Catch the Wave of E-procurement

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EXECUTIVE SUMMARY

The purchase of non-production goods and services represents the single largest cost item for an enterprise. Billions of dollars are wasted every year in inefficient procurement practices. But the growth of electronic procurement practices is enabling firms to reap benefits from both ends of the supplier-to-customer chain.
According to one estimate, for every dollar a company earns on the sale of a product, it spends 50 to 60 cents on goods and services — supplies, office equipment, computers, peripherals, and other non-production goods and services. Inefficient paper-based procurement practices cost corporate America billions of dollars every year. It’s estimated that the average cost of processing a paper-based purchase order varies from $50 to $200. Traditionally, purchase orders are funneled through layers of costly labor: administrative assistants fill out the order, accounting staff authorizes it, managers sign it, and finally, mailroom clerks shuffle it along. Companies can get significant benefits by reducing paperwork and increasing visibility into the inventory.

Last year was a difficult year for U.S. manufacturers due to the economic downturn. Many manufacturing companies had to revise their earnings downward, close plants, or lay off hundreds of workers. According to the National Association of Purchasing Managers, November 2001 marked the 16th consecutive month of decline for the U.S. manufacturing sector. A gloomy economy gave rise to an urgent call to slash operational costs and reduce massive inventory pileups. The promise of lower costs of goods and services purchased, lower inventory levels, shorter lead times, and improved communications has made Web procurement one of the hottest topics of e-commerce.

The concept is not new. In the 1980s and early 1990s, many companies used electronic data interchange technology to transmit information such as purchase orders, invoices, material releases, and shipping notices electronically. EDI involves the direct transfer of information using special, predetermined formats. To use this technology you have to be tied to traditional client/server technology. The sender must have an application that can send the information in the format (which is usually proprietary) the receiving application can read. The network vehicle for these transactions is known as a value-added network. Identical processing systems are not required — only the standard must be set up before the transfer.

What makes things different today is the Internet. There is no need for traditional client/server technology — you just need a Web browser. Product information can be called up from an online catalogue and ordering can be done by e-mail. Employees are empowered to make transactions that are right for the business by completing transactions from their desktops, relieving administrative personnel of this tedious process.

In the late 1990s, companies were using the Web for basic buying, selling, and selected auction capabilities. What’s emerging is an emphasis on order-to-delivery. The focus is moving toward integrated procurement chain management. Now, companies are trying to add such steps as contract negotiation, supply analysis, and consolidation of all of the supplies data within a single platform. As companies emphasize cost savings, investments in e-procurement technology are rising faster than investment in any other software category. According to AMR Research, companies spent about $1.7 billion on e-procurement software in 2001 and they will spend about $2 billion on such software in 2002 — a 17 percent increase from last year.

**Benefits**

Why is procurement an issue worth the attention of top managers? Chief procurement officers are looking for solutions that combat high procurement costs and lengthy cycle times and ensure smooth receipt of materials or services. They are looking to solve challenges:

- Reducing cycle times and order processing costs
- Empowering self-service requisitioning
- Achieving integration with back-office systems
- Positioning procurement to a strategic importance within the organization

E-procurement offers the greatest opportunity for companies to improve processes, reduce costs, and increase productivity across the supply chain. It offers two major benefits — efficiency and effectiveness. Efficiency is seen in lower procurement costs, reduced unauthorized buying, faster cycle times, and better integration with the back-office systems. Effectiveness is realized through higher quality purchasing decisions and increased control over the supply chain.

With Web-based procurement, businesses can eliminate the need to re-enter data from paper documents. This reduces clerical errors since every re-entry of data is a potential source of error. Web-based procurement can also shorten the lead-time between receipt and fulfillment of orders, thus reducing inventory. When invoice data are transmitted electronically, company cash flow is improved. Trading information obtained from historical data built from Web-based procurement transactions is an invaluable source of market research and strategic information.

In a recent study, the Aberdeen Group found that e-procurement is one area of e-commerce that is delivering rapid and quantifiable results by significantly increasing purchasing effi-
ciencies and reducing costs for the acquisition and ongoing management of business expenditures. Aberdeen estimates that a mid-size organization can expect to save almost $2 million per year through the use of e-procurement technologies.

