# A Strategic Pretext for Knowledge Management

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*To increase the chances that knowledge management will provide strategic advantage, it should be tied to competitive strategy. Most KM projects, if considering strategic impact at all, start from the outcome and work backward to strategic impact. This paper suggests that one should start with strategy, identify strategic points of knowledge leverage, and use that to drive KM initiatives. It provides a framework that applies concepts of strategy to knowledge and learning.*

## Introduction

Knowledge management (KM) has come a long way since emerging as a management discipline in the early 1990s. Its initial focus was on applications of information technology such as groupware, document repositories, and portals. While expanding the art of the possible regarding useful applications of information technology, this focus belied the distinction between information and knowledge. Merely giving someone access to a repository of information did not make him or her an expert. One still needed to *know* something to make sense of the information. And exchanging the knowledge required to frame and interpret the vast amount of content being captured remained a problem. We are now coming to respect the true value of knowledge as something beyond what we think of as information.

The early focus also tended to ignore the organizational context within which KM is embedded (Berkman 2001). One could throw all the technology one had at a problem, but if people did not want to exchange knowledge or communicate with one another before the availability of information technology, they wouldn't communicate afterward either (Zack and McKenney 1995). Recent work (e.g., Cohen and Prusak 2001) highlights the importance of trust and "social capital" for encouraging knowledge exchange.

Although more recent KM initiatives seem to be addressing these issues, the one area still seriously lacking is the ability to link KM to strategy and competitive advantage. Certainly one cannot read anything about KM today without the author extolling its strategic virtues. After all, this is a primary reason for senior executives to make significant investments in KM. On the other hand, the evidence that organizations are actually linking KM to strategy or realizing significant strategic benefits from KM is thin. The typical approach in most organizations I have worked with is to implement a KM solution and then to attempt to work backward towards an explanation of why this particular application, if successfully implemented and used, might create strategic advantage. Somehow, though, the link to strategic advantage becomes obscured, and the actual advantage is often not realized.

Based on my research with over 25 firms, I maintain that to link KM to strategic advantage, we need to understand and articulate those particular sources of advantage that come from knowledge as a strategic resource. If the application of some specific body of knowledge can be shown to create or sustain a competitive advantage by enabling an organization to better formulate and execute its competitive strategy, then that knowledge is a strategic resource. If KM is applied to the care and feeding of that strategic knowledge, then KM is "strategic" because it directly supports the competitive

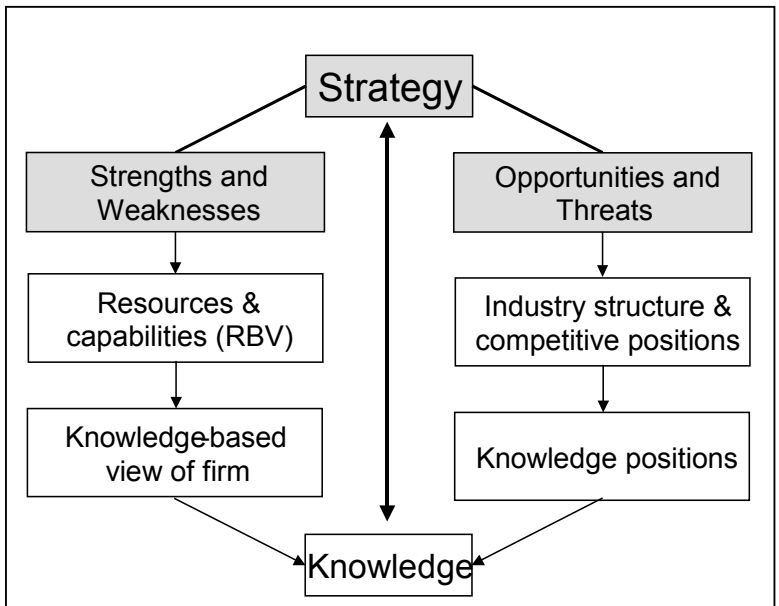


**Figure 1** ©Michael H. Zack

strategy of the organization. The difference between this approach and the one described above is that this approach starts with strategy and moves forward to KM, rather than starting with KM and working backwards.

