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Razorfish Reports

In Depth

Knowledge is power

What do we know and what can we do?

by Ben Kleinman

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There is much talk about workers today being "knowledge workers," but there is little talk about how businesses can help their employees actually be knowledge workers. If an enterprise wants true knowledge workers, it must realign its strategy, vision, and values, as well as provide practical tools. Companies and institutions that attempt to transform workers into true knowledge workers without helping to develop a new mindset will encounter strong organizational resistance. Such companies will fail in their efforts, as will those that do not provide knowledge tools for knowledge workers.

Knowledge is Power

At Razorfish, we believe the key to understanding why the value shift is important for business is rooted in the aphorism "Knowledge = Power." It is not a mathematical exactitude, but a social construct whose meaning changes over time. The traditional meaning is an obsession with information possession; a zero sum game, where if you share (give up) your knowledge you lose your value. Therefore, traditionally it has been in employees best interest to be a "knowledge hoarder".

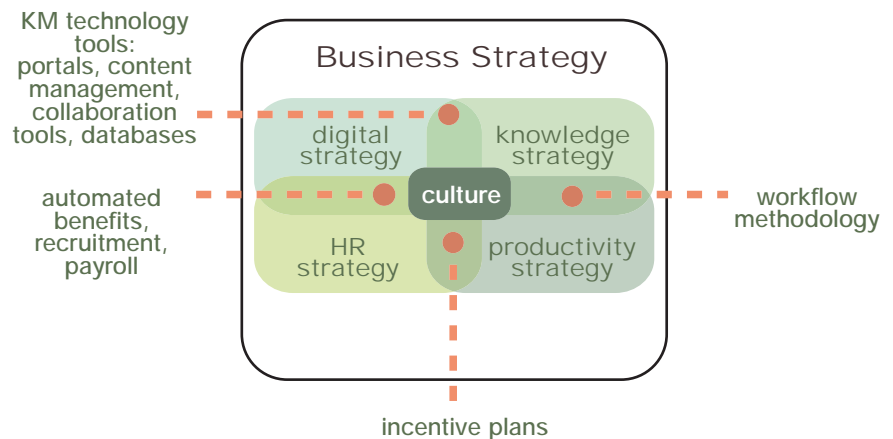
Over the past 20 years, however, a fundamental shift occurred as we learned about the natures of both knowledge and value. We learned that knowledge is only useful – valuable – when it is being used, otherwise it is a cost. For example, when I apply my knowledge of cooking to prepare a meal, the knowledge is useful and has value. At that same time, my knowledge of carburetors is not useful and actually takes up storage space (in this case in my mind) when it goes unapplied.

Executive Summary

Turning traditional workers into knowledge workers is not as easy as handing out new titles. Organizations must align their strategy, vision, and values around both their workers and their knowledge in order to create a place where knowledge workers can thrive. Knowledge workers only exist in a knowledge culture. But a knowledge culture alone is not enough. Knowledge workers have to have knowledge tools to maximize their productivity, and providing those tools is the organization's responsibility.

However, workers, too, must contribute to this new workplace. They must stop hoarding knowledge and instead constantly share and use it. When knowledge is not used, it is a cost - regardless of whether that cost takes the form of digital storage or salary. An employee is valuable only when "doing" something, not when "knowing" something.

Aligning Business and Knowledge Strategy



Of course, an occasion may later arise in which my carburetor knowledge comes in handy. Therefore, knowledge is still power, but only knowledge-in-use is power. Knowledge is, in all cases, a verb.

Knowledge Workers

But where does that leave the person who had the knowledge and "shared it" ("gave it away," is how workers may see it)? In order to be valuable, such knowledgeable workers must share the only possession that they can confirm is their own – what they know.

If they share this (i.e., make it useful) then they may fear that they have nothing left to give. This could be an unsettling prospect.

The challenge to the knowledge worker is to develop his or her own knowledge or build on others' knowledge; to make it broader, deeper, or of higher quality. This is the dynamic of how work gets done, fostering creativity and innovation – to show value by consistently adding value – not by hoarding knowledge at a cost. The value of an employee is in the

act of his or her assigned job, not sitting at a desk with a title and responsibilities. Doers are valuable because they continuously apply knowledge.

If knowledge is static, then it can be commoditized. It becomes cheaper for an organization to codify as much static knowledge as possible and store it digitally than it does to continue to pay the employee's salary and benefits. This sounds like a good plan, but it's not. Static knowledge is simply information, and information has a shorter lifespan than knowledge.

Razorfish's "knowledge map" is a living document; it evolves over time. It helps companies to "know what they know," and then align their core strategy and offerings with their current and desired knowledge future state. A transformation plan then serves as a guide to fill knowledge gaps and remove the knowledge companies no longer need which in turn will reduce costs.

