

Continuous Improvement Through Collaboration, Social Learning, and Knowledge Management

Andrew Muras and John Hovell

Manager: “What are you doing?”

Employee: “Social networking. I have 826 friends. I can find anyone.”

Manager: “Okay, I need to put together a team of international finance experts who know merger arbitrage, have 10-plus years’ experience, speak Cantonese, and can hit the ground running Monday.”

Employee: (pause) “I don’t have any friends like that.”

—Excerpted from IBM.com/connect commercial

We might laugh at the exchange above, but it highlights a current issue. What are the payoffs of these new ways of doing business?

The world of work is changing. We’re starting to discover how collaboration, social learning, and knowledge management can not only help businesses learn and perform better, but also provide insight and new ways of improving processes. Rather than shying away from these techniques, consider how you can integrate them with your ongoing process improvement initiatives.

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We were talking with a senior leader about collaboration and social networks for improving the business, and his comment was, “Only our 20- and 30-something employees work this way. Most of us older folks don’t find it very useful.”

So what’s your view? Do you take it as a badge of honor that you don’t use Facebook or have never tweeted? Or are you actively looking at ways of incorporating collaboration, knowledge management, and social learning to improve your personal productivity as well as that of your organization?

Now, you don’t have to be part of the 100,000 tweets or 1.3 million YouTube views occurring every minute worldwide. However, as a business professional, you should understand the concepts, payoffs, knowledge, and collaboration techniques that may help improve your business.

THE CHANGING WORLD OF WORK

Have you ever thought about why companies exist? For what reason do we choose to organize ourselves into silos—also known as “companies”? Let’s take a historical perspective to try and answer these questions.

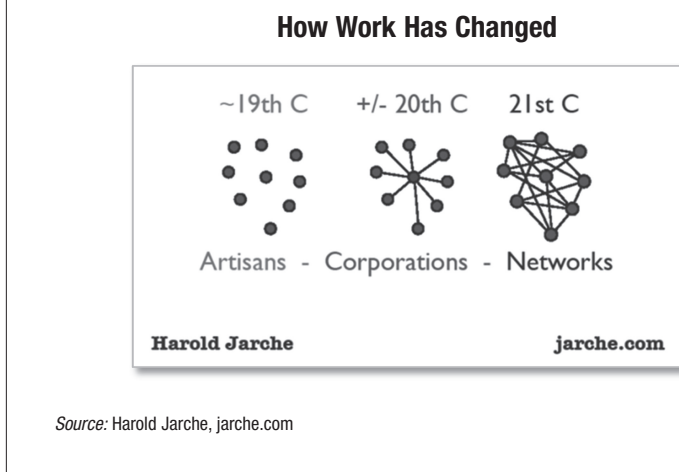
More than 50 years ago, your ZIP code was a critical piece of data about you. The physical area where you spent most of your time informed other people of the products

and services that were available to you. It wasn't easy or cost-effective to travel beyond your ZIP code, so you were almost forced to visit your local services, such as barbers, carpenters, plumbers, or grocery stores. In those days, you hoped your local services were led by global experts, because you didn't have the luxury of broad geographical comparisons.

Over the past 100 years or so, we've created a way for specialists to get together and collectively offer a service or product. For example, many grocery stores formed chains, and so did many restaurants. There was a benefit to customers and the companies alike, because by banding together, companies could competitively earn more business. There were legal and cost benefits to these wider geographical offerings. ZIP codes started to mean less, because you could get the products or services in wider physical areas.

Another major shift has happened in the past 20 years. That shift was from the industrial era to the information era. In the industrial era, organizations focused on making physical products, such as cars, televisions, and radios. Tremendous effort and energy was focused on process improvement and productivity gains. Shifting into the information era, we moved our prime area of focus from products to services. In fact, we improved products and services by leveraging our ability to find information. Technology—especially the computer and the Internet—created a way for us to very quickly share how to make things better or how to say things better. Most organizations now have entire information technology (IT) departments, with tremendous

Exhibit 1



funding to maintain all of this information.

