

Knowledge Management

# TURNING KNOWLEDGE ACCIDENTS INTO KNOWLEDGE MANAGEMENT



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## Contents

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Foreword .....	1
The Right People: The Burson-Marsteller Story .....	2
People, Places & Things® .....	3
The Right Place: The Hughes Christensen Story .....	4
The Right Things: The Schneider Automation Story .....	5
Responsiveness, Innovation, Competency, Efficiency: Getting the Greatest Value from Collaboration .....	7
Lessons Learned and Applied .....	9
Conclusion .....	10



***Turning Knowledge Accidents into Knowledge Management***

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## Foreword

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The other day I bumped into a colleague who I hadn't seen in ages. We were both on our way to the Lotus cafeteria, so we took a few minutes to catch up on things. As she described her most recent project, it occurred to me that I knew a few people at IBM who were involved with a similar effort. I thought they'd make a perfect match, so I gave her their names and wished her luck.

I like to call this type of unplanned meeting a "knowledge accident." If you think about it, this kind of thing happens all the time. People bump into each other at the water cooler, or in the hallway, and they get to talking, and all of a sudden a valuable nugget of information emerges. Maybe it's a lead, or an insight, but either way it's something that can potentially improve the efficiency and effectiveness of any given business process.

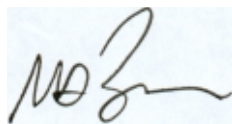
There's no doubt about it, knowledge accidents are a wonderful thing. The only problem is that they're random, so it wouldn't make sense to use them for a serious growth strategy. It would make sense, however, to turn the tables on knowledge accidents and make them happen on demand in a controlled manner. This is what many companies are currently doing, and it's what Lotus and IBM consider the essence of knowledge management.

I've often heard knowledge management described as "getting the right information to the right people at the right time." While I don't disagree with that description, it seems to imply that there is some automatic way of uncovering the "right information." The truth is that the right information — the ideas, the insights, the arguments, the explanations, the just-in-time data — doesn't always exist. Many times this information just happens to surface in conversations like the one I had with my colleague. So I would amend that knowledge management description by saying that it is important to "get the right people to have the right *conversation* at the right time."

Our best customers have proven this assumption and demonstrated exactly how effective knowledge management takes place. Sure, they use products like Notes and Domino to discover the knowledge that exists in their organization. But they also use these products to apply that knowledge to the business process at hand, a process which often uncovers new knowledge through conversation. Now, to be honest, this ability to consistently generate, capture, and apply knowledge does not come easily for most companies. In fact, many of our best customers were already entrenched in highly collaborative business cultures prior to their acquisition of Notes.

The trick for Lotus and IBM has been to find new ways to help *all* of our customers derive the same level of value out of our collaborative technology, regardless of their pre-existing company culture. To that end, we've been observing the ways in which our best customers use technology to cultivate, transfer, and apply knowledge. This has been a daunting challenge, but it has provided us with significant insights into the social and cultural dynamics of business collaboration. It has also formed the basis for our product design strategy.

At Lotus and IBM, we're big fans of knowledge accidents. In this paper, you'll learn about what we've done to turn them into knowledge management.



Mike Zisman  
Executive Vice President of Strategy  
Lotus Development Corporation

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## The Right People: The Burson-Marsteller Story

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*Burson-Marsteller safeguards brand value for Fortune 1000 corporations.*

Brand value and reputation are among a company's most prized assets; therefore, when a crisis arises, such as a product recall or a litigation battle, a company must often protect its brand from devaluation. Burson-Marsteller, a leading perception management firm, guides Fortune 1000 companies through the fast-paced and tumultuous process of safeguarding brand value.

*Burson-Marsteller must locate the right experts in order to succeed.*

When a crisis breaks for one of Burson-Marsteller's clients, the company marshals its resources to first analyze the situation and then create and deliver a response. This process often includes the identification of all the appropriate government agencies, media outlets, and customers that will require special attention. Burson-Marsteller consistently succeeds in these efforts because it has a proven method for getting the right information out of its 2,500 person employee base. The company uses an effective knowledge management strategy to locate these people and engage them in conversations that yield the "right information," which Burson-Marsteller then applies to the crisis at hand.