I also maintain that the reason most organizations start with KM rather than strategy, is that the people involved with strategy are not interacting at all with those doing KM (nor do they understand much about KM), and those doing KM are not interacting with those doing strategy (nor do they understand much about the firm's strategy). The point at which both strategy and KM come together is in understanding the strategic nature of knowledge itself. Once the strategists understand the strategic role of knowledge, they may include it in strategic decision-making. Once KM practitioners come to understand the strategic role of knowledge, they can then give a strategic focus to the knowledge and learning they are responsible for managing. And in organizations that take knowledge seriously, to insure the integrity of this link, KM practitioners should be coordinating directly with organizational strategists.

My objective is to provide a framework for initiating and facilitating discussion among KM practitioners and strategic managers about the strategic role of knowledge. In this paper, I take the traditional notions of strategy and competitive advantage and examine how they apply to knowledge-based resources and competitive environments. I make a case for strategically focused knowledge and learning, and present some guidelines for identifying strategic knowledge management opportunities. The discussion begins with a brief review of traditional strategy and shows how these concepts can be extended to knowledge as a strategic resource. It concludes with a set of steps an organization should take to diagnose its own knowledge-strategy.

## Business Strategy: The Traditional View

The best place to begin a discussion of strategy is with the SWOT (strengths, weaknesses, opportunities, and threats) framework (Andrews 1971). It is perhaps the most well known approach to defining strategy, having influenced both practice and research for over 30 years. Performing a SWOT analysis involves describing and analyzing a firm's internal capabilities – its strengths and weaknesses – relative to the opportunities and threats of its competitive environment. Organizations are advised to take strategic actions to preserve or sustain strengths, offset weaknesses, avert or mitigate threats, and capitalize on opportunities. Strategy can be seen as the balancing act performed by the firm as it straddles the high wire strung between the external environment (opportunities and threats) and the internal capabilities of the firm (strengths and weaknesses).

*Opportunities and Threats: The Industry Position View*

Refinement of the SWOT framework has proceeded down two paths: one representing strengths and weaknesses, the other opportunities and threats (Figure 1). Over the

last 20 years, strategy has been dominated by Porter's "five-forces" model (Porter 1980). This model focuses on the external (opportunities and threats) side of strategy, helping firms to analyze the forces in an industry that give rise to opportunities and threats. Industries structured so as to enable firms to dictate terms to suppliers and customers, and to provide barriers to new entrants and substitute products are seen as favorable. Strategy becomes a matter of choosing an appropriate industry and positioning the firm within that industry according to a generic strategy of either low cost or product differentiation.

Porter's model has come under criticism, however (Teece 1984, Barney 1991). The main argument is that the model addresses the profitability of industries rather than individual firms, and therefore does not help particular firms to identify and leverage unique and therefore sustainable advantages. Its underlying economic theory assumes that the characteristics of particular firms, per se, do not matter with regard to profit performance (Connor 1991). Rather it is the overall pattern of relationships among firms in the industry that makes the difference. If the industry as a whole is structured properly (i.e., with sufficient barriers and other impediments to competition), then all firms should realize excess returns.

*Strengths and Weaknesses: The Resource-based View*

It turns out, however, that unique characteristics of particular firms within an industry can make a difference in terms of profit performance (Nelson 1991, McGahan and Porter 1997, Rumelt 1991). To put balance back into the original notion of business strategy, recent work in the area of strategic management and economic theory has begun to focus on the internal side of the equation – the firm's resources and capabilities[1]. This new perspective is referred to as the *resource-based view* (RBV) of the firm (Barney 1996, Collis and Montgomery 1995, Grant 1991, Prahalad and Hamel 1990). Strategic management models traditionally have defined the firm's strategy in terms of its product/market positioning – the products it makes and the markets it serves. The resource-based approach suggests, however, that firms should compete based on their unique, valuable and inimitable *resources and capabilities* rather than the products and services derived from those resources and capabilities. Resources and capabilities can be thought of as a platform from which the firm derives various products for various markets (Kogut and Kulatilaka 1994). Leveraging resources and capabilities across many markets and products, rather than targeting specific products for specific markets, becomes the strategic driver. While products and markets may come and go, resources and capabilities are more enduring. Therefore, a resource-based strategy provides a more long-term view than the traditional approach, and one more robust in uncertain and dynamic competitive environments. Competitive advantage based on resources and capabilities therefore is potentially more sustainable than that based solely on product and market positioning.

While these two views of strategy may appear to be at odds, they are actually complementary when combined and integrated per the SWOT framework (again, see Figure 1). The industry structure and position approach helps an organization to understand its competitive environment while the resource-based view helps it to evaluate its ability to exploit opportunities and respond to threats.

