Opportunities for Action in Industrial Goods

Innovation to Cash:
Orchestrating the Process

THE BOSTON CONSULTING GROUP
Innovation to Cash: Orchestrating the Process

To generate the growth they need, industrial companies have spent decades pouring billions of dollars into innovation. Yet despite all the experience companies have accumulated in managing the innovation process, most new products and services fail to produce the expected returns, and many yield outright losses. Moreover, as product life cycles continue to shrink and copycat products proliferate, even highly successful new products may have very short lives in the marketplace. Under these circumstances, what steps can business leaders take to boost the odds of success?

Clearly, the answer is far from simple. Successfully developing new offerings involves large investments of time and money—and often, significant risk. We call the comprehensive process that extends from a new product’s conception to its phaseout from the market the innovation-to-cash cycle. (See the exhibit “The Innovation-to-Cash Process and the Cash Curve It Generates.”) Managing this cycle entails maximizing revenues, volume, and profits while minimizing risks, time, and expenditures across the entire span of organizational structures and activities. And it requires applying this approach not to one project at a time but to a whole portfolio of projects at different stages of development. Increasingly, managing the innovation-to-cash cycle also requires coordinating these efforts not just across a manager’s own organization but across multiple organizations as well.

Few companies have mastered all the processes and skills necessary to manage this far-reaching undertaking with coherence and discipline. In fact, large, established corporations have an especially difficult
time, in part because they tend to be firmly wedded to their traditional—and historically successful—ways of going about each element of the innovation-to-cash process. Industrial companies in particular tend to bring a “do-it-all-ourselves” mindset to the task. In our experience, however, they would do well to explore alternative approaches.

**Different Approaches for Different Situations**

When it comes to commercializing an innovation, companies generally play one of three basic roles: the
integrator, in which the company performs all the steps needed to take a new product or service to market; the orchestrator, in which the company retains direct management of some parts of the overall process and depends on partners to manage the rest; or the licensor, in which the company sells or licenses a new product or idea to another organization, which handles the rest of the commercialization process. In this article, we focus primarily on the orchestrator approach.1

Each of the three approaches has a distinct economic profile with a characteristic pattern of investment levels and potential returns. Each one requires a distinct set of skills. And each approach has specific strengths and weaknesses that make it better or worse suited to different situations. Indeed, The Boston Consulting Group’s analysis shows that under different circumstances the three approaches generate very different levels of profits—sometimes amounting to as much as two or three times the baseline value of the innovation in question.

Thus, the decision regarding which approach to use for a new offering is a highly strategic one because the approach governs how cash flows—and risks—are allocated among participants. Yet most companies tend to rely exclusively on whichever approach is most familiar, without even considering the others. For most industrial companies, for example, the integrator has been the traditional approach of choice. However, what has worked well in the past won’t nec-

1. For a discussion of all three approaches, as well as many ways to boost the effectiveness of the innovation-to-cash cycle, see James P. Andrew and Harold L. Sirkin, “Innovating for Cash,” Harvard Business Review, September 2003.
essarily work well in the future. In particular, companies that usually use the integrator approach should seriously evaluate some of the advantages—in terms of time, investment, and risk—offered by the orchestrator approach. Consider Whirlpool’s experience developing its Gladiator GarageWorks product line and Chrysler’s experience launching the Crossfire model.

**From Owning Innovation to Orchestrating It**

For Whirlpool Corporation, the world’s largest manufacturer of major household appliances, the Gladiator GarageWorks system of modular storage and organization products represents a radical departure from “business as usual.” First, the line is designed for a new “room”—the garage, rather than the kitchen or the laundry room. Second, it targets a new demographic segment—men, rather than women. Finally, it reached the market in record time—just over one year after initial funding, rather than the three to five years typically required by new projects in the industry.

When the idea for Gladiator was first proposed, many people within Whirlpool assumed that the company would use the integrator approach to developing the product line, as it usually did. Yet in the end, the orchestrator approach proved to be the key to Gladiator’s success. Because the market for Gladiator was completely new to Whirlpool, and because Whirlpool was relatively unfamiliar with potential Gladiator customers, orchestrating allowed the company to accelerate development, invest less of its own resources, and spread the risks. Specifically, to avoid the time and expense of hiring new engineers of its
own, Whirlpool tapped into the design expertise of its suppliers, including several that it had not worked with before. In addition, while Gladiator’s project leaders used Whirlpool manufacturing assets when in-house manufacturing made sense, they were rigorous about using outside assets when it did not. For instance, whereas the handles of some of the storage systems were taken from Whirlpool’s dryers, other items were made entirely by third parties that specialized in those products. Ultimately, Gladiator’s project leaders assigned the manufacturing of almost all the elements except the actual appliances to partners—an unprecedented move for Whirlpool.

