Knowledge management as a doughnut: Shaping your knowledge strategy through communities of practice

By Etienne Wenger

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Debate about the utility of knowledge management continues today. This author, a recognized authority on the discipline, suggests that as long as we adopt a good model for managing knowledge, in this case, a doughnut, its practice can give a company a decided advantage.

By Etienne Wenger

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The term "knowledge management" has had its detractors. Some people have even claimed that it is an oxymoron: when it comes to knowledge, they say, the term management does not even apply. Others have criticized the IT focus that the term suggests. Yet the term also makes sense. If knowledge is a strategic asset, then it has to be managed like any critical organizational asset. It is too important to be left to chance.

In order to define itself, the field has spent a lot of time trying to define knowledge. It has been important to insist that knowledge is different from more traditional organizational assets-and in particular, different from mere information-which organizations have learned to manage. This may have been a useful exercise, but intuitively, everybody knows what knowledge is. When you have it, you are likely to understand situations and do the right thing; when you don't, you are in trouble. More recently, the field has come to realize the importance of "communities of practice" as the social fabric of knowledge. Scientific knowledge, for instance, is really the property of communities, which decide what counts as relevant facts and acceptable explanations of these facts. Knowing is not merely an individual experience, but one of exchanging and contributing to the knowledge of a community. Knowledge from this perspective is what our human communities have accumulated over time to understand the world and act effectively in it.

The management side of the term "knowledge management" has been less of a topic of discussion. Yet I believe that it is as productive a term to investigate. If by "manage" we mean to care for, grow, steward, make more useful, then the term knowledge management is rather apt. What form does such management take? And who should be doing it? In this article, I will argue that when it comes to knowledge, management is a doughnut. This doughnut is illustrated in Figure 1. And noting that the center of the doughnut is empty, I will argue that knowledge management is primarily the business of those who actually make the dough -- the practitioners.
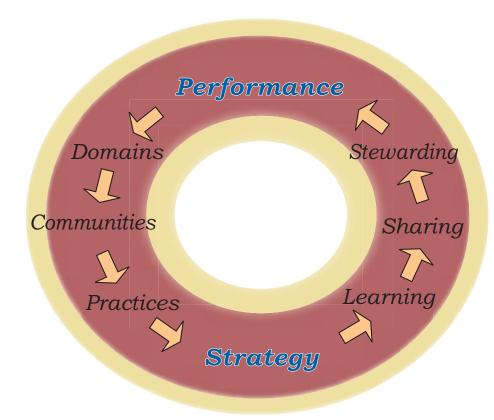
Some principles of knowledge management

Knowledge management requires the proper organizational context. You need to have processes in place to coordinate the management of knowledge and integrate it into business processes such as technology for information flows, interpersonal connections, and document repositories, as well as institutional and cultural norms of paying attention to knowledge. However, while all of these are important enablers, they do not *do* knowledge management. Unless you are able to involve practitioners actively in the process, your ability to truly manage knowledge assets is going to remain seriously limited. It is their knowledge. They know how it affects their ability to do their work. They know what needs to be documented and what should be left as a tacit understanding. They know what form the documentation of their knowledge should take to be useful in their practice. Hence, a fundamental principle

of knowledge management:

- **Practitioners, the people who use knowledge in their activities, are in the best position to manage this knowledge.**

But the knowledge of practitioners is not merely the knowledge of an individual. They need to interact with colleagues because they benefit from the stimulation and because knowledge of any field is too complex for any individual to cover. This is where the notion of community of practice comes to play a critical role. Communities of practice are social structures that focus on knowledge and explicitly enable the management of knowledge to be placed in the hands of practitioners.

- **Communities of practice are groups of people who share a passion for something that they know how to do, and who interact regularly in order to learn how to do it better.**

Figure 1. The doughnut model of knowledge management

Therefore, I will argue that communities of practice are the cornerstones of knowledge management. These communities can be defined by disciplines, by problems, or by situations. At DaimlerChrysler, brake engineers want to know how colleagues in different business units design brakes, in small cars, big cars, trucks, or minivan. At a global consulting firm, consultants from different countries get together to coordinate their efforts to serve a global client. In the U.S., government employees from different agencies who have to move their services to citizens to a web-based approach want to learn from each other as their agencies develop e-government systems. Defined by a shared problem, this heterogeneous community brings together professionals from a variety of relevant disciplines in each agency.

