Vol. 22, No. 9 (3 parts) Part 3, September 2000 www.summary.com ©2000 Soundview Executive Book Summaries* **Order # 22-23**

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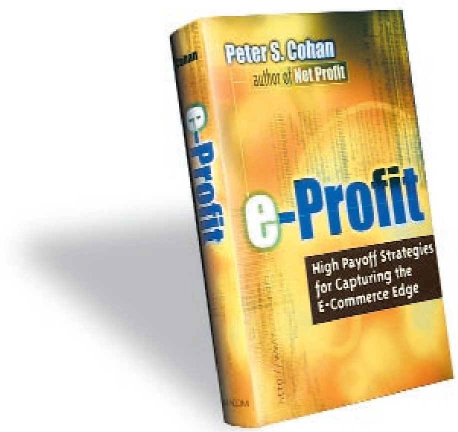
FILE: STRATEGIC MANAGEMENT



By Peter S. Cohan

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e-PROFIT

THE SUMMARY IN BRIEF

The numbers don't lie. There was $74 billion worth of electronic commerce conducted in 1998, a figure that many experts expect to balloon to $1.2 trillion by 2002. Despite such extraordinary forecasts (or, perhaps, because of them), many managers tend to maintain a high degree of skepticism about the role of e-commerce in our economy, and, subsequently, about the role it is taking in their businesses.

In *e-Profit: High Payoff Strategies for Capturing the E-Commerce Edge*, Peter S. Cohan addresses both skeptics and believers, offering tips and tactics that allow you to first identify the areas of your business processes that can be transformed by e-commerce technology, then create and implement a plan to make the technology work for you. Using such disparate companies as Amazon.com, Merrill Lynch, Toronto Hospital, Astoria Financial, and others, Cohan addresses the following topics and more:

- **How to identify and create high-payoff opportunities for e-commerce in your company.**
- **How to evaluate your organization's process-related needs that e-commerce can streamline and improve.**
- **How to use e-commerce to create competitive advantage for your organization.**
- **How to get hesitant senior managers involved in e-strategy and implementation.**
- **How to build an e-commerce infrastructure, from designing the architecture to evaluating suppliers, negotiating deals, and managing implementation.**

Whether you're just starting out with a Web site or need to improve what you already have, you likely face a mountain of questions every day, dealing with issues ranging from managing e-commerce projects to resolving organizational resistance to avoiding false starts and wrong turns on the road to e-business success. These are all valid questions, ones that businesses across a wide swath of industries and markets are addressing along with you.

The answers are just a page away ...

Published by Soundview Executive Book Summaries, 10 LaCrue Avenue, Concordville, Pennsylvania 19331 USA

e-PROFIT

by Peter S. Cohan

— THE *COMPLETE* SUMMARY

Evidence on High Payoff

People who need proof of the high value of properly implemented Internet solutions need look no further than Cisco Systems, whose Cisco Connection Online (CCO) has helped the company generate over 80 percent of its sales, or some $12 billion in revenue — easily one of the most successful e-commerce payoffs ever.

CCO is a Web site that performs two primary functions for Cisco's customers: It lets them find online solutions to their technical problems with Cisco products and it lets customers place and track the progress of orders for network equipment. A system started by mid-level managers, CCO has allowed Cisco to use the Internet to solve basic and complex business problems, from selling branded souvenir items like golf tees, to changing the entire way network services are marketed and distributed.

Perhaps the system's greatest achievement is the manner with which it gives customers the tools to configure network solutions over the Internet, allowing them to pick the correct components and troubleshoot any potential problems electronically. Resellers use CCO because it allows them to take quick delivery of equipment and perform their jobs much more efficiently. As a result, Cisco has been able to reduce its staff in several key areas (such as order processing) and increase its e-commerce-related revenues some 315 percent per year.

From its humble beginnings as a tool to solve basic problems to its status as the shining star of its company's e-commerce strategy, CCO illustrates the high payoffs that are possible when companies engage in a series of tightly budgeted experiments targeted at solving discreet business problems. Indeed, the highest-payoff e-commerce applications share a number of characteristics:

- **Management has created an environment that encourages people at all levels to engage in frugal experimentation.**
- **Management has placed enhanced customer satisfaction at the top of the corporate hierarchy of values.**
- **Management has encouraged an effective working partnership between IT and business units.**
- **Managers have thought in nontraditional ways to conceive effective e-commerce applications.**
- **Management recognizes that experiments in e-commerce require less rigorous upfront analysis.**

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Avoiding Low-Payoff E-Commerce Applications

Here are three important pitfalls that contribute to the failure of e-commerce initiatives and how you can avoid them:

1. Avoid investing in e-commerce initiatives where the vision for the technology is clearer than the economic benefit to participants. Make sure all of your channel partners get involved in your e-commerce project, from conception to implementation. Incorporate their goals, as well as yours, into the solution, to avoid creating an inadvertent state of competition between channels.

