HELPING KNOWLEDGE MANAGEMENT
BE ALL IT

CAN BE

IF THE U.S. GOVERNMENT EXPANDS THE HUNT FOR TERRORISTS to Somalia, you can bet the military's top brass will go to great lengths to avoid a repeat of the 1993 ambush depicted in the movie "Black Hawk Down." In the disastrous engagement in Mogadishu, the Somali capital, one warlord's guerillas shot down two Black Hawk helicopters and trapped American ground forces in a hostile urban landscape. Eighteen American soldiers were killed.

The military response next time will rely much more on a key stealth weapon: intelligence. Or to put it more accurately: knowledge. The U.S. Army's Lessons Learned program, one of the most powerful and flexible knowledge-management initiatives anywhere, gives soldiers condensed information that allows them to cope with combat situations more flexibly and capably.

The "lessons learned" reverberate far beyond the battlefields and parade grounds. The Army's growing list of knowledge victories now helps business executives understand that, properly managed, knowledge management (KM) may indeed help them run their businesses better.

It's not the first time that business has gotten excited about KM. Enthusiasm ran high in the early and mid-nineties. Unfortunately, though, enthusiasm doesn't automatically translate into results. If the idea of KM is such a good one, why do so few top managers rate it highly? In Bain & Company's 2001 Management Tools survey, KM ranked nineteenth among all 25 tools evaluated for effectiveness, and 14% of the 451 senior executives polled said they had abandoned it altogether.

Too many companies view KM as a complex new technology that needs only to be plugged in (usually at significant expense) to generate value. We recently had a telling conversation with a worried chief financial officer. He'd just invested in a costly KM system and then discovered that keeping it running meant far more than signing up for an annual software upgrade. His pricey predicament is shared widely. Our experience shows that KM *can* produce outstanding gains, but only if senior management understands that it is really a set of core business processes, and then applies sound operating principles to the KM program's design and implementation. The Army's successes bear out that point, as do the significant gains at businesses such as BP and Harley-Davidson.

Businesses have had a rough time marshalling what they know into systems that help cut costs and boost profits— and they've had only themselves to blame. But new lessons from the U.S. Army are showing that KM can be highly effective.

Mark Horwitch and Robert Armacost

Primer on KM

So what exactly is KM? And if it's been such a disappointment to date, can it really be expected to create lasting value for businesses?

Let's start with what it's not. KM is not just about sharing all the information you can think of with everyone you can imagine; e-mail can do that. We define KM this way: "The practice of creating, capturing, transferring, and accessing the right knowledge and information when needed to make better decisions, take actions, and deliver results in support of the underlying business strategy." Put simply, it's a process for transforming data and information to enable action.

"Data" and "information" might sound redundant, but they're two equally important knowledge ingredients. Data can include: sets of discrete, objective facts about events, or structured records of transactions. But data lacks inherent meaning and provides no sustainable basis for action. Information is data that comes with value-added interpretations—it's organized for some purpose, and is meant to have an impact on the recipient's behavior. Together, data and information create knowledge in a five-stage process:

1. Create—formally, via conscious effort, or informally, via discovery

2. Capture—knowledge must be captured to be shared

3. Organize—knowledge can't be used if it can't be found

4. Transfer—outlining how users tap knowledge and contributors share it

5. Use—the actual application of knowledge

Executives eager to make best use of their companies' knowledge assets first need to know what they've got. Those assets break into two categories, each of which can work in a different way. *Tacit knowledge*—usually what employees have in their heads—calls for quite different processes and organization than what's used to manage *explicit knowledge*. An oil-exploration company, for example, might have proprietary, explicit knowledge of the locations and dimensions of untapped oilfields, and that information can easily be written down, reused, and communicated. But the scoop on how to organize resources to tap those fields? That's more likely to be tacit knowledge. It's hard to communicate, difficult to replicate—and it's a notable source of competitive advantage.

Why KM Matters Today

Managers cannot afford to ignore *any* source of competitive advantage. The stakes today are so much higher than they were a decade ago. Even in recessionary times, talent can be scarce and more mobile than ever. That applies in old-line industries as much as it does in Silicon Valley—yesterday's machinist is today's highly educated operator of a computer-controlled flexible machining center. For its part, the U.S. Army is acutely aware that it must be able to move critical knowledge fast, despite high turnover.

