

## **E-Procurement: New Dimensions in Electronic Commerce and Supply Chain Management**

**By Scott A. Elliff**

Many e-commerce articles today focus primarily on the “sell” side of the business, highlighting how companies can better use electronic commerce to move product. Topics include how to get more consumer traffic on your Web site, how to integrate your information systems with those of your business customers, how to more effectively market business-to-business services in an Internet environment, and many others.

But every business is a purchaser as well as a supplier, with many routinely processing hundreds of buying activities daily. These include purchasing raw materials for manufacturing or finished products for resale, ordering office supplies and airline tickets, and contracting for temporary labor and consulting services. Typically, purchases represent 50 to 90% of a company’s cost structure — making procurement strategy and execution a critical lever for effective supply chain operations and superior business profitability.

Electronic commerce offers exciting new possibilities for businesses to improve their performance on this important “upstream” supply chain activity, both for *indirect* or support items and, increasingly, for materials that are *direct* components of the products and services that businesses make and sell. But what is e-procurement? Really, it’s any purchasing-related activity that involves electronic communication, the Internet, or related software to help companies achieve increased value. From point-and-click ordering using Web-based catalogs of individual suppliers, to marketplaces that bring together in one place the products or services offered by multiple suppliers, to live auctions that determine the lowest-price bidder — there is a wide range of new e-procurement methods and tools to help businesses buy goods and services better, faster, and cheaper.

As in many areas of e-commerce, the wide variety of alternatives can be confusing. What’s the best strategy for our company to use? What specific benefits are we trying to achieve? What are the best e-procurement solutions and specific tools, Web-based services, and other mechanisms for meeting our particular needs? This article outlines some of the major recent developments in e-procurement and the important strategic and tactical choices that companies need to make in order to answer these questions and to take full advantage of new “buy” side e-commerce developments.

Ironically, what’s most appealing to us as *consumers* using e-commerce to buy books or clothing or other merchandise — surfing the Internet, accessing a wide range of choices, and making one-at-a-time purchases at posted prices — is what *businesses* most want to avoid. Companies want to ensure that their processes are:

- *Reducing* the time employees spend purchasing, whether it’s leafing through catalogues or surfing the Web.

- *Leveraging* their volume with preferred suppliers in order to get better pricing, service, and access to new technology.
- *Limiting* choices to only those suppliers, materials, and services that they are confident can meet pre-approved levels of price and quality.

E-procurement is rapidly becoming an important issue. A recent survey by Deloitte Consulting found that among a cross-section of major corporations, only about 15% are satisfied with their current level of e-procurement activity. However, of those relatively few companies who have extensively adopted e-procurement solutions to date, 88% are satisfied with the results — and are reporting returns on investment that often approach or exceed 300%.<sup>1</sup> Not surprisingly then, *Purchasing* magazine reports that over 90% of purchasing professionals expect to be buying online within the next 12 months — with a total of perhaps several *trillion* dollars of goods and services transacted online over the next several years.<sup>2</sup>

### **What are you trying to achieve?**

In order to get started in e-procurement, you need to establish a strategy and choose the specific tools and services to help you execute it.

Too often, articles and promotional materials on e-procurement fail to distinguish among the different types of benefits that are available. A “one size fits all” approach is not likely to be successful in this complex area. Rather, devoting the time and attention to determining the right objective for your situation — identifying what you are trying to achieve — and then finding the best methods for achieving it, are keys to success.

The potential benefits of e-procurement can be classified into four major areas:

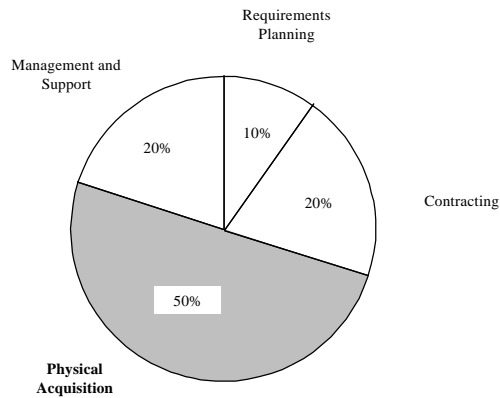
1. Increasing efficiency in executing purchase orders and other transactions
2. Accessing the capabilities of a broader supply base
3. Leveraging your volume to drive better prices and supplier value-added services
4. Improving the effectiveness of your ongoing procurement process

The detailed benefits that are available within each area, the type of strategies and tactics that are appropriate for pursuing them, and some of the specific e-procurement players who are in place to meet these needs are discussed below. With this information in hand, you should be in a strong position to set the appropriate strategy, select the tools and providers, and implement e-procurement programs that can provide significant bottom-line value to your organization.