2. Avoid the deployment of untested e-commerce technologies. Your organization does not have to be a guinea pig just to implement the latest in e-commerce innovation. Make certain your systems are rigorously tested in a simulated production environment before you deploy them.

3. Avoid skimping on communication, training and adjustments to your compensation system that are inherent in a new e-commerce application. Just as reengineering a process involves radical rethinking of how an organization works, so does e-commerce involve fundamental changes in the way work is done — an "e-engineering." Develop a clear plan for communicating and training the people who will facilitate the e-engineered work process, making explicit any changes to jobs, compensation and other key considerations.

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POSTMASTER: Send address changes to **Soundview, 10 LaCrue Avenue, Concordville, PA 19331.**

Evidence on High Payoff

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- **Management adopts a pioneering spirit in its e-commerce efforts.**
- **The company generates their e-commerce applications effectively by understanding the significant sources of organizational and customer pain.**
- **The company integrates and rigorously tests the front- and back-end systems before an e-commerce application goes live.**
- **The company aggressively markets their e-commerce application, to reach a critical mass.** ■

Your E-Commerce Evaluation in Seven Steps

One major part of your e-commerce implementation plan is to discern the costs and benefits of proposed e-commerce projects. A rigorous evaluation of those costs allows you to gain a thorough understanding of not only the concrete financial effect of the proposed e-commerce project, but also its intangible risks and benefits — disconnects in control and audit security, for example — allowing you to alter your plan to address these issues.

Here is a seven-step process you can follow to conduct an e-engineering project financial analysis:

1. Diagram your current business process. You must understand how an e-commerce project will enhance your company's cash flows, in order to truly assess the value of the project. Create a cross-departmental team that can diagram the specific steps in the process from its beginning in one department to its conclusion, however many organizations later. Select a mapping methodology that helps identify how specific processes act on information and documents at different levels of the organization, pinpointing disconnects and opportunities for improvement.

2. Measure the time and cost of your current process. Once the current process is mapped, measure the time and cost of the current process by interviewing pertinent managers and workers and accessing relevant records to identify the fully loaded annual cost of doing business. In completing this step, you are developing baseline statistics for the current process' operating and financial performances. Indeed, when Steps 1 and 2 are complete, you will have a baseline against which you can compare the costs and benefits of an e-commerce project.

3. Map out the e-engineered process. Develop a map that shows where Internet technology can be used to improve your process — how information will be collected, how it will be shared, and how your customers will ultimately be able to accomplish their objectives. Compare this map to the map you created for your current business processes and note the significance of the process improvements outlined in the new plan.

4. Estimate the time and cost of the e-engineered process. Quantify the ways in which the new process enables you and your customers to accomplish more without human intervention. Employ the same measuring technique you used in Step 2.

5. Develop a plan for the e-engineering project. Create an implementation plan for your e-engineering project, including the significant project phases from concept development to system testing and installation. Also, estimate the amount of time that internal and external project participants will devote to each action step, and the expenses incurred with each activity.

6. Calculate the cost of the e-engineering project. Convert the time estimates in each phase of the plan to specific costs — for example, the time of internal and external resources, additional hardware, software, etc.

7. Prepare an integrated cash-flow analysis of the e-engineering project. While each potential e-commerce project will have unique elements, the sources and uses of cash from the proposed project will likely fall into four categories:

- **Incremental cash inflows from additional revenues.**
- **Incremental cash inflows from reduced costs.**
- **Incremental cash outflows for building the e-commerce system.**
- **Incremental cash outflows for operating the new system.**

Calculate the net-present value of the project, discounting the net cash flows in each year of the project by the appropriate annuity discount factor, to account for the risk of the project and the timing of the cash flow. ■

Amazon vs. B&N: Competitive Advantage through E-Commerce

It's too early to tell whether e-commerce produces sustainable competitive advantage; while it has utterly transformed some industries, in others it has barely made a dent.