Active employees are constantly adding to their wealth of knowledge in the challenges and practices of their jobs. They are not static displays of information, but living, growing repositories of new, and often – perhaps most importantly – improved knowledge. So even if a person is not adding new skills into her skill set, she may be deepening/refining existing ones.

Organizational Responsibility

However, it is not only the employees' responsibility to simply use what they know. Razorfish has learned that organizations, in order to help themselves, must help their employees. There are two obligations on this front: first, put employees in situations where they can apply their knowledge to create value – set them up for success. Second, give employees the tools to find knowledge they do not have – to help them put their colleagues in the right

place to succeed – and learn for themselves during the process.

To meet the first obligation, companies must assess what their employees know. A cursory understanding of the experiences and skills of their resources, such as, "someone in HR has everyone's resume," will not suffice in this economy. A knowledge map of the enterprise can illustrate not only proficiency in Java or value modeling, for example, but also communication style, collaboration skills, and industry experience.

Once this type of mapping is done, resources – people and their experiences – can be used strategically in places (physical, mental, and in time) where they will enjoy being (everyone likes to succeed) and add the most value. These are places where employees are challenged and can grow. Additionally, the organization can then ensure that people grow not only for their own personal benefit, but for the organization's benefit as well. In other words, they can help make their employees more valuable.

To fulfill their second obligation (helping employees to help others) employers must simply take a knowledge map and make it accessible to the employees - all employees. Just as people should not hoard their knowledge, a company should not hoard knowledge either. It sets a bad example and closes off the knowledge culture (see below).

On any given day, one person will need to find what another person knows and they have to hope that the other person is willing to share that information. When the needed information is found, there is an opportunity to form a relationship with the sharer, leading to a mutually beneficial exchange. Everyone takes a turn at show-and-tell, and everyone gets smarter because of it.

The tools to do this sharing vary depending on the business and user needs. Simply handing out a copy of the map to all employees is not a good idea – a hard copy may not be the right tool

for every occasion. In some cases, sharing can be facilitated with a search engine over a system of documents, and in other cases, with a system of profiles of "Subject Matter Experts," to contact. In yet another instance, nothing more than a phone list may be needed to encourage knowledge sharing. Yet, more important than the tools is the culture. If the culture discourages people from connecting with each other, then the company will fail in its endeavor to create knowledge workers.

Knowledge Maps are as Important as Data Maps

To that end, companies often have a map of their IT network showing how all of their servers and databases fit together and the protocols they use to communicate. But few companies have the same map of their people. Still fewer organizations have one map that shows how both people and technology work together.

Building the map of an organization's collective knowledge is not an easy task. Razorfish's two-fold process is based on an understanding of what is valuable. With it, companies can not only focus on the knowledge they think is most valuable, they also can tie the value directly to the bottom line.

To actually determine what knowledge is the most valuable, a user-focused study of data, information, and knowledge is required. The critical high-level questions to be asked are:

- What knowledge do people have?
- What do they need in the situations they are in most often?
- Where and how do they find what they need?

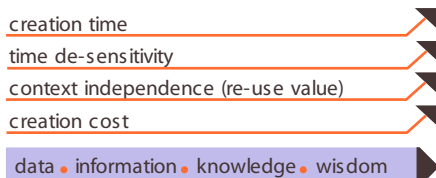
Razorfish has developed a methodology that answers these questions by outlining a series of distinct activities that can be separated and associated with a monetary value, in addition to the knowledge with which they are associated. With this, it is possible to

Data and information are not knowledge. Data becomes information when it is contextualized, and knowledge when it is applied. Along this chain the cost of creation increases (data is cheaper to create than knowledge) and the time it takes to create also increases. However, the re-use value increases as well, and knowledge has a significantly longer lifespan.

determine the effect of knowledge using common metrics, such as revenue per employee or cost per unit sold.

Metrics can be applied because knowledge has a high degree of contextual independence, while data does not. For example, the number "4" is a piece of data. When it was created, during a question about how many sales staff a company has, it had meaning in that context. However, simply saying "four" at any time in any conversation is meaningless, and may actually confuse a situation (add a cost). Some pieces of knowledge on the other hand, such as the experience in negotiating a Scope of Work contract, have some value in any Scope of Work negotiation session, and also in multiple contexts such as any negotiation setting (which could be as simple as a conversation).

increases:



Increasing the Value of Knowledge

The easiest way to increase the value of knowledge is to spread it faster, especially when and where needed. This can be accomplished by ensuring that the right people & the person who has and the person who needs the knowledge & are engaged in a focused

dialogue, resulting in a shorter time to produce the same, or possibly a better, result.