From this perspective, the role of professional "managers" is not to manage knowledge directly, but to enable practitioners to do so. Practitioners have a special connection with each other because they share actual experiences. They understand each other's stories, difficulties, and insights. This allows them to learn from each other and build on each other's expertise. Whatever systems and structures you have in place, there is no substitute for practitioners who act as knowledge managers.

- **Communities of practice manage their knowledge. If you had enough knowledge to micro-manage communities of practice, you would not need them.**

This inherently self-managing nature of communities of practice does not mean that practitioners know everything, are skilled at the process of managing knowledge, or can do all this without help. Nor should practitioners manage their knowledge in isolation. They need

to be in dialogue with executives in the organization, other communities of practice, and experts outside the organization. This tension between internal and external views is expressed in the following paradox:

- **No community can fully manage the learning of another, but no community can fully manage its own learning.**

This is both a relief and a challenge. It is a relief because the responsibility for managing knowledge is one that can be shared. It is a challenge because it is not easy to create an environment that is conducive to and enabling of practitioners acting as knowledge managers.

Three elements of a community of practice

To understand how communities of practice represent the foundation of a knowledge strategy, it is necessary to keep in mind the three fundamental characteristics of communities:

Domain: the area of knowledge that brings the community together, gives it its identity, and defines the key issues that members need to address. A community of practice is not just a personal network: it is *about* something. Its identity is defined not just by a task, as it would be for a team, but by an "area" of knowledge that needs to be explored and developed.

Community: the group of people for whom the domain is relevant, the quality of the relationships among members, and the definition of the boundary between the inside and the outside. A community of practice is not just a Web site or a library; it involves people who interact and who develop relationships that enable them to address problems and share knowledge.

Practice: the body of knowledge, methods, tools, stories, cases, documents, which members share and develop together. A community of practice is not merely a community of interest. It brings together practitioners who are involved in doing something. Over time, they accumulate practical knowledge in their domain, which makes a difference to their ability to act individually and collectively.

The combination of domain, community, and practice is what enables communities of practice to manage

knowledge. Domain provides a common focus; community builds relationships that enable collective learning; and practice anchors the learning in what people do. Cultivating communities of practice requires paying attention to all three elements. These same elements provide the structure underlying the doughnut model of knowledge management.

From strategy to performance

Knowledge management is a strategic activity. It starts with strategy and ends with strategy. It connects strategy to performance through knowledge. Starting with strategy, let us go through the doughnut model of Figure 1 to explore how each element fits in to the overall picture. Note that the doughnut model is meant to convey the logic of a community-based knowledge strategy, not a chronological sequence of steps. The development of communities of practice is a bottom-up process as well as a top-down one. Even though the steps may not be performed in the order in which they are described here, they fit in the overall logic.

Company-wide communities make learning available to all concerned. They make sure that the learning from various locations within and beyond the organization is synthesized and integrated, and then remembered and distributed

Domain: You need knowledge to do what you want

- **Translate the strategy of the organization into a set of domains**

Any organization-whether in the private, public, or non-profit sector-exists to achieve some goal and has a more or less explicit strategy to achieve this goal. The first step in knowledge management is to translate the strategy of the organization into a set of domains of knowledge: what knowledge do we require to be in business at all and what knowledge do we need to compete effectively?

Organizations have adopted different ways to achieve

this goal. At DaimlerChrysler engineering, it is the parts of the car that provide the logic for defining the domains: brakes, windshield wipers and seats. At the World Bank, the KM team sent out an invitation to practitioners to announce their domain and propose the formation of a supported community of practice around it: they came up with domains as varied as slum upgrading, early childhood, and land ownership. At Eli Lilly, a group of biologists defined a new domain, which they called quantitative biology, in order to create the sense of belonging necessary for a cross-company community in the context of an acquisition.

