Opportunities for Action in Industrial Goods

Supply Chain Strategies for the Internet Era

The Boston Consulting Group

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Business-to-business e-commerce, Internet exchanges, e-supply-chain management: great claims have been made about the Internet's ability to revolutionize supply chains. Now that the Internet hype is abating, allowing reality to set in, what is actually happening? How much value is the Internet creating, if any? And how can your business benefit?

Many companies are hoping for significant results. When The Boston Consulting Group recently surveyed 250 supply-chain executives and general managers at major U.S. corporations, more than half the respondents reported that they see the Internet as a way to "greatly improve" their supply-chain performance. On average, they expect to cut unit costs by 3 percent per year while enhancing revenues by 5 percent. Moreover, they anticipate achieving similar improvements annually over several years.

In fact, a number of companies are already realizing gains of this magnitude. Some BCG clients are engaged in initiatives that are yielding benefits equal to 5 to 10 percent of total sales, with further gains still available. However, most companies have seen only limited benefits at best—and in many cases, these benefits will offer no competitive advantage. Too many companies are using the Internet just to make simple enhancements to their supply chains. For example, they are reducing materials costs through online procurement and streamlining customer service departments through online ordering. Although these changes do generally lower costs and please customers, competitors can quickly replicate them.

Other companies, hoping for more lasting results, are making a different kind of mistake: they are piling one Internet project on top of another until they find themselves wrestling with an unmanageable range of initiatives. Many of these projects will not yield benefits commensurate with the investments that fund them.

There is a better way. BCG has identified a set of pioneering companies that are using selected Internet strategies to rebuild their supply chains and create durable competitive advantage. Many of these companies have achieved inventory turns that are two to three times the survey average. They expect to realize more than twice as much value from their initiatives as the average company and five times the value anticipated by the laggards. Your company may benefit from their experience.

Five Paths to the Prize

Leading-edge companies are building advantage by pursuing one or more of the following strategies:

- Actively collaborating with supply chain partners
- Extending the company's reach up and down the supply chain
- Changing the supply chain flow path
- Growing revenue—not just cutting costs
- Transforming capabilities into new businesses

Let's examine each of these strategies in action.

Actively Collaborating with Supply Chain Partners. The Internet creates new opportunities for collaboration among partners in a supply chain. By sharing customer demand data, for example, all partners can reduce forecasting errors, thus driving down inventories and improving manufacturing utilization. Similarly, coordination of production and delivery schedules contributes to reduced inventories and lower costs. Collaboration on product design can trim costs and speed products to market. Done right, these measures result in financial gains for all partners.

The benefits of such collaborative activities have been well publicized, and a number of companies are now taking this approach. Yet many companies neglect to involve their supply-chain partners when they design Internet-based enhancements. In contrast, leading-edge companies work with their partners, squarely addressing collaboration issues up front to uncover joint opportunities.

For example, a manufacturer of basic materials and its major distributor worked closely to revamp their shared supply chain. In a series of focused working sessions, they identified overlapping activities and redundancies. The two companies were performing the same downstream product modifications, operating sales forces in the same regions, using many of the same transportation routes and warehouse locations, and performing redundant administrative activities. Having combined these functions and leveraged the power of the Internet to redesign their processes, they are now on their way to realizing nearly $100 million in joint benefits. It is important to note that none of these opportunities had been apparent until the two partners engaged in active communication and joint problem solving.

Extending the Company's Reach up and down the Supply Chain. Companies can use the vast reach of the Internet to move beyond their current supply-chain partners and engage with a broader set of companies. Leading-edge companies reach out to their suppliers' suppliers and their customers' customers.

Adaptec, a manufacturer of high-tech components, provides a good example of expanded reach. Rather than build a new manufacturing plant for $1.2 billion, it created a virtual factory from a global set of manufacturers, suppliers, and suppliers to suppliers. Adaptec now uses the Internet to plan and synchronize in real time all these players' manufacturing activities—including product specifications, purchase orders, work-in-process updates, and shipping notifications. Coordinating operations for this widely dispersed set of participants would have been impossible without Internet-based structures and processes. The company has not only avoided a major investment but also cut manufacturing cycle times from 105 days to 55—while boosting customer satisfaction.