Now, we're in the midst of another major shift (see Exhibit 1). We've shifted from the information era to the knowledge and networks era. Did you know that we now have 10 times the number of words that existed in William Shakespeare's time?

We're all buried in e-mail, and we haven't read every page of the newspaper, let alone every page of the Internet. As Dave Snowden, a global thought leader in knowledge management, once said, "We know more than we say, and we say more than we write." We need to know what we know, in our heads, which is exponentially more than what we write down. Yet we're all buried in trying to keep up with what we write down.

The game is changing, and it may be time to embrace it by thinking and operating differently. One way of looking at these changes is to describe a practice area known as *knowledge management*. We prob-

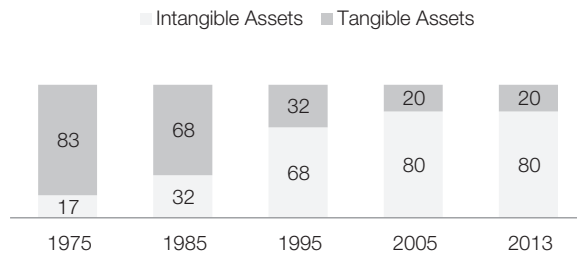
ably don't need to manage our knowledge the way we manage information, but many organizations are finding tremendous benefit in optimizing the flow of knowledge.

WHAT'S THE BUSINESS CASE FOR KNOWLEDGE MANAGEMENT AND COLLABORATION?

Over the past several decades, we've seen a dramatic shift in how companies are valued in the marketplace. Intangibles such as goodwill, brand, leadership, and knowledge now comprise a high percentage of a company's value (see Exhibit 2). What can be disconcerting is that much of this intangible value walks out the door at the end of each workday. While many companies vigorously manage such intangibles as corporate brands, few spend time actively managing and exploiting intangible capital such as organizational and employee knowledge and expertise.

Exhibit 2

**Intangibles Dominate a Company's Valuation
Components of S&P Market Value**



Source: Ocean Tomo, <http://www.oceantomo.com/productsandservices/investments/intangible-market-value>

We recently calculated our company's intangible asset percentage—i.e., market value divided by intangible asset value. It averaged 56% over a 6-year period, as shown in Exhibit 3.¹ While this percentage was consistent with many of our competitors, it was significantly lower than recognized leaders in our industry. Such a disparity suggests that the marketplace highly values these industry leaders and their ability to capitalize on both tangible and intangible assets. Our analysis highlighted several interesting points:

- Given that half of our company's value is from intangible assets, are we doing enough to systematically and purposefully identify, track, manage, and grow those assets?
- If we were able to close the gap with industry leaders, for example, by growing our intangible asset percentage by 25 points, our

stock price would increase by 50%.

In addition to intangible asset values, other studies have identified the business-case justification of collaboration and knowledge management practices in different ways. For

example, McKinsey reported that improved communication and collaboration through social technologies could raise the productivity of interaction workers by 20 to 25%.²

In another study, jointly conducted by the American Productivity and Quality Center (APQC), Deloitte, and Lockheed Martin, organizations with higher knowledge management and collaboration maturity were shown to have twice the financial performance across a number of common financial indicators such as return on assets and return on sales.³

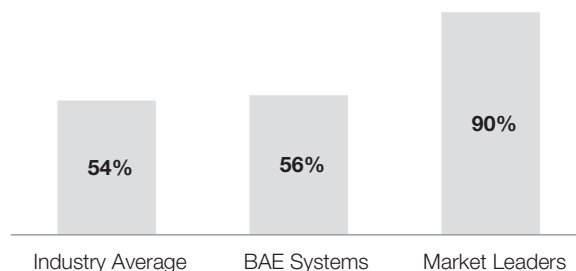
Such data points begin to make a compelling case for incorporating collaboration, social techniques, and knowledge management into your business improvement strategies.

