't adequately address the communications issues," he recalls. "The reason manufacturers don't get as many design wins is because the left hand forgets what the right hand is doing and things fall between the cracks."

The problem, according to Rector, is especially pronounced when a component manufacturer relies on an independent sales representative firm. He explains, "If each of a rep's clients used their own extranet solution to track design wins, the sales rep faces what I call 'dueling extranets'—and it becomes very cumbersome to keep on top of it all."

Component Knowledge provides component sales teams an efficient way to capture and organize knowledge, as well as a collaborate environment. It was developed with Java™ technology on the front end and IBM DB2® Universal Database™ on the back end. From the site, users can view updated status reports on customers, action items and discussions.

### **Value increases exponentially**

Rector manages a team of 15 consultants, who work on enhancing the increasingly popular service. "The value of Component Knowledge goes up exponentially with every additional company besides your own that uses it," says Rector. "It keeps an intercompany team proactive in getting the component design wins they need to grow their business."

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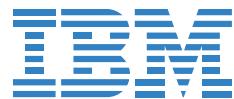
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# *DuPont promotes productivity through knowledge sharing.*

If you've ever fried an egg in a nonstick pan or slipped on a pair of stockings, there's a good chance you've crossed paths with DuPont. As the inventor of consumer materials such as Corian, Kevlar, Mylar, Nylon and Teflon, the Wilmington, Delaware-based company continues to be behind the products that shape our daily lives.

With 80,000 employees in 70 countries, DuPont encompasses three core businesses. Its life sciences business focuses on agriculture, pharmaceuticals and nutrition. The differentiated products group covers specialized polyester films, photopolymer and electronic materials and printing and graphics products. Finally, foundation businesses are responsible for delivering high-volume, specification-based products.

In an enterprise as large as DuPont, collaboration and information sharing are critical to ensuring competitive advantage and continued profitability. Recognizing these needs, the company undertook a massive project to standardize its entire enterprise on Lotus Notes and Lotus Domino, using them to develop a score of collaborative applications.



*The maker of Teflon pans and other consumer goods, DuPont builds its success in part by sharing its rich intellectual resources.*

### **Business Challenge**

Leverage applied knowledge for competitive advantage; develop best practices; identify subject matter experts

### **User Community**

80,000 employees across all business lines

### **Knowledge Management Solution**

Collaboration, expertise location, knowledge transfer: IBM Complex Opportunity Organization, IBM Global Services and Lotus Consulting deployed Lotus® Notes® for various collaborative applications

### **Business Value**

Up to 50% faster decision-making; better sharing of best practices; increased ability to exploit market opportunities through faster price change authorization; enhanced productivity through shorter cycle times

*“These technologies have helped us spread knowledge management across our extensive enterprise and, in turn, we’re finding it easier to work together as one.”*

*— Steve Miller, Manager of Collaborative Computing and Leader of the Communication, Collaboration and Coordination Program Office (C3PO), DuPont*



e-business

From virtual teams to the sharing of best practices and intellectual capital, DuPont has made knowledge management an integral part of its operations. As a result, it has seen decisions being made in half the time it used to take. The leaner decision-making process has led to enhanced productivity and increased ability to exploit market opportunities.

"In Lotus Notes and Lotus Domino, we have vehicles that allow our employees to collaborate, develop best practices and identify subject matter experts," says Steve Miller, manager of collaborative computing and leader of the Communication, Collaboration and Coordination Program Office (C3PO) at DuPont. "These technologies have helped us spread better knowledge management practices across our enterprise and, in turn, we're finding it easier to work together as one."

### **Knowledge sharing brings new opportunities**

DuPont had been using Lotus Notes for about two years when it decided to scale the solution from 4,000 users to all 80,000 employees. For development help, the company turned to the IBM Complex Opportunity Organization, which built a virtual development team of representatives from IBM, Lotus and Computer Science Corporation (CSC), DuPont's managed operations partner. IBM Global Services and Lotus Consulting helped DuPont and CSC with architectural design and implementation, providing DuPont with a scalable, reliable foundation for developing Lotus Notes-based knowledge management applications throughout the company.

It didn't take long for DuPont employees to begin reaping the benefits of knowledge management. Using Lotus Notes' workflow capabilities, the company has devised ways to expedite the sharing of resources and information. For example, operating procedure changes that once required weeks to approve can now be authorized in hours or days. Requests for price changes—in response to competitive threats—can now be approved in hours, compared to weeks. This drastically improves DuPont's nimbleness in capturing market opportunities.

DuPont's worldwide virtual teams can make decisions up to 50 percent faster using the asynchronous dialoging capabilities of Lotus Notes. In fact, there have been cases where this rapid decision-making has resulted in reduced cycle time for installing new facilities—which enables DuPont to capitalize on revenue opportunities faster by bringing products to market quicker.

### **The daily habit of managing knowledge**

Through the power of Lotus Notes, DuPont has created a foundation for building its knowledge management capabilities. Says Miller, "Talking with one another in Lotus' asynchronous modality has helped our workers incorporate knowledge management into their daily work habits. And we're not done—the ability to develop new knowledge management applications is only going to make us stronger."

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# *English Nature: telling campfire stories in the boardroom.*

Once upon a time...

No, business case studies don't start that way, or do they? This might have been the first thought that entered the minds of staff members of English Nature, the British equivalent of U.S. Parks and Recreation, when they first encountered a knowledge management solution proposed by IBM that consisted of stories, archetypes, myths and fables.

In 1991, The Great Britain (GB) Nature Conservancy Council was split into separate organizations (one for Scotland, one for England and so on) and English Nature had to determine its new identity. Says Caroline Wood, director of resources and communications at English Nature, "There were a lot of bruises, because people had liked being a GB-wide organization. We needed to find ways to become forward-looking when many of us wanted to hold on to the past."

In an effort to promote growth, English Nature engaged its staff in the task of determining a new vision. Says Wood, "If we were going to learn new ways of operating, we had to have ownership in our new direction. We wanted commitment, not compliance." English Nature

## Business Challenge

To increase knowledge sharing between communities within English Nature, such as public relations, land management and scientists

## User Community

700 staff members including scientists and administrators engaged in nature conservation in locations throughout England

## Knowledge Management Solution

Knowledge sharing through teaching observation and storytelling techniques

## Business Value

Increased acceptance of knowledge management practices leading to an increase in knowledge sharing across communities of practice



*English Nature staff members are finding new ways to share knowledge across departments and disciplines.*

*"I am hearing people using words like 'communities of practice' and using stories to better get points across in meetings."*

*—Caroline Wood, Director of Resources and Communications, English Nature*

*“It is no longer possible to manage an organization as if it was a machine, we need to see it as a complex and interdependent ecology in which humans volunteer knowledge; the conscript mentalities of command and control will not survive in the Knowledge Economy.”*

*—David Snowden, Director of the Institute for Knowledge Management in Europe, Middle East and Africa*

wanted to reform the way in which it managed intellectual assets. The organization felt that information often needed from one department by another wasn't being shared effectively, making projects such as organizational publicity much more difficult.

Initially, English Nature poured through knowledge management text books, but it wasn't until the staff had the opportunity to hear a lecture given by David Snowden, director of the Institute for Knowledge Management in Europe, the Middle East and Africa, that a solution was discovered. And when Wood met with Snowden, she knew immediately that she should enlist his help for English Nature.

“David was supportive of our desire to avoid the implementation of technology straight away. We didn't want to think of knowledge management as a new IT system. We wanted to see it as a new way of working and thinking. If we need an IT system to support it, then we will add that later,” says Woods.

Snowden and his team came onboard at English Nature for two weeks, and gave lessons in knowledge management theory and storytelling. Through this revolutionary method, one of several which fall under the generic title of ‘organic knowledge management’, Snowden passed on techniques that draw on the rich history of oral tradition. Says Woods, “This solution is really working. It seems that we are moving forward with this powerful new knowledge sharing tool with an ease that is surprising all of us. What's more, people are doing it because they want to.”

### **The organic metaphor - organization as a wilderness**

Two schools of thinking are emerging in knowledge management. The first sees the organization as a machine, and is carrying on with many of the methods and concepts of business process re-engineering, quality management and the like. While these techniques have been useful in the past, they are not appropriate for managing knowledge. The ‘mechanical’ school tends to focus on technology solutions in isolation from the cultural context.

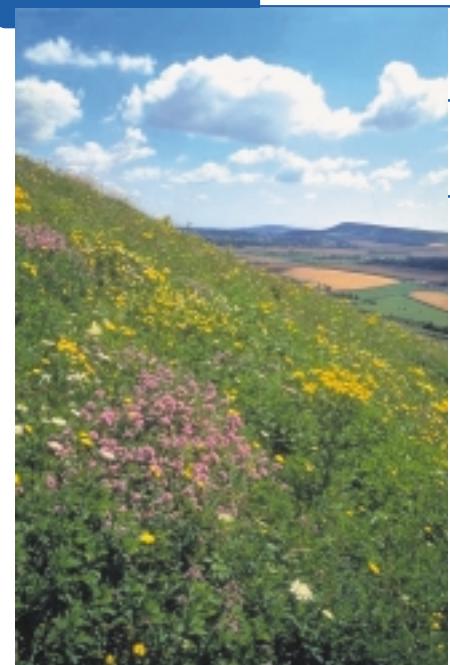
Says Snowden, “The mechanical metaphor has been useful in the past, but it has reached the limits of its usefulness. The second school sees the organization as a complex and interdependent ecology in which humans volunteer knowledge; the conscript mentalities of command and control will not survive in the knowledge economy. For organic knowledge management, technology such as that provided by IBM and Lotus is a powerful tool within such ecologies, but it is integrated with the human and cultural aspects of a solution: it is a tool not a totem.”

### **Observing four stories-archetype, myth, fable and virus**

To foster knowledge sharing at English Nature, Snowden used two techniques. “The first technique that we used is one we’ve adopted from anthropologists—taking the role of the unobserved observer. This helps us discover and understand the dynamics within an organization. The second technique is storytelling, which we initially used to map out the organization’s knowledge, but which eventually becomes a viable knowledge management tool.”

English Nature is now using storytelling techniques to communicate complex organizational situations more simply. The four forms of storytelling being used are:

- **Myths:** These stories are self-perpetuating, and build on the image of core values or key people within an organization. Myths move through an organization and can have a long shelf life within the culture. One example might be: “Once upon a time when English Nature’s budget was cut, important research was threatened. But an industrious manager sacrificed her weekends writing grant proposals in order to make up for the loss in funding. As a result, English Nature received a generous grant so that a research project, which identified the use of a particular pesticide as threatening to local wildlife, could be completed. Eventually, the pesticide was banned.” Such a myth might be used to inspire others in English Nature to understand how each part of the team benefits the whole.
- **Fables:** These are message-driven stories, and communicate organizational mores and morals. Fables can also address organizational morale. Fables are told by storytellers and will typically have 15-plus acts or sections. A fable might tell the story of an English Nature botanist, reluctantly participating in a documentary released to the media as part of a public relations campaign. It would describe—using elements of empathy—her trials, but would deliver the message that when the documentary was aired, several young people were inspired to pursue careers in botany. So even though the botanist didn’t really enjoy participating in the project, her actions directly influenced the future of her discipline. Fables can be used to challenge the knowledge hoarding practices of the scientific community and may generate myths in their own right.
- **Story viruses:** A story virus changes an existing story within the organization’s culture, using the story’s momentum to carry forward a different message or sentiment. If a story is circulating that two rangers are at odds over a personal dispute, and their manager hears this story, the manager might apply a story virus. The virus might modify the story to say that when the boss confronted the two rangers, she discovered that the two co-workers had merely been debating different methods of repairing a particular trail. This might give management time to approach the two co-workers in a thoughtful, well-planned manner.