More than anything else, Burson-Marsteller relies upon *people* to succeed. Notice how people enter every phase of the knowledge management process.

- *Step 1: Engage the team.* The account manager starts the process by sending out an urgent e-mail to the account team. This e-mail describes the situation and provides a link to an internally developed Domino rapid response application, which operates as a home base, or "war room," for project management. When members of the account team enter this space they receive assignments, follow certain procedures, and report their findings.
- *Step 2: Engage the experts.* The team members then consult the company's Talent Bank, an internal "yellow pages" that tracks the expertise and interests of each employee. This includes essential pieces of information, such as the client accounts, products and industries that these people track. In almost every case there is someone, somewhere in the company, who can provide contacts, helpful hints, shortcuts, or additional background that can improve the efficiency and effectiveness of Burson-Marsteller's response to the crisis.
- *Step 3: Engage the client.* Burson-Marsteller recognizes that some of the most useful insights and guidance often come from the client, so the company brings them into the process and provides them with the opportunity to collaborate through a secure extranet connection.

*Success is dependent on a culture in which employees regularly and accurately update a talent tracking application.*

Burson-Marsteller's story makes it clear that business success often depends on *finding the right people for the job*. Burson-Marsteller found a way to use technology to access the expertise — or knowledge — that existed within its worldwide organization and then apply it in a purposeful way. Their process is efficient and effective, and ultimately serves the greater business goal of protecting the client's brand and reputation from irrevocable damage.

*The right person can often provide information that is critical to a specific business objective.*

*A successful knowledge management infrastructure can differentiate a business from its competitors.*

But the Burson-Marsteller story doesn't end here. The company's knowledge management strategy worked so well that company representatives now discuss it and present its supporting technology to new business prospects. So, in the end, effective knowledge management is not only improving the business process at Burson-Marsteller, it's also attracting new business.

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## People, Places & Things®

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A casual survey of knowledge management literature and vendor Web sites will yield a great deal of information about information. Many of these articles discuss the process of pinpointing and managing knowledge in various forms, ranging from best practices and frequently asked questions, to lessons learned and policies and procedures. Moreover, this knowledge management literature may also address the many new technologies that can help companies work with that information — create it, store it, classify it, index it, mine it, search it, cluster it, visualize it, and subscribe to it. Clearly, these are important concepts and technologies for a company to consider.

Nevertheless, as the Burson-Marsteller story illustrates, truly efficient and effective knowledge management extends beyond finding information; it concerns finding the right people, gathering them together in a shared place, and then doing something with the information that they find or produce. People are the biggest part of the equation at Burson-Marsteller, but the company couldn't gain a true competitive advantage without properly orienting these people and managing their findings in a purposeful way. Lotus and IBM have witnessed this pattern emerge in so many successful knowledge management environments, that the term “people, places and things” was coined to frame the concept of knowledge management and the technologies that support it.

- **People.** These are the individuals, such as colleagues, experts, customers and friends who are online and available for conversation. The technologies that support, locate and promote communications with these people include corporate yellow pages, people-finder systems, and skills inventories.
- **Places.** These are the communities in which people share information. In most cases, communities will interact in physical and virtual places. The latter can be created by collaborative applications that people use to interact, share ideas, ask questions, and find answers. These places are where the “right conversation” can occur, and, ideally, they include techniques and methodologies to foster and promote the appropriate interaction for the task at hand. For example, the type of interaction required for a rapid response “war room” is different from the interaction required for a brainstorming session. The former might include a team leader, calendar, milestones, mission statement, and document library, while the latter might include features that encourage risk taking, such as anonymous entries.