One industry that definitely falls into the former category is retail bookselling, in which the primary e-role-player is Amazon.com. One measure of the company's impact is that two years from the date of its initial public offering, the company's stock market capitalization was over six times that of its two biggest brick-and-mortar

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Amazon vs. B&N:Competitive Advantage through E-Commerce

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competitors, Barnes & Noble and Borders, combined.

Amazon.com's success is the result of the cumulative effect of many sources of competitive advantage, including the following:

● **Warehouse locations.** Amazon.com's founder, Jeff Bezos, felt that the company should own its own warehouses, so that it could maintain quality control over the packaging and shipping of orders. He headquartered the company in Seattle, to be in close proximity to one of the distribution facilities of Ingram, Amazon.com's largest book supplier, and also maintains warehouses in Delaware and Reno, Nevada.

● **Enhancing customers' experiences.** Bezos altered the Web site to make it easy to understand, streamlining the order process and responding immediately to each customer question. He also made certain the site's search capabilities were top-notch.

● **Hiring.** Bezos' motto for hiring was that every time his company hired a new employee, he or she should raise the bar for the next hire, so that the overall talent pool constantly improves.

● **Frugality.** Amazon.com is loath to spend money on things that do not add value. For example, Bezos has desks made from doors — the wood and brackets cost around $70, and the labor is about $60. True to form, Bezos made the first four himself; he now hires carpenters to come in and build them 70 at a time.

● **Corporate development.** Bezos looks for ideas everywhere — on other Web sites, from his employees, from other companies, and so forth. He has expanded his company's offerings from books to CDs to just about any other consumer retail product imaginable, and he has, through acquisitions, accumulated the technology to continue personalizing each customer's shopping experience with every sale.

● **Time management.** Bezos and his top executives recognize time as a strategic resource that must be managed. He conducts quarterly analyses of his calendar, and makes changes as needed to better address competitive issues.

The Competitive Response

Barnes & Noble has taken two significant countermeasures to compete against Amazon.com:

● It established its own Web site, bn.com — a separate legal entity from the privately held B&N that was taken public in June 1999.

● It announced its intention to purchase Ingram, Amazon.com's book wholesaler, in 1998, directly threatening Amazon.com's supply lines. The Federal Trade Commission balked at the deal, but B&N had gotten their upstart competitor's attention.

Ultimately, however, the winner of the battle between Amazon.com and Barnes & Noble will be the one who understands that the customer experience on the Internet is what matters most — word of mouth is, in its way, more powerful than any monetary investment. ■

How Do You Use the Internet to Create Competitive Advantage?

1. Form an e-commerce strategy team.
2. Study customer needs.
3. Analyze e-commerce strategies of current and potential competitors.
4. Identify capabilities needed to provide superior customer value.
5. Perform a strategic audit of capabilities needed to provide superior customer value.
6. Envision e-commerce strategic options, such as using the Web to sell products, provide customer service, or interact with employees.
7. Evaluate your strategic options.
8. Select the optimal strategy.
9. Implement your strategy.

Getting Senior Management Online

In general, senior executives are cautious about e-commerce in the short run, but more optimistic about its potential to enhance the company's long-term value. Part of their initial hesitation stems from a general lack of sophistication regarding the Internet and technology in general. Research indicates that CEO attitudes toward e-commerce depend chiefly on two factors:

1. *How much e-commerce can potentially change the structure of the industry or the company's relative position.* What actual strategic impact the Internet will have on the CEO's market or industry is an important determinant of the CEO's response to e-commerce technology.

2. *How comfortable the CEO is with the Internet.* Has the CEO gone online to send e-mail, buy books, or do research? Does he/she recognize the impact the Web can have on competitive advantage?

The combination of these two factors determines the CEO's attitude toward e-commerce in four distinct ways:

● **High Strategic Impact/High CEO Comfort.** The

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Framework for assessing CEO's attitude toward e-commerce

Strategic Impact of E-Commerce	CEO Comfort with the Internet: High	CEO Comfort with the Internet: Low
High	More Aggressively	Experiment
Low	Be Creative	Ignore

Getting Senior Management Online

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CEO is likely to move aggressively to conceive and implement the use of the Internet to improve the company's competitive position and financial performance.

● **High Strategic Impact/Low CEO Comfort.** The CEO may dabble with the Internet, experimenting with it by setting up a separate subsidiary that does e-commerce or asking a smaller group of employees to investigate the Web on a small scale.