*English Nature embraces a knowledge management strategy suggestive of the wilderness it protects.*

- Archetype: This approach uses techniques developed by the famous psychiatrist Carl Jung and his followers, and involves a central, recognized set of characters. The famous cartoon anti-hero Dilbert is one such archetype. A story might be told using the archetypal, absent-minded professor to describe a new scientist coming from academia to join the research team. Immediately, both the knowledge of such an archetype as well as the complexities it communicates can be utilized as a common platform to achieve a higher level of collective discussion within the community of practice where the archetype is understood.

### **Wrestling knowledge from a community of practice**

Storytelling has helped address one of the biggest problems at English Nature—getting scientists to share knowledge. The general scientific community supports keeping close tabs on knowledge. With 60 percent of English Nature consisting of scientists, information was not flowing from department to department or office to office. Says Wood, “We learned that this is called a community of practice. Our scientists typically only released information to those who they knew could interpret it correctly, thus information crucial to better land management or public relations was kept out of reach.”

“We’re taking a very natural approach and percolating knowledge management into the organization. As more of the scientists latch on to these practices, the knowledge starts to flow more readily. Already, we see it moving into areas where it is needed,” says Wood. “I am hearing people using words like ‘communities of practice’ and using stories to better get points across in meetings.”

“English Nature has already effectively integrated better knowledge management practices, and by following our methods they’re already better at it than many of the consultants we’ve seen,” says Snowden. In the future English Nature plans to apply organic knowledge management, including any needed IT solutions, to other areas within the organization. But for the time being, it is enjoying managing its knowledge the same way it manages England’s natural resources—with an ecological sensibility.

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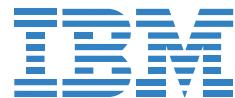
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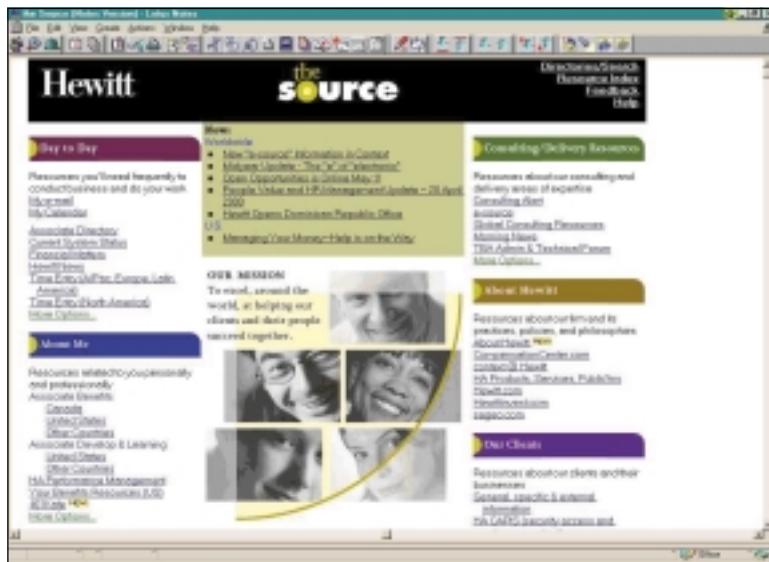




# *Hewitt Associates employs knowledge management to enhance client relations.*

What would it take for more than 11,000 associates—across 74 offices in 35 countries—to work as one firm, reflecting a common corporate culture? How would they share their collective experience and knowledge with clients? At Hewitt Associates—a nearly \$1.1 billion global management consulting and employee benefits delivery firm that specializes in human resource solutions—the answer lies in the unfettered exchange of knowledge. Says Dave Graffagna, co-leader of the firm's knowledge management team, “The ‘one firm’ concept means that we have a ‘we’re all in this together’ attitude and a centralized profit center, and a consistent technical infrastructure which drives everyone in the organization toward cross-team, cross-practice, cross-office and cross-country collaboration.”

For Hewitt Associates, workplace collaboration has acquired kaleidoscopic dimensions with its enterprise-wide knowledge management solution, powered by Lotus Notes and Lotus Domino. “When we first deployed Lotus Notes it was purely for groupware collaboration. But, its capabilities as a knowledge management tool triggered our



Logging on to *The Source*, Hewitt Associates consultants gain access to a wealth of links that connect them to knowledge management databases and other resources.

## Business Challenge

Enable structured sharing of knowledge and information between associates worldwide

## User Community

Management consultants, associates, administrators, and other staff

## Knowledge Management Solution

Knowledge discovery, collaboration, expertise location: Consolidation of virtual repositories created with Lotus® Notes® and Lotus Domino™

## Business Value

Easier access to knowledge, enables quicker and more complete client responses, improves customer satisfaction and boosts business growth

***“[Lotus Notes] capabilities as a knowledge management tool triggered our search for a better way to mobilize our knowledge resources for business growth.”***

*—Dave Graffagna, Knowledge Management Team Co-leader, Hewitt Associates*



*“Our challenge was how to enable our knowledge managers and subject matter experts to stay connected with everyone else. Lotus Notes has made it simpler to create a network of those associates and make them easily identifiable and accessible.”*

*—Dave Graffagna*

search for a better way to mobilize our knowledge resources for business growth,” says Graffagna. Realizing the possibilities, a Knowledge Management Leadership Council was established with associates from different areas to determine the company’s knowledge management and distribution needs.

Explains Graffagna, “For us there are three aspects of knowledge management—content creation and organization, the technological framework needed to enable its free exchange, and the cultural, learning and behavioral aspects that enable people to make the best use of the knowledge resources at their disposal. We found that IBM’s concept of knowledge management was very much in sync with ours.”

### **A virtual conference room**

Picture a perpetual virtual conference room, where there is free interchange of ideas and information, where a solution to one person’s question is assimilated by many others in different situations and stored away for future reference—that’s Hewitt’s knowledge management network.

“In the old days, as I like to call them, we had much more face-to-face mentoring,” recalls Graffagna. “While that continues, it’s a lot more difficult to do when you’ve got 11,000 people, rather than a few hundred. Or even a few thousand—and they’re scattered across the globe.”

So one of the challenges for Hewitt has been to consolidate the lessons learned from various client engagements in a central repository, and make more people aware of who is involved with various engagements so they know where to look when they need information or advice. “We have grown so dramatically over the last 10 years—from 2,500 people, we’ve more than quadrupled in size. It’s become more difficult for people who have the most experience to share what they know. Our challenge was how to enable our knowledge managers and subject matter experts to stay connected with everyone else. Lotus Notes has made it simpler to create a network of those associates and make them easily identifiable and accessible.”

### **Consulting Alert replaces e-mail exchanges**

In the past, Hewitt depended heavily on e-mail exchanges and paper repositories for sharing information. “We have traditionally been pretty good about sharing information, but we wanted to be able to do so in a much more structured and consistent way. We had banded together variations of what I would loosely call databases, and compiled e-mail lists of specialists according to topic, industry, client, etc. So, if one associate had a question he or she would send an e-mail to a specific e-mail list, which people would respond to when possible. But, we wanted to make it easier for more associates to both access information from the system at any time, as well as add information into it.”

Rather than relying on such e-mail exchanges, associates at Hewitt now exchange questions and ideas through an electronic Lotus Notes tool called the Consulting Alert database. “It is a very dynamic database. Consultants across the firm are expected to look at this database every two or three days,” explains Graffagna. Anyone in the organization can pose a consulting-related question at this electronic “consulting station,” and all the responses to that question are captured there for everybody else to see. “So nobody is reinventing the wheel each time, and the response time is closer to realtime than a typical repository,” Graffagna notes. “If someone’s done a big chunk of the work on a topic, I can take their effort, adjust it to my client, and then add additional value to it, based on the particular context. We’ve done a greater service for our clients and organization as a whole.”

The Consulting Alert database also contains information bulletins that are regularly posted with consulting-related information that must be communicated to all associates. For example, employees can find new legislation on employee ownership programs, economic updates on different countries and industries and more.

The Consulting Alert database feeds into a collection of Consulting Knowledge databases, which contain valuable information including project details, case studies about engagements, lists of associates and their areas of expertise, reference discussions, information about legislation and government policies, and even anecdotes capturing the realities of today’s workplace. In a broader context, an index of the available databases and resources, called The Source, provides a navigation map of all the links a user can access to obtain information. “This is our first attempt to create an enterprise information portal, and we’re already getting tremendously positive feedback,” says Graffagna. “It used to be a struggle to first find out what existed, and then where. We’ve taken big steps to get beyond that.”



*With knowledge management technologies, Hewitt employees can meet in-person or share information electronically.*

### **Consistent data structure enables easier search**

In all, there are more than 2,000 Lotus Notes reference databases containing 150 gigabytes of data, organized into various categories based on subject, location, industry and more. For example, the Compensation Knowledge database contains information regarding board of director compensation and governance, broad banding, business restructuring, compensation data sources, competency pay, employment contracts and the like. The databases are designed to accommodate the needs of different associates throughout the firm as well as those of different teams in the organization, such as client teams, the Total Business Administration group and the E-Information Council that evaluates the company's information and knowledge sharing needs and strategies. "Though we have thousands of databases, they're all organized in a consistent manner. Otherwise, it could be very frustrating for a user to adjust to dozens of different templates to get information," Graffagna explains.

### **The consultants' consultant**

The Lotus Notes and Domino knowledge management system has made a significant improvement in people's ability to do their jobs. Graffagna recalls, "One of our most experienced consultants came in on a Sunday needing to pull something together for a client. He expected to spend four or five hours on it. Well, the first thing that he did was a search across some of the knowledge repositories, where he found three or four key pieces of information, and examples of projects that we had worked on in similar situations. He was done in an hour, and has become one of our strongest proponents of using these tools."

According to Graffagna, knowledge management has been instrumental in improving how consultants respond to their clients. "Clients are getting more complete answers because our consultants have more complete information and knowledge," he says. "They get quicker responses because we have more readily accessible information. They are able to work with an associate who is well-rounded and more responsive. So, in many different ways, our clients have gained significantly."