***Truly efficient and effective knowledge management involves People, Places & Things; this includes finding the right people, gathering them together in a shared place, and acting on the information that they yield.***

*Knowledge management is commonly defined by the processes and technologies that are used to locate information.*

*Truly efficient and effective knowledge management incorporates people, places, and things.*

*By the Lotus and IBM definition, knowledge management technologies should locate the right people, provide a place for effective interaction, and a means to access the most critical information.*

- **Things.** These are the structured and unstructured bits of content that people create, capture, classify, and share. Things encompass the content, rules, processes and procedures that a company uses. In fact, they are the focus of most knowledge management tools and technologies that help people work with data in virtually every conceivable manner, from search and mining to visualization and contextualization.

## The Right Place: The Hughes Christensen Story

The Burson-Marsteller story highlights the way in which knowledge management technology can be used to help find the *right people*. The following story about Hughes Christensen emphasizes the way in which knowledge management technology can provide the *right place*, or community, for fostering efficient and effective business collaboration.

*The Hughes Christensen story underscores the importance of place in an effective knowledge management strategy.*

*Hughes Christensen needed to document and spread expertise across its organization.*

*Hughes Christensen designed its knowledge management strategy around place.*

*LearningSpace is a tool for developing, deploying, and delivering interactive courses online.*

*The right place has not only increased the knowledge of company employees, but also expanded the base of knowledge that the company controls.*

Hughes Christensen, a century-old designer and manufacturer of drilling equipment, thrives when knowledge is shared among its engineers. This knowledge can extend from physical issues like drilling depths, pressures and tools, to contextual issues such as the politics and customs of a given area. Unfortunately, over the years, the company's vastly dispersed operations have often limited this exchange, leaving vital drilling expertise locked up in the heads of just a few people. In the early 1990s, Hughes Christensen invested in a sophisticated expert system which was intended to supply engineers with drilling facts that would improve decision making and overall performance. While the system was technically a success, it did not improve the bottom line as much as the company had hoped.

It turned out that the expert system served as an excellent knowledge base for frequently asked questions; however, it did not provide a means for the engineers to learn from each drilling experience and build that know-how back into the company's products and procedures. What Hughes Christensen discovered was that it needed an environment — or place — in which employees could form a community. They needed a central environment where they could absorb knowledge and apply it to new customer engagements.

- **Step 1: Consolidate key information.** Hughes Christensen approached Transition Associates, a Lotus business partner, to repackage the rich content of the knowledge base into courseware modules delivered in an online setting.
- **Step 2: Create a place to meet.** Hughes Christensen understood that its employees could absorb this content in several ways; they could read it, they could attend online lectures, and they could even discuss it with their peers. For this, the company needed to provide more than simple online content. Hughes Christensen needed a complete collaborative environment that could transform the static facts into interactive courseware with options such as live interaction, asynchronous communication, online lectures, and question-and-answer sessions. Transition Associates used LearningSpace, Lotus' distributed learning platform, to provide Hughes Christensen engineers with a place to meet and a method by which they could acquire critical business knowledge.
- **Step 3: Foster new knowledge and build expertise.** Prior to instituting LearningSpace, Hughes Christensen focused almost exclusively on the design and development of drill bits. Now, more than a year later, the company has fostered enough of its own internal knowledge to expand its business from this product-specific realm to a broader services realm. In fact, Hughes Christensen is now valued just as much, if not more, for its geological consulting services as it is for its drilling products.

The Hughes Christensen story makes it clear that business success can often depend on *establishing the right place*, or community, for employee communication. Hughes Christensen used knowledge management technology to do more than just create a knowledge base full of useful information — it used technology to actually foster the learning process. In the end, Hughes Christensen was able to expand the knowledge and increase the core competencies of its engineers.

Just like Burson-Marsteller, Hughes Christensen has used its accomplishments in the realm of knowledge management as a means to back up its quality claims. The company frequently demonstrates LearningSpace in new client presentations, and in certain cases has impressed its potential clients so much that they have turned around and asked all of their other vendors to provide a similarly demonstrable knowledge management strategy. By understanding the value of managing knowledge in this way, Hughes Christensen has become a pacesetter in its industry.

