



Executing a Strategic Plan

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Introduction

For any company to achieve its goals, it must assess the markets in which it competes, determine what it needs to compete in those markets, understand its strengths and weaknesses in relation to those needs, and work to acquire the capabilities it lacks. This is the bread and butter of strategic plans. However, companies that field large, complicated, multiyear contracts – for example, nuclear power-plant builders, aerospace and defense contractors, or shipbuilders – must be open to many different ways of building capabilities. In particular, such companies engage in strategic sourcing, a process that allows them to acquire capabilities without ceding competitive advantage to partners or suppliers by, for example, becoming dependent, sharing too much intellectual property (IP), and so on.

Strategic sourcing includes sourcing from an internal business unit, sourcing from an external company, developing the necessary capabilities internally, or partnering with or acquiring another company.¹ Although usually undertaken by complex players, companies with less complicated products could also benefit from the process.

Some already do: For instance, in the automotive industry, deciding which components to produce internally and which to source is vital to establishing competitive advantage. Toyota, the world's most profitable – and nearly the world's biggest – car-maker may now internally produce only the 30% of its products it deems most critical to its brand.

Similarly, in technology hardware, Dell and Apple outsource components of many of the products they sell. With Apple in particular, where design is

the source of its market power, the balance between outsourcing pre-designed components and getting original design manufacturers (ODMs) to design and engineer components is a key source of competitive advantage.

However, companies must exercise caution when working with other parties. If companies outsource too much to a single supplier, or outsource something critical to the final product, the supplier might claim a larger share of the value added in the value chain, attempt to become a full-fledged competitor, or even choose not to supply components in an effort to create a space in which the supplier can begin to control the value chain. Companies can also put themselves at risk by making IP visible to others in the value chain.

What, then, is different about companies in the most complex industrial settings? Simply put, they field such elaborate products that they cannot manufacture every necessary component. They have been dealing with this problem for a long time and have thus developed rigorous, time-tested approaches for determining what they should produce, what they should source, and what kinds of relationships they should strike.

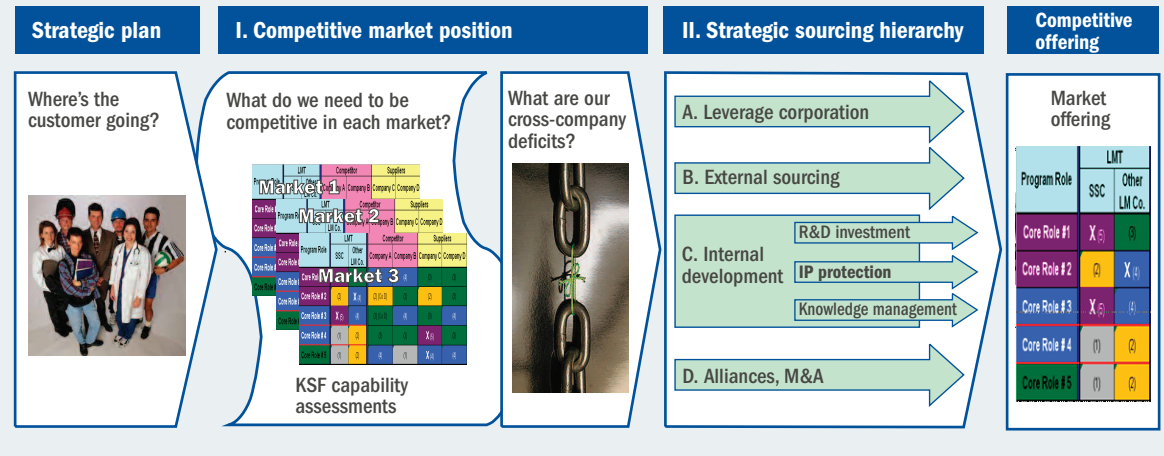
This paper sets out a methodology for strategic sourcing. It offers an example from which any industry with complex products or multiyear development cycles can benefit. The process is scalable, can apply to business units within companies, and is transferable across industries and markets.