### **Technology—the great enabler**

For Hewitt Associates, knowledge management is not a one-time project. What began nearly six years ago as an academic exercise has yielded so many unexpected benefits, that the company's original concept of a "short-term" effort has evolved into an Information Council that continuously evaluates changing requirements and solutions. "Technology is a great enabler of knowledge management," comments Graffagna. "We're continuously studying the learning and behavioral requirements of knowledge management so we can best utilize the technology available to us."

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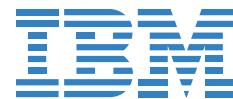
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# *IBM knowledge management initiative bears fruit companywide.*

Imagine a virtual two-way street, where information and knowledge travel back and forth between different points of origin—connecting people to each other and to information. Like traffic itself, both people and information must be directed to the right destinations for knowledge to be useful. But, as with any large organization, even IBM took formal knowledge management steps before information sharing and collaboration spread across its entire enterprise.

It wasn't until IBM Global Services formed in 1995 that the 86-year-old corporation began to systematically pilot and deploy communities of practice to leverage in-house expertise. It was also at this time that Lotus-based knowledge management tools began to be used to share the organization's intellectual capital. Essentially, IBM Global Services helped jump-start knowledge management initiatives at IBM.

Today, IBM has expanded that initial knowledge management effort in its services business and, through IBM Global Services consultants, to its clients. Inevitably, knowledge management consultants working with clients share and apply what they learned at IBM and other client sites.

Since IBM Global Services jump-started knowledge management initiatives at IBM, the company has shared its information through communities of practice and team rooms.

## Business Challenge

To connect people so they can collaborate; share intellectual capital between various IBM divisions

## User Community

IBM enterprise-wide employees

## Knowledge Management Solution

IBM identified knowledge management leaders, established communities of practice and built team rooms and customer rooms with Lotus® Domino™

## Business Value

Efficient and effective means to connect people for collaboration; creation, capturing, storing and sharing of knowledge, including best practices; enhanced customer service

*“The faster we learn and share what we learn with each other and with our customers, the faster we transform ourselves into the premier knowledge-based e-business.”*

*—Fred Schoeps, Program Director, Knowledge Management, IBM*



Says Fred Schoeps, knowledge management program director at IBM, "We are leading the way in integrating knowledge management into the fabric of the IBM business. Knowledge management is part of how we work and learn as well as what we value."

### **Building on what they know**

One of the earliest successes in electronically connecting people for knowledge sharing at IBM came by way of its VM Forums, a self-monitored electronic forum launched 20 years ago for tens of thousands of users to post questions or contribute discussions around topics of interest. Notes Schoeps, "Today, not only are we creating electronic places for employees to team, share information and leverage knowledge, but we are also creating electronic places to work with customers and partners through rich Web- and Lotus Domino-based collaborative tools."

### **Tools for collaboration**

As a technology company, IBM's main challenge is to stay focused on the critical success factor for knowledge management: people. To accelerate integration of knowledge management, IBM designated knowledge management leaders in each of the company's businesses, major business process areas and key functional areas.

Knowledge management leaders spearhead the formation of communities of practice—groups of people who work in different divisions but serve similar functions. Communities provide means of connecting people and systematically managing organizational knowledge.

Once a community is in place, its members can use applications such as ICMAAssetWeb, Lotus TeamRooms, Knowledge Cafes, Lotus QuickPlace, knowledge portals and more to help them transfer and manage knowledge efficiently. Developed with Lotus Domino and accessible from IBM's intranet, TeamRooms are virtual places that enable a team working on a project to capture works-in-progress, engage in forums and collaborate on common documents. "When the project is done, you can mothball the team room and potentially reuse it down the road," notes Schoeps.

A customized form of a team room for large account teams is IBM's CustomerRoom. Says Schoeps, "This is a common place for individuals working on the same account in different parts of the world to share documents, hold discussions and collaboratively work through issues."

### **Knowledge management—integral everyday**

Concludes Schoeps, "We are on a journey to integrate knowledge management into how we do business. The faster we learn and share what we learn with each other and with our customers—and they with us—the faster we transform ourselves into the premier knowledge-based e-business."

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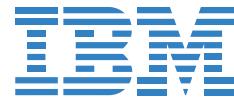
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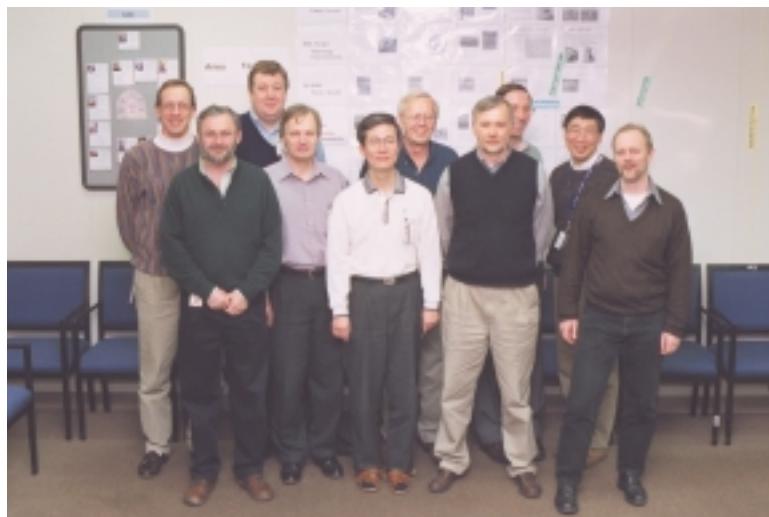


# *IBM-led chip alliance maximizes its knowledge assets.*

Ten years ago, IBM and Infineon (formerly Siemens Microelectronics) saw the future in dynamic random access memory (DRAM) chips, the most common kind of random access memory for personal computers and workstations. Together, these two leading technology companies—with Toshiba coming on board later on—joined forces to develop DRAM chips. Today, the DRAM Development Alliance (DDA) has 300 members and, at any one time, is involved in multiple groundbreaking research and development projects.

An alliance of this nature is not without inherent knowledge management challenges. There's an obvious need to share information within the Alliance, which is primarily located in East Fishkill, New York, with a second facility in Burlington, Vermont. Vast quantities of documents—often related to works in-progress—must be transferred back to the parent company offices. An additional difficulty involves integrating new hires, many from abroad, with minimum delay.

Lastly, time-to-market is a critical component within the chip industry. Ideally, projects should be reviewed upon completion, with “Well Dones” and “Issues” identified and consolidated. That way, researchers can avoid repeating mistakes when moving to the



*The DDA project management team representing the successful synergy of diverse projects, cultures and companies.*

## **Business Challenge**

DRAM Development Alliance (DDA) lacked an efficient way to share and organize knowledge and document lessons learned

## **User Community**

300 Alliance members

## **Knowledge Management Solution**

Strategy and action plan implemented with Lotus® Notes®

## **Business Value**

Weekly project meetings shortened by 1.5 hours, resulting in estimated savings of \$300,000 per annum; faster ramp-up of new hires

*“We are at the point where engineers view lessons learned as an integral facet of the learning curve.”*

*—Laura Rothman, Technical Controller/Coordinator, DDA Alliance*

*“One thing I’ve learned about knowledge management is that it really involves a lot of behavioral change. It’s not just about giving technology to people. It’s about helping them change the way they work.”*

*—Laura Rothman*

next stage in a project. Otherwise, errors can result in significant revenue losses. But the clock is always ticking in the chip development industry, and the pressure to progress quickly often leaves little room for capturing lessons learned.

As the DDA pondered ways to meet its knowledge management challenges, timing was definitely on its side. Around this time, knowledge management consultants from IBM Global Services were on the look-out for a suitable subject for a knowledge management pilot study.

After evaluating the DDA’s situation, the IBM consultants developed a knowledge management vision for the Alliance. “Although the DDA was utilizing Lotus Notes for knowledge transfer, they were not utilizing the Lotus technology fully, so we helped them exploit that,” says Sheri Feinzig, senior consultant, IBM Global Services. “We also took the knowledge management engagement further, by introducing knowledge rooms, a buddy mentoring system and a process involving lessons learned.”

As a result, the DDA is finding that its members are now much better at knowledge transfer and collaboration. From more productive meetings to faster ramp-up of new hires, the group’s new-found efficiency is enabling it to better focus on its core objective—developing the best DRAM chips on the market.

### **Multiple companies, cultures and projects**

The DDA already had team rooms in place—enabling knowledge transfer and collaboration in a virtual work space. Its team rooms should have provided the DDA with the knowledge sharing tool it needed to facilitate information-sharing and help new hires come up to speed. However, says Laura Rothman, technical controller/coordinator, DDA Alliance, “the team rooms had become deluged with information and really needed some restructuring. There were also too many team rooms—often with overlaps of information between rooms, making them unwieldy.”

This data dump was also being felt at the weekly status meetings, which had become not only long-winded, but also ineffective, with information being presented in a haphazard manner. What’s more, foreign members of the Alliance were hampered from participating in meetings, since presentation materials were not generally available beforehand to allow them time to prepare.

### **Putting the people back in the product**

The Jacobson Group of Boston was contracted to rearchitect the DDA’s team rooms. Working with the Alliance and IBM consultants, the group conducted a needs analysis and came up with an improved team room template.

Now called knowledge rooms, the virtual work spaces allow for a more systematic and structured method of presenting information. "A knowledge network architecture was provided, interlinking the various knowledge rooms that needed to share and collaborate, thereby significantly reducing the number of rooms that a member has to consult," says Rothman. Knowledge rooms were also structured in terms of functionality, further increasing their efficacy. Jacobson restructured the team rooms by means of a revised knowledge room template. A central repository will be established, where finalized information will be housed. This knowledge base will automatically replicate to the parent companies, resulting in improved knowledge transfer without information duplication.

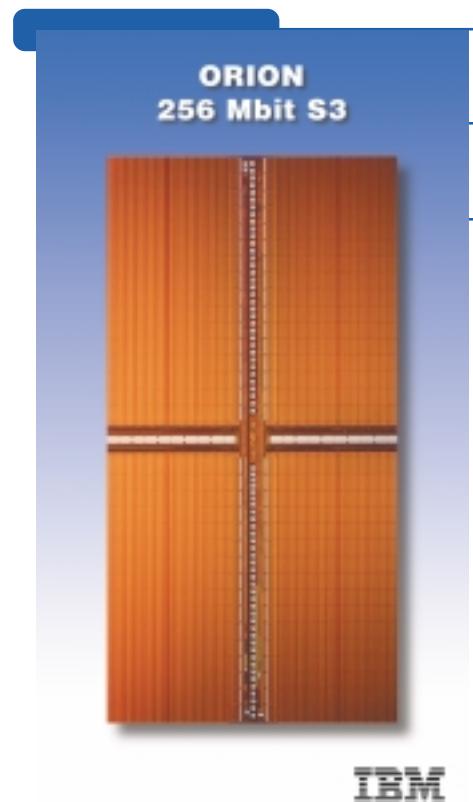
According to Feinzig, the restructuring of knowledge rooms will only succeed if all the people involved in that particular room are consulted on their information needs. "The greater the collaboration, the more successful the knowledge rooms will be," she says.