Having laid out a basic framework for strategy, the challenge then is to relate it to knowledge - that is to build a knowledge-based SWOT framework (K-SWOT). The next section develops the basis for the "SW" side of a K-SWOT framework. It looks at knowledge from the internal resource-based perspective to explain why knowledge may be a firm's most strategic resource. The subsequent section develops the basis for the "OT" side of a K-SWOT. It looks at knowledge as the basis for describing and evaluating strategic positions

[1] While many authors distinguish (often not consistently) between capabilities and competences, the term capabilities, as used here, is meant to include both.

within industries and related knowledge-based opportunities and threats. Finally the two are combined to form an integrated K-SWOT, showing how both strategic views of knowledge are complementary and reinforcing.

## Knowledge as a Strategic Resource

The strengths and weaknesses side of SWOT has been significantly more developed in terms of the role of knowledge, and is coming to be referred to as the knowledge-based view of the firm (e.g., Grant 1996, Kogut and Zander 1992, Spender 1994, Teece, Pisano and Shuen 1997). As the resource-based view suggests, having unique access to valuable resources (e.g., the deed to a diamond mine or a particular store location) is one way to create competitive advantage. However, not all organizations are so lucky. Most competing organizations hire from the same labor pools, use similar raw materials, have access to the same information technology, energy resources, plant, equipment, and other traditional resources. Even if a resource is unique, competitors might imitate it or develop an adequate substitute.

What may be the most unique and inimitable resource, however, is the knowledge an organization has about how to combine and coordinate those traditional resources. Companies having superior knowledge are able to coordinate and combine their traditional resources and capabilities in new and distinctive ways, providing more value for their customers than can their competitors, even if those resources are not unique (Penrose 1959, Romer 1995, Teece, Pisano and Shuen 1997). Therefore, knowledge can be considered the most important strategic resource, and the ability to acquire, integrate, store, share and apply it the most important capability for building and sustaining competitive advantage (Kogut and Zander 1992).

What is it about knowledge, compared to traditional resources, that makes the advantage sustainable? The resource-based view suggests that firms compete not only for customers in product markets, but also more importantly for inputs (resources) in factor markets (Barney 1986). To compete with another firm based on a key strategic resource, a firm either needs to imitate the resource, find a reasonable substitute, or acquire the resource in the factor market. While it may be possible to acquire a traditional resource via the market, knowledge does not lend itself to being purchased in ready-to-use form (Teece 1998). And because the knowledge held by a firm often appears to a competitor to be too complex, unpredictable, or ambiguous to understand, it is difficult to imitate (Reed and DeFillippi 1990, Zack in press). Several other competitive barriers to acquiring or developing traditional resources (Dierickx and Cool 1989) apply even more so to knowledge-based resources:

**Time compression barriers:** When acquiring and integrating a resource takes a period of time that cannot be shortened other than at prohibitive cost, there is an advantage to acquiring that resource before competitors. Knowledge, especially context-specific, tacit knowledge embedded in complex organizational routines and developed from experience, tends to be unique and difficult to imitate or purchase in the market. To acquire similar knowledge, competitors have to engage in similar learning experiences. However, acquiring knowledge through experience takes time, and competitors are limited in how much they can accelerate their learning merely through greater investment.

**Asset mass efficiencies** suggests that firms having an existing critical-mass stock of some resource will realize greater value from obtaining more of that resource than will competitors having less initial stock. This applies directly to knowledge because the more a firm already knows, the more it can learn (Cohen and Leventhal 1990). This enables a knowledge superiority to be sustained. Learning opportunities for an organization that already has a knowledge advantage may be more valuable than for competitors having similar learning opportunities but starting off knowing less (Goldstein and Zack 1989), assuming the

organization is also at least as effective a learner as its competitors.

**Asset interconnectedness and complementarity** suggests that an acquired resource may complement existing resources in one firm more so that the resources of another, providing greater value or advantage. When applied to knowledge resources, sustainability may come from an organization already knowing something that uniquely complements newly acquired knowledge, providing an opportunity for knowledge synergy not available to its competitors. New knowledge is integrated with existing knowledge to develop unique insights and create even more valuable knowledge. Organizations should therefore seek areas of learning and experimentation that can potentially add value to their existing knowledge via synergistic combination. This may be the greatest value from mapping existing knowledge resources.