This translation of strategy into knowledge domains is neither static nor obvious. The difficulty is that a good domain cannot be an abstract core competence, such as engineering excellence or miniaturization. It has to connect a strategic need to the daily work and concerns of community members so they will find relevance and personal value in participating. Some organizations that claim to do knowledge management do not have a notion of domain because they focus on information flows and repositories. But the notion of domain is absolutely critical to the ability to manage knowledge. A domain breaks down the problem into chunks that are manageable by those who should be managing knowledge, the practitioners.

Key issues: What mix of top-down and bottom-up processes allows an organization to engage the passion of its practitioners in strategic challenges? How to allow new domains to emerge and old ones to disappear?

You need people to have knowledge

- **Cultivate the communities according to each domain**

The next step is to find the practitioners who can form a community to can take care of the knowledge in their domain. The circle of people with whom practitioners need to interact in order to manage their knowledge is often different from the groups of people they work with each day. But practitioners often feel isolated. Merely having the same job or the same challenges does not make them into a community. Where are the relevant people? Do they know each other? Do they interact? What is in the way? To what extent are they already forming a community and what will it take to move

them to further stages of development?

Organizations have used a variety of approaches to achieve this goal. Some have invited a few reputable practitioners to take the lead, some have gone out and interviewed potential members, some have sent out invitations. Some have even invested in a formal process of social network analysis. Most have set up a support team whose members help community leaders move their community along a development path.

Key issues: How to overcome organizational silos? How to accommodate various levels of participation among people with diverging needs? How to manage community boundaries? How to form and interconnect sub-communities to encourage mutual engagement?

Practice: You need experience to produce usable knowledge

- **Engage practitioners in the development of their practice**

Once practitioners are forming communities in their domains, it is important to support their mutual engagement in a process of practice development. What will be productive is specific to each practice. But few things energize a community of practitioners more than getting into the nuts and bolts of the practice. In a company where I was called in to find out why their communities of practice were struggling, it turned out that these communities had evolved into brown-bag lunches. It may be useful for a community to have a speaker from time to time to bring in fresh ideas. But as the main activity, it was not enough to energize the community. What was missing was the opportunity for practitioners to engage directly with one another and find out what problems they were facing and how they were approaching them. This mutual engagement in the details of the practice makes community participation directly relevant to the work of members. For instance, a group of electronic engineers regularly get involved in problem solving to address the situation of one of the members. This kind of activity draws out their knowledge in the context of a concrete problem and affirms their identities as practicing engineers. Similarly, a group of salespeople really congealed as a community when they started to analyze sales transcripts, discussing in detail how to respond to a customer's objection and

why the respond was effective.

Key issues: How to maximize the value-for-time ratio for practitioners involved in this process? How to recognize and reward their efforts? How to help them organize their resources and make them easily accessible? How to understand, appreciate, and accelerate the effects of community activities on performance?

From performance to strategy

Communities of practice create value by improving the performance of their members when they apply their knowledge in the performance of their job. Because practitioners belong at once to their communities of practice and to their work teams, they are the direct "carriers" of knowledge. If a new solution is proposed in their community, they can apply it to their work. If they discover a new solution in their work, they can share it with their community. Such multi-membership avoids many of the hand-off problems that arise when specialists manage knowledge for others to apply. This is why it is important to have the practitioners themselves be in charge of managing their own knowledge, no matter how much assistance they receive in the process.

Involving practitioners in knowledge management is also important for returning knowledge from the field. The work of an organization produces two kinds of results: business results and knowledge results. Business units will apply the business results to serving customers. Communities of practice, for their part, need to manage the knowledge results from the work of their members and feed this knowledge back into the organization. Thus the management of knowledge assets closes the loop-connecting strategy and performance through a full "knowledge doughnut." Again, the three elements of communities of practice, in reverse order, provide the structure to describe the second half of this process.

Practice revisited: What have we learned?

- **Translate the learning inherent in activities into refined practices**

Practitioners learn constantly on the job. They invent new solutions, refine their skills, and learn from mistakes. They receive customer feedback, experience unexpected pitfalls inherent in well-established approaches, and discover new opportunities. They gain a unique perspective on the work of the organization and its relationships with the market. All this learning needs to be captured into refined practices that incorporate the lessons of the field.