Changing the Supply Chain Flow Path. Companies can also use the Internet to leapfrog layers of the supply chain or to engage new participants in moving products or information. Leading-edge companies find ways to change the flow paths of their supply chains to their advantage.

For example, FedEx and Kinko's joined forces to create a new document-delivery flow path that bypasses FedEx's own air-transport fleet. Both companies can now receive documents electronically from customers and immediately route them to printers close to their intended recipients. Thus FedEx and Kinko's can offer same-day delivery for far less than the traditional cost of even two-day delivery. The two companies currently serve 60 major U.S. markets in this way, and they plan to extend the service to 80 percent of the U.S. population by the end of 2001.

Growing Revenue—Not Just Cutting Costs. Most companies look to their supply chains for opportunities to cut the costs of materials, transactions, and inventory. In contrast, leading-edge companies focus on enhancing revenues, as well as cutting costs.

When a company uses the Internet to shorten order-to-delivery times, improve reliability, and broaden product choice, its customers respond, increasing price realization, market share, or both. When a company works with its customers over the Internet to expedite product development, its customers' businesses benefit and therefore so does its own. And companies that use the Internet to reach completely new customer segments add new revenue streams.

For instance, a manufacturer of industrial valves had been selling most of its output to customers in the paper, chemical, and petroleum businesses. By implementing a Web-based customer interface, the company has been able to enter an entirely new market of commercial distributors and building contractors, adding 5 percent to revenues in the first year alone.

Transforming Capabilities into New Businesses. As companies move their business processes online, they can more easily offer selected processes to companies in other industries. Leading-edge companies capitalize on this opportunity, generating new sources of revenues.

For example, Banta, a printing and document management company, understood that its global Web-based track-and-trace technology could prove useful for distributing more than documents. The company now provides inventory and distribution management to the electronics industry through a standalone enterprise, separate from its original business. Banta's new customers are reducing expenses, increasing service predictability, and improving responsiveness.

Capturing the Benefits

Even the best strategies can go awry in implementation. You can increase your company's chances of creating real value from supply chain initiatives by observing the following four guidelines.

Focus your implementation efforts. Pour energy into your most important projects and postpone or cancel the rest. Our survey showed that one of the greatest threats to successful implementation was undertaking too many initiatives. We see many companies struggling with a proliferation of improvement projects. The most effective companies pursue only those projects that will yield either quick wins or sustainable long-term advantage.

Break implementation efforts into manageable pieces. Successful implementation initiatives are those that are conducted in small segments with well-defined outcomes and clear benefits. For companies in our survey, distinct supply-chain investments of less than $50 million produced triple the returns (in percentage terms) earned by projects funded by more than $150 million. Moreover, returns from most of the small projects exceeded their original targets, whereas returns from the large projects consistently fell short of their targets.

This is not to say that companies shouldn't think big. In fact, as business processes are changed and information technology systems are upgraded, companies must implement many Internet-based supply-chain improvements over successive years. However, implementation is far more successful for companies that divide each big plan into a sequence of well-defined and controllable steps.

Invest in business processes at least as much as in IT. The executives we surveyed said that the greatest barrier to supply chain integration was that neither their own business processes nor those of their supply-chain partners were ready in time to support integration. They reported that inadequate IT was a much less important barrier. Nevertheless, when we asked the same executives how they were allocating their investment dollars, most said that for every dollar they spent on new IT, they were spending only 50 cents on business process improvements. Our data clearly show, however, that for companies whose non-IT investments were at least equal to their IT investments, the returns were significantly higher.

Keep the IT as simple as possible. Although we fully appreciate the challenges of integrating systems and processes across multiple organizations, we see too many companies struggling to implement IT that is unnecessarily complex and costly. In many cases, simple IT solutions can prove very powerful in achieving supply chain benefits. For instance, in our example cited above, Adaptec used low-cost off-the-shelf software to link its suppliers' engineers with its own, implementing the entire project in just 12 weeks. The project succeeded in enhancing communication and optimizing the utilization of manufacturing plants.

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By deploying creative, competitively focused Internet strategies, pioneering companies are transforming their supply chains into engines of durable competitive advantage. If your company is not yet exploring these strategies, we encourage you to begin at once. The rewards will be well worth the effort.

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