## Efficiency gains

One of the major potential benefits of e-procurement is simply the reduction in time and costs for processing the thousands of individual requisitions and purchase orders that flow through a typical company's purchasing system. As shown in Table 1, transaction processing activities represent about 50% of total purchasing department time today on average — time that could otherwise be spent developing and executing sourcing strategies, strategic supplier relationships, continuous improvement programs, and other clearly higher value activities.

**Typical Allocation of Purchasing Department Time**



Source: CCMI Client Time Allocation Survey, 1997-99.

In a typical company, 75% of all invoices are for purchases of under \$1,000. At an average cost of \$100 to \$200 or more to process the purchase order, pay the invoice, and handle all the related paperwork, this represents a tremendous overhead cost for most businesses.<sup>3</sup> Indeed, in many cases the cost of handling the paperwork can be greater than the value of the actual items that were purchased.

In this area, e-procurement solutions are relatively well developed. Ariba, Commerce One, Oracle, and many other providers offer e-commerce applications that streamline and automate the entire workflow from issuing purchase orders, getting documents approved, paying invoices, and updating appropriate budget and financial systems. These approaches typically result in dropping the cost of fully processing transactions down to perhaps \$25 per transaction — a reduction of as much as 90%.

An additional benefit of these approaches is reducing cycle times for responding to ongoing or unanticipated business needs. In many companies, the total elapsed time required to

requisition even standard items is often weeks — resulting in manufacturing downtime or inefficiency while waiting for materials, or carrying higher buffer stocks of “just in case” inventories. Using e-procurement tools to streamline and speed up the process, these cycle times can typically be reduced to a matter of days or even hours.

For efficiency-related changes, the direct impact on the bottom line is often hard to measure. For example, purchasing and administrative overhead costs *really* only decrease if total staff levels are reduced. If all you do is cut the number of purchase orders in half and leave your staffing at the same level, then the cost to process each one simply goes up from \$200 to \$400.

More frequently, staff are reassigned to projects and activities that have higher potential value to the company but were previously not addressed. Determining the real business value of these efficiency-related e-procurement solutions requires asking the question “What new things are we doing now that we are freed from this administrative burden, and what is the measurable value to the organization?” Frankly, the answer is often not well known.

Finally, efficiency-related solutions rely on using supplier contracts and pricing arrangements that are already in place, whether good or bad. One of the primary ways to achieve streamlined purchasing, for example, is to have access to the catalogs and pricing of current suppliers available right at each user’s desktop. Need some office supplies? Click on an icon and your order will automatically be billed to your department and shipped to your desk. Need to order raw materials for next month’s plant production? You can punch in your supplier order directly from the manufacturing floor.

Perhaps the supplier even has access to the production plan and current inventory levels and automatically reorders the materials for you, all at prearranged prices.

This type of deep and collaborative integration, facilitated by visibility throughout the supply chain, is not now routinely practiced, and represents an area of great growth and opportunity. With new systems appearing that will track the status of incoming materials in real time, across multiple transportation carriers, look for leading companies to use this increased supply chain visibility to enhance their use of e-procurement.

Even then, streamlining the process does little to address the other major potential sources of value from e-procurement — the ability to stimulate competition, drive better prices and services, and bring these improvements directly to the bottom line. Overall, the usefulness of efficiency-oriented e-procurement solutions depends largely on how efficient your current purchasing processes are to begin with, how good your existing supply contracts

**Objective: Efficiency Gains**

- IT systems and on-line supplier catalogs can cut transaction costs
- Real savings come only when staff activities and costs are realigned
- Does not address competitiveness of current suppliers or ability to drive prices down through Web-based tools

are, and how much added value is available by redeploying staff who are now working primarily on transaction processing and related administrative tasks.

### **Broadening the pool of suppliers**

Typically, a 1% improvement in the overall cost of purchased materials and services can increase a company's bottom line by 10 to 20% or more — a dramatic impact on profitability and shareholder value. It is no wonder a wide variety of e-procurement solutions have been developed to help companies access a broader range of suppliers and achieve price and service improvements.

