The New World of Knowledge Management

Why Knowledge Management Is More Relevant than Ever

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Intangible assets - intellectual property, software, patents, and services - have become the most valued assets in business. While companies once valued themselves by looking at inventory, cash, or other physical assets, today more than 85% of the market capitalization of the U.S. stock market is based on intangible assets – knowledge, skills, and information.

To categorize, organize, and manage all this information, companies embark on knowledge management. The concept of knowledge management has been around for decades, and it typically covers areas such as content management, content libraries, document tagging, information search and indexing, and taxonomy tools.

The concept also encompassed "human knowledge" – creating expert directories and topic-focused communities and other HR practices to help companies manage employee skills, categorize their expertise, and share their innovations as the company grows.

It's a very big market. In 2020, the market for knowledge management products and services was estimated at $366.8 billion and forecasted to grow to a staggering $1.1 trillion by 2027.[1] In a world where knowledge is everything, this might not be surprising.

What is all this money being spent on? The biggest portion of spending is on tools to capture, categorize, index, and organize content. These include search engines, portals, and tools that index text, audio, video, and other forms of content. While a lot of the investment was dedicated to software, a significant amount of human effort was still required.

In the learning industry, for example, there is a myriad of new systems for learning experience management, each of which can index videos, courses, websites, and documents. These tools try to identify skills and topics across learning resources and then use this information to recommend offerings to employees.

1 https://www.globenewswire.com/news-release/2020/08/26/2083835/0/en/Global-Knowledge-Management-Industry-Outlook-2020-2027-with-Global-Competitor-Market-Shares.html

While these tools are highly useful, the real issue is not finding and indexing content, but really using information and content to solve specific business problems. Following are the primary uses we found in recent interviews with large companies.

The Four Applications of Knowledge Management

Consider an engineer who needs to design a bridge, as in the example of Mott MacDonald (see case study). Let's step through the four ways KM can be used.

- **Acquire knowledge**: *We need to capture information.* We just finished a whole series of bridge building projects. As part of our work, we developed design specifications, pricing models, contractor specifications, building plans, and testing plans. I want other people to be able to reuse this information. How do I index, store, and categorize all this knowledge so others can use it?

- **Share knowledge**: *I know something I want to share.* I personally learned a lot in my career, and I want to share it with others. I know people in my company are working on similar efforts, and they sometimes reach out to me. How can I share the details of what I know, collaborate with others, publish or record my own expertise, or share stories, examples, or other best practices?

- **Use knowledge**: *I need to make a decision.* I am starting a new project to build an even bigger and more complex bridge than we've ever done before. How do I look at the work others have done, learn from their experiences, and make sure I'm not reinventing the wheel or perhaps making a mistake others have learned from?

- **Develop knowledge**: *I want to learn and grow.* Learning needs to be part of the everyday work. People shouldn't have to wait for their schedules to clear to develop new skills. I want to spend time improving my own capabilities so I can get promoted to be the VP of engineering or head of bridge engineering. What are the topics I need to dig into? What is the best order or path of information I should seek out? How do I test what I've learned? How can I become certified in this new information?

In the new world of knowledge management, we don't just want to store and index information, we want to design a set of technologies and systems that address these four critical use cases. This is how we make knowledge powerful, useful, and ever-more valuable over time.

"The goal is to surface just-in-time knowledge and just-in-time information to people where they need it, when they need it." Simon Denton, Productivity Engineer, Mott MacDonald

A Massive Opportunity to Tap into Unconscious Knowledge

New solutions for knowledge experience are much better at managing conscious knowledge through intelligent, context searches in the flow of work. They are more engaging and natural, offering knowledge-sharing opportunities through discussion threads or through capturing videos in platforms like Microsoft Stream, which makes them easier to find.

	Old Content-centered	New Integrated and human-centered
Acquire *Capturing information*	• *Conscious*: Categorize, index, and store documents in a knowledge repository • *Unconscious*: No ability to bring topics to users if they don't know about them	• *Conscious*: Share via video (e.g., Stream), capture and index structured and unstructured content (e.g., SharePoint Syntex) • *Unconscious*: Knowledge gets extracted from my work (e.g., topic discovery in Microsoft Viva Topics)
Share *Sharing information*	• *Conscious*: Submit documents to content databases and tag • *Unconscious*: No ability to identify unconscious shared knowledge	• *Conscious*: Discuss in collaboration platforms, augment suggested topics with expert views • *Unconscious*: My expertise gets extracted from my conversations and communities (e.g., surface conversations in Yammer to Viva Topics)
Use *Making decisions and solving problems*	• *Conscious*: Navigate content databases to find needed content/knowledge • *Unconscious*: No ability to introduce needed or available knowledge that the user isn't aware of	• *Conscious*: Intelligent search in the flow of work (e.g., contextual search with Microsoft Search) • *Unconscious*: Knowledge comes to me when and where I need it, in my flow of work (e.g., topic cards in Viva Topics)
Develop *Learning and growth*	• *Conscious*: Navigate Learning Management System to find topics I should learn about • *Unconscious*: No ability to bring needed learning to users if they don't know they need it	• *Conscious*: Intelligent search in the flow of work (e.g., related learning based on inferred skills needs) • *Unconscious*: Suggested learning comes to me where and when I need it, without me having to look for it (e.g., Microsoft Viva Learning)