E-procurement has also become an enabler for many of the best practices as well as a best practice in its own right. Automating and distributing transaction processing into the hands of employees frees the procurement team to do more value-added work.

The emergence of e-procurement makes use of new tools such as reverse auctions, global sourcing, aggregated volumes, and fast and inexpensive communications, enabling more companies to implement best practices and save money. For example, reverse auctions are used as a powerful negotiating tool to enable multiple users to bid and sell to individual buyers, greatly increasing the competition and improving the purchase price for buyers. Companies are using reverse auctions to drive purchase costs down to the lowest possible price.

Global sourcing is emerging as a powerful practice in the procurement arena. Tapping the worldwide market allows companies to increase their competitiveness, find additional suppliers, improve communications with suppliers, access leading-edge technology, optimize usage, and reduce total procurement costs.

**Implementation issues**

Managers should not make application investment decisions without a clear understanding of technology limitations. Many of the procurement automation applications have earned mixed reputations due to vendors who made promises that did not come to fruition. There are many reasons for failures:

- Many of the software solutions were difficult to implement.
- Integration was not a factor considered in the selection and implementation of applications.
- Employees refused to use the products due to lack of proper training.

According to a recent study of 50 e-commerce managers conducted by Forrester Research, enterprises are asking more than simple purchasing functions from their e-procurement applications. E-procurement apps have to go beyond basic procurement and support the whole spectrum. Among the managers’ key concerns raised in the survey were ease of use and integration.

**Benefits of E-PROCUREMENT**

**Strategic benefits:**

- Consolidate purchasing practices that will lead to greater discounts and better service from suppliers.
- Accelerate the flow of important information between buyers and suppliers.
- Reduce administrative hours, freeing staff to do other work.
- Fast response to highly competitive new market entrants.
- Boost compliance, driving spending to preferred suppliers by buying from static catalogs, dynamic catalogs, and negotiated contracts.
- Improve the chances of winning new business.

**Opportunity benefits:**

- Enhance image and improve corporate trading relationships.
- Improve buyer/supplier relationships.
- Better accuracy.

**Operational benefits:**

- Improve financial control by making it easier to match orders.
- Eliminate paperwork and its costs.
- Improve auditing and better security by enabling staff and auditors to verify and track the movement of orders through the system.
- Shorten the delivery time by eliminating the need to wait for paper documents by mail.
- Eliminate time zone obstacles.
- Reduce inventory levels.
- Maximize labor by empowering the employees to make transactions that are right for their work.
- Enhance efficiency at every stage by cutting overhead, cycle-time delays, buffer inventories, and errors.
- Permit flexible access anytime, anywhere.
- Ensure deliveries on time, every time.

With online resource management systems in their infancy, managers should think about the following issues before investing in online procurement software:

**In-house experts.** The lack of sufficient online procurement experts in the organization is one of the biggest hurdles many companies face in implementing e-procurement.
systems. Hiring a consultant with experience installing such systems can take some of the surprises out of the project.

**Employee education.** Get employees engaged and involved. Employees should be educated on the underlying issues and on the topic of total cost of ownership. When a process changes, the jobs of those who work in that tracking system calls a “PC,” one supplier calls a “desktop computer,” and another calls a “computer”. Until there is collaboration between suppliers, content rationalization is an enormous task.

**Business process re-engineering.** To capture the full value of online resource management software, managers need to bring in all elements of the solution — to think in terms of organizational change. For example, the system should be integrated into accounts payable, a centralized purchasing department should be streamlined, and the company’s entire procurement process should be reorganized. In short, business process re-engineering is essential to the success of Web-based procurement applications.

**Downsizing.** Online procurement will eventually reduce the number of employees in purchasing. However, that won’t happen anytime soon after the system is installed because the design and implementation of the technology demand an increase in IT staff for training and support of users and suppliers.