I worked with a community of engineers who attend each other's project reviews to collect the learning inherent in these reviews. The U.S. Army has become famous for its After Action Reviews (AAR), a process of candid discussion that immediately follows any action by comparing expectations with actual results. Other organizations such as HP engage in regular project snapshots in which team members reflect on their project to identify what they have learned.

Key issues: How to integrate these knowledge-extraction processes into normal business processes so that learning becomes part of regular work? How to involve community members so as to translate learning into useful practices for their community.

Community revisited: Who should know this?

Broaden the scope of learning beyond its source

The role of the community then is to make sure that project-specific learning does not remain either local or incidental. This is why practitioners cannot be knowledge managers by themselves. Company-wide communities make learning available to all concerned. They make sure that the learning from various locations within and beyond the organization is synthesized and integrated, and then remembered and distributed.

Of course, one common way to do this is to document the lessons learned and "best" practices that arise from projects into a "book of knowledge," as these community-managed repositories are known at DaimlerChrysler. But documenting is not the only form of memory and distribution channels available to communities. At British Petroleum, a team embarking on a new project will often convene a "peer assist," a multi-day event in which the new team invites a team that has done the same thing or something similar to discuss the new plan in light of their experience. At Xerox, a panel of master practitioners review the tips

from the field to confirm their applicability across contexts. Again and again, it is primarily the voice of the practitioner that lends credibility to knowledge across the community.

Key issues: How to combine broadcast and pull processes so that people know what is available and get it when they need it? How to communicate knowledge in ways that carry the mark of practice beyond a specific locality? How to ensure relevance and validity of learning across contexts? Who has accountability for decisions and policies?

Domain revisited: Where do we go now?

- **Think about knowledge strategically**

Engaging in this dual process of producing and harvesting knowledge gives practitioners a unique perspective on the strategic value of knowledge. This strategic stewardship takes two forms. On the one hand, some communities adopt a strategic stance in thinking about their domain and the development of their knowledge. They watch for gaps in their knowledge. They discuss which conferences to attend and who should go. They inspect competitors' products. Or they keep connected to universities where relevant research is being conducted. This way they take on active stewardship of knowledge in their domain and contribute to developing the knowledge strategy of the organization.

On the other hand, community members' dual focus on knowledge and work gives them a unique perspective on what new business opportunities exist. Their exposure to the market combined with their understanding of their own expanding capabilities thus constitute a strategic resource-one which has remained largely untapped in most organizations. What new opportunities are afforded by the development of our knowledge? An informal community of consultants at McKinsey have developed a new business line out of the knowledge they were sharing. Practitioners at the World Bank who build communities of practice among client countries are in effect proposing a new approach to fighting poverty. Communities whose original purpose was to implement a knowledge strategy are now using their new knowledge to develop innovative strategies.. A community on public consultation for the government of Canada is going beyond the sharing of consultation techniques to explore how to establish new, long-term relationships with the public. This strategic role of communities of practice highlights the needs for executive sponsorship so that the strategic musings of practitioners can find a voice in the organization.

Key issues: How to involve communities of practice in a two-way strategic conversation with the organization? How to translate the insights they gain from managing their knowledge into strategic directions that the organization can pursue?

Rolling the doughnut: Strategic knowledge management

This approach to knowledge management is a

Executive sponsorship acts as a bridge between the hierarchical structure of the formal organization and the horizontal structure of communities. Its importance cannot be overemphasized

substantial transformation of organizations because it turns traditional Taylorism on its head. Rather than assuming that knowledge is the property of management and the workers are the implementers of this knowledge, it assumes that knowledge is the property of the practitioners, and the role of management is to make it possible for practitioners to act as managers of their knowledge.

