# The Power Of Shared Knowledge

The path to knowledge-based companies is littered with disappointment. Here's how to make it work this time around.

By Hubert Saint-Onge

## Many CIOs have a very jaundiced view

of knowledge management; they tried it and it didn't work easily, so they've closed the book on that chapter—or so they think. In fact, IT and business executives grapple every day with ways to achieve better collaboration and improve the flow of knowledge across the company, whether employees and partners are in the next cubicle or continents away.

Increasingly, companies need to develop better customer services, processes, strategies, and value chains to leverage the intellectual or knowledge capital of their businesses. Sales has to talk to finance; service specialists in London need to work with their counterparts in Dallas; and appropriate technology has to support it all.

Most CIOs are well-aware by now that their job descriptions include a solid understanding of the company's workflow, processes, and the expectations of people in different functions. They also need a keen sense of who

**EXECUTIVE SUMMARY >** Businesses that embrace a holistic strategy of knowledge sharing will achieve sustainable "breakthrough performance." Conductive organizations will build knowledge platforms and encourage good internal collaboration.

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their customers are and what they want. Moving forward, IT will need even more understanding of organizational dynamics and change management. CIOs are expected to provide the technology and the processes that let people interact effectively to get their work done. This may or may not be called knowledge management, but the CIO will invariably be asked to provide the tools and processes for content management and collaboration.

That requires a much closer partnership with business leaders, and it's part of what I call the socio-technical approach to knowledge. To support that approach, different skills and mindsets—not based on pipes, bandwidth, or servers—will be the order of the day for IT executives. Only after those basics are established can IT adapt systems to meet the needs stemming from more interdependent organizations. The social dimension of work simply can't be ignored or underestimated.

In our book, *The Conductive Organization* (Elsevier, 2004), my co-author, Charles Armstrong, and I coined the term "conductive organization" to define a business that continuously generates and renews its capabilities to achieve breakthrough performance. Such an enterprise enhances the quality and flow of knowledge, regardless of geography. Key to its success is a strategy that calibrates culture, structure, and systems to the needs of customers and the marketplace. These businesses leverage the knowledge in the organization in interactions with customers, regulators, suppliers, and other stakeholders.

If this sounds like the ideal collaborative environment, it is. And even better, it's attainable. The first step toward achieving this organizational goal is envisioning the benefits and possibilities it offers. Then the heavy lifting can begin.

In fact, most companies have some form of content management and collaboration already in place, even if those consist mostly of the "reply all" button on E-mail. Instead of the often-used excuse that the corporate culture stands in the way of collaboration, we suggest that, more often, the relative awkwardness of these platforms presents the key obstacle.

## Beyond technology

In many ways, a truly conductive organization combines the goals of business-process management and optimization with a customer-centric focus across the physical and structural boundaries of the enterprise. With so many critical projects to implement, why is collaboration so important? Consider this chain of events: Competitive advantage comes from building capability faster than others in the market. And capability development results from the exchange of knowledge required to resolve problems and overcome challenges. Collaboration, therefore, generates new capability and is key to accelerating development and, in turn, competitive advantage.

Technology is a big part of the equation, of course, and tools

# In Support Of Virtual Teams

> **With more technology to support collaboration,** it's possible to create high-performance teams online. The challenge is to adopt the right processes and technology support.
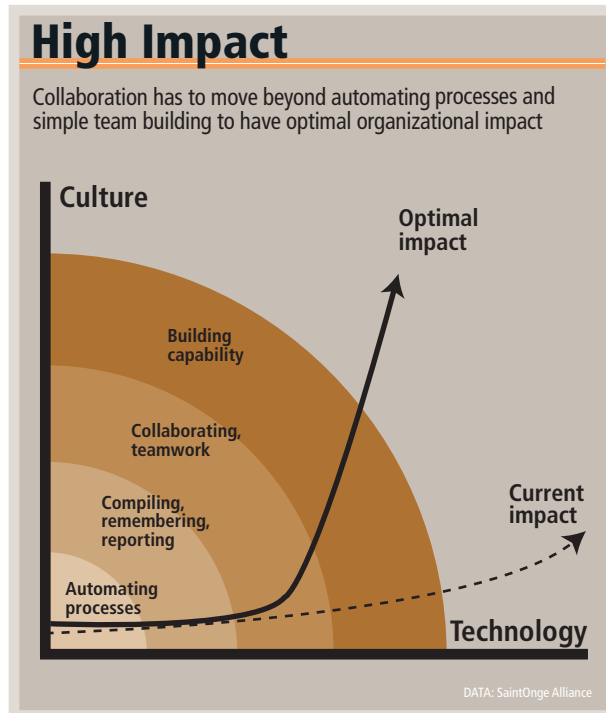
Highly experienced people with specialized capabilities are worth their weight in gold. That's why businesses are often only too willing to accommodate employees who don't want to relocate. As a result, many companies end up with lots of teams collaborating online. A company I worked with recently had engineers in 45 geographic locations collaborating on a complex network of projects.