It can even be applied in simpler industries. Consider two examples in apparel: Li & Fung has thrived by creating a network of thousands of partners to coordinate and produce fashion designs, thus basing their competitive advantage on a diversified sourcing strategy. Zara, in contrast, keeps most of its design and production supply chain in-house. Which model is better? And, more to the point, which model is better for any given apparel company dissatisfied with its competitive position? Oddly enough, lessons from shipbuilding, aerospace and defense, and other capital-intensive industries may hold the key to understanding how a struggling

¹ Companies are set up in different ways: Some simply have business units within companies; some have business units within companies within companies; and the terms “company” and “corporation” are sometimes used interchangeably. Here we have worked with a simple two-part structure in which we speak of companies and business units.

Exhibit 1

The strategic sourcing process



company on New York’s Seventh Avenue might identify and leverage its core competencies while exploiting – to its competitive advantage – strengths from the competition that it currently perceives as threats.

- **Price-of-entry** factors, as their name implies, are those a company needs simply to be in the game. They are like silverware in a restaurant: They must be clean and bright; however, once they are clean and bright, other factors come into play, and little is gained by polishing them to a higher shine.

The strategic sourcing process

Exhibit 1 sets out the end-to-end process with which strategic sourcing decisions are made once a strategic plan has been determined. Assessing market position identifies deficits, indicates a hierarchy of sourcing choices through which those deficits may be addressed, and, if a decision to build a new capability is made, leads to resource allocations.

To begin, companies must identify the key success factors (KSFs) relevant to the markets in which a given business unit – we will call ours the Complex Products Business Unit, or Complex Products for short – wishes to play. It is useful to think of these success factors with regard to their ability to influence market position at three levels:

- **Discriminating** factors are the fundamental elements customers use to choose between competing offerings – they allow the customer to discriminate at a basic level between two or more options
- **Important** factors are those customers use to make choices if two offerings are at par with regard to discriminating factors

Complex Products must therefore grade itself on the degree to which it and other business units possess the discriminating, important, and price-of-entry factors that determine the company’s competitiveness in the marketplace. Exhibit 2 (see next page) offers an example of such an assessment. Here, Complex Products has determined there are five KSFs that define a BU’s ability to compete. Two of these (KSF1 and KSF2) are discriminating – critical to the unit’s competitiveness.

Complex Products has also identified five levels of capability against each KSF: “leader” (purple), “top group” (blue), “medium” (green), “weak” (yellow), and “no capability” (gray). In this case, Complex Products determined that it was a leader in the first and third KSFs, but that it was weak in the second. Fortunately, the assessment showed that another BU was in the top group for the second KSF, presenting an opportunity for Complex Products to source from within the company. Things become a little more complicated with regard to KSF4: Complex Products’ analysis determined that this is an important factor, but the unit lacks relevant capabilities, and its internal sourcing options cannot

bring it above the weak level. KSF5 presents a similar challenge. Based on this analysis, these factors become either “buy” options, capacities to develop internally, or capacities that require an acquisition – respectively, the third, fourth, and fifth best choices one can make after “make” or “buy.” “Buy” is therefore the best option, hence the indications on Exhibit 2.

Now consider the exhibit once again with Complex Products’ competitors and suppliers included (*Exhibit 3, see next page*).

Complex Products’ two main competitors (Company A and Company B) are in the top group for KSF1, but one is weak and the other medium on KSF2 – and their best available sourcing or acquisition options provide only medium capabilities. Thus, if Complex Products sourced from another of its company’s BUs, it could establish an advantage over its primary competitors in KSF2 – and thus a significant advantage overall, as it would become the leading player for the two discriminating KSFs.

We have already identified KSF3 as something Complex Products can supply itself at a level supe-

rior to that of Companies A and B. But what of KSF4? Exhibit 3 shows that Company C, one of Complex Products’ suppliers, is a market leader in KSF4. As long, then, as Company C is an available source, Complex Products has a viable option for establishing a leading position in KSF4. However, if either of the competitors forms an exclusive sourcing relationship with Company C, or acquires the company, the best Complex Products could do is partner with Company D, which would provide medium capabilities in an important area. This suggests that Complex Products should lock up Company C for KSF4 as quickly as it can.