This has quickly become a crowded and confusing area, with trade magazines and television ads touting the benefits of alternative Internet sites and start-ups that have emerged to improve the process of bringing buyers and sellers together in a more competitive way. These marketplaces or exchanges offer a defined set of materials and services from a number of different suppliers, where you can view and compare supplier catalogs and price lists, seek supplier quotations for specific needs, and make supplier selection decisions.

These services are typically organized in one of two ways:

- *Horizontal* marketplaces focus on product lines that companies in a number of different industries utilize, such as Maintenance, Repair, and Operations (MRO) items, office products, and capital equipment. As well, there are sites that focus exclusively on categories of purchased services that have become increasingly important in today's economy — information technology, shipping, management consulting, and others.
- *Vertical* marketplaces are designed to meet the unique needs of particular industries — plastics, high-tech, and automotive to name a few. Here, you can access information and pricing from suppliers of resins, integrated circuits, castings, and a broad range of other parts and components used extensively in your specific industry. Exchanges have also developed to cover excess inventory, used equipment, and other items and types of transactions that historically have been particularly inefficient or time-consuming.

The primary e-procurement benefit of these marketplaces is that they facilitate much easier comparison shopping. The substantial legwork that used to be required to identify potential new suppliers, understand what they offer and obtain price quotations from them now can often occur in a matter of minutes. In an increasingly global economy, it has become more and more important for companies to find and use appropriate suppliers anywhere in the world, and e-procurement marketplaces provide a valuable method for increasing the access to these new potential supply sources.

These marketplaces and exchanges initially focused mostly on indirect materials and support services, since they were arguably the items that are critical to a business and least risky to buy through these new methods. However, there has been a rapid expansion of categories that are covered, and now just about anything a business needs, including critical raw materials, components, subassemblies, and even basic commodities such as fuel and agricultural products can be bought using horizontal or vertical exchanges.

In most major categories of goods and services, and in most major industries, multiple marketplaces or exchanges now exist. The “land grab” in business-to-business e-commerce has largely been completed, with dot-coms having obtained venture capital financing, recruited leading industry and category experts, locked up the best Internet addresses, and established their presence in the marketplace through media advertising, industry marketing programs, e-mail discount offers, and other high-visibility activities.

The original concept of these exchanges was for independent operators to facilitate interactions between buyers and sellers in fragmented markets. But new developments occur quickly in electronic commerce. Most recently, in many industries the major buying companies in that industry have set up and are operating their own exchanges — in the automotive industry, high-tech manufacturing, retailing, agri-business, and many others. While these “buyer-centric” exchanges can no doubt be effective, there is a growing concern among suppliers that their purpose is not to broaden the pool of suppliers but to enable the biggest corporate buyers to exert their combined clout over their smaller suppliers and extract lower and lower prices. Using e-procurement tools to achieve volume leverage is discussed in more detail in the next section.

With extensive competition both within and between exchanges, suppliers need to offer sharper pricing, better quality, and more value-added services to differentiate themselves and retain and grow their businesses — at least in theory.

So which of these many alternatives provides the best e-procurement value? And are they significantly better than more traditional methods? A personal market test of the alternatives available to small professional services businesses is described in a sidebar to this article — and concludes there is some modest value that is available but that a substantial amount of legwork is still required to achieve it.

While these e-procurement offerings no doubt provide some new “discipline” in pricing comparable goods and services, they do not directly involve suppliers in bidding for a customer’s business — and prices do not typically reflect the volume discounts and other benefits that can be obtained through establishing ongoing preferred supplier contracts. Put your company-as-a-supplier hat back on for a minute — would you post your best prices for your best high-volume customers on your Internet site? Probably not.

## Office Supplies Purchasing: A Personal Saga

In researching this article, I thought it might be useful to add a little personal test of the different procurement alternatives that are available to me personally as a small, professional services business.

What do I buy? Simple stuff -- mostly copy paper, printer supplies, and some pencils; my value come from my experience and what's in my head, though I have to get it down on paper, and manage the cash flow that it generates (so add some billing and time tracking software in my market basket, too). But there are lots of different ways I can buy it:

1. Order by phone using a supply catalog that's been mailed to me periodically for years (the incumbent -- with free delivery and a box of cookies if I order \$200).
2. Go down to the mall and pick it up from the name-brand office supply mega-store (remember to account for the travel time!)
3. Order over the Internet using the websites of the major brick-and-mortar retailers.
4. Use my membership in various professional organizations, whose sites offer preferred suppliers at presumably discounted rates.
5. Use a vertical marketplace that offers a range of products and services to small business real estate tenants in office parks.
6. Use a vertical marketplace oriented toward small businesses, marketed specifically to put me on an equal basis with my big company competitors, and that even promised to put my personal needs (\$500 ?) out for a reverse auction.
7. Use a horizontal marketplace that sends me emails about once a week offering special discounts or rebates.