Meetings have become more productive since the DDA began posting the agendas and presentation charts in the knowledge rooms ahead of time. In addition, the IBM knowledge management consultants provided a template for presenting information at these meetings. With the summary, conclusion and objectives clearly delineated, information could now be delivered in a more structured manner, adding to the efficiency and productivity of the staff meetings. The consultants also assisted Alliance members in taking effective minutes.

#### **Lessons learned point the way ahead**

To integrate success elements into the development process and prevent mistakes from being repeated, the consultants worked with the DDA to establish a process called "lessons learned." In lessons learned, objectives are first determined, with performance then measured against these goals. A designated leader drives the process. Secondly, since mistakes are going to be aired, it is essential that absolute confidentiality be maintained in order to facilitate an open and honest discussion. Once information is processed and consolidated, the lessons learned are incorporated into the development procedures and posted in the relevant knowledge room. Project managers are required to review these lessons prior to commencing the next phase of the project. Rothman points out, "We are at the point where engineers view lessons learned as an integral facet of the learning curve."

To assist new hires, the consultants reintroduced the buddy system, a practice which had fallen into disuse. It took time for new hires to come up to speed. Not only was the DDA involved in many different projects simultaneously, but in addition each company within the Alliance has its own ethos. Add to this the fact that the Alliance comprises different cultures as well, and one can well imagine what it was like for new hires. This was especially true for members from Germany and Japan, who had to come up to speed on work content as well as new cultural surroundings.



*DDA is constantly conducting ground-breaking research to develop DRAM chips.*

Today, new hires work with a mentor, who helps them adapt quickly to the DDA environment. In addition, knowledge management consultants automated what had been a paper process of signoffs, designed to assign a new Alliance member all the necessary peripherals, including office space, a computer and an identity badge. The hiring manager now submits a request in a database, which puts in motion a series of notifications that are automatically forwarded to the responsible parties using the Lotus Notes databases. Karl-Heinz Froehner, technical coordinator of Infineon, notes, "This automated process, in which steps take place simultaneously rather than consecutively, eliminates human error—where a broken link could cause the entire process to break down."

### **Building better business practices**

An exercise of this nature is inherently difficult to quantify, though increased efficiency and effectiveness can and does lead to concrete benefits. As Rothman points out, "By implementing lessons learned, and enabling the Alliance to learn from previous projects, we're helping the group avoid repeating mistakes and capitalizing on our successes. While it's clear that this is a valuable benefit, it is difficult to measure the mistakes you didn't make."

Weekly project review meetings are now much shorter, sometimes by as much as one to one and a half hours. With the information presented using the standard template, project reviews are also far more effective. Participants feel more productive, since they're able to review the meeting presentations in advance—a particularly important benefit for members who are not proficient in English. One engineer reported that the revised weekly meetings were saving the Alliance as much as \$300,000 annually, which more than funded the consulting program.

The automation of the new hire process makes for a much smoother ramp-up process. Feinzig notes that prior to the implementation of this process, it took some engineers six months to find their feet. Given that they were on assignment for two years, this impacted productivity significantly.

### **Knowledge management involves behavior modification**

"In the chip development industry, where time-to-market is a critical factor, it is absolutely imperative that knowledge be managed as effectively as possible," says Rothman. She sums up by saying, "One thing I've learned about knowledge management is that it really involves a lot of behavioral change. It's not just about giving technology to people. It's about helping them change the way they work."

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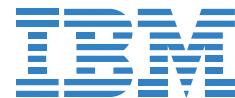
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# *SMPO leverages sales force knowledge to win back the globe.*

When you enter a new work environment, it doesn't take long to identify the resident expert. That seasoned veteran with all the answers. If you're worth your salt, you find this expert and learn everything you can.

But how can you get trained if the closest expert is hard at work, under quota and over 5,500 miles away?

IBM Software Management Project Office (SMPO), a sales force dedicated to competitive win-backs in the systems-management and database marketplace, faced this very challenge. Wanting to start a European team that would mirror the success of its long established Americas team, SMPO needed a knowledge transfer solution that wouldn't impede sales quotas.

IBM Software Group (SWG) Knowledge Management programs team, hot out of the forges and burning to deploy its expertise, began working with SMPO. By providing training in basic knowledge management concepts, supervision in deploying Lotus Notes Teamrooms and Workrooms as well as the development of voice-annotated presentations by sales experts, IBM Knowledge Management was able to provide SMPO with knowledge-based solutions.



*New hires at IBM SMPO can train anywhere at anytime using newly deployed knowledge management solutions.*

### **Business Challenge**

How to utilize subject-matter experts to transfer win-back sales knowledge to new hires in the Americas and a new sales organization in Europe

### **User Community**

85-person European technical sales force; ongoing new hires for European and Americas sales teams

### **Knowledge Management Solution**

Knowledge management training; knowledge transfer action plan and implementation; Lotus® Notes® Teamrooms and Workrooms; Lotus Sametime™, Lotus Freelance Graphics®

### **Business Value**

Competency and efficiency: 50% reduction in training time; yearly sales quotas reached by mid-year; 4 to 5 hours of research per sales person saved each week

*“We are a testament to how a global sales organization can expand and still deliver on its sales objectives by deploying knowledge management solutions.”*

*—Richard Simonetti, IBM Business Unit Executive, Worldwide SMPO Sales*



e-business

“With better knowledge management, SMPO was able to cut training time from 4 months down to 2 months, a 50 percent reduction,” says Richard Simonetti, IBM business unit executive, Worldwide SMPO Sales. “Quotas were reached by midyear, and several deals were signed which, without our introduction to IBM Knowledge Management, would never have come to fruition. We are a testament to how a global sales organization can expand and still deliver on its sales objectives by deploying knowledge management solutions.”

### **Knowing the cause of growing pains**

European expansion presented certain problems for SMPO, as the Americas team, the core of expertise in SMPO win-backs, had quotas to meet. This left no time for them to train new hires, let alone to travel overseas and train an entirely new sales force.

This training crisis was the impetus for an SMPO-wide concern for how its legacy knowledge was managed. Says Simonetti, “The traditional way we approached knowledge sharing was to contact the subject-matter expert directly. Then the expert would fax or e-mail relevant documents or direct us to specific information. This wasn’t efficient. We needed to free up our experts to focus on customers again, by creating a repository where everyone could go to deposit and retrieve knowledge.”

### **Transferring knowledge globally**

IBM Knowledge Management empowers its clients to harness individual and collective knowledge through training, community enablement and technology. Says Simonetti, “The IBM SWG Knowledge Management programs team had a superb understanding of what we needed. With their counsel, we were able to make our knowledge management choices as if we were experts.”

Orderly, functional Lotus Notes Workrooms and Teamrooms were created to manage separate projects. This provided a centralized location for storing and accessing contracts, training information and product matrices, saving individual sales team members up to five hours of research time weekly. By adding Lotus Sametime for instant messaging support, teams could interact on projects or training modules.

Lotus Freelance Graphics, was used to capture the subject-matter experts’ knowledge in audio-visual format, making training available to the European team. Says Simonetti, “Using voice-annotated presentations is more useful than a video conference session because they remain available for future use on the SMPO intranet. This knowledge-based solution significantly reduces the burden normally placed on subject-matter experts and has cut training time in half.”

With the successful transfer and management of knowledge from the Americas team to the team in Europe, SMPO now has a model for future expansion. Training no longer endangers quotas, and new hires have expert knowledge at their fingertips whenever and wherever they need it.

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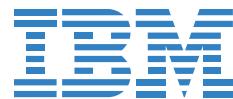
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# *IBM Software TEST reaps benefits with Knowledge Management technologies.*

Where would the “X-Files” be without the balance of Mulder’s paranormal ideas and Scully’s scientific expertise? Would the Beatles have risen to musical superstardom if Lennon and McCartney didn’t fuse their individual songwriting prowess? Behind these masterful pairings is a deep sharing of knowledge, demonstrating that while talent alone is special, collaboration between great minds can be extraordinary.

And so it was with the IBM Software TEST community. Talented engineers worked in small groups testing IBM software on different IBM platforms, but didn’t have the means to easily share ideas and collaborate. As a result, time was wasted re-inventing testing tools, and best practices weren’t being exploited.

To turn things around, IBM launched the Software Test Community Leaders (STCL) team, consisting of management representatives and technical leads who developed a formal knowledge management initiative based on Lotus and Web technologies. From Lotus TeamRooms to Web sites to knowledge bases and realtime collaboration, IBM’s thousands of software testers are able to efficiently and effectively share practices, tools and methodologies, as well as project plans and statuses, test cases, problems and other concerns like never before.



*IBM software engineers can now collaborate on testing projects online using a sophisticated knowledge management solution from Lotus.*

## **Business Challenge**

Provide an efficient means for IBM software testers to exchange ideas and collaborate on projects

## **User Community**

Thousands of IBM Software TEST professionals

## **Knowledge Management Solution**

Collaboration through Lotus® TeamRooms and Lotus Sametime™ and knowledge discovery through Lotus Notes® Test Tool Knowledge Base and other Lotus Notes databases

## **Business Value**

\$16 million in savings and other benefits due to increased efficiency and effectiveness in 1999, with \$25 million to \$30 million in benefits expected for 2000

*“A lot of what we do is really pushing knowledge management technology to the limit. I think we are proof that sharing knowledge is key to building and maintaining a productive community.”*

*—Bill Woodworth, Director,  
IBM Software TEST*



"In 1999, our collaborative efforts yielded \$16 million in effectiveness benefits, including cost savings from the identification of a single, highly efficient, automated tool that our product labs are using," notes Bill Woodworth, director of IBM Software TEST. "This year, we expect these benefits to hit the \$25 million to \$30 million range."

### **Working as a team**

The STCL team has catalogued test tools and practices, launched an intranet testing group Web site and begun distributing a quarterly newsletter. Using Lotus TeamRoom software, the group has enabled engineers to collaborate online, increasing knowledge sharing and reducing travel costs by over \$100,000. In fact, IBM Software TEST has developed a network of Lotus TeamRooms, one for the STCL leaders and one for each of the IBM-wide community workgroups.

"When ten people are collaborating on a project, each person can see what the other is doing and read their comments," notes Don Gilbert, program manager for IBM Software TEST. "The interactive nature, quick responsiveness and ability to edit and store documents and best practices in a single place makes our Lotus TeamRooms a great solution."

Using Lotus Sametime, which facilitates online meetings, test engineers can collaborate in realtime. Says Woodworth, "Many projects span multiple sites, so you don't have the luxury of having all of the team members in one office. With Sametime technology, we can create virtual offices where widely dispersed people can meet. Each attendee views the same documents online, and when someone makes a change, everyone in the session sees the changes being made."

IBM Software TEST's intranet site is the other primary channel where software engineers can access knowledge bases containing information on testing best practices and tools. And because engineers can post on the site reviews of specific software testing tools—both from IBM and other vendors—they can point their peers to the best tools.