WHAT ARE YOUR BUSINESS KNOWLEDGE CHALLENGES?

One financial executive related a case of knowledge failure: His company had implemented a talent-development

Exhibit 3

**Comparison of Intangible Asset Value
Intangible Asset % of Value**



Source: Andrew Muras and John Hovell

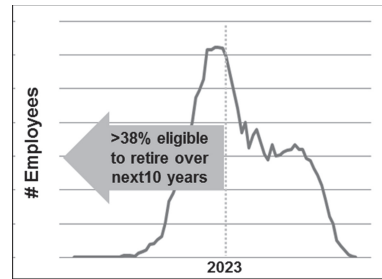
program for finance professionals to rotate among geographically dispersed business units. While the program was well planned, little attention was placed on ensuring proper knowledge transitions during the rotation process. As a result, one business unit suffered a multimillion-dollar budgeting error that was not discovered until well into the year, thus making it impossible to recover. This inadvertent error was traced to a failure in a knowledge hand-off between rotating individuals.

Unfortunately, such mistakes are all too common. To help highlight the impacts of knowledge issues on our business, we've identified four elements that impact our business performance and that we're attempting to solve:

1. *Upcoming knowledge loss.* Our current worker age profiles show that a large percentage of our workforce is eligible to retire within the next 8 to 10 years (see Exhibit 4). Since one of our core services is selling expertise, the question is how we will maintain our expertise and organizational knowledge over the coming decade. It's not just our company with this issue. Bersin & Associates has identified several industries that are at similar risk, including government, energy, oil and gas, telecommunications, and manufacturing.
2. *Inability to quickly find expertise.* It was disturbing to realize that LinkedIn often knew more about our employees than we did. It was easier to find employees and their skill set through a commercial tool than

Exhibit 4

A Large Portion of Our Expertise Is Set to Retire



Source: Andrew Muras and John Hovell

through our own internal systems. Since finding experts can be critical for solving problems, improving processes, and bringing new ideas to customers, we knew we had to develop the processes and systems for easily and quickly finding experts and expertise throughout our company.

3. *Minimal collaboration and knowledge sharing.* We looked across the company and found that less than one percent of our workforce was participating in a community devoted to technical or corporate knowledge sharing. This was also highlighted in numerous employee surveys that found we were underperforming in employee engagement and the ability of employees to connect with others.
4. *Low knowledge and collaboration maturity.* To understand our current state and the road ahead, we conducted a collaboration and knowledge-maturity assessment with APQC. We

scored low as an organization, indicating that we are leaving a lot of money on the table and negatively impacting our bottom-line financials (see Exhibit 5).

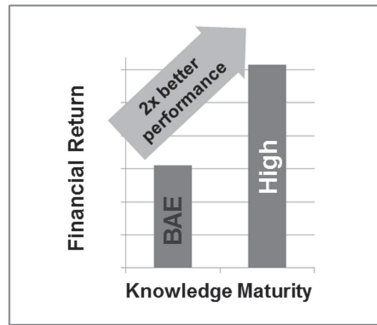
APPROACHES TO ADDRESS KNOWLEDGE CHALLENGES AND BUSINESS PROCESS IMPROVEMENTS

An EDS commercial from a few years ago captured the challenges for many in the business world. The commercial showed a team flying an airplane while, at the same time, assembling that plane in the air! Putting physics aside, the commercial made the point that businesses often don't have the time or funding to meticulously develop plans and strategies for detailed knowledge management and collaboration approaches. Instead, management often wants results sooner versus later.

Luckily, numerous solutions are available that can be rapidly applied. The following paragraphs describe four solutions we're implementing.

Exhibit 5

Organizations With High Knowledge Maturity Have Higher Financial Performance Versus Their Peers



Source: APQC, <http://www.apqc.org/knowledge-base/documents/why-should-you-assess-your-knowledge-management-maturity>

the last, which is ensuring that the KC team can apply what they’ve learned in the actual workplace. Using the KC process, we have documented significant cost savings or cost avoidance, often in excess of several hundred thousand dollars. In addition, the KC teams have used the process for identifying and implementing numerous process-improvement initiatives.

