Knowledge management— Past & future

In one sense, KM is growing up and facing reality, whether it likes it or not; in another, it is reaching a place of maturity and acceptance for which it has longed.

By Alan Pelz-Sharpe & Christopher Harris-Jones

KM has had its ups and downs, and the last few years have been particularly tough. Through economically difficult times, undertakings such as KM can seem a luxury, not an essential. Since 2001, we have seen management practice and IT focus on cost reduction and standardization, outsourcing of internal business processes has exploded, and the entire notion of outsourcing, hosting and pay-on-demand has matured to a level of acceptance. KM practitioners have not fared well in this period, and in many cases have been forced to defend themselves, their projects and their basic value proposition.

Most people inside the industry agree that KM has value and that it is an important area of study and practice, but too many project failures have given it a tarnished image. Nonetheless, most agree that elements of KM can provide both strategic and tactical business advantages, but the path toward achieving those advantages is still unclear. What is clear is that good intentions, high-quality software and an enthusiastic project team does not always equal success.

However, the landscape is changing, and the need to comply with new regulations is sweeping across the world, demanding in its wake much tighter management of information. That, in turn, is driving major suppliers such as Oracle (ora cle.com), Microsoft (microsoft.com) and IBM (ibm.com) to look again at information management and the opportunities it may afford. It also drives management scientists and consultants to realistically appraise and balance information needs against ideals. KM plays a part in that—less the focus and more the catalyst. As a result, there is less space in the marketplace for the pure-play KM product or service provider, but those skills are more in demand in broader business situations.

In one sense, KM is growing up and facing reality, whether it likes it or not; in another, it is reaching a place of maturity and acceptance for which it has longed. Surviving and even thriving in this new state of existence requires that we embrace change while ensuring that our core values and skills are utilized fully. We must step boldly into a wider world with hardcore issues to face.

My colleague Eric Woods wrote in KMWorld a year ago that "many writers would like to see next-generation KM move away from technology issues," and that remains true today. However, Eric rightly stated that it is a naive stance to take. With all the changes underway in the workplace and the market, KM cannot afford—outside of some academic activity—to assume that attitude, because it is not the force behind its own existence. KM is a response to the workplace dynamics and issues we all face, and those workplace dynamics are changing. We are not, as many seem to believe,moving at top speed toward a flatter, more open and democratic management style. Ask anyone who works in an outsourcing situation where things are headed, and he or she will tell you that it is back to strictly hierarchical working methods. I recently encountered an outsourcing center that measures how many workable minutes there are in the day and how many tasks they expect each worker to complete in the day, then reviews on a weekly basis the worker's performance by second or minute against each task. We may not like it, but the world of business is a complex and contradictory place.

IT vendors and technology service providers have been watching the KM space with intensity over the last few years and have ramped up their activity considerably over the past 18 months. Their attempts at KM fell fairly flat in real terms five years ago, but this time they are more positive. The reason is that their customers are driving this renewed interest, not the KM community.

We are seeing demands from our clients to manage all the information a company acquires or produces, structured and unstructured, paper and digital—for that information to be subject to great scrutiny, for duplication and redundancy to be eliminated, and for dynamic business processes to be enabled, to ensure collaboration across the organization, thus reducing costs and increasing efficiency. Basically, those are the same drivers that have been pushing IT and the economy for most of the past five years. Nothing changed there, but what has changed is the willingness of enterprises to try new things or invest in new technologies. Making the most of their existing investments is top priority. So for IT vendors to continue thriving, they need to embrace the new situation and enable more effective and efficient data management for their customers. It is the wave that KM practitioners may also need to ride.

IT vendors are rapidly facing up to the consolidation of their industry and the consolidation of many product and technology groups that once stood alone and proud. Of particular interest is the merging of portal, collaboration and content management. Over the past 24 months, we have seen dramatic consolidation in that space at a corporate level, and it is now starting to translate through to technological consolidation, driven in large part by the demands of users.

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Collaboration grows

Collaboration technologies have grown in scope substantially during the last few years. They were once represented by a relatively small collection of technologies — often implemented independently — such as e-mail and discussion groups. The appearance of new components, such as instant messaging and white boarding, simply added to the number of standalone technologies available. We are now starting to see significant collections of tools appearing in single collaboration suites — for example, Open Text's (opentext.com) LiveLink, Oracle Collaboration Suite, Lotus (lotus.com) Workplace, Microsoft WSS and others.

The wide range of different technologies appearing in those solutions demands a common user interface and some integration to provide a coherent whole. Many are now exploiting portal-like interfaces to deliver a collaborative workplace.

Collaboration tasks usually require access to reference material and also generate new content.

For that to be managed effectively, you need CM as an integral part of your collaboration suite, and many collaboration vendors are now delivering simple CM. Others have strong links to external CM systems.

CM expands

CM is also moving toward comprehensive suites of tools that cover a multitude of tasks. Whereas traditional document management,Web CM, digital asset management, records management and a wide range of other content-related technologies were once all independent tools, they are coming together under the enterprise CM (ECM) banner. We have seen multiple acquisitions over the last two years as vendors have expanded the scope of their software.

As well as managing completed documents, a CM system should also help you to manage the content creation process. Most pieces of content require multiple authors, which means that collaboration tools can be very useful. Collaboration tools are increasingly part of CM systems, frequently through acquisition—for example, eRoom in Documentum (documentum.com) and Intraspect in Vignette (vignette.com).