From the perspective of factor market economics then, sustainability of a knowledge advantage, comes from knowing more about some things than competitors and being able to learn from experience at least as well as they can, combined with the time constraints faced by competitors in acquiring similar knowledge, regardless of how much they invest to catch up.

This dynamic relies on a distinctive characteristic of knowledge called *increasing returns* (Arthur 1990). Unlike traditional physical goods that are consumed as they are used, providing decreasing returns over time, knowledge provides *increasing* returns as it is used. The more it is used, the more valuable it becomes, creating a self-reinforcing cycle. If an organization can identify areas where its knowledge leads the competition, and if that unique knowledge can be applied profitably in the marketplace, it can represent a powerful and sustainable competitive advantage.

Organizations, therefore, should strive to focus their learning experiences on building or complementing those knowledge positions that provide a current or future competitive advantage. Knowledge mapping has become a cornerstone of KM. Absent a strategic context; systematically mapping, categorizing and benchmarking organizational knowledge can still help make knowledge more accessible throughout an organization. However, by using a knowledge map to strategically prioritize and focus its learning experiences, an organization can create greater leverage for its learning efforts. It can combine its learning experiences into a "critical learning mass" around particular strategic areas of knowledge.

## Knowledge as a Strategic Position

The external side of SWOT, as exemplified by Porter's work, is often referred to as the strategic-positioning school. By that, we mean that strategy can be represented by the competitive position of a firm in an industry (Porter 1996), as opposed to the specific bundle of resources and capabilities it controls. There can be many factors on which firms compete in particular industries (e.g., price, service, location, reputation, time to market, etc.), and these could form the dimensions by which to identify traditional strategic positions or regions in a strategic space.

Porter's work also examines industry structure to identify its effect on competition. It identifies five competitive forces that impinge upon firms the ability to earn profits in an industry: new entrants, supplier bargaining power, customer bargaining power, threat of substitute products or services, and traditional intra-industry rivalry. It identifies determinants of the relative power between a firm and these actors, many of which are dependent on the industry as a whole. However it does identify some opportunities for individual organizations to mitigate those forces.

Perhaps the most robust factor is switching costs – the cost to switch from using one product or firm to another. Switching costs, if large enough, can discourage new entrants and those offering substitute products, can lock in customers, and keep rivals at bay. If low enough

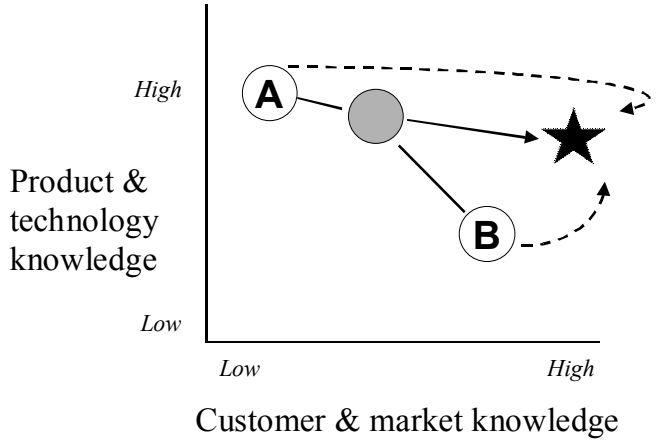


**Figure 2** ©Michael H. Zack

relative to suppliers, the firm has an opportunity to switch suppliers at will and consequently may receive price or product performance concessions. Cost advantages or product differentiation can also thwart new entrants, lock in customers and keep rivals at bay. The lack of these can weaken suppliers' positions.

First mover advantage – being the first to occupy a strategic position – often provides long-lasting cost advantages by tying up the best locations, preempting the best personnel, gaining access to preferred suppliers, or acquiring assets while demand is still low. Perhaps more importantly, the first mover may get to define the rules of competition. There may, however, be costs associated with being first, as well. (Porter 1985)

What does it mean to hold a strategic position, to gain first mover advantage, to create switching costs, or to segment markets based on *knowledge*? To date, little work has been done regarding the relationship between the positioning school of strategy (the "OT" of SWOT) and knowledge. Learning curves, one potential source of first-mover cost advantage (Hirschmann 1964), represent the phenomenon by which costs decrease as cumulative volume increase because of some (generally unexplained) learning effect. But even learning curves are grounded in the notion of physical product and manufactured volume.