This requires teaching people to recognize what they need and how to get it. It means putting tools at their disposal such as an expert locator or (best) examples of previous work on which to base conversation (establish context). Either or both of these may be digital, but they do not have to be. The key is getting people together; that is the most effective way to transfer knowledge (whereas technology is good at transmitting data).

A Knowledge Culture is a Valuable Culture

Aligning and adjusting a culture is a difficult task. Payscale and incentives must ultimately be aligned with knowledge-applying and knowledge-sharing activities (but aligning payscales is difficult and is not a recommended place to start). Physical space should encourage people to talking with each other in order to build personal networks. Processes and workflow cannot exclude conversation. All of these activities should be undertaken with the understanding that the use of knowledge by people is the core business objective.

Ultimately, every company or organization needs a system where the knowledge of the organization is available. It needs to foster a culture that supports this collective dynamic. This is the culture we have built at Razorfish, and the culture we believe is valuable to our clients. Without it, knowledge workers become knowledge-able costs.

Knowledge Tools for Knowledge Workers

Now that we've covered the intellectual value shift that a business must go through to be ready for knowledge workers, they must still give workers the tools needed to meet knowledge responsibilities. There are many examples of failed tools that clearly demonstrate a negligence in social considerations--that simply because you build a tool does not mean people will

use it. From NHSNet in the UK, to Sony's Beta video-recording technology, superior ideas and execution do not guarantee success. This is also true for the tools given to employees to improve productivity in the knowledge economy. With careful consideration, however, employers can maximize the success of the tools.

Most Common Knowledge Situations

There are a few common situations in which knowledge workers often find themselves. First, they all need basic access to core data, information, knowledge, and productivity tools at one level or another-- often more than employers think. Second, to find that information, employees often have to use different tools to solve problems, (with different data in different places) hindering their ability to answer simple questions. Third, in these days of high employee turnover (whether leaving is the employees' choice or the employers) there is a lack of shared community, history, and language. In the absence of these things, people have difficulty doing their work and working together toward a common goal.

Tools that help: Intranets

A basic, proven means to address this issue is for companies to develop an intranet. Intranets are an internal "Internet" for the company, and provide a means to unify corporate data and information, create efficiencies, support collaboration, and communities. Best of all, depending on the organization's strategy, there may not be a need to replace legacy systems.

At Razorfish, we believe an intranet should, in most cases, be a portal to other systems. For example, if SAP is the financial system, then the finance staff should be able to continue the SAP interface for core processing. Other employees who need access to some of that data (but on a limited and restricted basis) may be able to make do with a portlet or window into SAP through the intranet. Content management and other systems can work in the same way.

There are many benefits of this philosophy. First and foremost, it means the legacy systems may not need to be replaced, which is a significant cost-savings in hardware, software, training, and change management. Second, it fights data anarchy by forcing companies to confront redundant data storage and duplicative processes. It helps companies integrate people, systems, and processes to become more efficient in the workflow and ownership of data and information around the system. Third, a well conceived intranet can also allow for some level of both personalization and customization, that contextualizes the work experience – important when turning information into knowledge.

Customization

Customization allows users to make changes to a site based on their personal choices and preferences. For example, on an intranet, a user may specifically want to see the latest company news all the time, but may not want anyone to see the corporate directory. Or, perhaps there is a choice of (branded) backgrounds, and one employee prefers red to blue. The site offers the user the chance to do that, but the parameters are determined at a higher level.

Personalization

Personalization differs from customization in that the site (or the administrator behind the curtain), not the user, determines the information that will be presented. For example, all employees in the marketing department may need to receive a message or may be eligible for something that the sales force does not. Amazon.com, for example, personalizes its recommendations based on the user's previous purchases.

Intranets also help build or strengthen the internal brand, support a common corporate language, and provide a central place for the corporate community. These are critical as companies develop a culture around knowledge sharing – a key goal in the knowledge economy. Plus, intranets are relatively easy to place at the center of people's work, assisting with the social acceptance of the tool.

Tools that help: Collaborative Environments

More often than ever before, companies are asking their employees to collaborate, and often collaborate on focused, high-visibility projects with tight deadlines. To make matters trickier, these employees may come from different departments and have different backgrounds (read: "cross-functional teams"), so there may be little or no understanding of each other's roles or working methodology. Moreover, they may be geographically dispersed. In short, these may be people with nothing in common except their assignment.

To begin to bring them together – to agree on the task at hand, to share ideas, to build a common language through ongoing dialogue, to have common documents to reference – these people need a common place. The only type of place that will accommodate dispersed people is a virtual collaborative tool. At Razorfish, we have found that a virtual space goes a long way toward getting great results.

