

*Part 3 in Gold's five-part series
on enterprise-wide e-learning*

Developing Enterprise E-Learning at Kodak

Kodak started small
and learned from
early mistakes.

By Martha Gold

In early 2000, Kodak was in hot pursuit of a top-of-the-line LMS (learning management system)—one with all of the bells and whistles to meet the requirements on the imaging company’s long wish list. The LMS would be the centerpiece of Kodak’s enterprise-wide e-learning system that would centralize numerous training and development divisions and deliver digital learning to 50,000 employees in 57 countries. The new system would integrate smoothly with the current HR system and, ideally, be up and running within two years.

Two-plus years later, Kodak has a different perspective on what it wants to do, born of its experience in trying to meet that ambitious goal. Kodak’s experience is like that of other global companies trying to achieve the promised benefits of enterprise e-learning.

“We learned the hard way that it’s critical to do things globally up front rather than develop them in the United States and expect everywhere else to adapt,” says Catherine Nowaski, Kodak’s director of e-learning. “You don’t really need all of the features, all of the functionality. Everything doesn’t need to be there on day 1. Find what is the most valuable [to you], and get it out there.”

In the three years since Kodak started its enterprise-wide e-learning initiative, it has been through one LMS, numerous content providers, and a few false starts—and learned a few lessons along the way. For example, integration has, predictably, emerged as a big challenge, pointing up the need to select technologies that work well with existing IT infrastructure. And it’s good to start small.

The short list

Kodak began its search in 2000 for an LMS by drafting a 35-page RFP (request for proposal) that

included 250 requirements. “We were sure we needed a huge LMS that would take care of all of our training needs,” says Nowaski. “Online, classroom, blended...we were trying to buy and implement something that would take care of everything in two years and on a global basis.” In retrospect, she says, “That wasn’t realistic.” The first LMS selected posed integration difficulties and had too-high a price tag.

“We came to the realization that the system we were trying to implement was more sophisticated than the environment would stand and that most employees didn’t have the ability to download plugins,” says Nowaski. “Then we looked at what our employees were asking us to deliver; it was self-paced, Web-based classes on such skills as communications, teamwork, Word, and Excel. So, we switched tactics and began looking at the critical things we needed. We’ve since learned what will and won’t play in our environment, and what will get blocked at the firewall.”

In a revised approach, Kodak began seeking a simpler, more modest LMS and the support needed to make it work. Nowaski and her team pared down its original, multipage RFP to a short list of requirements. Nonessential “wish list” items were set aside. “In the first search, we identified the best in the in-

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Tricks for Getting Around Tight Security (Without Hacking)

Like most major corporations, Kodak has tight security that protects its Internet infrastructure from outside hackers and internal employees who may unwittingly download a corrupted program or usurp storage space with MP3s and video games.

To protect the company's system from the ills of unsupervised Internet usage, only certain employees are authorized to use the Internet. They must type in an identification number and a code each time they want to surf the Web. Even those with Internet access authorization are limited by the company's firewalls from bringing much back with them, because many software programs and plug-ins can't be downloaded onto company computers. In addition to the risk of outside software interfering with other applications on the network, some programs have been known to come with unwanted attachments in the form of network-destroying viruses.

Though security keeps Kodak's system safe, it also makes it difficult on occasion for users to download needed software. For Kodak's enterprise-wide e-learning initiative, that has meant finding a way

around the security system to sneak in the software necessary to run courses from Kodak's LMS.

"In the case of the LMS vendor's content, it requires the ShockWave plug-in," says R. Scott Hildebrandt, a systems analyst involved in implementing Kodak's current LMS from Element K. "Since we've locked down our machines, most of our employees can't load ShockWave. Nor will it allow ActiveX, another piece of software that ShockWave uses to connect to the Internet and generate marketing information." Hildebrandt says he and his team worked around this problem by distributing the necessary software to nearly 14,000 computers and making it available from a "safe" Website.