I propose that firms who take knowledge seriously first need to think of strategy and competition in terms of defending competitive *knowledge* positions rather than product/market positions. Let me illustrate with a simplified version of a real example from an organization I recently studied. Figure 2 shows the strategic positioning *based on knowledge* of the focal company (shaded circle) and two of its competitors, A and B. The first question, as with the traditional positioning school, is to define the bases of competition in the industry. But instead of traditional dimensions like price or location, we have defined knowledge dimensions. That is, we have identified general domains of knowledge firms must have to participate in the industry. In this simple case, we have just two: customer and market knowledge (an external view) and product/technology knowledge (an internal view), and while described generically here, they would typically be described at a more industry –specific level of detail[2].

To participate in the industry, firms must have some minimal or threshold level of knowledge in each of these domains. We can therefore consider these basic or "core" levels of knowledge as barriers to entry. That is, this is the knowledge required by a firm just to participate in the industry. Beyond that, a firm's knowledge can be defined as being "advanced" if it enables the firm to carve out or participate effectively in some specific knowledge-based

[2] A good place to start in identifying knowledge domains is with the generic strategic framework of Tracey and Weiserma (1995). They identify three "value disciplines" – ways to compete - each which suggests a general domain of knowledge: product leadership (product/technology knowledge), operational excellence (operations knowledge) and customer intimacy (customer/market knowledge). In practice, however, most firms have a much more complex set of knowledge dimensions.

competitive niche in the industry, and "innovative" if represents truly distinctive, unique and valuable knowledge in the industry (Zack 1999). Knowledge requirements beyond the core level are analogous to traditional barriers to mobility among strategic positions within an industry. That is, they represent an obstacle, in the form of the required acquisition or development of new knowledge, which must be overcome to move from one strategic knowledge-position to another.

In this example, the company's historical competitive strategy has focused on product leadership, and consequently they have developed a relatively strong knowledge position in product/technology knowledge and moderate customer/market knowledge. Competitor A, however, has a stronger product/technology knowledge position and weaker market knowledge position. Competitor A is pursuing perhaps the same product leadership strategy but in a more knowledge-focused way. (Assume for the sake of the example that we are talking about the same product categories, technologies and markets across all three companies.) Competitor B, pursuing more of a customer intimacy or service strategy, has greater customer/market knowledge but less product/technology knowledge.

The trend in the industry has been a move towards value-added services, as products have become more commodity-like, decreasing prices and margins. The product leadership strategy is requiring greater investment in R&D to maintain product knowledge uniqueness and superiority. Those remaining in the traditional product space but not investing in R&D will increasingly have to rely on (and probably acquire or develop) operational and manufacturing knowledge to maintain a low cost operation. In light of these trends, the company evaluated the ability of their existing knowledge position to support their current product leadership strategy. They also evaluated the strength of their knowledge position relative to their competitors. After careful strategic analysis, the company decided to pursue a customer intimacy strategy, whose new anticipated required knowledge position is denoted by the star. This new position requires greater knowledge of customers and markets, and less knowledge than they currently enjoy regarding products and technologies. This new strategic knowledge position also raises several strategic issues:

*Is the new knowledge position strategically viable?*
The new position concedes the product knowledge space to Competitor A, yet assumes adequate product knowledge to hold off Competitor B (even if the company lets some of its product knowledge lapse), and dominates Competitor B in market knowledge. It appears to be strategically viable.

*Can the company learn enough to move to this new knowledge position?*
This depends on the company's knowledge management and learning capability. Their generic KM capability must be sufficient to acquire, develop or harvest knowledge generally. More importantly, the company's KM and learning initiatives must be focused specifically on developing its new strategic knowledge domain (viz., customer/market knowledge).

*Could a competitor learn enough faster to preempt this new knowledge position?*
Competitor A would have to learn the most about markets. The company gives this a low probability. Competitor B could possibly increase its product and market knowledge enough to move to this position. However, the company believes its knowledge management and learning capabilities are far superior to most of the firms in its industry.

*Are there opportunities for knowledge-based alliances, mergers or acquisitions?*
The company believed that its knowledge was complementary to Competitor B, and that by acquiring B the company could enter its new strategic knowledge space even more quickly while eliminating a potential competitive threat.

## Implications

This simplified example raises some key points to consider when taking a knowledge-position view of strategy.