Business cycles spin more quickly too. Automobiles now go from concept to showroom in months rather than years. The rates of new company formation and innovation may have slowed, but they're still strong. In our business—strategic management consulting—we've had to accelerate our client cases in the last few years, completing studies in three months instead of six.

The richness and velocity of today's information flow makes a knowledge business out of every business. But there is a gap between those that apply knowledge intelligently and those that don't know what they know, let alone know how to harness it. Just watch as the profit pool moves toward the former.

Economic turbulence affords KM abundant opportunity to make a difference. Certainly, knowledge sharing can identify cost redundancies. BP's KM program, "Shared Learning," has saved the company nearly $700 million in its first two years. On one North Sea drilling project alone, team leaders saved $80 million by applying cost-saving tips they learned from experts around the company. In situations where success hinges on increasing customer satisfaction, KM can help protect revenue streams by getting the right information to the right people at the right time. For example, KM may help increase the response rates and effectiveness of call centers.

And where it's a challenge to leverage firm-wide resources across global and industry boundaries, well-built knowledge systems can help break open new markets. Example: German conglomerate Siemens has a knowledge initiative named "ShareNet." Siemens' Information & Communication business unit credits ShareNet for landing a key contract to build Telekom Malaysia's pilot broadband network, leveraging work from a Siemens team in Europe. And *CIO Magazine* reports that at British Telecom, one account director traced $1.5 million in new business to his team's use of briefings offered on intellact, the telco's KM service.

KM can also be highly effective in restructurings resulting from a merger or acquisition. When a merger deal closes, the hard work begins. Plenty of deals have foundered when integration of the two firms has gone awry. But when

WHEN KM GOES RIGHT

Doing KM right needs neither deep pockets nor a degree in computer science. Bain's own experiences are proof of that.

In a knowledge-intensive and highly customized business such as management consulting, we're just not in the game unless each of our consultants is armed with the best approaches and methodologies, the sharpest insights, and the broadest industry perspectives. When we pioneer new thinking on growth strategies in, say, the retail sector, we have to be able to quickly make that thinking available to other client cases.

By overhauling our KM systems, we've cut by at least 25% the time it takes our consultants to retrieve critical information. (They now regularly meet tight proposal deadlines that otherwise they might have missed.) We've also been able to boost the quality of the proposals, and more easily overcome challenges during client engagements.

The price tag? Less than $2 million. Not bad for a system that serves 2,800 employees in 27 offices worldwide. The project was up and running in under six months.

Bain had had a KM "back office" since the early 1980s, but the system wasn't keeping up with the increasing pace and complexity of our business. In the late 1980s, a strategy study could take six months; a decade later, it had to be done in half that time. Teams were wasting time finding industry data and locating and contacting knowledgeable colleagues. By 1998, we clearly needed to upgrade the system if we were to maintain the firm's healthy growth rate.

A new KM plan got a thumbs-up in November 1998. Bain's leadership committee supported the plan's overarching goal: to harness KM to get the best results for our clients by significantly improving our productivity.

Each of the specific goals tied tightly to Bain's business strategy: We wanted to create a useful everyday tool; to help sell work in half the time; and to launch new cases at least 30% more quickly.

The KM initiative had three elements. We built a permanent KM staff, hiring dedicated "knowledge brokers" with proven skills in research and communication. We moved crucial third-party research to users' desktops. And we designed a new Web-based platform called the Global Experience Center (GXC). From the GXC, users can easily access all Bain case work and industry and functional knowledge, and tap into external databases. The GXC also tracks down other "Bainies" with relevant experience, and connects to Bain Virtual University, an online training site which has 160 modules including videos, presentations, and exercises.

The GXC has been a great success. It is amply meeting its business goals. We train every employee to use the GXC, and it gets 98% in satisfaction ratings in Bain's user polls. But it scores highly not just because it's easy to extract information; we've built processes to encourage constant data input. At the beginning and end of each client case, a knowledge broker interviews the team manager to harvest key insights (while maintaining clients' confidentiality), and then assembles a package of core content for the GXC Web pages.

Additionally, we've built in different types of incentives to align our behaviors with our KM system's objectives. There are some carrots and some sticks. Among the carrots: Awards programs put some fun into the measurement of which offices are contributing best. And sticks? KM team members have also gotten good results from friendly warnings that they would go public with the names of those who hadn't complied.