### **Pushing knowledge management limits**

Through an infusion of knowledge management, IBM Software TEST can fully leverage its collective expertise. Like Mulder and Scully, Lennon and McCartney and countless other great teams, the software testing engineers are building a synergy that will make their work as valuable as ever for the company's leading-edge software groups.

"A lot of what we do is really pushing knowledge management technology to the limit," says Woodworth. "I think we are proof that sharing knowledge is key to building and maintaining a productive community."

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# *Kellogg fortifies HR knowledge base to better serve employees.*

Kellogg Company practically invented a staple of the American breakfast—it's been making corn flakes and other cold cereals for nearly 100 years. An equally long history of employee commitment has built Kellogg into one of the most well known names in the business world. To better serve employees and retirees, the company sought more efficiency from its human resources organization.

With more than 13,000 retired or current Kellogg employees in the U.S. and Canada being served by various regional offices, executives knew they could respond to benefit queries and requests more quickly and thoroughly through a single HR office—if only they could consolidate their knowledge resources.

Through a knowledge management solution based on Lotus Notes, Kellogg took care of its consolidation needs. With these knowledge bases in place—consolidating records from disparate HR offices—Kellogg was able to create the People Services Center (PSC). The knowledge bases effectively synthesized a broad expanse of employee information, enabling the PSC to unilaterally handle benefits administration, employee services and transaction processing.



*Known for its breakfast cereals, Kellogg has also built a more efficient human resources organization, the Kellogg People Services Center, using a sophisticated Lotus knowledge management solution.*

### **Business Challenge**

Provide a more efficient way to share benefits information with employees and retirees

### **User Community**

Kellogg People Services Center for company employees and retirees

### **Knowledge Management Solution**

Knowledge mapping and discovery, collaboration and expertise location: a centralized, Web-accessible knowledge base created with Lotus® Notes® and Lotus Domino™

### **Business Value**

Savings of \$500,000 annually in overhead, enhanced enterprise-wide information sharing, increased employee satisfaction

*“The bottom line for a human resources organization is serving its constituencies. The knowledge management tools we implemented have helped us serve our workers and retirees more effectively and with fewer people.”*

*—Susan Schmitt, Director, People Services Center, Kellogg Company*



“Using knowledge management techniques was invaluable to consolidating our human resources departments,” notes PSC Director Susan Schmitt. “By pooling the knowledge contributions of each of our offices, we were able to save \$500,000 annually in overhead costs alone.”

### **Information in realtime**

Delivering Lotus Notes over an intranet helps employees access certain benefit information in realtime—without having to pick up the phone and consume the costly time of an HR representative. The intranet also helps save data input time. “Once we update the content in our knowledge database, it’s automatically uploaded on the Web, so we don’t have to update it in two places,” says Schmitt.

The intranet also employs a knowledge discovery feature, where workers can access “scripted life events” like getting married or having a baby, then determine benefit changes they may want to consider.

### **Easy customization assists information centralization**

When Kellogg sought a solution to its knowledge management problem, it found that Lotus Notes—already in place as the corporate e-mail system—was an easily customizable answer.

Standardized tools and recognizable icons inherent to Lotus Notes are enabling HR employees to quickly learn how to add content to the knowledge base. This multiple-contributor feature facilitates the kind of collaborative HR environment Kellogg envisioned, helping staff share the information that helps them serve the company’s employees and retirees.

### **Preserving the relationship-oriented culture**

In addition to the technical challenge of retooling Kellogg’s HR information infrastructure, it was also important to ensure the new system’s adoption by employees who are used to personal service.

“Kellogg has a very relationship-oriented culture,” says Schmitt. “Our employees were unsure about the benefits offered through this new system compared to the more labor-intense system of having personnel on site taking their calls.” After the Lotus solution was implemented, it took only four full-time employees to field 21,600 calls in 1999. Even with fewer personnel, surveys show that at least 90 percent of Kellogg’s workforce is either satisfied or very satisfied with the service they’re now receiving.

“The bottom line for a human resources organization is serving its constituencies,” Schmitt concludes. “The knowledge management tools we implemented have helped us serve our workers and retirees more effectively and with fewer people.”

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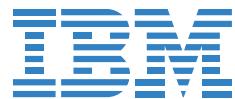
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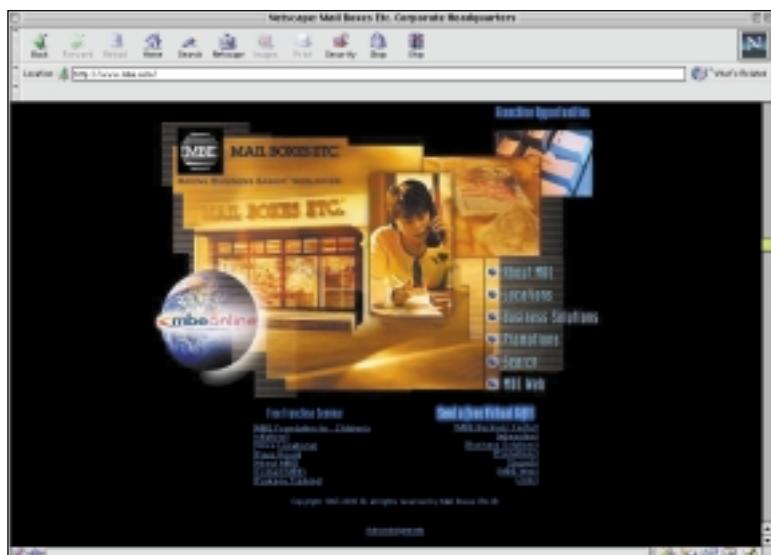


# *Mail Boxes Etc. knowledge base brings growing enterprise closer together.*

With more than 4,000 retail locations across the globe, Mail Boxes Etc., headquartered in San Diego, California, is one of the world's largest franchise operations, specializing in postal services and business communications. Every day, a new center opens somewhere in the world. For most of the company's 20-year history, each franchise has operated as a stand-alone operation.

Recently, Mail Boxes Etc. saw an opportunity to serve as a fulfillment center for e-commerce businesses. To do this successfully, the company connected its franchises through a virtual private network and deployed sophisticated software for monitoring and managing shipments.

However, franchisees—who have varying levels of computer skills—have needed help coming up to speed with the new automated shipping systems. Until recently, they were flooding Mail Boxes Etc.'s tech support center with up to 300 calls daily. And, without a central repository of technical data to consult, tech support reps were hampered in providing fast, accurate responses.



Mail Boxes Etc. has made training and information sharing across its growing enterprise easier with a knowledge management solution from Lotus.

## Business Challenge

Provide an efficient, thorough means to share information, collaborate and ramp-up new hires across its retail locations

## User Community

As many as 20,000 associates in 4,000 franchises

## Knowledge Management Solution

meHelp, a knowledge and support system base developed with Lotus® Domino™ and Lotus Notes®, for capturing and organizing knowledge and facilitating collaboration

## Business Value

Anticipate response time to be reduced from 3 weeks to 4 hours; 60% reduction in call load; enhanced consistency in customer service and enterprise-wide knowledge sharing

***“Our IBM-based knowledge management solution will continue to be a key in creating the consistency that is required for customer confidence in our organization.”***

*—Ray Causey, Vice President of Technology and CIO, Mail Boxes Etc.*



That's when Mail Boxes Etc. recognized a need to consolidate its information resources, and turned to a knowledge management solution to capture and organize its internal knowledge assets. The company enlisted the help of Lotus Business Partner Norstan, experts in Lotus Notes and knowledge management solution development. Norstan developed mbeHelp, a knowledge base of frequently asked questions (FAQs) on technical issues that associates can search by keyword or index.

Not only is mbeHelp helping up to 20,000 Mail Boxes Etc. associates solve systems issues, but the knowledge base is facilitating collaboration, enabling each center to provide a consistent level of personalized service to customers. Explains Ray Causey, vice president of technology for Mail Boxes Etc., "Our knowledge management project was driven by a need to improve tech support—and already, we anticipate mbeHelp will reduce our call load by 60 percent. But because of the information resources we can now easily share across our growing enterprise, our franchise associates are better equipped to provide the high level of service customers expect."

#### **Single knowledge resource for multiple service channels**

Associates access mbeHelp by logging on to Mail Boxes Etc.'s intranet. There, they can learn how to reload printers, complete specific types of transactions or find out more about the system's capabilities.

If they can't find the answer they need, associates can submit an online request to the home office Help Desk for assistance. This request is routed to an appropriate support person by Mail Boxes Etc.'s tracking system, developed with the workflow capabilities of Lotus Notes and Lotus Domino. Common resolutions are added to the knowledge base.

The knowledge base supports the self-service intranet site as well as the company's other service channels. For example, tech support representatives consult mbeHelp when answering employee calls. "Previously, our typical backlog for unresolved issues was 850 calls and our average turnaround time was three weeks," notes Causey. "With our knowledge base, we can promise an initial response within 4 hours and can resolve 75 percent of all cases within 24 hours."

#### **Knowledge management foundation**

So far, Mail Boxes Etc. has only scratched the surface of its knowledge management potential. The company will continue enhancing mbeHelp, adding links to other company resources, such as training materials and human resources documents. As new franchises open, the company will be able to support them without adding additional corporate staff.

"If every time a customer goes into a Mail Boxes Etc. center they get a different set of services and responses, then we're no different than all the independents out there," concludes Causey. "So our IBM-based knowledge management solution will continue to be a key in creating the consistency that is required for customer confidence in our organization."

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# *Marist College shepherds knowledge to give education freer rein.*

In Poughkeepsie, New York, on the verdant banks of the Hudson River, a quiet revolution is taking place in liberal arts education. Marist College, founded in 1929 as a seminary, has emerged to become a leading arts and sciences college, and is now redefining the education process to make it more effective, affordable and available.

With an undergraduate enrollment of 3,350 students, Marist seeks to build a diverse community of students in pursuit of personal and intellectual growth. But doing this while preparing students for life in the 21<sup>st</sup> century requires that faculty give students increasingly broader perspectives on their subject matter and empower them to play a more active role in the learning process.

Leveraging a 20-year relationship with IBM, Marist faculty members and IT staff teamed with IBM in 1999 to explore the ways in which knowledge management technologies could help meet these needs. Starting with isolated projects in distance learning and content management, the team moved on to create a comprehensive, integrated knowledge management infrastructure, based almost exclusively on IBM and Lotus technologies. However, Vice President of Information Technology Kamran Khan is quick to point out that the relationship between the two organizations runs •



Several members of the team that is turning Marist's knowledge management vision into reality; left to right: Kamran Khan, Developer Ethan Giorgi and Dean of the School of Communication Arts Guy Lometti.