Finally, there is KSF5, which is a price-of-entry factor. Complex Products can source the provision of KSF5 to Companies C or D, or even consider Company A. Company A presents greater risk, of course, because going to a full-blown competitor renders an organization more vulnerable than going to a supplier.

Based on our analysis thus far, Complex Products should provide KSF1 itself, source KSF2 from another BU within the company, provide KSF3 itself, source KSF4 from Company C, and source

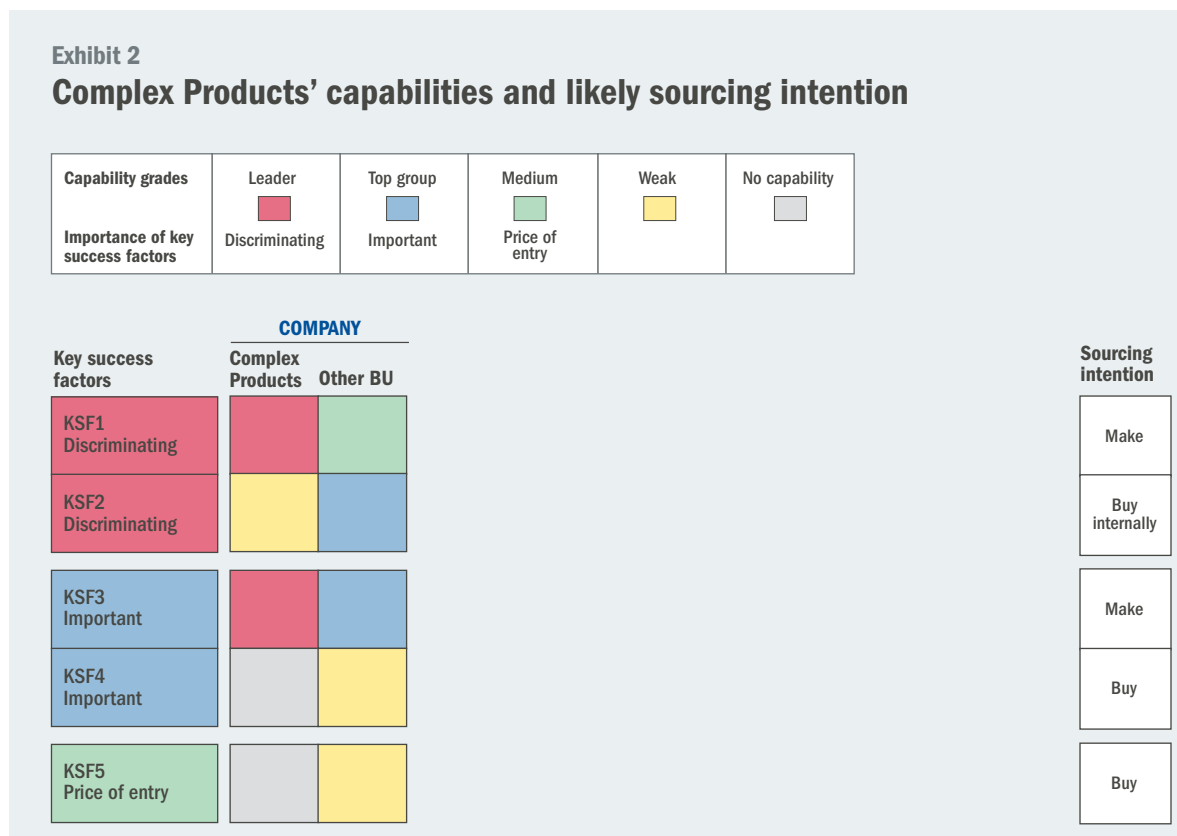


Exhibit 3

Complex Products' capabilities vs. competitors and suppliers, and detailed sourcing intention