For this test, I tried all 7 methods, using a market basket of 10 common items, and usually using multiple providers within each basic method.

The results? The lowest priced overall market basket was about 7% lower than what I had been paying previously, but it charged a handling fee that offset about half the savings. I could have saved about another 10% by buying each item separately from the lowest priced source, but it would have meant 5 separate packages and writing 5 separate checks (and getting on 5 new junk mail lists!). In several cases the items were not exactly the same, so it was impossible to compare them precisely (not a big deal for copy paper, but it would have been if I was in the high tech manufacturing business and the item was an important raw material or component). Ironically, the ones that marketed most directly to me as a small business offered the least savings -- two were higher in total cost than what I had previously been paying. And no, I never heard back regarding the auction.

Overall, the email offers of rebates were appealing and I still might use them, but generally the incentive for switching suppliers and purchasing methods was low ... and I like the free cookies.

-- Scott A. Elliff

To achieve the “best” overall procurement results, you may need to repeatedly shop the marketplace, changing suppliers as competitive conditions change. In the grocery aisle, we easily switch from one breakfast cereal or detergent to another depending on what’s on sale. But for each new supplier, your company needs to check them for compliance with quality requirements and other business practices, individually add them into your supplier and financial reporting systems, have their inventories separately handled and stored, and have their invoices separately processed and paid. Together, these overhead costs can offset much or all of the savings you achieve by shopping the Web.

The value of deep integration with suppliers is also highlighted by the effect of subtle changes from one supplier to another in technical specifications for raw materials and components. Though small, these changes can have an unfavorable impact on overall manufacturing productivity that may far exceed the savings generated from shopping the marketplace. The longstanding trend has been toward developing strategic relationships with a handful of trusted long-term suppliers who can work with you to drive operating improvements and future technological advantage. Frequent changes in suppliers based on the use of marketplaces or exchanges would clearly run counter to these important initiatives.

**Objective: Broadening the Supplier Pool**

- Plethora of horizontal and vertical marketplaces makes comparison shopping easier.
- Don’t expect to get the best prices just cruising the Web.
- Repeated switching of suppliers to chase lowest prices can be hard to manage and cause other problems that offset savings.

**Leveraging volume**

Achieving lower prices is a major objective of any buyer, of course, and a straightforward way to drive prices down and obtain increased supplier attention is to leverage total purchasing volume through Internet-based auctions. In a way, these are the e-procurement equivalents of traditional requests-for-proposal and price bidding techniques that purchasing departments have used for years: Bundle your volume together, and make it a winner-take-all proposition. Now, however, they can occur in real time with a worldwide supply base bidding interactively and with visibility of other supplier bids, until a winner emerges.

As consumers, we are all familiar with auctions, in which the buyers continue to bid up the price for a given item or service until only one buyer remains. Technically, e-procurement uses “reverse auctions” or “downward auctions,” where the bidders are the suppliers and prices continue to fall until only one bidder remains, who then has the right and obligation to supply the requested goods or services at the low bid price.

The initial entrant in this field, FreeMarkets, Inc., began five years ago with an auction for plastic parts for Frigidaire refrigerators, a commodity category in a mature market niche where you might have expected that the lowest possible price was already in effect. FreeMarkets obtained savings of about 15% within about 3 hours, and a new business was

born. Since then, over \$7 billion in auctions have been completed for major corporations and even one state government. Perhaps the most dramatic indication of the potential importance of e-procurement solutions is that FreeMarkets now has a stock market capitalization of \$2.5 billion as a newly public company, down significantly from the Internet frenzy last year, but not bad for a company with about \$40 million in revenues over the past year.

The level of activity generated in these auctions is often very impressive. Recently, for example, the eabbreviate.com unit of consulting firm A.T. Kearney assisted a Fortune 500 company with \$75 million in telecommunications services expenditures. Sixty-two qualified suppliers from 3 different countries submitted over 700 competing bids during the course of the auction, and the client saved about 18% versus its prior cost level.