## Business Challenge

Enrich the learning experience; draw and retain top-notch faculty; attain position as key technology resource for the business world

## User Community

Faculty, students, businesses, K-12 community

## Knowledge Management Solution

Learner support system based on IBM DB2<sup>®</sup> Digital Library, Lotus<sup>®</sup> Notes<sup>®</sup>, Lotus Domino<sup>™</sup>, Lotus Sametime<sup>™</sup> and Lotus QuickPlace<sup>™</sup>; distance learning with Lotus LearningSpace<sup>®</sup>; digital library for FDR Presidential Library based on DB2 Digital Library

## Business Value

Improved communication between faculty and students; more efficient teaching and learning processes; opportunities for innovative sources of revenue

*“Average SAT scores for incoming freshmen are dramatically higher, helping us raise the bar for academic achievement.”*

*—Dennis Murray, President and Professor of Public Policy, Marist College*

*“The more we get involved in knowledge management, the more we realize that communities are the most important component. You’ve got to ... understand what technologies will best serve their needs. That’s what we’re learning with IBM.”*

*–Kamran Khan, Vice President, Information Technology, Marist College*

deeper than software and servers. “IBM has been very active in higher education as well as in the K-12 community, so it understands our needs and has the depth of expertise to fulfill them,” he says.

As it evolves, this infrastructure is serving myriad communities by eliminating obstacles of time and geography to deliver high-quality information. And it is enriching the learning experience by broadening the students’ scope of interactions with faculty, other students and the business world. The knowledge management infrastructure is also helping Marist forge relationships with the business community, which is increasingly looking to the college as a provider of technology-based learning and collaboration solutions.

As Marist enters the second phase of its Joint Study with IBM, the college’s investment in knowledge management is elevating the college’s prestige in the higher education market. “This past year, we received over 6,200 applications for 900 freshman seats,” reports Dennis Murray, president and professor of public policy at Marist College. “As a result, average SAT scores for incoming freshmen are dramatically higher, helping us raise the bar for academic achievement and give our graduates a greater advantage in the marketplace.”

### **Testing the knowledge management waters**

Marist’s first joint study project, the Marist Electronic Reserve Instructional Technology (MERIT) system, used IBM DB2 Digital Library to make reserve materials available to students across the campus network, thereby eliminating the need for a paper-copy library reserve room. Faculty saw its potential as a media repository and began using it to store images, class projects, and other teaching materials. This provided students with a single, convenient place to go for syllabus resources and made distribution of these materials much easier for faculty and staff.

During the MERIT project, other Marist faculty members were rising to meet knowledge management challenges of their own. When Assistant Professor of Computer Science Dr. Rebecca Thomas was called upon to deliver an online C++ course for IBM employees, she turned to Lotus LearningSpace to adapt her course to the special needs of distance learning.

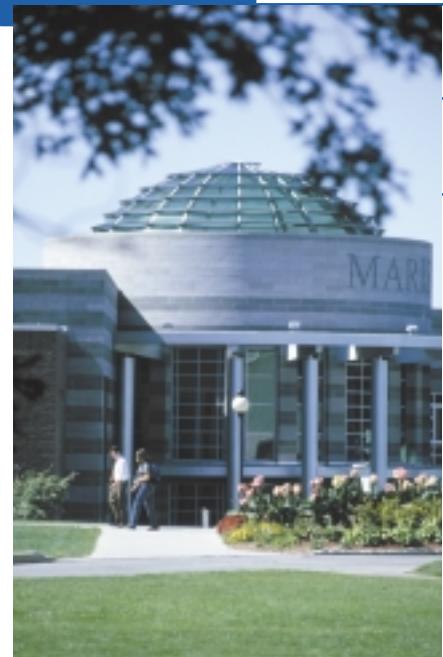
Registered students log on to Dr. Thomas's C++ learning space through the Internet to view their learning schedule. Then, they can enter the Media Center to access required readings and view Dr. Thomas's accompanying notes. In the Course Room, students can post questions for Dr. Thomas to answer either publicly or privately. In addition, Dr. Thomas keeps a database of student profiles, portfolios and graded work in LearningSpace. "Each student can go back to his or her own assignments and look at my comments before starting the next assignment," she explains.

Several miles up the road from Marist College, in Hyde Park, resides the FDR Presidential Library. At the library, Director of Education Programs John Ferris and FDR Scholar and Marist Associate Professor of History David Woolner have started to change the face of history. About two years ago, they decided to make 150,000 of the most sought-after documents in the library accessible through the library's Web site. But posting the document images wasn't enough. Woolner and Ferris wanted to make it as easy for 4<sup>th</sup> graders as it is for a scholar to navigate the library and understand the documents. That required extensive indexing and search facilities, which FDR Library—as an archival institution—never had. Not surprisingly, the library looked to the Marist/IBM Joint Study Team for the technology experience required to build such a digital library. Powered by DB2 Digital Library and IBM Content Manager and hosted on the Marist campus, the FDR Web site now averages over two million hits per quarter.

### **Bringing it all together**

Although all of these projects were individual successes, meeting the college's strategic objectives called for the creation of a comprehensive, integrated foundation and methodology for the discovery, capture and sharing of knowledge. Combining the best features of MERIT's and FDR's easily searchable digital libraries with the interactivity of Dr. Thomas's online course, the Marist/IBM team built the Learner Support/Knowledge Management System (LS/KM), which includes five components:

- Frequently Asked Questions (FAQ) uses Lotus Domino to provide learners with access to content experts, such as Dr. Thomas. These interactions are then stored in Lotus Notes databases.



*Marist's Donnelly Hall houses much of the IBM technology that drives the FDR Digital Library as well as the Learner Support/Knowledge Management System.*

The Customized Resource Storehouse (CRS), a future link to DB2 Digital Library, will provide a searchable archive of articles, clippings, texts and other multimedia resources. Students who take online courses will also be able to tap into the CRS through LearningSpace.

- Online Discussion and Team Projects provide opportunities for building communities around particular courses, subject areas, business problems or tasks. This component leverages the Web-enabled teamware capabilities of Lotus TeamRoom or QuickPlace to create instant shared workspaces that members can access anytime. It can easily be integrated into Lotus Sametime to enable team members to find each other online and initiate live conversations. Content experts monitor the interactions in the teams to capture information for the FAQ and can direct team members to information in the CRS or Learning Gallery/Business Solutions Forum (see below).
- The Learning Gallery/Business Solutions Forum captures challenges that arise in learning or business environments and stores them in Lotus Notes. Users can then access the challenges and post suggested solutions. As these solutions are reviewed and successful ones are identified, the database becomes a collection of best practices.
- The Content Experts and Evaluation Team are a critical component of the LS/KM. They help learners get the most out of the technology tools, verify that the tools continue to meet their needs and prevent the content repositories from becoming digital dumping grounds. Dr. Thomas serves as the content expert from the computer sciences department, and the Joint Study team is in the process of recruiting content experts from Marist's communications, business, sciences and humanities schools.

The LS/KM, as well as the MERIT system, the distance learning course and the FDR Digital Library, are supported by IBM S/390® Parallel Enterprise Server™, an IBM RS/6000® SP™ and multiple Netfinity® 5500 servers located in Marist's data center.

#### **A continual learning process**

Khan notes that the rewards Marist has reaped are possible only because of a concerted, ongoing effort, enthusiastically promoted by the college's executive management. And in an organization that's all about education, the ongoing knowledge management work with IBM has probably been one of the most interesting learning experiences of all. "The more we get involved in knowledge management, the more we realize that communities are the most important component of any solution," Khan says. "You've got to know how to define those communities and then understand what technologies will best serve their needs. That's what we're learning with IBM."

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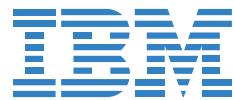
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Part of the material in this document was based on interviews by Mary E. Boone, author of *The Interactive E-Manager: Smart Communication Strategies for an E-Business Era* (New York: McGraw Hill, January 2001).

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# NHL scores a knowledge management hat trick with Lotus.

Each time a player skates onto the ice, scores a goal or makes an assist, the National Hockey League (NHL) is taking notes. League officials are as meticulous about tracking statistics as players are about pre-game rituals. Numbers, after all, equip general managers as well as coaches, scouts and trainers to make the decisions that affect their teams—player moves, game strategies, draft picks and so on.

But in an organization as large as the NHL—with 30 U.S. and Canadian teams and offices in New York, Toronto, Montreal and Tappan—sharing information across the enterprise is no sure shot. In fact, disseminating paper statistical reports proved to be so costly, time-consuming and inconsistent that Gary Bettman, of NHL Senior Management, called for “no more paper.”

That's when the NHL turned to efficient knowledge management technologies—namely, Lotus Notes and Lotus Domino. Chosen for their scalability, flexibility and ease-of-use, Lotus Notes and Domino were used to create a corporate portal that connects to a network of knowledge resources.

Now, the NHL has a convenient way to capture knowledge acquired from many places, organize it and share it efficiently with anyone that has an interest or stake in the NHL.

Using knowledge management solutions from Lotus, the NHL has a convenient, fast means to communicate game and player data to internal and external audiences.

## Business Challenge

Provide efficient means to share NHL player and game statistics

## User Community

General managers, coaches, scouts, trainers, media and fans

## Knowledge Management Solution

Knowledge discovery and mapping, collaboration: information portal created with Lotus® Notes® and Lotus Domino™

## Business Value

Reports generated instantly, compared to several days; efficient means for enterprise-wide knowledge sharing

**“Our Lotus Notes and Domino knowledge management solution delivers the information the NHL needs and makes statistics come alive for all of our internal and external customers.”**

—Peter DelGiacco, Vice President of IT, National Hockey League



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Says Peter DelGiacco, vice president of IT for the NHL, "From this portal, team officials can learn what they need to make decisions that impact their team's success; reporters can research statistics for their stories and our fans can keep on top of their favorite players."

### **Organizing the data deluge**

At every game, league officials collect data continuously, inputting the statistics into IBM ThinkPad® laptops. Overnight, the data is replicated to Lotus Notes databases residing on the franchise's IBM Netfinity® servers as well as a dedicated media server supporting an application called *Game Notes*, which is available through the portal.

Previously, teams sent game notes to opposing teams and reporters in a variety of formats. "Now, with *Game Notes*, our NHL franchises can manage information, including news releases, using one standardized, consistent format, which media use as an ongoing news resource," says DelGiacco. "That's an incredible step towards organizational effectiveness and administrative savings."

*Statistical Leaders* was one of the first applications developed with Lotus Notes for the portal. It enables users inside and outside of the league to answer questions about players or teams. Explains DelGiacco, "It's broken down into several sections, such as time on ice, goals, points, assists. And users can also drill down and find out who had the most power play goals or if the team that had the most shots on goal was also the highest scoring team in the league."

If users want a graphical analysis of player performance in comparison to others around the NHL, they can consult *Player Comparisons*. With a simple click, numbers can immediately be viewed as charts or graphs, for example.

For both *Statistical Leaders* and *Player Comparisons*, Lotus Enterprise Integrator (LEI) extracts data from Lotus Notes databases to feed the Domino server. Domino replicates the data to Lotus Notes clients used within the league and to a Lotus Notes database that teams and the media access through [www.nhlmedia.com](http://www.nhlmedia.com). Hockey fans also can access this valuable information through the NHL's official website, [www.nhl.com](http://www.nhl.com).