The functionality of the space does not have to be overwhelming to have a big impact, as Razorfish has proven through implementations of client's own collaborative tools. Of course, it should be web-based with appropriate security and administrative functions, and have calendaring and contact lists – preferably ones that synchronize with the existing corporate systems. People should be able to post documents, and capture threaded comments about those documents, or about any topic. Version control is also useful, as are virtual whiteboards. Depending on the business

need and current situation, implementation of the system features can be phased over time to maximize productivity and acceptance while minimizing the need to spend large amounts of money for features that are not needed by the culture.

The tools can influence set-up and ramp-up time (quickly onboarding new members as well), resulting in more time spent on value-added work. By keeping "everything" in one place, including discussions and ideas, innovation does not get lost. A consistent platform for virtual spaces makes the documents, dialogue, and the captured knowledge available across an organization, resulting in the reuse of assets to generate additional value.

Tools that help: Access for Diffuse Groups

Unlike teams that need to collaborate closely, such as task forces and client-facing project teams, there are some groups where deep collaboration is not needed. Instead, these groups often need specific, targeted knowledge to provide active context for immediate tasks. For example, repair crews may need to access a focused database or be able to instantly locate an expert from the road to provide the level of service that customers expect.

Freelancers, service technicians, and dispersed R&D units are great examples of what Razorfish calls Diffuse Work Units. These groups often need to be able to easily find key documents such as technical specs, SMEs, and decision-makers, easily share knowledge back to the organization, receive performance feedback, and get real-time inventory knowledge. For example, a tool for service technicians helps them to handle more clients because they work more quickly, or can reduce cycle-time for engineers around the world.

To get them the information they need when they need it, the tools they have must fit their workstyle. Mobility is critical, and for Razorfish mobility does not especially mean wireless devices or

remote access – it could be either or both. Companies with a voicemail culture, instead of an email culture, may choose to use a phone-based system, for example. As with intranets and collaborative environments, tools for diffuse groups also must integrate with legacy systems.

Social Acceptability

The potential of these tools is great, but as I mentioned before, technical excellence is only part of the battle when developing, buying, or implementing a new productivity tool. The other part – perhaps the greater challenge – is getting people to use it. The social acceptability of tools is the most critical driver of success.

It is estimated that 50 - 70% of the work necessary to implement an effective knowledge management initiative is the cultural change involved. People perform the high-value work, and tools must be embedded in their work lives. This cannot be dictated from above. People will resist the change and will likely find ways around it. Consequently the company will not derive the most value from the money it spent. Both ROI on the tool and the employees will not be maximized.

To better understand this, let's step back for a moment. We must take a look at social drivers of technologies that are so embedded in our lives that we fail to consciously recognize them – they are simply the way we get things done. The automobile is a perfect example of this.

To keep this example simple, let's focus on the act of driving itself. How we drive is determined more by social convention than by technology. Cars can reach speeds of more than 100 miles per hour, but we have speed limits. We know not to make a left turn from the right lane – at least most of us do. And we know how to react when others do. This is an example of communal, living knowledge. We do not consciously recognize this knowledge, yet all of us share this understanding of how driving “gets done”.

Living Knowledge Base

On the non-technical side of helping workers become more efficient, employees do need to be part of a community. They learn from each other's successes and mistakes; people often “know” what the databases do not, and knowledge is often shared through stories. Again, it is important to direct people to one another for help, but the feedback into the system makes it more valuable to them and to the company. This also provides for a consistency of delivery and, occasionally, the opportunity to find efficiencies or take advantage of potential partnerships within the enterprise.

People will use tools they think are valuable and important but ignore others – even if those others are equally or more valuable. In keeping with the automobile example, in the 1940s and 50s, there were no seat belts on cars. A man named Preston Tucker installed seat belts (and anti-lock brakes) in his cars, but instead of seeing these as great improvements, people determined he was socially irresponsible. If a car had seat belts, it implied that the cars were not safe. Therefore, people did not want to buy his cars – they preferred cars without seatbelts because they were “safer.” Even today, it is estimated that more than 25% of Americans do not use their seatbelts, despite laws and safety studies that say they should.

There are many layers that need to be considered when implementing tools for knowledge workers. In Razorfish's experience, careful planning and research can result in tools that people want to use, not merely tools that are usable. By matching the choice of tools with the business case and the user need, companies can achieve terrific gains in productivity and morale at the same time.

Recommended reading:

Brown, John Seely, and Duguid, Paul: *The Social Life of Information*, February 2000, Harvard Business School Press

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