Most businesses believe they have the technology and collaborative tools to compensate for the lack of physical proximity. But that's not always the case. For example, E-mail is generally very ineffective for this kind of collaboration. Frustration can get very high with a multiplicity of E-mails that can't be followed or are erased indiscriminately, or with lists that include some people and exclude others.

The head of a technology company recently asked me to find out why his sales staff didn't get better with time and experience; their development seemed to be arrested somehow. The answer became obvious when I looked into the organization. The sales staff was distributed around the globe in small offices or working from home. It wasn't possible for them to learn from one another. The junior salespeople weren't working directly with more senior people from whom they could learn. This is a case where creating a virtual community of practice can have significant payoffs.

With the right processes and technology, virtual teams can perform as well as, if not better than, in-person teams. They can create a high-trust environment where people work across disciplines, functions, and geographies without the costs imposed by the need to work face to face. • *H.S.O.*

have come a long way in assisting knowledge sharing. Tools such as business intelligence, E-mail, instant messaging (IM), and mobile devices offer real-time connectivity as never before. But if all it took were wireless technology and data mining, every business would have the perfect collaborative environment. In fact, technology is absolutely required, but it's insufficient by itself to build an effective knowledge platform. The



**High Impact**

Collaboration has to move beyond automating processes and simple team building to have optimal organizational impact

Culture

Optimal impact

Building capability

Collaborating, teamwork

Compiling, remembering, reporting

Current impact

Automating processes

Technology

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right approach and process must be put in place to harness the full potential of a technology-enabled collaboration system (see "In Support Of Virtual Teams," p. 64).

We're finding that mobility and the prevalence of real-time connectivity add significant complexity to the picture. The lack of integration and the resulting usability issues become significant barriers to user adoption. Additionally, most companies have yet to offer effective work spaces for virtual collaboration. IT often believes that everything is in place for people to collaborate easily and effectively, but this doesn't correspond to users' experience. We know that people will use IT tools only if they add to the perceived level of efficiency. If users find it too difficult to collaborate by means of the virtual tools we give them, they'll simply refuse to use them.

While there are many contributing factors to collaboration failures, I believe the main problem is that the approach isn't holistic. Technology and culture aren't coordinated; they're on parallel tracks. As we so often hear, technology without the right processes and people falls short.

Efforts to enable collaboration, especially from an IT standpoint, have focused almost exclusively on technology issues without giving the right level of attention to defining effective

supporting processes. IT departments aren't consulting the people who will use the technology. This is why a governance structure for a project to deploy a content and collaboration platform must play a very significant role in fostering adoption.

One could argue that IT is going through a major shift away from the traditional computing of number-based information and toward word-based information. At present, there's little software available to bridge the chasm between the computational logic of number-based programs and the complex content and collaboration of word-based programs—and there's no sign this will change soon.

The bulk of the investment in software so far has been in number-based software, which includes CRM, ERP, and a host of applications. Word-based software has an increasing presence with intranets, portals, and search engines, but still represents a rather small proportion of software investments. Yet, most of the information exchanged in companies is expressed in words. Though not well-integrated as a rule, the different components of the word software form what one could call the "content and collaboration" platform. As companies become increasingly networked, both internally and externally, we're seeing a shift to word-based technology that brings with it a new set of challenges. IT needs to fully understand the implications of this shift if it's to keep building competitive advantage.

Previous generations of knowledge management tended to be internally focused and not tied to strategic drivers. With the increasing importance of customer centricity, we've all seen the emergence of an increasing requirement to access information coherently across silos. The connection between culture and technology can no longer be ignored when customer centricity moves to center stage.

## Organized for collaboration

For many companies, content and collaboration still represent somewhat uncharted territory. Notwithstanding the technology challenges in making word-based software for content and collaboration scalable and reliable, CIOs are generally well-equipped to resolve technology problems. The greater challenge is making technology relate to the organizational dimensions, such as work habits, leadership approach, and the underlying corporate culture. Unlike other technology that consists mostly of automating processes, the technology that supports effective knowledge exchange can't be deployed without taking into account organizational issues.

From my experience in this work over the past couple of decades I've also found that there's a big difference between claiming to put the customer first and actually doing so. Businesses need to base their organizational structures on the type of customer relationship they want—not the reverse. We need to build the organization from the outside in, not the inside out. This will only happen with the right level of connec-

tivity and the right technology-enabled platform to achieve it.