Gladiator was launched in late 2002, after just 15 months of development. The response from consumers quickly exceeded expectations. Because Whirlpool had taken the orchestrator approach, turning extensively to outside parties, gross margins were lower than if the company had made everything itself. But although costs per unit were higher with this approach, total costs were lower, because there were no factories to build, for example. Moreover, a faster launch enabled Whirlpool to establish the Gladiator brand and gain a foothold in the market before copycat offerings arrived. As a result, Gladiator is expected to have higher total lifetime sales and to be more profitable than would have been the case if the company had taken the traditional integrator approach.

Equally important, the experience gave Whirlpool invaluable experience in developing projects much faster—and much less expensively—than it usually does. Such skills will be essential as the company continues its search for organic growth. Indeed, without new product lines or extensions, the appliance manu-
facturer would find itself essentially stuck in an industry facing slow growth, tightening margins, and increasingly elusive profits. It is a situation now facing many large companies—including, for instance, automobile manufacturers.

Consider Chrysler. Since the late 1990s, the U.S. automaker (now a unit of DaimlerChrysler) has been losing domestic market share, mostly to more efficient Japanese rivals. To limit the pain, Chrysler has cut costs dramatically. But so have its competitors. To re-ignite growth, Chrysler needs to sell more cars more profitably while continuing to slash spending. In other words, the company must get more out of less as quickly as possible.

The Crossfire coupe, launched in July 2003, is one element of this plan. A sporty two-seater with a sleek, muscular profile, the Crossfire is one of the first of a wave of new models designed to push the Chrysler brand upscale, where margins are higher. In this strategy, design and quality are critical, as are speed and cost containment. But rather than invest the time and resources to develop and manufacture the Crossfire’s higher-performance parts on their own, Chrysler’s project managers focused their efforts only on the new car’s body style, interior, and marketing; for the rest of the necessary elements, they took the orchestrator approach. For instance, they turned to Mercedes-Benz for the engine, the transmission, and many other parts. All told, almost 40 percent of the Crossfire’s parts come from Mercedes.

In addition, Chrysler assigned manufacturing not to one of its many proprietary plants but to Wilhelm Karmann, a specialty auto manufacturer in Germany. There, Karmann’s engineers helped Chrysler adjust
its designs so the Crossfire could be assembled on the same line as another Karmann project: the Mercedes CLK. In fact, Karmann eventually took on not only the manufacturing of the Crossfire but most of the engineering as well. Chrysler, meanwhile, worked to keep the project on track with overall goals and specifications, and to develop the marketing to position the new model effectively. The first Crossfire models reached the U.S. market after just 24 months of development and at a cost of $240 million—meeting or exceeding the benchmarks set by Chrysler’s Japanese and European rivals.

Early consumer response has been positive. But the benefits for Chrysler may be larger than success in the showroom. Besides bringing a new car to market more effectively and efficiently, Chrysler is gaining a real understanding of when the orchestrator approach makes sense. This knowledge alone can be a significant competitive advantage.

**When to Orchestrate?**

Whereas many industrial companies have never explored the orchestrator model, some have embraced it almost too enthusiastically, with managers and executives eager to try the “asset-light” strategy in virtually any situation. In some cases, however, the risks may outweigh the potential benefits. For instance, if Chrysler had not been able to turn to a partner as capable as Karmann—which could leverage its experience with Mercedes—the risks of time or quality problems would have been much higher. In addition, had anything gone wrong, it could have been a near fatal blow to Chrysler’s attempts to reinvent the brand. When deciding whether orchestrating makes
sense for a particular innovation, companies must apply the same rigor they would bring to any other major strategic decision.

Above all, they should challenge conventional wisdom. The value of doing so may be the real lesson to be taken from the experiences of Chrysler and Whirlpool, both of which turned to the orchestrator approach in defiance of conventional wisdom. Whirlpool, for instance, handles more sheet metal than almost any other company in the world. Certainly it had the scale and expertise to produce the Gladiator line entirely in-house. Similarly, one of the biggest factors pressuring Chrysler is that after losing market share, it now suffers from severe excess capacity: some of its North American plants are running less than half full. Why not make the Crossfire in those plants? The answer, for the Gladiator line as well as for the Crossfire model, is that certain characteristics of those innovations and the associated risks made the orchestrator approach a smart bet.