Key success factors	COMPANY		COMPETITORS		SUPPLIERS		Sourcing intention
	Complex Products	Other BU	Company A	Company B	Company C	Company D	
KSF1 Discriminating	Leader	Medium	Top group	Top group	Medium	Medium	Make
KSF2 Discriminating	Weak	Top group	Weak	Medium	Weak	Medium	Buy internally
KSF3 Important	Leader	Top group	Medium	Top group	Medium	Top group	Make
KSF4 Important	No capability	Weak	Medium	Medium	Leader	Medium	Buy
KSF5 Price of entry	No capability	Weak	Top group	No capability	Top group	Top group	Buy

KSF5 from Companies C or D. Thus Complex Products can assemble a competitive offering consisting only of leader and top group capabilities; it is required to look externally for only two of the five KSFs, and only to a supplier rather than a competitor.

Still, Complex Products must keep an eye on what its competitors and suppliers are up to. Exhibit 4 (see next page) rolls in “team grades,” ranking Complex Products’ offering against that of Company A, its primary competitor. As the exhibit shows, Complex Products is consistently stronger, as long as it moves quickly to lock up Company C for KSF4. If it fails to do this, its offer will be only marginally superior to that of Company A, because it will be unable to establish a better-than-medium capability in KSF4. It is still superior in the discriminating KSFs, but if being competitive means never falling two capability grades below the competition, Complex Products’ offer is actually weaker.

What emerges from this analysis is that it is crucial to move quickly on KSF4 – a counterintuitive insight, because KSF4 is not a factor upon which customers base purchasing decisions. One way Complex Prod-

ucts can lock up Company C is to invite them to provide KSF5 as well. Consequently, we have marked the boxes that indicate the bid Complex Products would assemble. This is the bid reflected on the right-hand side of the exhibit under “home team” and the detailed list of sourcing intentions.

Exploring the range of sourcing decisions

There is one other factor we have not yet adequately explored – a complication with regard to Company C that we discuss under “sourcing externally” in this section.

As noted, strategic sourcing options are attractive in the following order:

- Where possible, source from another unit in the company
- Source externally when there is adequate competition
- Develop internally if the above two options are not available and time, talent, R&D resources, and PP&E requirements are sufficient

- Establish a long-term relationship with an external partner through a merger or acquisition.

Let us consider these in turn and see how they in fact lead Complex Products to a solution that differs from the one already elaborated.

SOURCING FROM ANOTHER UNIT WITHIN THE COMPANY

As noted, companies generally strive to source internally before considering other options. But occasionally this approach adversely affects the company's ability to win a contract or execute on a program. In some cases, for instance, the company might find its internal partner possesses the necessary capability but has other priorities; for example, different strategies may drive each unit's P&L. Complex Products, in such a case, should still consider working with the internal unit, but should use it for its expertise rather than its production capability, to manage an external supplier rather than provide the relevant product.

Companies might also look externally for a capability if the customer does not want to put so many

eggs in one basket, because of long-term detrimental effects on the overall competitive state of the market.

SOURCING EXTERNALLY

Where there is no internal sourcing option, a company must consider either sourcing from a supplier or even a competitor. Although this is not business as usual for many companies, working with competitors – co-opetition, as it has famously been called – is becoming more common and has long been standard practice in industries such as aerospace and defense. Here, the size of the projects, the small number of players, and government concerns about maintaining a viable market lead to a situation in which companies often work with a competitor on one project while competing for another. One of the challenging features of this situation is IP protection, which we discuss below. As this approach becomes more common in other industries, IP and related concerns will become an issue more broadly.

Sourcing externally is a credible option when there is adequate competition (to minimize the risk of

Exhibit 4
Complex Products' offering against Company A's bid

Key success factors	COMPANY		COMPETITORS		SUPPLIERS		TEAM GRADES		Sourcing intention
	Complex Products	Other BU	Company A	Company B	Company C	Company D	Home team	Company A team	
KSF1 Discriminating	X						Complex Products BU	Company A	Make
KSF2 Discriminating		X					Other internal BU	Company D	Buy internally
KSF3 Important	X						Complex Products BU	Company D	Make
KSF4 Important					X		Company C	Company A	Buy from Company C
KSF5 Price of entry					X		Company C	Company A	Buy from Company C

becoming captive to a single supplier) and no significant threat that the external company will become competitive with the primary company in its core activities.