Figure 1: How Knowledge Management is Evolving

However, studies show that about 95% of all knowledge is unconscious – we don't know there is something to know or we don't realize we have something to share. In the old era of knowledge management – the world of content databases, navigating to documents and manual tagging and indexing – unconscious knowledge remained untapped.

What really will make a huge difference in the new era of knowledge is that smart technologies can now tap into unconscious knowledge in the following ways:

Pull unconscious knowledge from conversations, discover it in documents, and identify it in communities. We think of this as knowledge, topic or expertise discovery. For instance, engineers may be participating in various communities for different bridges, discussing specific requirements via Microsoft Teams or answering questions. Microsoft Viva Topics can now find this knowledge to add to its Topic Center. Engineers who may not realize the value of the information they are discussing, don't have to do any tagging or categorizing.

Push unconscious knowledge to those who need it but don't realize they need it in their flow of work. For example, in Microsoft Viva Topics this is done with Topic Cards that bring insights about people, content, and information related to a specific topic to the person who needs it, when they need it, and how they need it. Rather than hoping the engineer will realize they need to find new information about a specific subject, the technology serves up relevant insights and offers experts to connect with to find out more.

Today, with technologies like Microsoft Viva Topics, this vast area of unknown expertise and human knowledge can finally be surfaced and made available to people to learn and do their work more efficiently and effectively.

Too Good to be True?

All this happens with new algorithms, machine learning, and AI. But not by magic.

As with any algorithm, machine training is an important part of machine learning. Without teaching the machine what problems to solve, what "good" looks like, what topics or knowledge areas belong together, which ones are noise or irrelevant, the best technology might only surface a mess.

So don't expect a miracle with these new technologies. Do expect to put in a lot of discipline and careful thought to train and develop a solution and to embed it into your work processes.

As we talked with various companies who piloted knowledge management in Microsoft 365, SharePoint Syntex and Microsoft Viva Topics, it became clear that identifying a business owner for this work is key. Although technology is an enabler, knowledge management can't be an IT-driven solution. Knowledge management at its core requires a deep understanding of the workflows and experiences of the workforce. The most successful knowledge leaders are those who have been in the role of the workers they support because they understand the work and the knowledge required.

Getting Started with Knowledge Management

How can you get started managing knowledge in a human-centered approach? Here are some steps to follow:

- **Define the problem**. Start small, define where knowledge matters most, and identify what topics, content, and expertise to address. For example, you might want to start with client-facing areas of the business or in areas involved in developing products and solutions.

- **Define and measure success criteria**: Establish what success will look like, determine baseline measures, and then measure and iteratively improve. For example, metrics could be around faster speed to delivery of projects, fewer errors, higher quality, or increased customer satisfaction or employee engagement.

- **Define personas**: Understand who the users of the knowledge are likely to be by segmenting the knowledge areas into distinct groups. For example, you could create groups of engineers working on different construction projects.

- **Identify topic owners**: Determine who has expertise and knowledge in the identified knowledge areas and assign them the role of topic owners to drive the curation and classification of knowledge in their areas. For example, a topic owner could be an engineer for a specific type of bridge or an engineer in a specific geography.

- **Define use cases**: Topic owners define use cases and develop scenarios where knowledge will be needed in the flow of work. Based on these use cases, they identify and curate knowledge and define how it gets integrated into workflows.

- **Form communities**: Topic owners establish communities in which people can volunteer to participate. Participation in these communities should be voluntary but the value of participation should be constantly highlighted.

- **Use technology**: Apply technology like SharePoint Syntex and Microsoft Viva Topics to accelerate knowledge acquisition, sharing, and application. Organizations should not start with the technology to drive the process but rather finish with it.

- **Iterate, improve, and scale:** Start small, testing and iterating to improve the process before scaling. Knowledge is contextual and organizations that miss the context of specific workflows will confuse users rather than help them improve.