"Before we launched the LMS, we tried to work as many of these problems out beforehand," says Hildebrandt. "So we ended up contacting MacroMedia and getting them to work with us on ShockWave."

Hildebrandt and his team also made the software available on the company's e-learning Website

◀ www.ecampus.kodak.com.

Though that Website is outside the company's firewall, Hildebrandt and his team designed the connec-

tion so that Kodak's network would treat it as an internal site. "We created a DNS (database) entry that points to their server," says Hildebrandt. Having "kodak.com" at the end of the address makes the portal seem like an internal Website so the company's firewalls let employees download software because it appears to be a transfer between two internal Websites, which is generally safer than exchanges between internal and external sites.

Another security hurdle that Hildebrandt cleared was making the eCampus portal available to employees from locations outside the company. The NetPass authentication helped turn that challenge into a logical solution. Employees access the site by going to the eCampus Website and typing in their employee identification number and NetPass password.

"How do I ensure that those who should be hitting the site are hitting the site?" asks Hildebrandt. "By putting the authentication application in our DMZ"—IT slang for Web servers outside the company firewall. "That allows employees to access e-learning from a library, cyber café, hotel, or anywhere there's Internet access."

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dustry, sent out RFPs, and got a whole load of paperwork back that we had to sift through,” she says. “The second time around, we just wrote a checklist of what we knew we wanted, met with vendors, asked questions, and had the vendors send us proposals. It was much easier to make a decision this time around.”

Kodak ultimately chose a provider close to home and familiar—Rochester, New York-based Element K for its LMS, KnowledgeHub. Kodak’s IT department had already piloted an earlier version of KnowledgeHub and found that it integrated better with Kodak’s infrastructure than other applications. “It doesn’t have all of the bells and whistles of a multimodal LMS, but it has the functionalities that we needed,” says Nowaski. “It’s a relatively new product for Element K, and we’re sort of growing with them.”

In addition to choosing simpler applications, Kodak is also maintaining a more realistic timeline. Instead of rushing to discard its old system and get one up and running in two years, the company is proceeding at a more reasonable pace and implementing improvements in stages. “We’re kind of running in a hybrid mode right now,” explains Nowaski. “We have an old legacy system running in the background that our administrators are using in Rochester, but all of our online courses are available through Kodak’s e-campus.”

A few good vendors

Kodak is integrating 80 discrete HR systems into one worldwide system using SAP software, a process that Nowaski says will take at least two years. Even when it’s completed, Kodak must figure out how to link its HR system with Element K’s ASP (application service provider)-based LMS while minimizing security risks.

Currently, Kodak employees have access to the LMS through the Internet and intranet, says R. Scott Hildebrandt, a systems analyst who was involved in the LMS implementation. Employees access the LMS via an existing system, NetPass—a password-enabled application that provides Kodak employees access via a sign-in number (their employee number) and a

password. By taking over the authentication process, Kodak was able to make the 1750 classes on Element K’s LMS accessible to employees with the same sign-in number and password they use for NetPass, eliminating the need to memorize another password. The

process also cut down on the influx of new accounts and passwords that employees created when they forgot their passwords, saving the company from exceeding the number of users for which it’s licensed. Prior to that integration of passwords, says Hildebrandt, “We found that when people forgot their passwords, they wouldn’t call up Element K to reset them; they’d just generate another account. So we risked using up a lot of licenses.”

Though a final solution for integrating the LMS with Kodak’s HR system remains in the works, Hildebrandt and his team have figured out how to integrate content from external providers into the LMS—a task that continues to be a challenge despite AICC and SCORM standards.

“We were under the naïve assumption that if something conformed to the AICC-standard, it would pretty much be plug-and-play,” laughs Nowaski. “And whenever you buy something, they talk as if it’s going to be that way.” However, Hildebrandt and his team had to spend many hours adjusting the parameters of internally and externally developed courses or wrapping them (adding software), to get them to function smoothly over the LMS. In fact, the only courses that consistently worked well on any of the LMSs were the ones developed by or purchased through the LMS vendors: Element K’s courses worked well through KnowledgeHub; the courses that THINQ offered (not developed) worked well on THINQ’s LMS.