Many businesses are attempting to address the problems caused by disparate information systems—for both customers and employees. For instance, at S.A. Armstrong, where my book co-author Armstrong is CEO, there was a need to help customers select the right water pump for a building project. Customers tended to consistently oversize pumps, resulting in unnecessary energy costs. In response, the company developed a collaboration platform that guides engineers in selecting a pump based on the best knowledge available. An accredited engineer can design a pump on the platform in real time, get a 3-D rendition of it, and instantaneously assess the relative merits of that choice. Not only has the knowledge of Armstrong experts been built into the platform, but it now can easily be accessed through a multimedia presentation. If required, an engineer can reach an expert for one-on-one consultations.

While many knowledge initiatives have focused internally, the most compelling and valuable use of a content and collaboration platform will often be with customers. Once there's strong connectivity at the customer interface, pressure for greater internal connectivity will follow.

A number of U.S. defense contractors have put in place virtual communities of practice that include members of the military organizations they deal with. When customers start building collaboration spaces, such as communities of practice, and require their suppliers to be part of them, there will be a compelling reason to get on board. There are early signs that this is happening, but it will take some time before it reaches critical mass.

These actions may seem very basic and logical, but they required new ways of working in each case. IT had to recognize the opportunities and be in a position to respond rapidly with the right tools. And IT needed to achieve this while leaving

**MORE HORIZONTAL MARKETS WILL MEAN MORE COLLABORATION**

ownership of the initiative to the business managers. IT's role is to be the custodian of the enterprisewide platform, ensure its integrity, and make certain that it can be leveraged for business opportunities as they present themselves.

Another company moving in the right direction is VSP, a large U.S. provider of vision care with a network of more than 17,000 doctors across the country. Exchanging the right information within this network has always been a huge challenge exacerbated by different state regulations. However, the com-

pany turned this challenge into an advantage by using a content and collaboration platform to build a monthly communication specifically designed for each individual doctor. As a result, VSP has seen a significant increase in the level of satisfaction among doctors in its network.

The drive to realize higher levels of customer centricity is also creating horizontal segments that cut across the more conventional vertical lines of a business. The traditional way to approach prospective customers in many companies is through their geographic channels or business units.

## The horizontal view

The recent development of enterprisewide market segments brings a new dimension to the way companies work and requires a great deal more collaboration. This trend has been evident for some time in sectors such as financial services, but it's relatively new in others. For instance, when a pharmaceutical company was asked to produce millions of anthrax vaccines in a matter of weeks, it had to form a horizontal team that cut across the conventional vertical sectors of R&D, manufacturing, and marketing. When a large retailer sought to accelerate growth through the implementation of customer segments, it had to form horizontal teams that traversed the vertical functions of merchandising and geographic distribution channels. Many companies are going through these significant changes as they seek to accelerate growth.

Fewer companies are attacking the problems from a top-down, enterprisewide perspective, but those that do so see tremendous benefits. Turner Construction Co., for example, views knowledge exchange as a strategic imperative. Four years ago, chief knowledge officer Jim Mitnick and VP and CIO Douglas Nies launched The Knowledge Network, which, among other things, offers safety information and best practices to all of the company's subcontractors. Mitnick and Nies wanted stakeholders to understand the benefits of knowledge sharing firsthand so they would embrace the concept, not just the technology. With this content and collaboration platform, the company has enhanced the level of collaboration with its key external

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## The User Experience

When users are satisfied with a content/collaboration platform, they'll take full advantage of it, fostering additional use throughout the company

| Characteristic | User implication |
|---|---|
| • Easier navigation | • A true gathering place for information sharing |
| • High-quality information | • More participants at all levels |
| • Interactivity and visibility | • A positive feeling about their knowledge and the experience |
| • Trust in the content | • Widespread accountability for information |
| • Central access | • Move away from the push of E-mail and toward pull technologies |

DATA: SaintOnge Alliance

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partners (see "Turner Constructs A Platform," this page).

Demand by businesses is only one part of the collaboration equation. For the next wave of knowledge management to fully take hold, a comprehensive technology infrastructure is needed that enables collaboration and learning, and manages knowledge assets for all to use. It will become the conduit for the enterprise-knowledge network. Current vendor approaches aren't designed to achieve these goals, however.

Despite a content explosion taking place on the word side—including blogs, content-management software, and IM—most offerings are incomplete. The collaboration aspect is often weak, and, when it's present, it's generally not integrated with collaboration tools. Even with the best intentions, most IT vendors don't have all of the pieces together to implement an effective

# Turner Constructs A Platform

> **As a highly** decentralized and specialized business, Turner Construction Co. found it increasingly important to spread the expertise of its 5,700 employees throughout the company and to hundreds of subcontractors across the United States.

So four years ago, the commercial building company—with $7 billion in construction volume—considered ways to better share and access its knowledge. The first effort was the creation of the Turner Knowledge Network and Turner University, says VP and CIO Douglas Nies. "We started with simple education, like OSHA [Occupational Safety and Health Administration] guidelines and training, and then rules for how to build something; it was more like E-learning," he says.