"Instead of running time-consuming player and team reports," says DelGiacco, "general managers and coaches now have instant, easy-to-access information that can be viewed anytime, anywhere, in a versatile manner that meets their requirements."

### **Smooth skating with knowledge management**

Moving from paper reports to an electronic knowledge management solution, the NHL is in a much better position to harness the power of its knowledge assets for the benefit of those inside and outside of its enterprise.

Says DelGiacco, "The bottom line is that our Lotus Notes and Domino knowledge management solution delivers the information the NHL needs and makes statistics come alive for all of our internal and external customers that depend on it."

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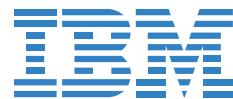
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# *The Rouse Company reengineers its business with knowledge management.*

Founded in 1939, The Rouse Company is one of the largest real estate development and management companies in the U.S., operating 150 properties in 22 states and Canada. Its roster is filled with the likes of the historic Faneuil Hall Marketplace in downtown Boston and the Summerlin planned community in Las Vegas.

With about 4,200 employees across the nation, making sure that everyone is walking on the same side of the block can be daunting. That's what The Rouse Company discovered when it reengineered its leasing process, moving from a geography-centric to an account-centric system. Doing so required coordination of the leasing effort and dissemination of demographic, competitive, property, expense and sales information to its 100 leasing employees located throughout the country. Previously, only local employees located at the company's retail sites handled sales transactions for their sites. Now, all leasing employees need to be coordinated and have access to the information so they can lease spaces in shopping venues that they might not actually see in person.

To centralize its leasing system, the company worked with Lotus Business Partner ASI International, which customized its Lotus Notes-based Strategic Leasing Product (SLP) to meet The Rouse Company's specific needs. The result is The Rouse Company's Leasing Management System (LMS), a knowledge base of 13 databases—



*With its Lotus knowledge management solution in place, The Rouse Company keeps the Faneuil Hall Marketplace in Boston brimming with successful shops.*

### **Business Challenge**

Implement account-based leasing across enterprise; provide an efficient training system and reporting solution

### **User Community**

Up to 1,700 employees in 70 different offices

### **Knowledge Management Solution**

Knowledge discovery: knowledge base containing documents on real estate spaces in the U.S., developed with Lotus® Notes®; knowledge transfer: online courses developed with Lotus LearningSpace®

### **Business Value**

From knowledge base: time and cost savings from decreased paper flow; enhanced collaboration and knowledge sharing; increased sales transactions. From online courses: 77% reduction in training cycle; savings in travel expenses

*“We simply could not have enabled this critical change in our business without the knowledge management technology from Lotus.”*

*—Joel Manfredo, Vice President,  
The Rouse Company*



several containing over 100,000 documents—which gives Rouse employees a window into any real estate space in the U.S. Employees can find out who is working on a particular project, read detailed progress reports and learn about demographics, sales, trade areas, competitive offerings, selling sheets and more. In short, their paper-saving knowledge management solution is providing more accurate pricing and space availability information, enabling them to be more proactive in closing sales.

“Before, it would have taken weeks to organize and distribute all of this information because it was paper-based, decentralized and located throughout our different offices,” notes Joel Manfredo, vice president at The Rouse Company. “While a causal relationship is difficult to determine, we do know that, since the knowledge resources our employees need are captured and organized in a way that allows them quick access, The Rouse Company’s occupancy levels have become one of the highest in the industry.”

### **Leveraging Lotus for learning and beyond**

Pleased with its Lotus Notes knowledge base, The Rouse Company decided to call on Lotus when it needed to train about 700 employees in 70 different locations on a customized budgeting and reporting software solution. Initially considering having instructor-led classes, the company shuddered when it learned how much it would cost to send 12 instructors on the road for five weeks to reach all of these employees.

Wanting a more time and cost-efficient way to transfer knowledge to dispersed employees, The Rouse Company decided to develop online courses with Lotus LearningSpace.

Working with Lotus Business Partner RWD Technologies, Inc., The Rouse Company installed the hardware and software needed to create a six-hour course. Development and testing took just seven weeks, and the course was delivered over the corporate intranet. Says Manfredo, “We trained between 600 and 700 people in 8 days. An instructor-led course would have taken five weeks just to deliver.” The savings are many, since online learning eliminates travel costs and time required of instructors. And with LearningSpace, the company can offer refresher courses at zero incremental cost.

The Rouse Company currently handles 30 percent of its training online, and expects this percentage to grow substantially. The company plans to add 11 courses from the National Education Testing Group and to develop several new customized courses taking advantage of both the asynchronous and synchronous features of LearningSpace.

### **Transforming business with knowledge management**

Through its knowledge management solutions, The Rouse Company has successfully transitioned to a new business model and is poised to continue its pace of growth. “We simply could not have enabled this critical change in our business without the knowledge management technology from Lotus,” concludes Manfredo. “Our employees are now better informed and can thus pursue sales opportunities more aggressively, effectively and efficiently.”

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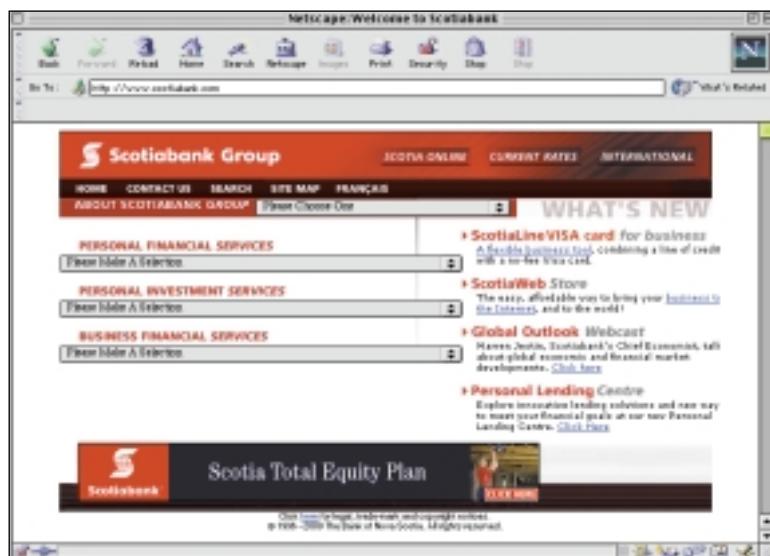


# Scotiabank Group opens knowledge port to sales team.

In the corporate world, knowledge not only lends power, but it can also generate money, efficiency and a competitive edge. However, when that knowledge is spread across disparate systems, it quickly loses value because it isn't easily accessible by the individuals that need it the most. Until recently, Scotiabank—one of Canada's largest banks with 1,200 branches—feared that it wasn't making the best use of its knowledge resources.

That's what led Scotiabank to implement Prospector, a new customer relationship management (CRM) system that enables the bank's sales and marketing organizations to share knowledge and collaborate on a worldwide basis. "We view market and client knowledge as institutional assets that should be used on behalf of our clients, rather than residing in fractured pieces, or exclusively with different individuals," says Conor O'Reilly, managing director and head of the Wholesale Relationship Management Project at Scotiabank Group.

Based on Lotus Notes and Lotus Domino, Prospector enables Scotiabank to provide its relationship managers and product specialists with a common view of customer requirements, regardless of their location. More than 1,000 employees servicing clients in 32 countries are now empowered with secure, encrypted access to customer information as well as up-to-the minute data from a variety of business sources.



Using Lotus knowledge management technology, Scotiabank created Prospector, a system for sharing its customer information resources enterprise-wide.

## Business Challenge

Enable customer relationship managers to easily collaborate and share knowledge enterprise-wide

## User Community

Relationship managers, product specialists

## Knowledge Management Solution

Collaboration: Prospector, a knowledge management system developed with Lotus® Notes® and Lotus Domino™

## Business Value

Efficient and secure means for enterprise-wide knowledge sharing; instant access to information from multiple business sources; global information replication; minimal user training

***"Prospector is the perfect knowledge management solution, because it runs on employee brain power—and is shared around the world."***

*—Conor O'Reilly, Managing Director and Head of the Wholesale Relationship Management Project, Scotiabank Group*



“One of the things that is quite unique about Prospector is that other organizations have tried similar projects, but have had limited geographical or product reach,” says O'Reilly. “Prospector is substantially comprehensive in scope because it covers all aspects of how Scotiabank services its wholesale customers.”

### **Bringing it all together**

Since the bank maintains different systems for its financial products and services, customer data resides in multiple locations, and that was making it impossible for employees to obtain a complete view of customer accounts. In addition, the bank's marketing processes were primarily paper-based. And when it came to sharing information, customer relationship managers were limited to using e-mail and the telephone. Compounding the problem was that fact that these managers are often on the road and much of their work involves information that is highly confidential.

Notes O'Reilly, “The ability to effectively balance this customer confidentiality with the need to collaborate was of paramount importance when it came to selecting a platform for our knowledge management system. We chose Domino as our technology platform because of its collaborative capabilities and outstanding security features, in addition to its unique replication ability—all necessities for our business.”

### **High availability keeps users current**

Not only did the new system have to stand up to rigorous geographical and security demands, it also had to service a market that demands up-to-the-minute information from a variety of business sources. In order to effectively deliver information and service the time-critical nature of its business, the bank uses a cluster of Lotus Domino servers to ensure users can call up relevant information in just seconds. Lotus Notes' replication ability provides other employees instant access to the same information, dramatically improving communications and efficiency, as well as their ability to service customers.

### **The perfect knowledge management solution**

A core team of personnel from both IBM and Scotiabank deployed the knowledge management system over the course of a year. Lotus Notes, with its intuitive and user-friendly interface, minimized training needs and helped ensure there were no lags in service or system downtime during implementation.

Overall, it hasn't taken long for Scotiabank's executive management team and employees to see the value in capturing, organizing and sharing their intellectual capital. Says O'Reilly, “The value of the Lotus Notes and Domino knowledge management solution will increase exponentially as system usage grows. When more data is entered into the system, it becomes more relevant. Prospector is the perfect knowledge management solution, because it runs on employee brain power—and is shared around the world.”

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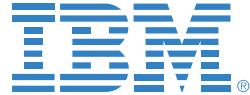
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## *Shaw Pittman captures knowledge assets to build its practice.*

Cool digs, hot young professionals, burgeoning business and high employee mobility. If this sounds like another dot-com start-up scenario, guess again. We're talking about Shaw Pittman, a \$165 million, 750-employee law firm headquartered in Washington D.C.

Like most successful law offices, Shaw Pittman had always worked overtime to satisfy its clients' needs with a cadre of the best and brightest attorneys. But because turnover is a fact of business life, Shaw Pittman needed to ensure that new hires can come up to speed efficiently and that its entire team employs and promotes best practices.

Shaw Pittman recognized it needed to leverage its intellectual capital, sharing it among the firm's domestic and foreign offices and even with clients. Today, 500 Lotus Notes databases are the backbone of the firm's sophisticated knowledge management system.