*Strategic Knowledge Maps*

The analysis was based on a strategic knowledge competitive map, not on a traditional product/market competitive map. A product/market map might look very different. Two firms having the same knowledge may, in fact, choose to use that knowledge (appropriately or not) to produce different products for different markets. Knowledge as the driving underlying resource for producing and marketing products, however, means that these strategic knowledge positions represent potential (if not current actual) product/market competition. A strategic knowledge map offers a more forward-looking view to identify those firms who have the greatest potential to become a strategic threat. Looking only at current products and markets is like looking at the tip of an iceberg. Looking at the underlying knowledge is like looking below the water's surface.

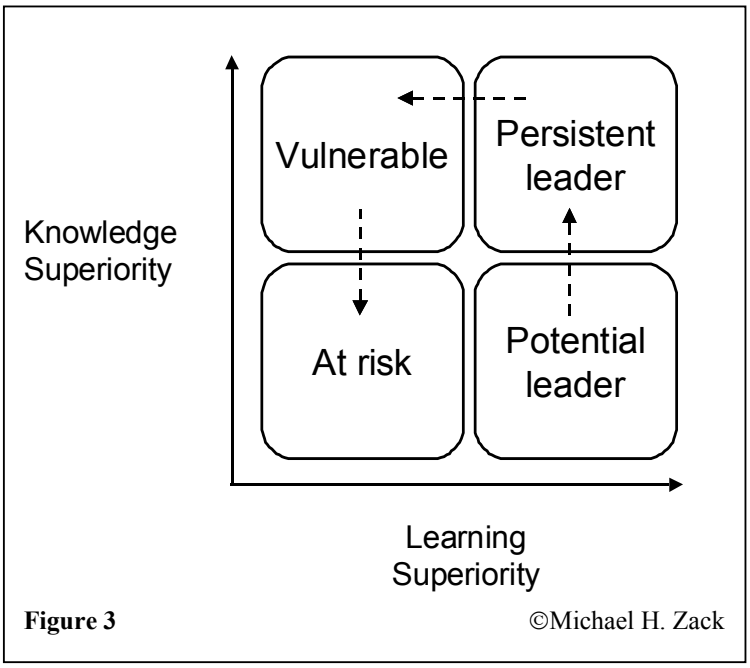


**Figure 3** ©Michael H. Zack

The map reveals the strategic gaps that an organization's KM and learning should be focused on. By performing a traditional knowledge mapping exercise and comparing it to a strategic knowledge map, an organization can identify which knowledge strengths and weaknesses are strategically significant and which are not. If KM is focusing on the ones that are not strategically significant, it will not produce long-term strategic value.

*Strategic Knowledge Gaps: The Link to SWOT*

Knowledge and learning management must address two key knowledge gaps:

1) *The internal strategic knowledge gap.* This is the gap between where the organization's knowledge is now and where it needs to be to execute its strategy. The internal knowledge gap is analogous to the strengths and weaknesses side of a SWOT. It represents the knowledge strengths and weaknesses (SW) of a K-SWOT.
2) *The external strategic knowledge gap.* This is the gap between the organization's knowledge and that of its competitors, now and in the future. The external knowledge gap is analogous to the opportunities side of a SWOT. It represents the knowledge opportunities and threats (OT) of a K-SWOT.

To add strategic value, KM and learning must be aligned with these two strategic knowledge gaps.

*Sustaining a Knowledge Advantage*

The discussion above suggests that a sustainable knowledge advantage comes from a combination of superior knowledge and superior learning. Four possible generic competitive positions can be derived (Figure 3): superior or lagging knowledge vs. superior or lagging learning capability. Those firms

exhibiting a superior knowledge position in some strategically important domain and a superior ability to learn from experiences within that same domain should enjoy a persistent and sustainable knowledge advantage[3]. Those lagging in both are at risk. Those with superior knowledge but not learning capability will eventually cede their position to those with possibly less current knowledge but a greater ability to learn and catch up. Absent continual learning, "entropy" drives firms to the at-risk position.

The traditional notions of first mover advantage and switching costs are complementary, reinforcing and quite powerful when applied to knowledge-based competition. First movers in a learning situation avail themselves of the opportunity to begin learning before competitors. Given the nature of time compression diseconomies, asset mass efficiencies and asset connectedness discussed earlier, if the firm can gain a knowledge foothold and has a learning capability at least as good as its competitors it can sustain its knowledge position. The more it can learn how to serve its customers and the more customers can learn about how to use the company's products or services, the greater the switching cost. Switching to a new supplier means that the supplier has to learn about the customer and the customer has to learn about the supplier and the product all over again. The more customized the product or service or the more embedded it is in the customer's operations, the more learning required and the greater the switching costs. This is especially true for contract-based or other long-term business relationships. For example, auditors often perform the first year audit at cost or even at a loss, hoping that the mutual learning that takes place will enable them to price and perform the work better than competitors who would have to start at the beginning. Outsourcing creates even greater opportunities to create knowledge and learning-based switching costs.