**Better communication.** Employees often feel threatened by new technology. They need to know the reasons for and advantages of using this technology. It is important to communicate openly with employees, teach them about the technology, answer their questions, and calm their anxieties.

**Success**

In most companies, the purchasing process hasn’t changed in decades. The majority of businesses still employ a largely paper-based process that is inefficient and error-prone. Recent industry research indicates that only 8 percent to 10 percent of the largest 5,000 companies have purchased e-procurement systems. However, e-procurement is gaining broad appeal. Faced with skyrocketing expenses of traditional procurement systems, companies are forced to emphasize e-procurement over other IT projects. In fact, e-procurement is the fastest-growing software segment, followed by customer relationship management, supply chain management, and enterprise resource planning.

Early adaptors of e-procurement have reported lower costs of goods and services purchased, lower inventory levels, shorter lead-times, and improved communications with suppliers. The savings generated through the application of e-procurement was 25 percent at Fleet Bank, 22 percent at Compaq, 20 percent at IBM, and 18 percent at DuPont.

The elimination of uncertainty between trading partners that have an effect on the value of the end product creates a win-win situation for all parties. By sharing information over the Internet, the buyer and seller develop a single dynamic forecast. The result is more accurate forecasting with lower...
inventory levels. E-procurement enables trading partners to collaborate more effectively, plan more accurately, and respond more rapidly up and down the value chain.

The following are examples of some companies that capitalized on the e-procurement advantages.

The e-procurement initiative has proven very valuable to the Mercedes-Benz España Vitoria Plant. The old procurement process at the Spanish automaker was cumbersome, resulting in high costs, maverick buying, and slow flow of important information between the plant and suppliers. The plant purchased goods and services from 1,500 different suppliers. The company wanted to automate its procurement process, streamline the entire process, tighten control, and enforce optimized purchasing strategies. Mercedes-Benz España implemented MySAP e-procurement, which integrated easily with its existing SAP ERP system. The solutions provided impressive results: The number of suppliers was reduced to 200 and purchasing lead-times were cut. Purchasing staff have more time to concentrate on strategic tasks such as evaluating suppliers and negotiating long-term agreements. The project is expected to save $1.5 million to $3 million a year.

Dell Computer sells PCs directly to customers and starts assembly after receiving a customer order. The company leverages the Internet to deal with customers and suppliers. Dell is able to manage its large worldwide supply chain and avoid unnecessary fluctuations by sharing demand data as well as current inventory positions of components with many of its suppliers on the Internet. Dell is using Agile Anywhere, an Internet-based technology, to fulfill individually customized products within a delivery target of five days or less. Aggregating all product information in a single system on the Internet enables Dell to disseminate product changes instantly and track them across the supply chain. The system helps Dell to extend its leadership position in a competitive computer market. By 2000, Dell had linked 90 percent of its suppliers to its factory floor using the Web-based technology, allowing everyone to see up-to-the-minute information on orders and replenishments. Dell reduced inventories to five days’ worth, down from 13 in 1997, resulting in a $50 million saving. Dell is planning to do more with its Internet technology. The PC maker is encouraging customers to adopt Web-based procurement systems that can link directly into Dell’s order management system. Litton Industries used the option to order PCs from Dell. The change cut the average time to submit an order from 21 days to less than two, and provided a saving of $200,000 for Litton.

In 2001, $15.55 billion-diversified manufacturer Emerson was expected to report its first decline in year-end earnings per share in more than four decades. The highest priority for Emerson was to wring as much cost out of operations as possible, using the e-procurement system the company has been building the previous couple of years. The system is called Materials Information Network. It stores information about preferred suppliers and special pricing, and it contains detailed product specifications on materials the company uses to make products. MIN went live in January of 2001 and is helping consolidate buying activity across 60 divisions, steering employees toward the lowest-cost suppliers. Emerson anticipates that MIN will save the company $30 million in 2001 and $500 million by 2005 by decreasing the amount the company spends on direct supplies.