Based on this definition, Company C actually presents a problem. It is the only player with leader status in KSF4, and it has no serious competition. This creates an issue for the whole market, as is always the case when the market failure of a single company can compromise any part of a product or service. It also makes other players vulnerable: As long as Company C is the only strong player in KSF4, it can extract more than its fair share of the profitability from any value chain that requires this capability.

Consequently, by sourcing KSF4 from Company C, Complex Products is potentially putting itself at risk. What should it do? It could make an apparently suboptimal external sourcing choice for the sake of assembling an offer without putting itself at risk. It might source from Company D, which has only a medium capability in the KSF, although this would significantly weaken its competitive offering: as noted above, Company A can then source

from Company C and put a credible offering together.

Before considering this unsatisfactory possibility, then, Complex Products should mull other options: internal development and long-term alliances or M&A. Of these, internal development is preferable. Exhibit 5 thus shows a shift in sourcing intention from “buy” to “make/buy,” meaning that the company will, if it can, assemble its own version of KSF4 by making and buying necessary components of the KSF. It can now also return to a stand-alone choice of sourcing KSF5 from Company C or Company D.

INTERNAL DEVELOPMENT






Developing a capability internally requires aligning R&D resources, talent, and facilities and equipment against the challenge on a credible timeline and at a reasonable opportunity cost – and, as we shall see, working to protect the company’s IP and reviewing, and if necessary strengthening, its knowledge management capability.























































The best way to proceed is to dissect the KSF that the business unit is building into its product and

Exhibit 5
Complex Products alters its strategic sourcing decision

Key success factors	COMPANY		COMPETITORS		SUPPLIERS		TEAM GRADES		Sourcing intention	
	Complex Products	Other BU	Company A	Company B	Company C	Company D	Home team	Company A team	Original	Modified
KSF1 Discriminating	Leader	Medium	Top group	Medium	Medium	Medium	Complex Products BU	Company A	Make	Make
KSF2 Discriminating	Weak	Top group	Top group	Medium	Weak	Medium	Other internal BU	Company D	Buy internally	Buy internally
KSF3 Important	Leader	Top group	Medium	Top group	Medium	Top group	Complex Products BU	Company D	Make	Make
KSF4 Important	No capability	Weak	Medium	Medium	Leader	Medium	Complex Products BU	Company A	Buy	Make/Buy
KSF5 Price of entry	No capability	Weak	Top group	No capability	Leader	Leader	Company C or D	Company A	Buy	Buy

Exhibit 6
KSF4 Core Products

Capability grades	Leader 	Top group 	Medium 	Weak 	No capability 
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KSF	Core product	COMPANY		COMPETITORS		SUPPLIERS					Final team	Sourcing intention
		Complex Products	Other BU	Company A	Company B	Company C	Company D	Company E	Company F	Company G		
KSF4	Core product I										Complex Products	Make
	Core product II										Company E	Buy
	Core product III										Company E	Buy
	Core product IV										Complex Products	Make
	Core product V										Complex Products	Make
	Core product VI										Company E	Buy

service components. Effectively, the company is conducting the same assessment for a single capability that we discussed earlier with regard to the entire competitive offering (hence the observation at the end of this paper’s introduction that the methodology is scalable).

This analysis will allow the company to determine, at a granular level, which product or service components of the KSF it should build, which it might be able to source from within the company, and which it can source externally – allowing it to focus internal resources on developing only those elements not readily available elsewhere.