"We really wanted to be an industry leader in sharing knowledge and experience among ourselves, so we could deliver high-quality services," says Paul Mickey, managing partner at Shaw Pittman. "With our Lotus Notes knowledge management solution, we can step into that leadership position."



Shaw Pittman is an expert in the courthouse and the IT arena, having developed scores of knowledge management extranets that help its clients utilize their knowledge resources.

### Business Challenge

Share law firm's intellectual capital with all employees and clients

### User Community

400 lawyers, 350 other employees, clients

### Knowledge Management Solution

Knowledge transfer, collaboration: Lotus® Notes® extranets and databases containing administrative, process, internal practice and client outsourcing information

### Business Value

Improved responsiveness and productivity; competitive advantage when soliciting new clients; 99% reduction in new client approval time; fast ramp-up of new associates

*"We really wanted to be an industry leader in sharing knowledge, so we could deliver high-quality services. With our Lotus Notes-based knowledge management solution, we can step into that leadership position."*

*—Paul Mickey, Managing Partner, Shaw Pittman*



## Sharing best practices

Twelve practice groups operate within Shaw Pittman. Technology transactions is the largest, encompassing outsourcing, technology transfers, licensing and emerging companies—nearly half the firm. The firm has handled 400 major outsourcings for clients that contract for IT functions. Lawyers negotiating outsourcing deals frequently work from customer sites, which makes remote access to information critical. All lawyers carry a local replica of the pertinent Lotus Notes database on their notebook computers—giving them quick access to the information they need to serve their clients.

For instance, an attorney at a customer site who is presented with a question he or she cannot readily answer can type a query into the discussion view of the Lotus Notes database called “What’s Up.” Other technology attorneys will see the question when they replicate their databases—which they normally do at least once a day—and those with expertise can answer the question. This way, the lawyer with the question doesn’t have to ask someone back at the office to search through paper files, spending hours researching an issue someone else has already addressed.

## Ramping up new hires

For new hires that come on board, Shaw Pittman has found that knowledge transfer can help make them productive more quickly and help current staff to work more efficiently. An internal systems support database that houses the intellectual assets of the firm is used as a training tool to help first-year associates come up to speed, making more of their hours billable. The database, which contains the collective experience of all of the firm’s lawyers, is also used to track best practices, enabling Shaw Pittman to better market itself to potential clients.

Internal databases contain all of the firm’s administrative and process information, including new client material. These databases can be sorted by vendor, location, attorney, client or type of contract. Using a Lotus Notes workflow application, Shaw Pittman can consult the databases for potential conflicts between new and existing clients. As a result, the new client approval process has been shortened from two weeks, when the process was paper-based, to less than two hours.

## A marketing advantage

Not only are Shaw Pittman’s Lotus Notes databases a means to increase internal efficiency, they are also another revenue source. Shaw Pittman has developed more than 50 extranets for its clients, helping them make the most of their knowledge assets.

Says Mickey, “We are so pleased with how knowledge management has helped our business, that when we call on clients, we introduce the concept and technologies to them. By showing them how we can use knowledge management practices to deliver our services more efficiently, we are increasing the value we bring to them.”

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## *VHA helps healthcare providers share best practices, improve care.*

While healthcare organizations know what clinical practice is good for a patient's condition, the care that the patient actually receives might differ. Often, this has nothing to do with the doctor's advice. Rather, it deals with more systemic issues—a pharmacist misreads a doctor's handwriting, a crucial piece of testing equipment is unavailable when needed or the ambulance doesn't have the needed medication on board.

VHA Inc.—a national alliance of healthcare organizations founded in 1977—was challenged with helping the 1,900 hospitals, health systems and other providers in its membership reduce this gap, called clinical variation. What its members needed was an efficient, cost-effective way to share best practices, so that they could provide a higher standard of clinical excellence to their patients.

VHA teamed up with Lotus® Professional Services, which leveraged Lotus Notes and Lotus Domino to develop the Clinical Knowledge Management (CKM) system in less than three months. User-friendly, featuring an intuitive interface, the CKM system is



While VHA's public Web site communicates the organization's high standards for patient care, VHA's Customer Knowledge Management intranet helps the organization meet those standards by sharing best practices among its medical and administrative staff.

### Business Challenge

VHAs members needed to reduce clinical variation, the gap between what medical institutions know is good clinical practice for a patient's condition and what care a patient actually receives

### User Community

Tens of thousands of nurses, physicians, pharmacists, hospital administrators and emergency medical services personnel from 1,900 member institutions

### Knowledge Management Solution

Clinical Knowledge Management (CKM) system, a knowledge repository of authorized clinical information and instructions; developed with Lotus® Notes® and Lotus Domino™

### Business Value

Reduction in clinical variation, efficient sharing of best practices, better patient care

*“Our CKM knowledge repository is the place to go for practical insights generated by member organizations that are working to improve the quality of care.”*

—Stacy Cinail, Vice President of Clinical Affairs, VHA



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a knowledge repository that VHA members may search for authorized clinical information and instructions. Also available are informal database discussions called "Hallway Chats," which enable teams to brainstorm and share information in an unstructured way.

"Our CKM knowledge repository is the place to go for practical insights generated by member organizations that are working to improve the quality of care," says Stacy Cinatl, vice president of Clinical Affairs for VHA. "We're encouraging them to share tips, case studies, experiences and techniques."

### **Better knowledge sharing for better care**

The CKM system fits well with a series of programs that VHA created to help hospitals assess and improve the level of patient care. Notes Cinatl, "The medical community wants to produce higher clinical excellence so they can reinforce the confidence of their patients." VHA's Clinical Advantage program includes initiatives to improve care for stroke, cardiac and breast cancer patients, reduce medication errors, improve patient safety and enhance the quality of end-of-life care.

To help its members achieve these quality goals, VHA formed improvement programs for cross-functional teams. Since the teams involve representatives from many member institutions, relying solely on in-person workshops would be impractical. Thus, the CKM system provides the optimum collaborative solution for healthcare organizations spread throughout the nation.

At any given time, the CKM system could have upwards of tens of thousands of users. Cinatl offers an example of how a cross-functional team might use the system: "Suppose a nurse is concerned about how her healthcare organization uses beta blockers for patients with heart disease. The team has a brainstorming session to come up with ways to improve on their care."

She continues, "They research their ideas in CKM, examining what other organizations have done. The nurse may post a question in a Hallway Chat, ask a subject matter expert or search the system using keywords. There's quite a bit of flexibility in how users can take advantage of this tool."

### **Encouraging input**

At VHA, knowledge stewards and advisory councils are responsible for driving CKM's success. Knowledge stewards, grouped by disease categories, focus on extracting information, supporting the cross-functional teams and overseeing Hallway Chat discussions. Advisory councils include specialists organized by disease and are responsible for approving information elevated from other sources into the CKM system.

"CKM is too new for formal assessment, but we are quite pleased with it," says Cinatl. "We're getting good anecdotal feedback, and we can see what we need to do to make the system work even better."

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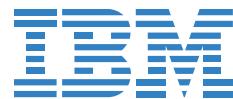
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# *Village of Buffalo Grove populates knowledge bases for city service.*

Once a sleepy farming community providing nearby Chicago with cheese, milk and butter, the Village of Buffalo Grove, Illinois, has evolved into a suburban community of 43,000 residents. But don't let its agrarian roots fool you—this town is far from being sleepy. Beneath its upscale housing developments and wide-open fields is an expansive knowledge management system powered by a leading-edge IT infrastructure.

Running a growing city involves managing lots of information as well as sharing it—which, over the years, became quite cumbersome in Buffalo Grove. City staff members found themselves relying on senior employees for answers—which worked when these employees were available. Explains Robert Giddens, the city's director of management information systems (MIS), "A lot of the knowledge that 20-year employees have—whether it relates to municipal ordinances, property restrictions or even known fire hazards—is in their heads. We needed to document what they know, so other people could share it—and, thus, eliminate any lapses should these veteran employees retire or go on vacation."

Goal in hand, Giddens and his MIS team of three tied together the city's islands of automation, creating an intricate web of knowledge sharing that prompted *CIO Magazine* to devote a recent cover story to this "wired town." With Lotus Notes



*Knowledge management has permeated across the Village of Buffalo Grove, transforming the town into a safer, more efficiently run place.*

### Business Challenge

Decrease learning curve by sharing subject matter experts' knowledge; promote safety, efficient city operations and better service to residents

### User Community

250 municipal employees, 43,000 residents

### Knowledge Management Solution

Knowledge discovery and mapping, collaboration, knowledge transfer: intranet, Web site and 450 Lotus® Notes® knowledge bases

### Business Value

Enhanced information sharing between employees and city departments; greater efficiency in citywide operations; better service to residents

*"Knowledge management is giving our people power and more efficient ways of working—all of which helps serve our citizens and promote a strong, safe community."*

*—Robert Giddens, Director of Management Information Systems, Village of Buffalo Grove*



as the backbone, Buffalo Grove now has some 450 knowledge bases, an intranet and a Web site that enables its 250 employees to capture, organize and share their knowledge resources, providing a safer, more efficiently run community.

“Like data mining, we’re ‘people mining’ to populate our knowledge bases with the data for running our city,” says Giddens.

### **Safety through shared information**

Searching through paper files or consulting with senior employees—both time-consuming, hit-or-miss methods—are in Buffalo Grove’s past. These days, employees log on to the city intranet and residents to the public Web site to conduct the research they need. Many of the knowledge bases were developed with support from Lotus Business Partner Precision Systems Concepts, a Schaumburg, Illinois-based systems integrator.

Firefighters, for example, use a Lotus Notes knowledge base to track calls received as well as personnel activity, such as attendance and payroll. They also share information with the building department, so both can effectively monitor the safety and integrity of city structures. And when there’s a fire, they can retrieve detailed floor plans and information on previous fire code violations from their knowledge bases.

In a similar vein, police officers use knowledge bases to track parking tickets as well as offenders. Instead of calling dispatchers or the 9 a.m.-to-5 p.m. records office, officers can log on any time to do background checks or find out if they’ve been called to a particular house before. After an accident, an officer can go online to check the involved party’s background. And if the accident damaged a city tree, the officer’s report is shared—electronically—with the public works department, so it can dispatch a crew.

From the city Web site, residents can learn a wealth of information: from what happened at the recent village board meeting, to city rules and regulations, to past or current issues associated with particular locations.

### **Growing into knowledge management**

Just as its growth was carefully planned, Buffalo Grove took measured steps into a knowledge management solution—steps that have now become gallops as municipal employees and residents embrace its efficiencies. Firefighters, for example, have spearheaded the creation of distance learning classes with Lotus technology. This way, firefighters in outlying stations don’t have to travel to the central training area—and away from their areas of coverage.

Through innovative technology solutions, Buffalo Grove will continue delivering new knowledge management applications that promise to embellish the town’s country atmosphere with the smooth-running efficacy of a thriving city. Says Giddens, “Knowledge management is giving our people power and more efficient ways of working—all of which helps serve our citizens and promote a strong, safe community.”

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