● **Low Strategic Impact/High CEO Comfort.** The CEO is likely to try to conceive of a way that he/she can use the Internet to transform the industry. Depending on that industry, this move could be a successful breakthrough, or a resource-sapping bomb.

● **Low Strategic Impact/Low CEO Comfort.** The CEO will likely stay away from the Internet altogether. If the Web doesn't transform everything, this is a smart move; if it does, the CEO must take the blame for striking an ineffective posture. ■

Engaging the CEO in E-Strategy

If your CEO is comfortable with the Internet, here is a four-step process to engage your CEO in strategy to move your company's e-commerce initiative forward:

1. Identify an Internet-only competitor that is growing rapidly in your market. While some CEOs may tend to dismiss the importance of small, new competitors as if they were gnats, others understand history and the potential for such small competitors to come out of nowhere and dominate an industry. Microsoft CEO Bill Gates thought little of Netscape's Web browser until he recognized how hard the upstart could impact his company's business.

To Be or Not to Be Aggressive: A Study in Contrasts

The Aggressive Mover

Despite its limited capital resources, Kosher Grocer, Inc. (an online retailer whose only employees are its two founders) moved aggressively to incorporate the Internet into their business, with effective results. The company hired an Intel/SAP joint venture, Pandesic, to host its entire computer system, from its e-commerce catalog and transaction processing system to back-end fulfillment and accounting functions. Without sinking too much capital into the infrastructure needed to deploy its selected e-commerce solution, Kosher Grocer was able to generate tremendous value for customers for a reasonable amount of overhead.

The "Ignore" Approach

Astoria Financial's CEO, George L. Engelke, has no computer in his office, does not like voice mail, and has absolutely no interest in the Internet. He says his work is unrelated to opening accounts or processing mortgages; he sees himself more as a devil's advocate when it comes to matters of technology.

It is debatable whether Engelke understands the Internet is not right for his company, or if he's simply too old to change his ways. By the time he retires, though, he may face a dire decision — either his company will adapt to e-mortgages or perish.

2. Study the most dangerous Internet-only competitor's management and strategy. You must conduct research that will reveal key information about the Internet-only competitor, such as what customer needs they meet, what advantages they have over you, and where they are vulnerable.

3. Set up teams to "war game" your competition with the Internet-only competitor. Set up two executive teams — one to plot your strategy against the Internet-only competitor, and the other to plot the competitor's strategy against you. Present each team's case to your CEO, and allow him or her to determine whether your organization's assumptions about your competitor were correct.

4. Create a new e-strategy for your company based on the insights from the "war gaming" effort. Work with the CEO to develop a plan to engage the marketplace with an e-commerce initiative. You may need to create a separate business unit dedicated to developing an e-strategy to block the growth of the competitor. ■

Managing and Sustaining E-Commerce-Induced Change

How do you manage e-commerce-induced change? Here are some guidelines:

1. Determine whether senior management must be educated about the Internet's potential impact. Until senior management is on board, there is no use in attempting to change your organization to accommodate e-commerce. Merrill Lynch, for example, was dragged into the world of online trading — it announced that it was entering the field before it even had worked out a mechanism to do so. Much of this hesitancy was a result of Merrill's senior executives' initial reluctance to embrace the Web as a tool for trading. When the company's brokers started losing business to online trading houses, management finally came around.

2. Tailor senior management's education to their specific needs. Get senior management online to conduct such basic activities as e-mail, checking stock prices and researching competitors. From there, senior managers can appreciate the power of the Internet, then be driven to learn about how the Web can transform business models and create competitive advantage.

3. Senior management must develop a vision for how e-commerce will change the business. Management must create a clear vision for e-commerce and develop it in tandem with those who implement that vision. Merrill Lynch's online trading endeavor was saved and advanced by Vice Chairman Launny Steffens, who developed his solid strategy only after soliciting input from brokers and customers.

4. Implement the vision as a series of experiments. Think through key issues ahead of time, then put an experimental "best guess" online quickly, altering and maintaining your online presence as your market evolves.

5. Communicate the vision to employees and customers. Let employees work with a prototype, both to acclimate them to your endeavor and to help you troubleshoot it. Likewise, engage customers with your e-commerce entity, solicit their feedback and demand that employees draft effective responses to that feedback.