Consider a breakdown of KSF4 in the example we are discussing (*Exhibit 6*). In this case, KSF4 disaggregates into six products. As the exhibit shows, the company is strong only in Product 1; it lacks capabilities for the remaining five products. However, there are several credible suppliers for Products 2, 3, and 6. In an environment of such robust competition, the company can afford to buy these capabilities from the strongest supplier. It will purchase Products 2 and 3 from Company E and Product 6

from Company F, comfortable that the strengths of Company G will keep its suppliers in check.

This leaves the company with a more complicated situation for Products 4 and 5. It can either partner with Company C, with the attendant risks discussed above (being held hostage or allowing Company C to begin to emerge as a full-fledged competitor). If it does not wish to expose itself to this risk, or if Company C has partnered elsewhere or is demanding more for its contribution than the company is willing to pay, Complex Products must set out to make these elements, even though it is starting from a position of weakness.

If Complex Products chooses the “make” route, as indicated, it will begin to apply internal resources to Products 1, 4, and 5, with an emphasis on 4 and 5 (where it has furthest to go). It should regularly monitor alternative suppliers for Products 4 and 5 as market conditions change. For instance, customers may be as unhappy as Complex Products is about the scarcity of suppliers for Product 4, and so may decide to support – and even fund – other suppliers. If the customer is the government, this is particularly likely. In such a case, Complex Products

could itself apply to the government for funds. However it proceeds, it should monitor industry developments on a schedule determined by the pace of technological, policy, and competitive change.

Beyond these considerations, however, when a company decides to develop a capability internally, it must pay special attention to three areas: R&D investment, IP protection, and knowledge management.

For R&D investments, the company must create a technology road map that displays product development progress, technology readiness, and investment dollars required for progress. This road map must include episodic tests that will genuinely “prove out” the technology; this helps ensure that progress occurs at the necessary rate, and that there are as few misunderstandings as possible about the development schedule between the company, business units, and customers. This will also allow the company to compare its readiness to technological developments in the marketplace. If an external source advances at a faster pace, the company can evaluate whether to abandon internal development or complete development to avoid sourcing a KSF from an external supplier.

We noted earlier that a company might settle for a suboptimal technical solution if that solution offered other benefits. One issue is that all external sourcing options carry IP risks. Of course, patents, robust nondisclosure agreements, and other partnering agreements protect IP to some extent; however, once a company has had access to the IP of another player, it is difficult, even with the best of intentions, not to use that acquired know-how in other areas (some might liken this to trying to “unring” a bell). In addition, there is the problem of “second-order” IP that results from such sourcing arrangements, such as learning how a company approaches problem solving. One way or another, companies share a great deal of competitive knowledge beyond the technological IP intrinsic to the project.

Patents in particular prove to be a double-edged sword for companies whose customer is the government. Because the government has the power to infringe a patent at will, patent protection in such cases does little more than provide marketing value by acknowledging the originator of the know-how.

Of course, patenting provides much more powerful protection in commercial markets.

The best way to protect a company’s IP is to apply a distributed process that drives IP protection decisions as near to the project technologists as possible: They know best what needs to be shared, what know-how the supplier/competitor already possesses, and where technological developments are heading. This distributed process should be paired with a centralized IP repository to maximize the likelihood of cross-leveraging IP where useful.

Finally, to build a KSF successfully, a company must align knowledge management processes with strategic goals. To do so, companies identify positions within each business unit that are aligned with the KSFs it needs to build, prioritizing positions based on whether they are related to discriminating, important, or price-of-entry factors.

