

KM critical to attracting, retaining top talent

Part 2 of an interview with **Dr Robert D Mayfield**

Ed note: In 3Q/2008 we published the first part of an interview with Dr Robert D Mayfield on the importance of implementing knowledge management (KM) processes in the generation sector of the electric power industry. Here we return to that theme with the second and final part of the discussion.

As pointed out in the first part of this interview, managing an electric-power generation business efficiently and profitably is no easy task. It involves protecting major physical assets against damage over their multi-decade lifetimes, keeping current on maintenance and repair practices, learning and implementing new digital technologies to improve process control and communications, etc—all while navigating federal, state, and local regulations and ensuring compliance and safety at every level of operation.

In addition, there are staffing concerns. Perhaps the most compelling challenge facing the industry today: The current workforce is graying rapidly and relatively few qualified workers are entering the field. Critical to addressing workforce and other plant-level issues, according to Dr Robert D Mayfield, is knowledge management (KM). Simply put, KM processes make new strategies and tools available to generating companies for gaining competitive advantage.

To pick up where we left off, Robert, when you talk about “learning organizations” you mention the importance of learning from your mistakes. Often, that’s easier said than done. Are there ways to train people to do this and to help organizations become “learning” ones?

Training and development is a top priority in a learning organization. It sounds simplistic, but the truth is that times change, people change, situations change, markets change, and

so organizations must change and adapt to succeed. Training and development of the people that underpin an organization make it possible for the organization itself to continually evolve to meet new challenges.

Blended learning works well within a learning organization. It encompasses the following:

- E-enabled knowledge—specifically, online documents, articles, notes, and access to technical experts.
- E-enabled distance learning, including training modules, video conferences, and Webcasts.
- E-enabled collaboration—that is, interactive peer-to-peer learning.
- Team-based computer simulations.
- Custom programs and workshops.

Another important component of training and development within a learning organization is cross-fertilization or cross-departmental training—programs that enable employees to share knowledge across the enterprise and across disciplines. Managers often are surprised at how many good new ideas come from such programs.

The best way to implement a cross-training program is by tar-

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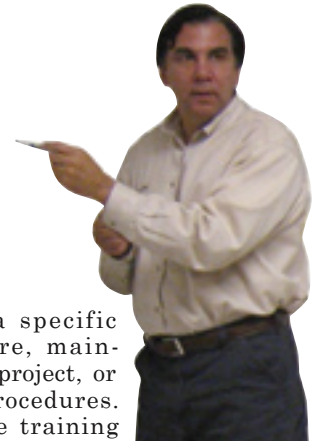
getting a specific procedure, maintenance project, or set of procedures. Once the training is complete, workers should be assigned to work, on a periodic basis, with more experienced team members on those limited procedures so that “knowledge depreciation” does not set in.

Remember, just setting up a training program isn’t enough. That’s Step One. The whole process must be monitored and evaluated constantly to ensure employees are using it and learning from it. Everyone benefits when employees are well trained and educated. They know how to communicate better with management, how to ask questions and contribute ideas, and how to make informed decisions for improved work performance and, by extension, improved organizational performance.

Pick up any business magazine and you’ll see something about the importance of mission-critical knowledge. Why should our industry, in particular, be concerned about loss of mission-critical knowledge?

In many industries, mission-critical knowledge is important to keeping the supply line moving, the factory humming or the recipe for the “secret sauce” protected. In the electric power industry, human error can shut down the grid—or at least a large part of it—and shut down everybody else’s supply lines or factories, although the secret sauce would still be protected. Our nation’s economy depends on the reliability of the electricity grid; everyone suffers when a catastrophic failure occurs—whether caused by human error or a tree limb. Mission-critical knowledge in our industry is *hyper mission-critical*.

Within the industry itself, mission-critical knowledge is all about competitive advantage. You can dress it



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up in all kinds of fancy academic or business-journal language, but the bottom line is every company must compete and, to be successful, every company needs an edge.

In power generation, the real crisis is that we often don't recognize when, where, and how mission-critical knowledge is lost. No organization wants its proprietary knowledge walking out the door, or wants to waste time and resources relearning information that should be ingrained in its organizational DNA. Yet, electric power producers typically allow this to happen—usually without knowing it.

Organizations that can retain their mission-critical knowledge and then leverage it through the use of technology will move to the front of the line. It's about retaining the knowledge of experienced workers and capturing the energy and ideas of new workers and then applying technology in novel ways to transform that information into a competitive edge by being able to identify trends, unusual patterns, and hidden relationships that others can't.

That's the upside. The downside is that if organizations don't take steps to prevent the loss of mission-critical knowledge, they risk losing business secrets, core processes, and proprietary knowledge—losses that can lead to unacceptable operational, functional, and/or financial harm.

How do you identify mission-critical knowledge?

The first step is to think about risk. What keeps a manager up at night? What are the risk factors that really would stop the organization dead in its tracks? Not everything that is "mission-critical" is a "do-or-die" situation. But identifying and evaluating risk is central to knowing what is "mission-critical" and what is "now."