Sustaining Change

Once you have led your company into the new Internet frontier, you must effectively adapt to and sustain that change in the face of increasing competition and increasingly demanding customers. There are six essential principals for accomplishing this most daunting of tasks:

● **Develop new services and products in close conjunction with customers.** Do not create new products in a vacuum and expect customers to be ecstatic with what you come up with. Work closely with your most innovative customers to test your prototypes and collaboratively develop new products and services — ones with a built-in audience.

● **Go outside for new technologies and products, if your customers demand them.** Sometimes, you cannot develop new products and services quickly enough to meet customer demands. When this happens you must obtain the expertise or extra hands you need to get the job done, whether by corporate acquisition, outsourcing, or forming other partnerships.

● **Get the best talent available**. The most valuable e-commerce-centric companies have very few tangible assets, but are brimming over with intangibles. One of those intangible assets is talent — companies must, in order to sustain change, have a stable of very smart people who can anticipate change and react to it quickly.

● **Be objectively self-critical.** The most successful, change-sustaining companies encourage fact-based self-criticism. Microsoft's software development teams can look forward to a 100-page memo from their project managers at the end of a project, criticizing everything that went wrong (the memo is distributed to everyone on the project team and to Bill Gates). While it may seem extreme, this self-criticism has led to product improvements and a more rigorous methodology for incorporating customer input in the development of those products.

● **Tie employee compensation to service improvements.** Delivering customer satisfaction and shareholder value is imperative to long-term success in your e-commerce endeavor. Create a compensation system that rewards improvements in both areas, measured by customer satisfaction surveys and share price, respectively. Such a system rewards sustained change by encouraging employees to develop new ways to make customers happier. ■

Building an E-Commerce Infrastructure

Senior management's role in crafting a company's e-commerce architecture depends to a large extent on how dependent the business will be on the effective operation of the e-commerce-enabling technology.

If the business is not heavily dependent on reading e-commerce, the e-commerce architecture is important only to the extent that its failure will potentially anger a relatively small number of customers.

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Building an E-Commerce Infrastructure

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If the business relies heavily on e-commerce, senior management must be actively involved in setting the vision for the endeavor, establishing the performance standards for the system, and ensuring the organization has the resources required to satisfy those standards as the system grows. Those standards include cost-effectiveness, integratability, scalability, ease of end-use and supplier participation.

Designing the Architecture

Charles Schwab's co-CEO, David S. Pottruck, believes it is impossible to lead his company if he is not conversant and comfortable with Internet technology. He spearheaded the company's foray into online training, and before most of his competitors could point and click, Schwab had a significant portion of the online market cornered. Indeed, much of the credit for the fact that 80 or 90 percent of their trades now occur online (at a rate of 4 million transactions an hour) can be credited to the swift business decisions by top management.

It hasn't always been easy. In early 1999, the enormous increase in trading volume (from 617,000 in December 1996 to 1.2 million two years later) caused Schwab's trading system to fail twice, due to problems with its main computers. The company responded quickly, migrating from batch processing of trades to real-time processing on mainframe computers.When even that wasn't enough to meet demand, Schwab increased the percent of its annual revenue spent on information technology and made plans to add 32 new mainframes in a configuration that would act as one single computer. If one goes down, another will take over, with no downtime whatsoever.

The company's aggressive approach to system architecture has paid off — 2.7 million of the company's 6.0 million customers use their online trading service. The company's success helps illustrate the guiding principles of e-commerce architecture:

● **Senior management must set the vision.** Schwab's top brass realized the importance of competing in the online trading market early and created the context in which the company developed its superior e-commerce technology.

● **Companies must match the architecture to the extent to which it embraces e-commerce.** Senior management must recognize where their companies stand in the spectrum of e-commerce architecture, and must match their architecture with their place in the spectrum.

● **Senior management must establish performance standards.** Just as Schwab's senior brass set (and, eventually, the company met) ambitious targets for ROI, uptime and other factors, so should your company's management set specific performance standards for system architecture. You don't have to pick the hardware and software, but you do need to make sure they help your organization provide superior customer value online.

● **Senior management must drive the company's compliance with performance standards.** Keep track of what competitors offer and how customer expectations change. Senior management must assure that e-commerce architecture evolves to keep the company at the head of the pack as its industry evolves.

● **Companies must build e-commerce capacity to anticipate rapid demand growth.** If your e-commerce architecture is not sufficiently robust to satisfy rapidly growing demand, your successes can actually lead to failures. Monitor your e-commerce demand and make realistic forecasts for future demand.