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knowledge can be pooled and shared effectively, there's a better chance to retain key talent and expertise—tacit knowledge—and to smooth the integration process itself. Every time an organization's blueprint has to be redrawn, there's a chance to overlay a knowledge framework that can help the new organization toward its full potential.

Despite their skepticism about KM's effectiveness, many managers are still voting for it with their budgets. A Conference Board study recently revealed a ten-times increase in intent to launch a company-wide KM program over the next five years. Senior executives are the most open of all, according to a survey by KPMG. When asked,

"What level in the organization is pushing hardest to have a KM program?" about 40% of management respondents said "senior management," and more than 15% indicated "board level." Overall, 80% of companies are developing such KM systems right now, and actual spending on KM projects is forecast to grow to $12 billion by 2003.

So given this uneasy mix of "doesn't work" skepticism and "have to do it" activity, how can you make sure that your KM investments will produce practical results and a high return on investment? As the architects of Bain & Company's own knowledge network (See the sidebar above) we've found that four simple principles help keep us on the right course.

1. Make KM Serve Your Strategy— Not Vice Versa

An alarming number of companies seem to be developing KM systems with no clear end in mind. In a recent Conference Board survey of 200 senior executives, 85% of companies with KM efforts underway conceded that their KM programs had no stated objectives. Too often, business leaders think of KM programs as separate administrative functions when they should view them as enabling the most important elements of the business strategy— thus tying directly to the organization's key success measures. Siemens' stated aim for its ShareNet program was to accelerate sales of telecom equipment and services. BP's goal for its Shared Learning program was to reduce drilling costs.

The U.S. Army puts its military strategy at the core of its knowledge program. Its Lessons Learned initiative

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directly supports the big goals of being able to put combat units anywhere in the world inside 96 hours, and maintaining a versatile and agile force that can respond quickly. CALL—the Center for Army Lessons Learned— enables rapid access and dissemination of essential and highly relevant information anywhere, providing a full set of codified lessons to a mission in less than seven hours. And the program achieves high efficiencies, given the repetition of military missions. Its "After-Action Reviews" have helped minimize problems in later engagements. For example, the Army's initial mission in Haiti in the early 1990s codified lessons learned in 25 scenarios. A follow-up mission encountered 24 of those scenarios.

Executives who are keen to study the Army's methods should heed the remarks of one CALL analyst: "If a company does not have a well-defined business strategy, it should not even consider trying to define a strategy for knowledge management."

The right kinds of questions to ask first are these: Have you correctly defined your business? Are your industry boundaries stable or blurring? Do you achieve superior returns compared to your competition? How easily can you protect your core competency? A KM program built on the wrong business strategy is a KM program wasted.

2. Drive KM Right from the Top

So KM isn't just a job for the chief information officer? Absolutely not. If the top brass is not convinced that the knowledge-management effort will directly enhance the bottom line, the program will surely fail. If the shared knowledge is meant to drive business needs, then KM is a business initiative that line executives should drive.

Ideally, it will be on the chief executive's own agenda, as it is at KM leaders such as Harley-Davidson, BP, and Siemens. For example, at BP, chief executive Lord John Browne sparked the company's KM initiative. And Siemens' CEO, Heinrich von Pierer, guaranteed that KM became a big deal there when he wrote in a letter to shareholders: "Our first priority is the electronic networking and management of our internal knowledge to make us even more efficient and bring our customers greater benefits. Our ultimate goal is to ensure that all of our people can access the company's unequaled pool of knowledge."

Four years ago at Bain, Tom Tierney, then our worldwide managing director, made our KM capability one of the firm's top three strategic priorities. A core group of senior partners, led by Mark Horwitch (co-author of this article), designed a new KM initiative and then got Tierney's endorsement before launching it. But we knew how easily such programs can fall off a company's "mission-critical" list, so we built in a mechanism to reinforce ownership at the highest levels. Horwitch heads an advisory board of senior partners who ensure that the program stays in sync with the firm's strategic objectives, that it's still valuable for our staff, and that it keeps producing a decent return for the investment. (See the sidebar on page 29: "When KM Goes Right.")

A company's leaders also need to acknowledge and knock down the cultural barriers to successful knowledge initiatives. If, for example, there's little history of sharing information, or willingness to share, and if there are few incentives for sharing, it'll be tough to make a KM program go. Unless you can quickly demonstrate that the KM program will help staff do their jobs better and faster, you'll likely get pinned down in ugly culture clashes.