So, first you must identify critical "at risk" knowledge and skills, particularly those associated with impending attrition. Second, you must evaluate the risks associated with losing critical knowledge and skills, and focus on the areas of greatest risk. Third, you must develop, implement, and evaluate actions (documentation, mentoring, coaching, training, re-engineering, sharing of expertise, etc) for managing risk. Finally, and importantly, don't hoard knowledge.

Our industry needs to get over the idea of dividing up knowledge and retaining it in separate business units. That doesn't work today. We need to distribute mission-critical

knowledge among all employees involved in operations, maintenance, engineering, and support functions. Now, I'm not saying that the CFO has to know how to fix an emergency valve leak or that a pipe-fitter has to know how to file Sarbanes-Oxley financial statements, but both of these guys need to recognize that these roles are critical to the successful functioning of the overall organization.

You mention the importance of sharing knowledge. I've also seen the term "knowledge transfer." Is that the same thing? Can you elaborate a bit on knowledge transfer?

Sure. In order to share knowledge, it must be transferred from one person to another. Knowledge transfer ultimately is a human process that requires dynamic interaction. So, the effectiveness of knowledge transfer depends primarily on human characteristics—on the folks doing the sharing and transferring. In order to successfully transfer knowledge, you must have a climate of understanding, trust, cooperation, and teamwork. And, although technology is great, the most effective strategy for knowledge transfer is face-to-face

"The most effective way to share knowledge is through face-to-face communications."

interaction.

In fact, I'd go so far as to say that most employees don't learn much of real importance from organizational documents. They learn about the organization, job, specific tasks, expectations, etc, from communicating with and observing their coworkers. And, here's where it gets interesting: Knowledge can reside not only in one person's head, but in the collective heads of internal networks and communities. So, it is important that relationships within the organization be nurtured and that the individuals within the networks feel as though they have valuable knowledge worth sharing.

To effectively transfer knowledge and share it among workers, you must (1) have a team or learning culture, (2) workers who are willing and able to receive the knowledge, (3) make sure everyone in the organization understands the importance of sharing resources, (4) allow tolerance for mistakes, (5) develop relationships and trust, and (6) provide incentives or rewards based on sharing.

You talk about the importance of relationships and trust and incentives and rewards for sharing knowledge. Are there reasons why employees aren't willing to share what they know?

The short answer: "Yes." That's why culture is so important. Some employees may be unwilling to share their expertise because they consider knowledge their intellectual property—something which might form the basis of future consulting work or employment somewhere else. Or, they fear that if they share what they know, they become less "unique" within the organization and may lose status or become expendable. Some employees object to knowledge-sharing exercises because they are "too busy with real work," and finally, some employees may simply lack the proper communications skills needed to effectively share their knowledge.

For all these reasons, the most effective way to share knowledge is through face-to-face communications, which means organizations must provide opportunities to build relationships among employees.

If face-to-face relationships are so important, why do organizations get so preoccupied with technology?

Technology is a tool, but only a tool. Organizations that use technology as the primary means of igniting an organizational transformation are going to be sorely disappointed. For one thing, it's like putting the proverbial "cart before the horse": If you don't identify the knowledge you need transferred and the people who possess that knowledge, how are you going to know what IT system will work best?

A good KM system is built around people; managers should never try to force people into the system's mold. An important point to remember: 90% of tacit knowledge—the knowledge, experience, know-how that comes from intuition or years on the job—is shared through face-to-face communications.

That said, face-to-face, socially based knowledge-sharing certainly can be augmented by technology. Because people do have "real" work to do and they are busy, organizations often have a hard time providing opportunities for social one-on-one knowledge interactions. Technology-based social interactions can provide an alternative when face-to-face interactions are difficult. I'm talking about e-mail groups, Web-enabled discussion groups and other interactions in some sort of virtual shared workspace that is hosted by the organization's Intranet. These

groups are often referred to as communities of practice (CoPs) or community cafés, they definitely can facilitate knowledge-sharing and enhance decision-making processes within the organization.

Tell us how these communities of practice might work.

A CoP leader generally is a manager who recruits experts with backgrounds relevant to the KM practices or strategic objectives that must be shared. Community members are those employees to whom the expertise needs to be transferred. By participating in Web-enabled meetings or online discussion groups, members share knowledge, experiences, and best practices that will benefit the organization. So you've got community members participating in discussions, raising issues and concerns regarding common needs and requirements, alerting other members to changes situations, and above all learning from the recognized experts and from each other.


Presumably, even the newest hire has something to contribute; otherwise, you wouldn't have hired him or her. The group leader's job is to make sure everyone feels comfortable and participates. The leader has to not only organize the events—whether they are virtual or face-to-face—but ensure dissident views are heard and understood. The CoP becomes a place for mentoring and coaching and for nurturing the idea that everyone is in the same boat with the same goals.

You mentioned best practices. Where does that fit in with knowledge management?

To talk about best practices, it's best to take a step backward and talk about blended learning. We talked about learning organizations in the first part of the interview, and blended learning and best practices are better understood within that context.