The substantial set of multiple CM tools and collaboration functions demands an integrated user interface for effective delivery. Once again, the workplace portal is being used with increasing frequency.

Portals become workplaces

Portals have traditionally been channels for aggregating and delivering content and functions from multiple sources. They are now evolving toward workplace portals, which provide more than just a delivery channel. They also provide a degree of integration between the individual components and offer a working environment that provides everything you need to do your job.

As well as the extra layer of integration, workplace portals are increasingly delivering substantial functionality of their own. If you are to provide most office workers with a complete working environment, they need collaboration tools to help them work together and CM tools so that they can retrieve the information they need to do their job. That is exactly what workplace portals are increasingly delivering.

Convergence

There is a high degree of convergence between those three major collections of tools, and some vendors are starting to deliver all three to varying degrees of depth. However, that does not mean that they will eventually merge into a single piece of software—the result would be too big and complex. What is actually happening is that the suites are increasingly being offered as collections of software modules that can be delivered as an integrated unit, but with options for starting small and expanding the functionality gradually, or selecting a set of modules that operate with existing software tools the user has already implemented. The former provides a sound growth path for gradual implementation, which is an effective strategy. The latter is likely to deliver a less wellintegrated solution, but is a pragmatic approach to legacy integration.

In a growing number of cases, the components are being made available with standards-based interfaces. In some cases, they exploit Web service standards (such as XML, SOAP and UDDI), which means the components are moving toward the model of a service- oriented architecture (SOA). As well as those standards, the most commonly used Web services standard exploited by the portals community is WSRP and its Java relative JSR 168. That Web services or SOA approach is aimed at separating the software layers into easily reusable components that can be recombined as required. The movement toward multiple components makes it much easier to assemble components into a solution, usually based around a workplace portal. It parallels the changes in the development of application platform suites. Multiple levels of the software stack are moving toward the same SOA model.

Visualization

Those developments are core to the future of KM's relevance in the workplace, but clearly they are not the only major movements in technology; they form a core for KM practitioners to be aware of and work with. Another area that will profoundly impact KM technologies over the next few years is visualization. It's an area where we have seen a leap in interest in 2004, with users seeming to become more aware of the limitations of existing systems and methods, and small startups attempting to come to market.

In the move to manage and share information more seamlessly, a major area of feedback from users has been their level of dissatisfaction with information navigation. For example, a Google (google.com) search on Pelz-Sharpe provides approximately 1,500 hits, displayed in order of perceived relevance 10 at a time. The assumption is that there is one specific piece of information that will resolve my query and by a process of elimination I will find it. But, in fact, it is far more likely that my query will be resolved by a number of sources in different contexts. Many software vendors are working to provide interfaces and query results that reflect that need. They range from Oracle and Microsoft to niche vendors like Blinkx (blinkx.com) and Musicplasma (musicplasma.com). In a sense, it's nothing new, and those who have visited the KMWorld show over the years have seen vendors, such as TheBrain (the brain.com), pushing that type of approach. What is new is the sense of urgency and funding behind the newer entrants—a recognition that richer query response is necessary to drive communication and interaction.

Information architecture

Hand in hand with that approach is the re-emergence of information architecture throughout 2004, with major vendors coming out with key initiatives, as well as grass-roots movements such as the Asilomar Institute (aifia.org) and in particular the work of Peter Morville at Semantic Studios (semanticstudios.com). Information architecture is a major component of a complete enterprise architecture. Ovum defines enterprise architecture as follows:

"Enterprise architecture provides a coherent view, at various levels of abstraction, of an organization's business strategy, processes, information flows, enabling technology architectures and infrastructure, and the relationships between them. It encompasses current and target views, and the transitional process to move from one to the other, together with supporting principles, standards and policies to support its implementation and ongoing maintenance."

Defining structures to the organization of information assets as part of the view of the entire organization will provide more accessible and usable environments in which to work—a solid platform for a more user friendly collaborative environment. That—in connection with development of more graphical and more human means of information delivery—will potentially deliver a step change in the way that organizations produce, process, store and deliver information. The re-emergence of information architecture as a hot topic in 2004 and the support of major IT firms will drive it forward through 2005 and beyond.

Conclusion

We expect to see over the next 18months the re-emergence of KM in the workplace. In many instances, it will not be labeled as KM, and the term information management will come more and more to the fore. As organizations recognize that sophisticated search tools will not make sense of their information chaos, the emphasis will move quickly to the management of information. There will be major initiatives and products released to aim to capture a much larger portion of information than historically, and to manage it centrally in elegant structures. The need to manage information throughout its life cycle as a complex and dynamic entity will gain traction. We can expect to see little traction for "feel-good," general KM projects, but a great deal of traction for those that help reduce waste and improve transactional efficiency.

Building a business case for KM will get no easier. And although it is valid to argue that such measures as ROI are often irrelevant and downright misleading, those kinds of measures, along with TCO numbers, will support and get buying for projects over the next few years. KM practitioners have a great deal to offer, their skills in building collaborative workgroups and collaborative enterprises may be even more relevant now than in the past. However, those same practitioners may need to develop a new language and business case to launch their projects.

We expect to see major IT vendors and consultants embrace KM but deliver KM initiatives as part of much broader information management and re-engineering initiatives. Again to quote my colleague Eric Woods, "Knowledge management should reinforce the need for human values in an increasingly automated world." That is true, but cynicism and the relentless drive to reduce costs is more likely to be the key driver over the foreseeable future.

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