Anyone who has participated in an auction for antiques or art or other merchandise knows that the environment can become emotionally charged and that bidding sometimes exceeds rational or sustainable levels. While significant improvements in price can be obtained, buyers need to be careful since it doesn't do any good to accept a low bid submitted online by a supplier only to find out later that they don't have the capability to deliver the volume and quality you need.

Indeed, the most important activity in these reverse auctions is the work that occurs before the auction actually takes place. You may need to pre-qualify suppliers who have the capacity, quality levels, and track record to serve your business, and invite only that select group to participate in the auction event. Do you really want anybody with a Web browser to be able to bid for your business?

In addition, without a strong knowledge base of what your company purchases, from whom, at what prices, and for what uses, it is nearly impossible to derive the full value from e-procurement and other "upstream" supply chain initiatives.

Many companies still don't really know these basic facts about their internal operations. Decentralized corporate structures and the autonomy given to individual business units have often resulted in an inability to take full advantage of business-to-business e-commerce. In many consulting projects, the first, and arguably most valuable, task performed is "building the fact base" that can later be used to develop and implement improvement programs — an arduous task that often involves piecing together information from a dozen disparate, incomplete, and inconsistent data sources. In e-procurement, and auctions in particular, it is critical to know how much volume you have and how much you can realistically commit to the winning bidder.

Finally, the price of individual items is often only one consideration in determining the most appropriate supplier for your business. Other price-related considerations such as payment terms, warranties, shipping and duties, as well as non-price factors such as lead times, product innovation, and access to new technology may be equally or more important than unit prices alone. While auction providers can increasingly accommodate these

additional factors, determining the overall “leading” bidder in a real-time auction environment can quickly become very difficult or impractical.

An auction format is only effective if you have significant volume that can be leveraged in order to gain attention and price discounts from the marketplace. For many smaller and medium-sized companies, the level of purchases of specific categories of goods and services is unlikely to be adequate to command superior pricing through an auction.

To address these situations, yet another variant of e-procurement has emerged — an outsourcing or intermediary approach. Here, in effect you turn over your spending requirements for office supplies, electricity, MRO, or other business needs to a third party who bundles it together with the volume of other small and medium-sized companies to create enough volume leverage to attract superior pricing from suppliers. While consortium or group buying has been in existence for some time — your health insurance plan uses it to get better prices for doctor visits, pharmaceuticals, and other items, for example — bringing it to e-commerce is a new development.

ICG Commerce is one of the new players in e-procurement that uses this approach, among others, with some notable successes. Smaller customers can potentially save anywhere from 5 to 25% on the cost of factory supplies, administrative services, packaging, and related categories, and major companies can utilize the ICG Commerce staff of procurement experts and its e-procurement technology to drive ongoing procurement improvements. Major oil company Sonoco recently announced that it was turning over its nearly \$1.4 billion in purchases to ICG, for example.

As the old saying goes, “be careful what you ask for, you might get it.” Before committing your volume to an auction, a third party, or some other variant, it is important to understand your company’s willingness to live with the results. At what point would you be willing to change suppliers — for a 1% improvement, a 25% improvement, or under no circumstances at all? What if a supplier who you don’t know much about, or are not entirely comfortable with, wins the auction event? Sure, you can choose not to give them your volume, or you can use the auction purely as a way to reduce the prices and margins of your incumbent suppliers without making a change ... at least for a while. But without your commitment to live with the results, suppliers will quickly recognize that it is just a paper exercise, and may not continue to participate fully and openly.

**Objective: Leveraging Volume**

- Online auctions can yield major savings.
- You first need to have a strong understanding of your usage, requirements, and other factors in order to obtain the benefits.
- Price is rarely the only criteria for selecting suppliers, so be sure to consider multiple factors that are important to you.

## Process improvement

While outsourcing is a broad business trend today and can be used effectively for procurement, as discussed above, many companies continue to be interested in improving their own internal capabilities to strategically manage their supply base and execute programs that drive down costs and increase service and quality levels. For them, the relationships with suppliers are considered to be an important element of their overall business success, and they are reluctant to hand them over to a third party — even if doing so would help them leverage volume or otherwise reduce costs.