In our experience, most managers base their commercialization decisions on fragmented and partial evaluations of the relevant factors. Worse, they make assumptions such as “We are as low-cost as any supplier can be” or “We’ll be the leader even if we’re late to market,” and then they fail to explore the consequences. To be sure, there is no “black box” that helps managers understand when the orchestrator—or, indeed, any of the three approaches—will be most effective. But a systematic analysis of three critical dimensions—the nature of the innovation, certain characteristics of the industry, and the kinds of risk involved—can be extremely helpful. Only through a rigorous analysis of these parameters can a company capture what is unique and important about the inno-
vation and choose the approach that will maximize profits.

In general terms, the orchestrator approach is the right choice when a company has developed a breakthrough concept that is a step removed from its core business, when several capable suppliers and potential partners are available, and when time to market is of more than usual concern. Gladiator and the Crossfire both fit this profile. In addition, manufacturers of products with very short lives can do well as orchestrators, exploiting the capabilities of many partners simultaneously rather than following a linear process over which they might have more control. Other factors to consider, among many, are the level of physical assets required, the importance of brands, the infrastructure needed, the risk of substitutes, and the necessary financial investments.

**What Orchestrators Need**

Of course, for the orchestrator approach to work effectively, it must be a good match not only for the project but also for the company’s capabilities. To succeed as an orchestrator, a company will need capabilities that it may not have if it has traditionally pursued the integrator approach. For one, the company should be skilled at managing projects across several organizations. It should also have strong skills in supply chain management, including the ability to find, evaluate, and work closely with suppliers—possibly all over the world—not just as undifferentiated vendors but as true partners. Also, orchestrators need to be highly skilled in thinking strategically about the value chain. Where and how—exactly—do they want to play? How should they structure commercial arrange-
ments to ensure that they capture the value (for example, which intellectual property it is critical to own, and which it is not)? Which activities that they have traditionally conducted in-house are no longer critical to generating cash? Companies often lack the essential skills in these areas and therefore must develop or obtain them.

Another organizational requirement for orchestrators is strong and committed leadership at the highest possible level of the company. Because the orchestrator model often represents a departure from a company’s traditional approach to commercialization, it can run afoul of conflicting internal agendas, causing resentment and resistance. This issue can be a particular problem for large industrial companies that have huge investments in proprietary manufacturing assets and capabilities, with the need to keep that capacity occupied. In such companies, the decision to employ the orchestrator model, rather than using the company’s own capacity, cannot help but stir up conflict. Even where such conflict is not an issue, close collaboration with other companies can raise tricky legal and logistical challenges. And turning an idea into cash cuts across so many functions and subprocesses—both internally and at partners and suppliers—that there usually is no single owner of the overall process. In Whirlpool’s case, explicit backing from the CEO enabled the Gladiator team to withstand institutional pressures to “do it our way.”

Another key factor is having the right metrics. While this is true for any of the three innovation-to-cash management models, it is particularly challenging for the orchestrator model, in which metrics must be applied both to internal contributors and to external companies. Not many companies actually conceptual-
ize and manage the overall process of turning an idea into cash; even fewer measure that process with any real rigor. Many companies can’t even track the number of company-paid engineers working on a given effort, let alone how well they are “extending the enterprise” and leveraging suppliers’ engineers. Yet basic metrics such as total time from idea to net positive cash flow; tradeoffs among cost, quality, and time; and basic performance by innovation teams are essential to the management of the process. Failure to measure almost always reflects failure to manage.

Finally, successful application of the orchestrator model requires discipline. In many companies, existing process requirements (such as tollgates, milestones, and support requirements) are routinely ignored—without consequences. Too often, senior management commits funding, approves products, and allows marketing campaigns to be launched even though the team in question has not met its carefully established targets. Indeed, in most organizations, ineffective innovation projects are almost impossible to kill. Whether this lack of discipline arises from politics, egos, or other sources, the end result is costly: process discipline gives way to management by fiat, resources get fragmented, and promising innovations see their economic potential hemorrhage away. Companies that adopt the orchestrator model must be particularly meticulous about imposing discipline—on themselves and on their partners.

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Industrial companies that have traditionally kept their product-development and commercialization processes entirely in-house would do well to explore the considerable benefits of adopting the orchestrator model.
Companies such as Whirlpool and DaimlerChrysler are finding that by working as orchestrators, they can develop major new products faster and for less money while sharing some of the risk with their collaborators. They can leverage the significant expertise that lies outside. And they can improve their ability to turn innovations into cash.

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