“I think that’s always going to be a challenge,” says Nowaski. “We’re smarter now, and we’ve built room into the timeline to adjust content to make it work.”

The interoperability problems led Nowaski to change her strategy on acquiring new content. “When we first started, I thought it would be good to get more content from different areas,” she says. “Now I want to work with just a few good vendors.”

Going global

Kodak wants to expand its e-learning offerings so that all employees have access to all of the courses they

need. But providing e-learning across international borders presents challenges, including working with strict European privacy laws, finding courses in languages other than English, and finding vendors able to handle support tasks in different time zones.

"When you go global, you don't have as many windows to do maintenance."

European Union privacy laws require that employees be informed and provide permission for any electronic transfer of personal information. For that challenge, Hildebrandt and his team had to develop a new way for employees to access Kodak's e-learning LMS. Now, when an employee signs into the system for the first time, a privacy statement pops up that explains what Kodak will do with the employee's data. At the bottom of the statement is a button the employee selects to confirm that he or she accepts the terms. That confirmation step meets EU requirements.

Training director for Kodak's Latin American region division, Andrea Mascarenhas, encountered the second challenge—finding e-learning courses in different languages—when her team began promoting Kodak's e-learning portal. "Very little content was offered in different languages unless it was developed locally," she says.

Most of Kodak's online courses were available only to employees who could read and understand English at a fairly high level. Employees at the company's two manufacturing sites in Guadalajara, Mexico, and São José dos Campos, Brazil, or in smaller sales and marketing offices scattered throughout the 11 countries that make up Kodak's Latin American Region division, have had to muddle through with far less Spanish language-based content, particularly in business skills areas. IT-related content in various foreign languages is easier to get, says Mascarenhas.

To address the shortage, training directors from Kodak's international divisions—Latin America, Europe, Africa, and the Middle East; Greater Asia; and Japan—met last year to discuss their training needs and to use that information to begin developing courses in Chinese, French, Spanish, Portuguese, and other languages. In addition to translating or creating courses in different languages, programmers added help text and instructions in those languages.

Programmers at Kodak are familiar with the third challenge: performing system maintenance in a firm with offices in multiple time zones. However, the

need to inform people of off-hours system repairs wasn't as apparent to U.S.-based LMS providers.

"When you go global, you don't have as many windows to do maintenance," says Hildebrandt. "The vendor needs to know that it must notify customers of all scheduled maintenance to avoid conflicts. Typically, [the system maintenance people] do major projects on Sundays so it's not that big an issue. But at times, they've had to [shut down the system as early as] 6 a.m. They've gotten the disruption down to only 15 minutes, but we've run into issues. For example, our group in Paris may schedule a demo for that [same] time."

The future

This year, Kodak plans to develop more of its own content using ToolBook, an authoring application by Click2Learn, and DreamWeaver. It's also working on getting more employees to take one or more of the courses now available online.

"We had a couple of successful pilots after which people asked, 'Where can I get more of this?'" says Nowaski. "Now we're going to need to focus more on giving hands-on demonstrations in actual departments, to help people become more self-directed learners."

The path Kodak has taken to get to its present state hasn't been smooth, says Nowaski, but it has brought the unexpected benefit of valuable lessons in content and hardware selection, integration, and implementation. Overall, Nowaski expects many of her team's future projects will go more easily now that they have a few years of experience tucked under their belts. Already the company has benefited from some of the lessons, as evidenced by speedier implementation of the second LMS—seven months, a third of the first LMS's cycle time.

"The team learned a lot about fitting third-party application provider solutions into the Kodak infrastructure," says Nowaski. "Our work is improving, we're evolving." TD

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