Historically, companies have turned extensively to management consulting firms to help them understand and apply best practices within their purchasing departments. Normally, the consulting team begins by assessing the company's situation and improvement potential, and develops a set of customized strategies and action plans. Subsequently, the consultants work jointly with purchasing staff on a set of "pilot" spending categories to execute the improvements and provide training in new techniques, which the client is expected to use on an ongoing basis without additional consulting support.

While it sounds good in theory, and has often provided a strong short-term payback, many companies are finding that *institutionalizing* these improved strategies and purchasing techniques is a major challenge. Achieving the benefits typically involves applying a disciplined and complex methodology that includes substantial internal data gathering and external market research, extensive use of analytical and scenario modeling tools, in-depth strategy development and planning, and disciplined execution by a staff team that is devoted exclusively to the effort — what is typically called a "strategic sourcing" program. Since the level of effort and discipline required by strategic sourcing is often difficult to sustain once the consultants are gone, purchasing procedures sometimes revert back to traditional ways of doing business and the bottom line gains are not maintained, both reducing value to the client and undermining the reputation of the consultants.

New players in e-procurement have emerged to address this situation as well, offering Internet-based tools and processes that give users the ability to access and apply best practices tailored to their specific situations and that allow users to remain fully in control of their own procurement activities.

For example, B2eMarkets, Inc., offers users a Strategic eSourcing Management solution that walks online users through each step of a consulting-type procurement methodology, including gathering data, analyzing requirements, and setting strategy, as well as executing e-procurement through shopping e-marketplaces, conducting reverse auctions, and using other methods that are built into the application. Based largely on the strategic sourcing approach used by Andersen Consulting, one of the largest firms in procurement consulting and an investor in the company, the subscription-based service includes industry and commodity templates, evaluation tools, "coaching" and related on-line support.

Initial results from using this approach to e-procurement have been impressive. Across about \$400 million in spending volume, B2eMarkets' customers have achieved cost reductions averaging 25%, and have achieved them in about half the time of traditional strategic sourcing processes.

Whether this approach, like the others, is right for you depends on where you are today and what you are trying to achieve. A strategic sourcing oriented program is perhaps the most comprehensive approach to e-procurement, with the greatest potential long-run benefits. For many companies, however, starting with the basics of increasing efficiency, accessing a more competitive supply base, and leveraging volume, as discussed earlier, may be the appropriate first steps, with more sophisticated solutions coming later.

Any software-based solution is only effective if it is fully and correctly used, of course, and is only as good as what's programmed into it. Experience, diligence, and sound judgement are still required – especially in unique situations — and no electronic commerce system can take their place ... at least not yet. And even a sophisticated online solution can't replace meeting and working with suppliers the old fashioned way. These personal relationships have always been important for improving business practices, changing specifications, integrating information systems, and seeking win-win improvements in pricing, quality, and service levels — and will continue to be important in the future as well.

### **The Potential of E-Procurement**

E-procurement is an exciting and rapidly evolving aspect of e-commerce and supply chain management that promises to yield significant improvements for the companies who buy trillions of dollars of goods and services today. But it is not a panacea.

IBM, last year's winner of *Purchasing* magazine's top honor, bought over \$12 billion per year over the Internet in 1999 and is rapidly making electronic procurement a requirement for all its suppliers. IBM estimates that electronic-commerce related procurement process improvements will save over \$200 million annually, and believes that substantial further gains can be achieved. Yes, the numbers are staggering, and the potential of e-procurement as an element of business-to-business e-commerce is dramatic. But it is important to recognize that IBM's program has been 5 years in the making and has required a virtual transformation of its entire set of traditional procedures for contracting, ordering, payment, and overall supplier management.

#### **Objective: Process Improvement**

- New e-procurement providers can help you apply a full range of strategic sourcing “best practices” through the Internet
- Most comprehensive approach, but also requires greatest discipline and management support
- Does not replace working with suppliers the old fashioned way on continuous improvement and other key aspects of relationship

## **E-procurement: Who's Doing It?**

Think e-procurement is just a nitch or a fad? Here are some of the major corporations who have programs underway to unlock the variety of potential benefits that are highlighted in this article.

**Texas Instruments:** Over 100,000 purchase orders annually for MRO and related items are now processed through on-line systems. Costs per purchase order have dropped by 80%, and staff time has been redeployed to focus on strategic supplier management activities. Within six months, prior catalog-based approaches were completed replaced, and savings through efficiency gains are running at a level of over \$12 million annually.