While we most often use this process for retirements, it can also be used for job rotation programs, promotions, divestitures, building expertise, or limiting single-point failures (i.e., when there’s only one employee who knows how to do “xyz.”)

Communities

Communities and communities of practice (COPs) have long been a staple in collaboration and knowledge management initiatives and have an established track record of improving organizational knowledge, helping employees solve problems, and improving overall business performance. In a community, employees can do and learn through a group what they can’t do and learn by themselves.

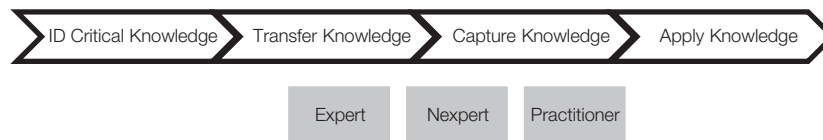
Knowledge Continuity

Past approaches at capturing knowledge from retiring or rotating employees have involved asking the departing employees to develop desk guides or endure a set of Q&A sessions, which might even be videotaped. Unfortunately many of these guides and videos end up gathering digital dust in SharePoint repositories and other archives.

Our Knowledge Continuity (KC) process avoids these issues as we employ a human “teaming” process that ensures that critical knowledge is transferred and woven into the fabric of the organization. It’s a relatively simple process involving four steps and three roles (see Exhibit 6). The critical steps include the first (identifying the knowledge, which is often tacit—i.e., in our brains), and

Exhibit 6

The Four Steps and Three Roles of Knowledge Continuity Offer a Rapid and Proven Knowledge Transition Approach



Source: Andrew Muras and John Hovell

Exhibit 7

Documented Success Stories Are One Reason for the Continuing Use of Communities in Government and Industry

An Aerodynamics COP facilitated collaboration among business units to perform computational fluid dynamics (CFD) to help downselect fin and wing shapes of a guided projectile. As the lead engineer cited: "Without that effort, we would have completed a portion of a wind tunnel test before learning what we learned from the CFD. We would have had to stop the test, complete redesign and sizing, build additional model parts and start a second test to complete the original objectives. The extra cost would have been roughly \$200k and delayed us several months."

Source: Andrew Muras and John Hovell

For those not familiar with the concept, a community is simply a group of people who participate (typically voluntarily) in a shared conversation around a shared topic (LinkedIn groups are an example). Successful communities can be formed in almost any area or function, such as finance, project management, and engineering. Communities thrive when those participating have business issues that need answering, often quickly and from a group of experts.

From a tactical perspective, a community is often nothing more than a monthly phone call and maybe an online discussion area for communicating between meetings and answering questions. It's simple, yet powerful.

What becomes powerful, especially in communication with senior leaders, are the success stories (see Exhibit 7) that often arise through discussions, community interaction, and associated process-improvement efforts. At our company, we are looking to build both the number of communities as well as overall participation levels, so that a large percentage of our workforce is a member of at least one community.

Expertise Location

So what would you do if you had to quickly assemble a group of international finance experts who have 10-plus years of experience and who speak Cantonese? Could you rapidly discover and mobilize your internal resources, or would you have to outsource? Unfortunately, it's often the latter.

While expertise location is often critical to the success of both ongoing performance and new business efforts, the issue with many organizations is that no single function has full responsibility and accountability for expertise data. For example, in our company, at least three organizations play significant roles in capturing employee skills and expertise: Human Resources has control of talent profiles and HR system data, IT sponsors SharePoint MySites profiles (roughly similar to LinkedIn profiles), and Business Development develops and stores proposal resumes.

We'd like to report that we've solved this issue and associated processes. Unfortunately, it's a work in progress. We're not alone in this quest: For example,

APQC reports (see Exhibit 8) show that only 10 percent of organizations have a very effective expertise location process.