● **Companies must respond decisively to network interruptions.** While it is almost inevitable that you will experience network interruptions, you must have a plan on hand to address and correct those problems quickly and efficiently. Senior management must step in to cover reasonable losses customers incur as a result of that downtime. If you don't take responsibility for your failures, you will lose the loyalty of your customers. ■

Nine Steps to Evaluate E-Commerce Suppliers

There are nine essential steps to evaluate different e-commerce-related technologies, including hardware, software, and various consulting and network services:

1. Create an interdisciplinary team for evaluating e-commerce suppliers. General managers, information technology staff, financial staff, and others who have been involved in the e-commerce strategy/development process should be included.

2. Agree on the specific, measurable business objectives that the e-commerce technology is intended to meet. These should be measured in terms customers will consider important, such as system uptime, ease of use and speed of response.

3. Translate the business objectives into a Request for Proposal (RFP). The RFP should describe the most important things you want the e-commerce system to do for your business; they should, however, be general enough that you and the team will be able to measure how well prospective suppliers will perform on each requirement.

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Nine Steps to Evaluate E-Commerce Suppliers

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4. Identify between five and ten potential vendors who you expect will respond effectively to the RFP. The list should be balanced between well-known vendors and start-ups that specialize in new technology.

5. Develop specific criteria for evaluating the suppliers. Translate your business objectives into a set of evaluation criteria you can use to evaluate suppliers.

6. Create tests to assess how well each supplier meets these evaluation criteria. Design and, when proposals are returned, vigorously execute tests based on your evaluation criteria. Frequently, external consultants prove excellent resources for this step.

7. Score each supplier on the evaluation criteria. Create decision matrices that array vendors against the evaluation criteria, and grade each supplier based on that criteria.

8. Rank the evaluation criteria in terms of their relative importance to meeting the e-commerce project objectives. Agree with the team on the relative importance of each evaluation criterion, and create a weighted grading system that gives higher marks to the most important criteria.

9. Choose the winning supplier based on the highest average score. Rank the suppliers in descending order of the weighted average score. The winning supplier is at the top of your list. ■

Negotiating Deals and Managing Implementation

Negotiating e-commerce purchasing contracts is an important management responsibility that can determine how effectively the vision for e-commerce is implemented. In order to conduct a successful negotiation, you must develop a clear vision for how the process will work and communicate that vision to the vendors and employees who will negotiate the contracts. Once the process is underway, it is essential that you develop an RFP that is both comprehensive and realistic, containing detailed proposal specifications, technical requirements and expected contract terms and conditions.

You must also communicate openly and frequently with the vendors who participate in the process, and develop a framework for assessment that contains quantifiable criteria such as cost, reliability, management capabilities and account support. Once you receive bids, you can compare the responses to that criteria, and make firm, learned evaluations. When the winning bidder is identified, you can then review the vendor's processes, meet the people who will manage your account, and get everything (particularly performance measurements and compliance reporting) down on paper.

Managing Implementation

E-commerce's ability to create value for customers and shareholders depends heavily on how well executives manage implementation. You must address several key issues, including the elements of project management that are unique to e-commerce, and determine which project management principles work most effectively for your organization, in order to successfully implement an e-commerce solution. Finally, you must determine the methodology you will follow to successfully implement your e-commerce project.

In order to address these key factors, you must enact six crucial principles of successful e-commerce implementation:

1. Identify the capabilities needed to make the project successful. As technology becomes more sophisticated and scalable, e-commerce projects likewise demand a broad range of capabilities, including Java, HTML, and special ways to link these two technologies with back-end systems to fully integrate the online experience.

2. Analyze your organization's capability gap. Determine whether your organization's "homegrown" capabilities are sufficient to meet the challenges of e-commerce implementation, or if you must rent the capabilities needed for the project.

3. Outsource project help, when appropriate. If necessary, hire outside consultants with compelling track records and lots of experience.

4. Anticipate the effort of integrating back-end and front-end systems. Make sure your Web site's front-end interface links effectively to back-end fulfillment system, for superior customer value.

5. Fix the time and cost of the e-commerce development process. Be willing to commit the resources necessary to achieve deadlines and budgets that are sufficiently realistic so that fixed-price/fixed time contractors are willing to take on your project.

6. Be prepared to modify the e-commerce system after it goes into operation. Solicit e-mail feedback from customers and act on their input, solving problems quickly and adapting your e-commerce system to their changing needs and the equally changing strategies of your competitors. ■