## The Right Things: The Schneider Automation Story

As illustrated in the stories above, companies can gain a real competitive advantage if they exploit the ways in which they acquire and disseminate knowledge. Finding the right people and creating the right kind of place that fosters their effective and efficient collaboration are two important keys to managing knowledge. Of course, the remaining part of this equation is the thing — or the information — that a company owns. Every company collects information, the useful portion of which is usually stuffed into so many different systems, and in so many different formats, that locating it can be a long and arduous task.

Schneider Automation is a global manufacturer of automation systems and services. The company, which operates facilities in the United States, France and Germany, gains a competitive advantage when it provides quick and accurate answers to its customers.

Schneider Automation uses a “closed loop” system that provides one point of access to all company data. Notice how technologies, such as search tools, deliver greater value when they locate and present things in the context of Schneider Automation’s customer relationship management (CRM) system.

- *Step 1: Locate the information.* Like many companies, Schneider Automation was working with decentralized information that was stored in all parts of the enterprise, in computers, in notebooks, and in the minds of company employees. This made it difficult for company representatives to efficiently and effectively locate the information that they needed. Schneider Automation met this challenge by forming a business process re-engineering effort called Customer Delight.
- *Step 2: Build a single point of access to the information.* Schneider Automation brought in Transaction Information Systems, a Lotus business partner, to develop a global system which would grant every employee in sales, marketing, and customer service with real-time access to company information. Their tool was a Domino-based system that reached into SAP R3, relational databases, Web servers and file systems, and dozens of Domino databases that existed throughout the company. Through a single CRM interface, users could query information, and if it was not immediately available, they could log an “information request” that would be fulfilled over the course of the following two days.

*“Things” are also key to business success.*

*Schneider Automation gains a competitive edge when it provides its customers with quick and complete answers.*

*Schneider Automation’s knowledge management system not only reached into company databases, but also deposited search results into a customer relationship management system.*

*Step 3: Measure effectiveness.* By providing a system that locates information — and even automatically prompts users for information updates — Schneider Automation has made significant strides toward their customer satisfaction goals. The company has also used its technological infrastructure to present marketing, sales and technical information in four languages simultaneously, and even provide a dual English-French interface through the use of dynamic keywords and synonym tables. By making adjustments like these, the company has witnessed a 35 percent increase in customer satisfaction in less than 12 months.

*Schneider Automation created a direct path to critical business information and an environment for applying and measuring its effectiveness.*

The Schneider Automation story makes it clear that business success can often depend on *finding the right things* and delivering them to the right people at the right time. Schneider Automation found a way to create a truly global Web-based application that offered point-and-click access to enterprise information. Moreover, it achieved this end while reducing the time and support expenditures associated with worldwide information distribution. And like the other Lotus customers cited in this paper, Schneider Automation uses its knowledge management success — which is best manifested in its Customer Delight statistics — to back up its claim of delivering world-class levels of customer and technical support.

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## Responsiveness, Innovation, Competency, Efficiency: Getting the Greatest Value from Collaboration

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By observing the practices at customer sites like Burson-Marsteller, Hughes Christensen and Schneider Automation, Lotus and IBM have gained many insights into the patterns of successful human collaboration. The mission of the Lotus Institute, the internal “think tank” at Lotus, has been to work with customers like these to understand the social dynamics that contribute to their success. The Lotus Institute works in concert with The IBM Institute for Knowledge Management (IKM), which provides its member companies with research into areas such as organizational and cultural behavior, new economic and business models, and the role of technology. Where appropriate, IBM shares and applies that learning to its consulting services and product development.