Where Knowledge Management Is Going

Knowledge management is at the cusp of a new era. The technology is already here and getting better every day. Organizations that combine structured and disciplined approaches with smart technology to solve problems will emerge as winners in knowledge management.   In turn, they will be better than the competition, increase customer satisfaction, and improve engagement and retention of their workforce.

Managing knowledge is at the heart of organizational learning, putting knowledge in the flow of work is converging with learning in the flow of work. Organizations with a learning culture will excel in both.

Mott MacDonald Curates Knowledge for Excellence in Engineering

The Mott MacDonald Group is an engineering consultancy headquartered in the United Kingdom with 16,000 employees worldwide in 150 countries.

At any given time, Mott MacDonald has about 10,000 projects running concurrently, ranging from designing bridges to tunnels to buildings. An engineer usually works on four to five projects at the same time. Managing the massive amounts of knowledge that is created through these projects is paramount to the success of the company.

The company's mission is to create opportunities through connected thinking by connecting people to content — and content to people — all in the flow of work. So, the company started with communities in which people can volunteer to participate. Currently, Mott MacDonald has more than 60 communities, each focused on different types of projects or other topics. Every employee is expected to be part of at least one community to share knowledge and learn from others. While these communities certainly help the company increase profits and reduce losses, they are focused on improving the knowledge, skills, and capabilities of employees.

"Enterprise knowledge is the heartbeat of the organization," said Simon Denton, productivity engineer for Mott MacDonald. The company has been using SharePoint Syntex and Microsoft Viva Topics for 18 months to complement its existing rules-based content classification system with suggestions on what topic areas to consider.

Each person is required to rate their expertise on defined capabilities on a five-point scale, from beginner to world-class, and to re-assess quarterly. They also indicate their interests. SharePoint Syntex and Microsoft Viva Topics suggest other areas of interest that might be relevant for the individual, along with inferred skills based on the experiences people have developed through similar projects. What's important is that the user is in control of adding interest areas to their profile or leaving them off. Based on the information submitted, employees are then assigned to communities where they need to actively participate to increase their own knowledge and that of others.

Content and topics are surfaced based on historical searches and most recently based on Microsoft Viva Topics. This is helping engineers see new topics that communities might not have considered before. Importantly, topic owners and experts curate and validate the topics and content the technology suggests and then classify the information with a three-level rating (bronze, silver, gold). When people search for content, they see the classification, helping them understand the value and relevance of the content.

Similarly, when an engineer looks for a colleague with a certain expertise, they see the self-rating of people on capabilities, which helps them understand the level of competence a colleague might have and determine whom to reach out to for help. To tap into the unconscious knowledge created in the 10,000 projects, Microsoft Viva Topics pulls suggested learnings from everyday work systems and adds them as suggestions into the topic center where experts review and classify them.

The combination of human experts with machine learning and suggestions is critical to the success of knowledge management at Mott MacDonald. The company is on a journey to embed knowledge sharing and capture into everyday work. Its next step is to push knowledge into workflows. Explaining to people how the technology works and being transparent about its use and limitations has been key throughout the process. "People need to trust the technology and understand we are using it to make work better," said Denton.

About Josh Bersin

Josh founded Bersin & Associates in 2001 to provide research and advisory services focused on corporate learning. He expanded the company's coverage to encompass HR, talent management, talent acquisition, and leadership and became a recognized expert in the talent market. Josh sold the company to Deloitte in 2012 and was a partner in Bersin by Deloitte up until 2018.

In 2019, Bersin founded the Josh Bersin Academy, a professional development academy that has become the "home for HR." In 2020, he put together a team of analysts and advisors who are now working with him to support and guide HR organizations from around the world under the umbrella of The Josh Bersin Company. Recently published research covers topics such as hybrid work; HR technology market trends; employee experience; and diversity, equity, and inclusion. He is frequently featured in publications such as Forbes, Harvard Business Review, HR Executive, The Wall Street Journal, *and* CLO Magazine. *He is a popular blogger and has more than 800,000 followers on LinkedIn.*

About Kathi Enderes

Kathi is the vice president of research at The Josh Bersin Company; she leads research for all areas of HR, learning, talent, and HR technology. Kathi has more than 20 years of experience in management consulting with IBM, PwC, and EY and as a talent leader at McKesson and Kaiser Permanente. Most recently, Kathi led talent and workforce research at Deloitte, where she directed many research studies on various topics of HR and talent and frequently spoke at industry conferences. Originally from Austria, Kathi has worked in Vienna, London, and Spain and now lives in San Francisco. Kathi holds a doctoral degree and a master's degree in mathematics from the University of Vienna.