The key was to find something simple but important to the company that would yield quick results. In Turner's case, the company's safety record, which was already good, improved 50% in the first year after the knowledge-sharing platform was introduced. With that accomplishment under its belt, Turner had an easier time getting corporate buy-in for other efforts.

The company brought in an outside consultant and vendors to help shape a larger collaboration strategy that took an organizational approach. They made presentations to senior management—all the way up to the CEO—to explain the benefits. "It wasn't easy," Nies says. "They didn't all understand it when we said, 'We have TKN and the university, but we need more; we need the organization and culture to adopt this.'"

With Nies and others as advocates, Turner put in place a variety of processes—using a mix of vendor products—that showed the tangible results of knowledge sharing. These included a portal that enlisted people, not only documents and training, and links to virtual team rooms where experts could exchange information. For instance, six people who are good with roofs can join that community and share ideas. Eventually, employees and customers began to rely on the technology in order to do their jobs. The platform "became part of the workflow of the business. It was not an add-on," Nies says.

Another change was a reorganization based on vertical industries. Now, when a customer such as Home Depot wants to deal with the large-account person at Turner, or a health-care facility wants to talk to someone who knows that industry, Turner can respond. The company had to structure itself and its work to its customers' needs.

Nies realized the company also had to extend access to its partners, so it created an extranet for collaboration. While there was some resistance and a "fear of giving away too much," Nies says, the opposite was true. "If we don't do this, we're holding back on customers and the industry, and it's more costly." Turner has found that the collaboration platform eliminates waste and fosters better communication.

Turner will continue to phase in projects this year and next. Nies says the company is investing roughly $4 million annually in its efforts, excluding infrastructure and initial startup costs, but it will become a zero-cost system, given the payback in efficiency and satisfaction. Turner will keep building on its collaboration efforts because "a knowledge strategy pulls people together," Nies says. • *Paula Klein*

content and collaboration platform, and software offerings in this area are far too compartmental and proprietary.

A group of electronic-content management companies is in the early stages of working on integrated solutions. They include EMC's Documentum, Hummingbird, IBM Web-Sphere, Open Text, and some search and portal companies, such as Entopia, Interwoven, and Plumtree Software. Those that survive will provide the most integrated, comprehensive platforms. Enterprises will increasingly insist on integrated solutions that let them both manage content and support collaboration.

What will this new architecture look like to users? It will be highly usable, intuitive, and standardized. Currently, technology such as E-mail is far too push-oriented. We need to de-emphasize that model and move to "pull" technologies that are available when needed.

For example, customers, partners, or workers will go to a collaborative workspace to seek information and advice in real time instead of waiting for an E-mail reply. As Turner Construction has done, they can search or use browser objects for a productive inquiry and find relevant knowledge objects that show how others have dealt with their problem in the past. Then they can call on the appropriate people, in person, to ask questions. That's how collaboration is best supported—with a combination of knowledge access and knowledge exchange.

While it may seem daunting to create such content and

> **THE MOST EXPENSIVE COMPONENT, THE TECH BACKBONE, IS ALREADY IN PLACE AT MOST BUSINESSES**

structure, the most expensive pieces are already in place in most companies: the technology infrastructure and the backbone that transmits information across the enterprise. One could argue that companies now use only a fraction of this very expensive backbone, and that's limiting the ROI for this significant investment. What's generally missing is the "last copper mile," the software that facilitates collaboration and provides access to content easily and at a low cost. That software becomes everyone's workbench in the collaborative networks of the conductive organization.

To create a socio-technical approach to knowledge, we have to move beyond automating processes to collaborative teams, and finally to building organization capability systematically. Far from adding a new burden to the organization, the content and collaboration platform will be fully integrated into the way work is done. This is how the next wave of knowledge management will provide companies with the built-in ability to renew capabilities in line with what their customers need. It's the promise of conductive organizations. ○

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## ActionPlan

**Though building a collaborative business is an ongoing process, there are steps that will get you on your way with a content and collaboration platform in the short term. It involves both technology and corporate culture.**

- **Develop and heighten the awareness** of your IT staff and business leaders concerning what effective content and collaboration could represent for the company.
- **Bring together a cross-functional** group of business leaders and IT staff to formulate a content and collaboration platform that's linked to the business' strategic drivers. Be sure business-process owners are involved.
- **Put in place a multitiered governance** structure that will ensure the right level of business sponsorship and consultation to engender the shared ownership of this platform.
- **In the course of formulating the strategy,** identify the key business applications that will justify the investment in the platform. Start small to show early wins. Use existing infrastructure and skill sets to keep costs and training at a minimum.
- **Define and map the different phases** of implementation and the results to be obtained at each phase.
- **Experiment and renew** the strategy as you go along.