To effectively implement KM processes, you need a team, or learning culture. That means every employee is learning and sharing every day—not just when they're in a training program or an executive management seminar. When we talk about blended learning and best practices, we're talking about ways to ensure that learning and sharing are going on. In other words, becoming or being a learning organization is the strategy and blended learning and best practices are tactics.

Blended learning is about using a mixture of distance learning, self-



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study, and on-the-job training. To have an effective blended-learning environment, you've got to attract, train, challenge, and retain the best and brightest employees, develop and implement "Best Industry Practices" across all your projects, aim for competency in operational experience, ensure each employee is well trained and qualified to perform his or her duties, and, finally, tailor qualification standards for each position and make them plant-level documents.

This all seems like common sense; however, you'd be surprised how many organizations pay lip service to these

ideas, but don't take any real action to assure their implementation.

In the case of best practices, the learning environment is essential because what you must have is an environment in which best practices are sought out, implemented, reviewed, and constantly updated. Implementing best practices requires a willingness to not only take a hard look at your own organization, but to look outside to see what the guy down the street or across town is doing.

One of the best ways to do this is by benchmarking—defined as measuring an organization's performance

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Which opportunity do you think would be more exciting for a bright 20-something? Now, these may be extreme examples, but the fact is we are up against stiff competition when it comes to recruiting talented engineers. And, because skills development for many of the positions in our industry must begin at the undergraduate or graduate level, a student considering a career in power generation often has to commit to a power program years in advance of entering the job market. Today, not many kids are thinking, "Wow, I want to be a powerplant engineer when I grow up."

I can't emphasize this enough. A student's perception of jobs in power generation is critical as he or she considers career opportunities, professional challenges, salary, job security, and a work/life balance. We've got to be proactive about this. We have got to position ourselves as an "employer of choice."

In my opinion, companies can't do

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this by themselves. This must be a concerted effort by the entire industry. The best and brightest students today don't want to just get up, go to work, punch a clock, and come home. To gain acceptance to the top engineering schools, they had to develop impressive resumes, even before they left high school. They want to be involved in their communities and feel like they are contributing to the world around them.

As an industry, if we're going to attract these kids, we've got to embrace a social vision that defines corporate citizenship as both a moral responsibility and an economic necessity. World-class organizations understand that good corporate citizenship strengthens the organization. Power companies must adopt a social vision that guides the development of citizenship strategies and "puts a positive face on the industry."

We've got to distinguish ourselves from competing industries through progressive employment practices, excellent customer service, minimal environmental impact, and by taking a measurable, active role in our communities. That's just to get kids looking at the power industry in the first place. Within the industry, we've got to positively and proactively compete

against best-in-class organizations, determining how the best-in-class achieve their performance levels, and using the information as the basis for the organization's targets, strategies, and implementation. Benchmarking involves setting up partnerships with other organizations so all can learn from each other. As long as you avoid proprietary issues, competitors can engage in and benefit from the information-sharing.

KM processes—like blended learning, benchmarking, best practices, etc—depend on people. As you just said, "you've got to attract, train, challenge, and retain the best and

brightest employees." How does an organization do that when experienced people are retiring and universities are graduating fewer engineers with an interest in our industry?

That, in a nutshell, is at the heart of the problem. There are a couple of things going on here that present real challenges to the electric power industry. First, look at who we're competing against. Say you're a young engineering student trying to decide on a future direction. Let's also assume you're proactive, a getter, and you do a couple of internships. You work one summer at the Googleplex, Google's freewheeling headquarters in Southern California,

to make the workplace attractive to both start in and stay in.

The second—and really this is the first and fundamental step—we've got to develop an industry-wide strategic-workforce gap-analysis plan. It would start with a proactive evaluation of the critical workforce capabilities needed over the next five years and identify talent gaps before they arise. How can we plan and forecast the future of a single company, let alone the whole industry, if we don't think strategically about the number of people retiring, the skills they have, the skills that will be lost when they walk out the door, and the skills that we're going to need in the next five, 10, or even 20 years?

What are some of the things a company can do to attract and retain the best employees?

I've got five "big ticket items," so to speak, when it comes to attracting and retaining talent:

- Create an engaging workplace with opportunities for teamwork, collaboration, and democratic participation, with mechanisms for employee recognition on an individual and team basis.
- Create opportunities for continuous learning, growth, and advancement through frequent changes in roles, responsibilities, and projects.
- Create an atmosphere in which employees feel free to speak up and to contribute their points of view, ideas, and criticisms without hesitation.
- Build the organization around responsive managers who really pay attention to employee needs and provide mentoring, coaching, and career guidance.
- Recognize that employees have lives. Flexible work schedules, signing bonuses, annual incentive bonuses, and pay for performance all must be part of the "package" to attract, retain, and reward good people.

If you had to sum up why you think KM processes are important to our industry, what would you say?

The bottom line is that the power generation sector of the electric power industry is a good place to work. But we can make it better. KM tools are critical not only because they help companies succeed, but because they also help people succeed. This industry, the one that enables all others, doesn't have to reinvent itself. We just need to recognize where and how to improve. KM processes can help us do that. CCJ



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