Cost savings are also the motivation for America West Airlines. The $2 billion carrier was losing money even before the Sept. 11 attacks of 2001. To cut costs, the company has invested heavily in e-procurement. In the summer of 2001, America West began using Material-Net’s reverse auction tools to buy indirect goods such as hotel stays and cleaning services. The auctions yielded price breaks, some as high as 40 percent. The airline is planning to add other e-procurement apps, such as electronic requests for infor-
mation and order management, in a bid to consolidate all of its procurement into a single platform and further drive costs down.

The $13 billion Eastman Kodak Co. spends more than $6 billion each year for goods and services ranging from office supplies to automobile fleets. Kodak is using e-procurement to trade electronically with suppliers. The company is in the process of rolling out an application that supports reverse auctions worldwide. The new application enables buyers to announce their needs to vendors that then bid their prices down until a bid is accepted. Kodak’s goal is to have reverse auctions account for as much as 20 percent of the company’s annual purchasing within the next year. Since Kodak began using auctions last summer, the company has slashed up to 20 percent off the prices of goods it purchased. The company is planning to expand the use of the technology to all of its worldwide facilities.

FedEx Corp., is a $20 billion global enterprise, has more than 370 facilities in the United States and Canada, and delivers nearly five million packages a day. The corporation spends more than $7 billion dollars annually on indirect goods and services such as office supplies, delivery carrier supplies, and vehicle parts. Traditionally, FedEx relied on inefficient paper-based procurement to manage indirect purchase requisitions, ordering, and fulfillment. The process was manual and labor-intensive. In 1999, FedEx chose e-procurement solutions from Ariba to automate and streamline its paper-based procurement processes. Since the advent of e-procurement at FedEx, overall purchasing cycle times have been reduced from between 20 percent to 70 percent. The company reduced the number of suppliers by more than half, achieved more competitive pricing from suppliers, and gave its own employees better service. The full return on investment was achieved within three months. Today, only one-fifth of FedEx’s yearly requisitions go through the Ariba system. The company is expanding its e-procurement activities in terms of users and suppliers to achieve even more savings.

E-procurement products

The procurement of non-production goods is an important component of the field of operating resource management. This field is still fairly small compared to other software industries, but it’s growing rapidly.

There has been a significant growth in e-procurement products recently. Vendors are responding to the market, and the demand for robust e-procurement apps is heating up. Oracle rolled out Oracle Sourcing, allowing users to integrate into Oracle or rival back-end systems. PeopleSoft and Baan have released electronic procurement products tied into their enterprise resource planning software packages. Ariba will add a module to its e-procurement platform that will let companies use a finer set of criteria to find suppliers. SAP, whose Enterprise Buyer is being used by more than 1,100 customers, will add a module to let companies grade how well multiple suppliers collaborate with one another.

The endorsement of e-marketplaces and growing awareness of e-procurement benefits will continue to persuade more companies to explore the opportunities.

Conclusion

Enterprises have been bruised in a tough economy that shows only slow signs of improving. With economic uncertainty, IT initiatives targeted to cut costs, increase productivity and generate revenues are more important than ever. E-procurement is a project that focuses on the trouble spots and excesses of enterprise, and it is being eagerly embraced by many organizations. Enterprises are using the Web to manage their procurements and supply chains more effectively.

As companies aggressively look at improving margins and maximizing profits, there is unprecedented pressure to manage operating expenses as efficiently as possible. Electronic ordering appears to be the trend for the future. With all the benefits that Web-based procurement offers, it would seem that eventually every industry would turn to it. The reduction of paperwork, fewer errors, more accurate information, better inventory management, and quicker delivery times point to the fact that it’s just a matter of time before every company is employing this technology. The technology gives companies an opportunity to gain a competitive advantage no matter what their size.

As e-procurement offerings expand to automate other business processes — logistics, reporting, and excess assets sales — they will inevitably lead to the procurement of direct goods and services for manufacturing. As a result, companies can drive even greater efficiencies and savings in all their purchasing.

To make this technology successful, managers must plan and lay technology groundwork. They must believe in the benefits of this technology, opt for a comprehensive approach, define new relationships with vendors, train and support suppliers, and openly communicate with employees.

For further reading