The impetus for starting communities can come from the organization or from the practitioners. I have seen it work both ways. Sometimes the company sees a need and encourages interested practitioners to get together and form a community of practice. Sometimes practitioners just start getting together to learn from each other and the knowledge they produce ends up playing a strategic role in the organization. The most successful communities have always combined bottom-up enthusiasm and initiative from members with top-down encouragement from the organization. On the one hand, communities are energized by producing value for both their members and the organization. On the other hand, it is crucial that communities set their own agenda and govern themselves because they are the ones with the

knowledge to do so.

Getting going on the doughnut can be a big deal or a small beginning, depending on how ready the organization is. One advantage of a community-based initiative is that it can be started where there is energy, one community at a time, and spread as people see the value. Eventually, however, the KM doughnut is a strategic initiative that entails a broad strategically driven focus on knowledge involving the whole organization. The full doughnut model of knowledge management requires a number of enabling structures that integrate the work of communities of practice into the organization. These are the sponsorship, recognition and support structures.

Sponsorship structure

It is crucial for the organization to provide adequate sponsorship for communities. Sponsorship is different from traditional management in that it does not involve reporting relationships: an executive sees that a community can deliver value and therefore makes sure that the community has the resources it needs to function and that its ideas and proposals find their way into the organization. While there is often one specific sponsor who is designated, it is more useful to think about the sponsorship structure that enables the communities to thrive and have an impact on the performance of the organization. This includes high-level executive sponsorship as well as the sponsorship of line managers who control the time usage of employees. The role of sponsorship includes:

- Translating strategic imperatives into a knowledge-centric vision of the organization
- Legitimizing the work of communities in terms of strategic priorities
- Channeling appropriate resources to ensure sustained success
- Giving a voice to the insights and proposals of communities so they affect the way business is conducted
- Negotiating accountability between line operations and communities (e.g., who decides which "best practices" to adopt)

Executive sponsorship acts as a bridge between the hierarchical structure of the formal organization and the horizontal structure of communities. Its importance cannot be overemphasized. The KM doughnut is not a project. It is a way of life for a knowledge organization. Community development takes time and commitment, and community-based knowledge initiatives can only reach their full potential with committed sponsorship that promotes a sustained focus on capability development.

Recognition structure

Knowledge is power and one may well wonder why anyone would want to share it. But hoarding knowledge is not necessarily the best way to benefit from its power. In a knowledge economy, reputation is a crucial asset, and sharing knowledge is therefore also a source of power, providing that one's community serves as a platform to build a reputation. As one engineer put it: "The advantage of my community is that it allows me to build a reputation beyond my team." Such reputation building depends on both peer and organizational recognition.

- Peer recognition: community-based feedback and acknowledgement mechanisms that celebrate community participation

- Organizational recognition: rubric in performance appraisal for community contributions and career paths for people who take on community leadership.

Support structure

Communities usually need some organizational support to function optimally. This support includes:
- A few explicit roles, some of which are recognized by the formal organization and resourced with dedicated time
- Direct resources for the nurturing of the community infrastructure including meeting places, travel funds, and money for specific projects
- Technological infrastructure that enables members to communicate regularly and to accumulate documents
- Last but not least, organizations that have used

communities in a systematic way have put together a small "support team" of internal consultants who provide logistic and process advice for communities, including coaching community leaders, educational activities to raise awareness and skills, facilitation services, communication with management, and coordination across the initiative.

When the cycle of the doughnut model is thus integrated in to the organization, communities of practice connect strategy to performance through a focus on knowledge-the development, refinement, and diffusion of critical capabilities. Business units and teams also connect strategy to performance, but through a focus on business processes. This defines two paths between strategy and performance: business processes and communities of practice. These two paths are distinct, yet tightly interwoven because practitioners are involved in both.

Treating knowledge management as a strategic imperative requires the full cycle of activities in the doughnut from strategy to performance and back. Unless your organization is engaged in this learning cycle, I would say that it is not really engaged in knowledge management. It can have advanced information flow and repository systems. It can have experts and specialists. It can have sophisticated research departments and corporate universities. Yet it is not doing true knowledge management. I would claim that true knowledge management-viewed as the management of strategic knowledge assets-is the process by which communities of practice are supported in completing the full cycle described here. So knowledge management is a doughnut, after all. ∎