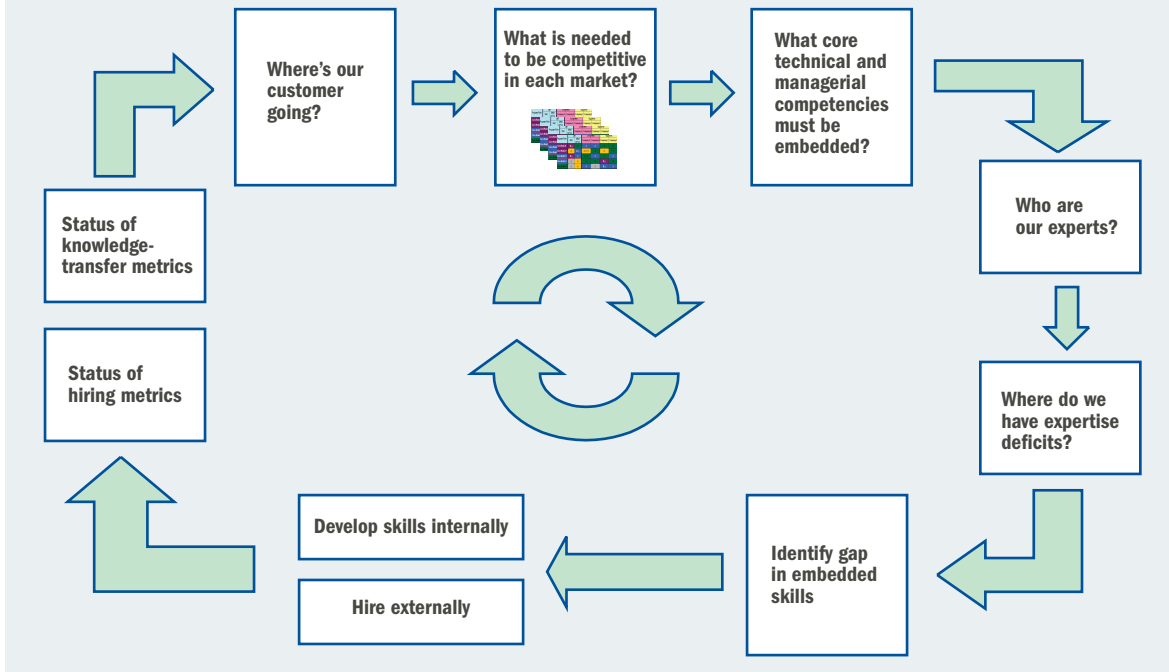
Exhibit 7 (*see next page*) shows an iterative process for managing the expertise cycle. Based on the chosen strategy, companies must identify current expertise and deficiencies, understand categories and skills that need to be bolstered, and institute metrics that track hiring and knowledge transfer such that the necessary capabilities come to exist within the company and remain well into the future.

LONG-TERM PARTNERSHIP: ALLIANCES AND M&A

The fourth strategic sourcing choice can have significant consequences: forming either a long-term alliance or partnership with an external firm, or acquiring the firm. This is a choice a company should only make in the context of a full understanding of the KSFs required to compete, the products and services that make up each of those KSFs, and the supplier-competitor capability map. For instance, in the original example, Company C might have been a reasonable target for alliance or acquisition.

Using its overall assessment of the market situation, Complex Products can derive a list of target firms based on what it needs to do to strengthen its position and the capabilities of potential targets. This is especially useful when a new KSF is emerging in the marketplace or if there has been a reprioritization of KSFs based on current or expected developments.

Exhibit 7
Managing the expertise cycle



Companies should be clear on compelling reasons to acquire a firm. When identifying M&A targets, the company should evaluate only the strategic value of the acquisition, such as controlling a target firm's development in the service of the company's strategic goals, increasing the company's credibility in the marketplace, developing a particular technology, or leveraging the target's current capability in areas strategic to the company. Strategic value does not include acquiring major suppliers to reduce costs via efficiencies, tempting though such opportunities often are. In our experience, the operational efficiencies that focused suppliers offer means they are best left as separate entities, so long as a competitor will not lock up the supplier. When companies take into account questions of cultural fit and other issues, it rarely makes sense to acquire

a supplier for reasons of cost; alliances are almost always superior choices.

* * *

By conducting a comprehensive assessment of market requirements and internal and external capabilities, a company can position itself to acquire the capabilities it needs in a well-thought-out, integrated manner that leverages available resources. Once the company identifies its deficits, it can employ one of four sourcing options: sourcing from another unit within the company, sourcing externally if sufficient competition exists, developing the capability internally, or pursuing a long-term alliance or acquisition. The company's R&D investments, IP protection methods, and knowledge management model must all align with the sourcing decision.