3. Don't Distribute Knowledge—Broker It

Good KM is not just about distributing knowledge; it's about *brokering* knowledge. Brokering involves devoting ongoing programs and personnel to capturing, identifying, transferring, prioritizing, and disseminating the right information at the right times. A common mistake is assuming that the system can be run without people—and without investment in their skills. KM cannot be maintained by the IT help desk.

Below the senior leadership in the Army, key KM roles are very clear, with CALL staffers divided into the subject matter experts, who analyze, package, and disseminate knowledge, and the knowledge collectors, who gather on-site data and update the CALL center. At Siemens, the ShareNet initiative has 100 system experts spread throughout its line organization.

BP's knowledge experts run half-day or day-long "retrospects" at the end of a project, focusing on successes and

potential improvements, and identifying key lessons to share with the rest of the organization. Similarly at Harley-Davidson, which has modeled its KM strategy on the Army's. When a design project is wrapping up, Harley's KM teams move in to compare assumptions to results, and to begin brainstorming applications of lessons learned. "It's while we're designing that we take time out to look at what's working and what isn't working," says Tim Savino, Harley's director of organizational development. "That way, we can improve the design process and document some of these learnings for the future. It's a way to institutionalize a reflective activity."

Every KM effort needs such "knowledge brokers" who can make sure that the right connections are being made. It is a complicated role, one that typically requires individuals who combine editorial skills, some technical ability, and a genuine understanding of the business needs of the systems' users. Few companies are rich in such multidisciplinary individuals.

4. Hold the Technology Bells and Whistles

Businesses that lack clear KM objectives are easy prey for KM technology vendors with lavish product portfolios to sell. Technology is indeed a critical element of a well-built KM program. However, technology is secondary to development of a coherent knowledge strategy, a clear focus on the processes that best support the overall business goals, and a considered approach to the people and skills it will take to make the program fly.

In the Army, the Lessons Learned initiative began without computers as a way to get more out of training simulations. Technology was added as a tool to facilitate the process.

You start to build a knowledge strategy by first defining the content, approach, and structure with questions like these: What do we need to know to meet our big goals? Where can we get this knowledge, both internally and externally? How should we categorize the content? Should we manage the initiative centrally?

It's critical to spotlight the functions that will yield the best results fastest. For example, if the business strategy calls for growth by capturing new customers, the KM program can help share best practices in sales and service, or increase cross-selling competence. A blanket approach to KM will increase the chances of failure.

So you've done all that, and now the software vendors are pounding on the door? Better to ignore them until you have a staffing plan that clarifies roles, quantifies and tracks performance, provides the right incentives, and backs it all up

with the right kind of training. An example: A part of the bonus of, say, the head of manufacturing might be tied to the freshness and depth of knowledge on new production techniques presented on the company's intranet.

Need to Have or Nice to Have?

The Army's example shows what is possible in the midst of daunting complexity. With almost half a million active personnel and almost as many reserves, the scale of the Army's operations dwarfs those of any multinational. But its early KM successes have kept breeding other successes; the after-action reviews proved so helpful to soldiers in the field that they spread voluntarily. In effect, they were "pulled" by the users—not "pushed" down by the top brass.

Now the Army is adding even more flexibility with a program it's calling "Random Thoughts While Running." More than 800,000 soldiers and Army civilians are getting portable e-mail accounts and access to a host of Army Web-based information. The initiative will allow knowledge to flow even more rapidly up and down the chain of command as well as between units.

In a world that prizes closely measured returns, determining exactly how KM can create value remains a challenge. But that did not stop BP or Siemens from investing. Siemens, aware that its telco division's failure to quickly generate top-quality proposals was hurting performance, plowed almost $8 million into ShareNet. Since its inception, the resulting collaboration has yielded more than $120 million in additional sales. Siemens held to a key tenet of all successful KM initiatives: It kept the focus on the business process that would get the best results most quickly.

Regarding return on investment: How happy would your chief financial officer be with the 1,400% that Siemens demonstrated?

For many businesses to date, KM has largely been a "nice to have." It has not yet achieved "corporate weapon" status. That's unfortunate. With business today running less on instinct and so much more on data, a KM that's hooked to overall strategy can be a potent tool indeed. ◆

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