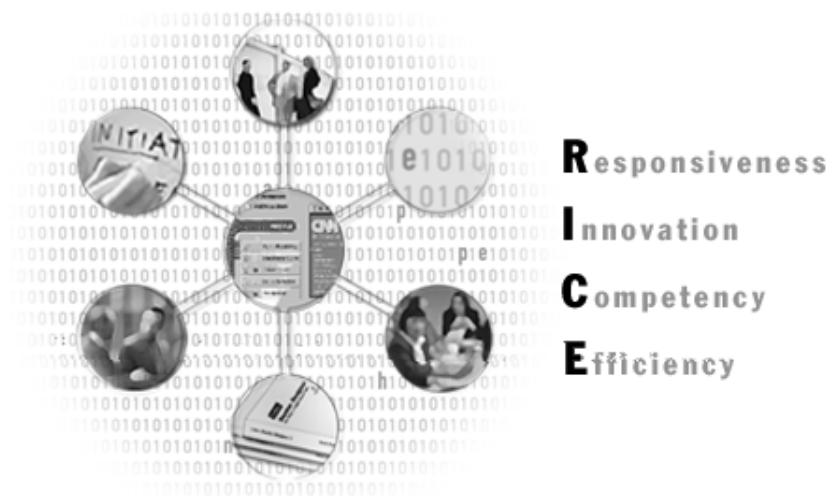
*The Lotus Institute and IKM are dedicated to understanding business and technology.*

By focusing on its best customer installations, Lotus and IBM have gained a deep understanding of the most appropriate and useful applications of collaborative technology. Among its observations, the Lotus Institute has found that its best customers are using technology to create, share, and apply knowledge in the context of online conversations — in short, they’re practicing knowledge management.

It is from this collective work that the phrase, “people, places & things,” emerged as a useful means to represent the essential elements of knowledge management technology. However, the value, or benefit, of knowledge management is realized when it serves specific business goals. This point is evident in the cases cited in this paper, in which the particular technologies chosen were explicitly designed, and then aligned, to achieve a particular business objective, such as crisis response, skills enhancement, or customer satisfaction.

*Lotus and IBM have found that the benefits of knowledge management can include increased responsiveness, innovation, competency and efficiency (RICE).*

In fact, through its extensive research, the Lotus Institute has identified four strategic business goals that are best served by knowledge management technologies — Responsiveness, Innovation, Competency and Efficiency. Lotus refers to these goals collectively as RICE.



***RICE: Responsiveness, Innovation, Competency and Efficiency are the four strategic business goals that are typically served by knowledge management technologies.***

**Responsiveness.** Many companies have fond memories of the days when markets and technologies were less frenetic. These days, any number of unanticipated events — such as dramatic technological changes, the sudden appearance of nontraditional competitors, or drastic shifts in the worldwide economy — can send a company into a tailspin.

*Knowledge management technologies help companies react to events and marshal resources.*

Knowledge management technologies often confer the greatest benefit when they simply help a company anticipate those events and marshal the human and information resources needed to respond intelligently. By identifying the “who, what, where, and when” a company can quickly coordinate its activities in response to customers and events. The case of Burson-Marsteller bears this point out. By instituting a “people finding system” that tracks expertise across the extended organization, Burson-Marsteller is equipped to efficiently and effectively respond to virtually any corporate crisis.

**Innovation.** In businesses characterized by rapid technological changes and compressed cycle times, innovation is often the primary source of sustained competitive advantage. The challenge for many companies is bringing employees together across the boundaries of time and geography to brainstorm, share ideas, and co-create new products and services.

*Knowledge management technologies can drive and support innovation.*

Innovation has been a key objective of collaborative technologies for many years; unfortunately, most electronic discussion groups veer off course and produce few measurable results. Therefore, by structuring collaboration to achieve specific objectives or to resolve issues, knowledge management tools can drive group interactions beyond the basic interactivity of discussion forums.

**Competency.** A company that wants to remain competitive must develop its people. In some industries, where employee attrition rates are high, competency building and skills transfer have become critical to survival. In fact, in some cases it is not enough to simply talk about a highly skilled workforce, many companies are now required to actually demonstrate their core competencies, and strategies for maintaining them, before winning new business. This type of situation was illustrated in the Hughes Christensen case, in which the company was able to set a new competitive standard by making its ongoing educational strategy part of every customer proposal.