Since the corporate landscape is littered with many failures and lessons learned, we've incorporated the following note of caution into our planning: steer clear of resume databases, which are too difficult to maintain, and single-approach solutions, which are prone to single-point failure.

Culture

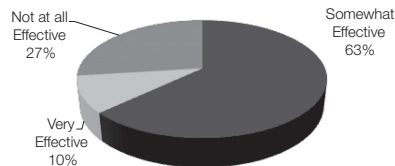
Those in the defense and aerospace industries often have an inherent distrust of sharing and collaboration. "Need to know" is an unwritten rule in the workplace and often the subject of jokes (i.e., "If I tell you, then I'll have to kill you."). The issue is how to transition from such a "need to know" attitude to a "responsibility to share." Yes, there are times when "need to know" is essential. However, it shouldn't be an overarching theme for all.

We tend to use a couple of tag lines for messaging that will hopefully begin altering the culture. One is the concept of

Exhibit 8

APQC Reports Show That Industry Has a Ways to Go for Effective Expertise Location

How Effective Is Your Organization at Expertise Location? APQC, 2013



Source: http://www.apqc.org/knowledge-base/download/283214/K04226_ELS_whats_your_approach.pdf

“working out loud” and another is “What do I know that others need to know?” Both of these are an attempt to change how people think about and act concerning collaboration and knowledge-sharing in the workplace. See Exhibit 9 for an example and group exercise in “working out loud.”

Most of us learn and share knowledge through our connec-

tions—by watching what others do and sharing thoughts and best practices with peers, mentors, and management. But how do you develop and build those connections, particularly in large or distributed workforces?

Our approach is to concentrate on people and processes, while using available technology. In the people element, we are developing easy-to-use tem-

plates and other informational media—soon to include video and narrated briefs – to begin describing the “what’s in it for me” as well as the expectations for 21st-century knowledge workers in our industry.

In the process element, we are implementing numerous pilots and knowledge processes that help address business problems and foster employee connections. For example, in the latter, we conducted a Virtual Connect conference featuring senior leaders discussing various business and technical issues and which was open to the entire company. We are still evaluating the results and hope to conduct additional such conferences on a regular basis.

FROM ANOTHER PERSPECTIVE: LINKING KNOWLEDGE WITH STANDARD PROCESS IMPROVEMENT APPROACHES

What if you’re not in the position to implement any of the four processes described here? Are you just out of luck when

Exhibit 9

“Working Out Loud” in Practice

Working Out Loud: Five-minute practice exercise for groups

In one or two sentences (140–200 characters), recap something you’ve done or learned that day that might be of interest to others. It could be a quick overview or have the explicit goal of teaching others, such as “this is how I do xyz.”

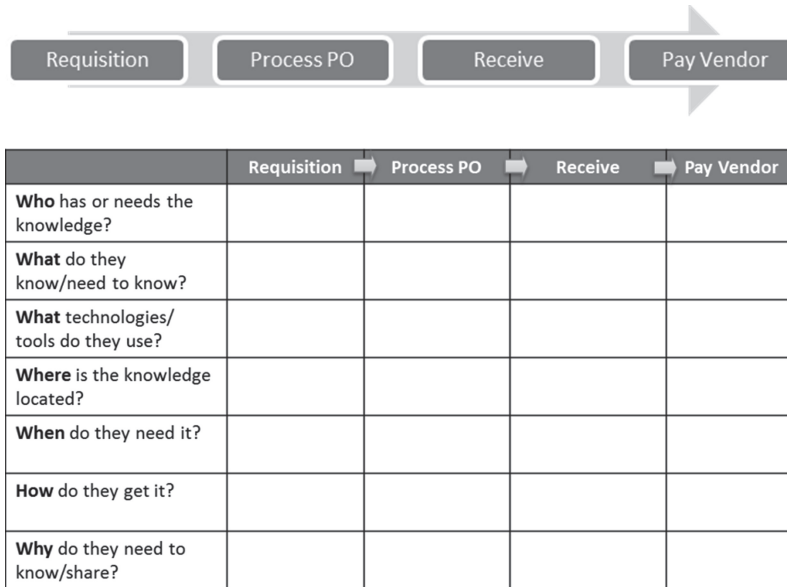
Read out loud to the group and ask for quick comments and feedback. Congratulations! You’ve now begun narrating your work/working out loud.