**Owens Corning:** In the past year, over \$250 million in purchases for construction services, pallets, and a variety of other items have been made through reverse auctions. Savings have averaged 10%, and the company plans to increase its use of auctions by 60% next year. The company focuses substantial attention on preparing detailed RFQs and communicating actively with potential bidders to ensure a high level of competition.

**Burlington Northern Santa Fe Railway:** Multiple initiatives are underway to utilize e-procurement. With over 40,000 employees spread out across the US and Canada from the two prior companies that had merged to form BNSF, the company was not leveraging its overall purchasing power, with substantial "maverick" local spending rather than full use of preferred corporate contracts. With new online catalogs, including digitized images of preferred supplier products, together with the company's contract terms, conditions and pricing, BNSF expects that the new system will fully pay for itself within six months through increased use of volume leverage and better purchasing controls. BNSF is also using reverse auctions to sell off surplus locomotives, buy equipment parts, contract for future natural gas needs, and other purposes – with 8-10% savings achieved to date. Plans are also underway to broaden the supplier pool and improve transaction efficiency by developing a vertical e-marketplace with other major railroads.

**General Electric:** America's consistently most admired company and CEO are pursuing e-procurement in a major way, with initiatives in transaction processing efficiency, web-based auctions, on-line supplier collaboration, and purchasing process improvement – as well as programs to sell e-procurement services to other companies. With about \$5 billion of on-line auctions planned for the coming year across plastics, medical equipment, aircraft engines, power systems, and other business units, GE expects to save \$500 million or more in purchase prices and to reduce transaction costs by up to 90% -- on millions of transactions per year. On-line sharing and collaboration with suppliers is rapidly being developed to reduce time-to-market for new products and parts replenishment time for existing products. As well as providing benefits within the company, GE's Global Exchange Services division offers digital exchanges, online catalogs, and related e-procurement capabilities to other companies, generating significant revenues for GE, too. According to Jack Welch, "e-business will change the DNA of GE forever by energizing and revitalizing every corner of the company." It doesn't get much stronger than that.

Going forward with e-procurement requires addressing a number of important questions about your organization and its needs, objectives, and capabilities. Some of the key questions that anyone getting started with e-procurement needs to ask follow.

### **Getting Started with E-Procurement: Key Questions**

- What are the strengths and weaknesses of your existing procurement processes and activities?
- What specific objective(s) are you trying to achieve through e-procurement, and why?
- What categories of goods and services need the most attention and would benefit most from new e-procurement approaches?
- Can you utilize existing horizontal or vertical exchanges to meet your needs?
- How willing are you to change suppliers, including adding new ones to your supply base, in order to achieve short-term or long-term benefits?
- How important is price compared to other factors in determining which suppliers to use?
- How willing are you to outsource parts of your procurement activity?
- How important is it for you to have a proprietary solution that's unique to your company alone?
- How will you ensure that buyers in your company embrace and use new techniques?
- How will you integrate new information systems requirements into your organization in a way that supports rapidly achieving e-procurement benefits?

Which type of e-procurement approach is right for you depends on the situation you face, the specific objectives you are trying to achieve, and the answers to the previous questions. E-procurement offers substantial bottom-line benefits, but don't expect a miracle overnight, and be aware of the limitations and pitfalls that can accompany dramatic changes in supply chain operations.

- 1 "Leveraging the e-Business Marketplace: Business-to-Business e-Procurement Trends, Opportunities, and Challenges," Deloitte Consulting, 1999.
- 2 *Purchasing Magazine*, Annual Survey of On-line Buying, 1999.
- 3 Capital Consulting & Management, Inc. (CCMI) ongoing client studies, 2000.

## **About the Author**

**Scott A. Elliff** is Founder and President of Capital Consulting & Management, Inc. (CCMI), offering high-quality analysis, practical advice, and fresh perspectives to help clients achieve bottom-line improvements in profitability, effectiveness, and market position.

Mr. Elliff has sixteen years experience consulting to a wide range of Fortune 500 and other companies, with particular expertise in supply chain management, including product development, forecasting, procurement, scheduling, manufacturing, transportation, logistics, inventory management, and customer service. He has written and spoken widely about these topics in a number of industry conferences and publications.

CCMI can be found on the Web at [www.CCMIservices.com](http://www.CCMIservices.com). Mr. Elliff can be reached at (703) 370-2607 or by e-mail at [scott\\_elliff@CCMIservices.com](mailto:scott_elliff@CCMIservices.com). All materials © CCMI 2000.