*Knowledge management technologies can catalyze the learning and skills transfer processes.*

Knowledge management technology can foster interactivity among co-workers for the purposes of learning and skills transfer. This can take the shape of formal training with a product such as Lotus LearningSpace, or can take a more informal dimension through the creation of communities of practice and communities of interest.

**Efficiency.** A common lament of executives is: “we don’t know what we know.” Employees are forever re-creating the wheel, failing to leverage learned lessons, best practices and expertise that exist elsewhere in the company. Most knowledge management efforts concentrate on effectively documenting, cataloging and distributing such corporate knowledge assets so that the left hand can learn what the right hand is doing. This could mean tapping the expertise and knowledge that reside in individual systems, or even reusing knowledge that has been created in a business process.

*Knowledge management technologies can accelerate information access, and provide a means to apply information in a meaningful and lasting manner.*

Clearly, efficiency depends on how well the knowledge created by individuals and groups can be captured and packaged for reuse by others inside, and outside, the company. More than that, however, knowledge management technologies must provide individuals with the tools to discover and mine corporate knowledge that has already been created. Once people find the corporate knowledge assets they need, they can improve upon those assets by applying them to new processes and problems.

## Lessons Learned and Applied

Responsiveness, innovation, competency, and efficiency are four strategic goals that Lotus and IBM believe are best served by an effective knowledge management infrastructure. In order to advance this understanding, IBM and Lotus have been working with their customers to understand the ways in which technology can help serve these goals.

Among other observations, Lotus found that its most successful customers were usually effective at group collaboration prior to their adoption of Notes and Domino. That is, there was something inherent to their culture that enabled them to take immediate advantage of collaborative technology. The challenge for Lotus has been to identify these inherent cultural dynamics and then apply that understanding to the development of product features, solutions and methodologies that can prompt and support them.

Community interaction is among the most prominent collaborative dynamics because of its ability to create business value. Moreover, communities can exist everywhere in an organization, within operating groups, across groups, and even throughout the customer and partner contingents. Therefore, if communities are prompted and managed correctly, they can become a source for new and valuable knowledge.

Through its observations, IBM and Lotus identified four distinct phases of community interaction. People start by sensing a business need; they then gather and organize their findings; they collaborate and discuss what they know with others; and finally take action, often internalizing the new knowledge.

This cyclical process appears in organizations of all types and sizes, so one goal for Lotus has been to work this knowledge into its product fabric. Through its recently announced knowledge management suite, Lotus is making early inroads into this collaborative domain. For more information on Lotus' current and future products, see the accompanying document, *The IBM/Lotus Knowledge Management Product Road Map*.

*Lotus and IBM will continue to explore the strategic business goals that are best served by knowledge management technology.*

*A company culture that fosters collaboration is often more receptive to collaborative technologies.*

*Community interactions create business value, and tend to occur in four stages.*

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## Conclusion

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*Lotus and IBM are committed to turning knowledge accidents into knowledge management.*

*Lotus and IBM will continue to investigate the features and purpose of knowledge management so that companies everywhere can effectively discover what they know.*

Knowledge exists at virtually every strata of an organization. Sometimes it surfaces by accident, perhaps when two people bump into each other at the water cooler, and other times it is prompted by a technological infrastructure. Lotus and IBM's knowledge management efforts are aimed at the latter, so that interactions can deliver powerful business value to their participants and to the greater organization.

As part of this effort, Lotus and IBM have dedicated considerable resources toward observing and analyzing the collaborative efforts of their best customers. This examination has uncovered the three key ingredients in effective knowledge management — people, places and things — and the strategic goals that these ingredients serve; namely responsiveness, innovation, competency, and efficiency.

Lotus and IBM will continue to work with their best customers to improve upon these understandings and apply them to technologies that uncover, cultivate and apply the knowledge that exists in companies everywhere.