To encourage working out loud and richer knowledge transfer, don’t ask for lists of activities and tasks. Instead ask such thought-provoking questions as “What did you learn?” or “How did you solve a problem?” or “What do you wish you’d have done differently?” or “How did you decide to do xyz?”

Source: Andrew Muras and John Hovell

Exhibit 10

Using Knowledge Flow Insights for Improving Traditional Process Improvement Approaches



Source: Andrew Muras and John Hovell

it comes to getting results from collaboration and knowledge management? Fortunately, no, you can apply knowledge management in more traditional approaches.

For example, many organizations have performance-excellence programs driven by process improvement techniques such as Lean Six Sigma, Activity-Based Costing/Management, and others. Have you ever considered adding another element to this mix—one that identifies knowledge flow as an integral element of process improvement?

As a potential construct, consider a top-level, four-part procure-to-pay process, as shown in Exhibit 10. Using traditional improvement

approaches, you can readily analyze waste, costs, cycle times, and other process factors.

Now expand this analysis to include the unique role of knowledge flow, capture, and dissemination in the process through using a “five Ws” approach (who, what, when, where, why)? Such an approach provides deeper insight and generates new ideas for discovering cost drivers, eliminating non-value-added, and identifying potential quick-hit solutions.

SUMMARY

The world of work is changing, and we’re just now starting to discover how collaboration and knowledge management can not only help businesses

learn and perform better, but provide insights and new ways of improving processes. Rather than shying away from these techniques, understand how you can integrate them with your ongoing process improvement initiatives.

Consider this insight from a *Harvard Business Review* article:

No single [method] has all the approaches for sustaining organization attention to improvement ... A few companies that lead in sustained process improvement have drawn from the best of [multiple process improvement methods] to embed continuous

improvement in their organizations.⁴

The question is: Will yours be one of those organizations that draw from the best of multiple techniques, including knowledge management and collaboration, to position your organization for sustained success and improvement?

NOTES

1. For those interested in performing a similar analysis using readily available financial data, see Murray, A. Rethinking ROI: The metrics of intangible assets. *KM World*, November 2012. Retrieved from <http://www.kmworld.com/Articles/Column/The-Future-of-the-Future/Rethinking-ROI-The-Metrics-of-Intangible-Assets-85810.aspx>
2. See Bughin, J., Chui, M., & Manyika, J. (2012, November). Capturing business value with social technologies. *McKinsey Quarterly*, page 2 of pdf version of article. Retrieved from http://www.mckinsey.com/insights/high_tech_telecoms_internet/capturing_business_value_with_social_technologies
3. See <http://www.apqc.org/knowledge-base/documents/why-should-you-assess-your-knowledge-management-maturity>
4. Uniting the Religions of Process Improvement, blogs.hbr.org, March 7, 2011.

Andrew Muras is an advanced learning manager at BAE Systems, where he is responsible for delivering collaboration and knowledge management, social learning, performance management, and business improvement solutions. He is the author of *Process Improvement and Performance Management Made Simple*; he has also published dozens of articles in the *Journal of Corporate Accounting and Finance*, the Performance Management Institute's *Measured Quarterly*, and the *Shared Services News*. He can be reached at amuras66@gmail.com. **John Hovell** is senior manager of social learning at BAE Systems. He is responsible for delivering collaboration strategy and learning tools. He presents at national conferences and has published numerous articles including a chapter in the new book *Making It Real: Sustaining Knowledge Management*. He can be reached at <http://twitter.com/klowey22> or <http://www.scoop.it/t/knowledge-management>.