While a knowledge advantage may be sustainable, building a defensible competitive knowledge position internally is a long-term effort requiring foresight and planning as well as luck. Long lead-time explains the attraction of strategic alliances and other forms of external ventures as potentially quicker means for gaining access to knowledge. It also explains why the strategic threat from technological discontinuity tends to come from firms outside of or peripheral to an industry (Utterback 1994). New entrants often enjoy a knowledge base different than that of incumbents, and which can be applied to the products and services of the industry under attack. This has been especially evident in industries where analog products are giving way to digital equivalents. This long learning lead-time or "knowledge friction" highlights the importance of benchmarking and evaluating the strengths, weaknesses, opportunities and threats of an organization's current knowledge platform and position, as this knowledge provides the primary opportunity (and constraint) from which to compete and grow over the near-to-intermediate term. This must, in turn, be balanced against the organization's long-term plans for developing its knowledge platform

## K-SWOT

Starting with a definition of strategy as the means by which an organization balances it internal strengths and weaknesses with its external opportunities and threats, I have attempted to show how each of those aspects can be applied to knowledge-based competition. The knowledge-based view of the firm focuses on an organization's ability to acquire, develop and share knowledge resources to formulate and execute its strategy. The knowledge-positions view suggests that organizations face opportunities and threats based on how the

[3] This assumes the absence of technological discontinuities that might render a firm's knowledge obsolete. While it is beyond the scope of this paper, one extension I am currently developing is the value of strategic *knowledge options*. This is a natural progression from financial to real to intangible options and includes defining the strategic scope and robustness of existing knowledge platforms as well as the value of developing and maintaining multiple domains of potentially strategic knowledge as a hedge against uncertainty and discontinuity.

knowledge driving their strategy compares with that of their competitors. From a knowledge strategy perspective, the core domains of knowledge required to deliver particular products or services to particular markets, not the products and markets themselves, define an organization's industry. And competition is defined by how one organization's strategic knowledge compares to another defending a similar knowledge position, regardless of whether or not they are currently producing similar products or selling to similar markets. The two come together to form SWOT by realizing that it is an organization's knowledge and learning strengths and weaknesses that enable it to locate, move to and defend promising strategic knowledge positions, that is, to manage its knowledge-based opportunities and threats.

This framework also suggests a general process for performing a K-SWOT analysis:

1. Describe the organization's industry in terms of its key knowledge domains.
2. Identify the organization's current strategy.
3. Identify the knowledge required to successfully formulate and execute that strategy.
4. Compare the required knowledge to the organization's existing knowledge, to identify its internal knowledge gaps (positive or negative), that is, its knowledge strengths and weakness.
5. Compare the existing and intended knowledge positions to competitors' knowledge to identify external knowledge gaps, that is, knowledge opportunities or threats.
6. Evaluate the organization's learning ability relative to the need to realign existing knowledge (internal) and relative to competitors learning abilities (external). Note that the more "head-to-head" an organization is competing for a particular knowledge position, the more important is a learning superiority.
7. Determine whether the organization's knowledge and strategy are in alignment. If not, determine whether the organization is capable of modifying its knowledge or whether it should instead modify its strategy.
8. Regardless of the knowledge strategy position eventually adopted, determine whether KM and organizational learning program and initiatives are focused on the internal and external strategic knowledge gaps.

## Conclusion

Firms that take knowledge seriously, treat it as a strategic resource. They recognize that knowledge can drive strategy and provide a basis for competitive advantage. Starting with traditional notions of strategy and competition, I have showed how those can be applied to knowledge-based competition. By starting with a strategic analysis of knowledge resources, organizations can best identify which knowledge is most important to their competitive viability, and direct their KM and learning efforts in that direction. This will increase the chances of realizing long-term strategic value from those initiatives. However, until executives and KM practitioners can engage in a conversation about knowledge from a strategic perspective, realizing long-term value will be more difficult. The K-SWOT framework described here is a start in that direction.

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