

Aberdeen Group

Best Practices in e-Procurement

The Abridged Report

December 2001

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Preface

Aberdeen Group is a recognized leader for its research and analysis of Internet-based technologies that automate, streamline, and improve procurement and supply chain management (SCM) processes. Aberdeen was one of the first market research firms to analyze e-Procurement solutions and to quantify the benefits and pitfalls of these technologies.

In its continued research of emerging procurement automation technologies, Aberdeen has identified enterprises that have been the most successful in deploying e-Procurement to control costs, streamline processes, and enhance responsiveness across the supply chain.

The full version of Aberdeen's *Best Practices in e-Procurement* report contains detailed profiles on all best-practice e-Procurement winners in one or more of the following areas: non-production ("indirect") procurement automation, strategic sourcing, and production ("direct") procurement automation/supply chain management (SCM). This abridged report documents the selection criteria, implementation strategies, and process redesign initiatives select few of the best-practice winning enterprises used for successful e-Procurement deployment, and it quantifies the benefits that have resulted from these technologies and initiatives. This abridged report also provides a high-level overview of best practices for e-Procurement that can be emulated by solution providers, consultants, and enterprises.

The targets of this report are the following business and information technology (IT) executives:

- Chief procurement officers (CPOs) that are responsible for building and managing their organizations' supply chains;
- Chief executive officers (CEOs) charged with improving their companies' profits, responsiveness, and standing in the market;
- Chief financial officers (CFOs) focused on controlling costs and optimizing their organizations' resources;
- Chief information officers (CIOs) involved in selecting and implementing electronic commerce (e-Commerce) solutions;
- Management consultants and systems integrators (SIs) tasked with identifying leading e-Procurement solutions; and

- Current and future e-Procurement, SCM, and marketplace solution providers looking for a roadmap for future products as well as an analysis of competitors and potential partners.

To assist readers, we have included three appendices: Appendix A offers a glossary of e-Procurement-related acronyms and abbreviations; Appendix B provides a list of relevant Aberdeen research for further reading; and Appendix C lists contact information for the software vendors whose e-Procurement solutions have been deployed by enterprises that have demonstrated best practices.

Chapter One:

Executive Summary

Identifying Best Practices in e-Procurement

This report is intended to recognize those enterprises that have demonstrated industry best practices in deployment of Internet-based procurement automation to control costs, streamline processes, and enhance responsiveness across the extended supply chain. The report examines the selection, implementation, and business process reengineering strategies these enterprises used to deploy e-Procurement technologies in the areas of indirect procurement, strategic sourcing, and direct procurement/supply chain management.

Additionally, the report is intended to help procurement executives, corporate executives, and business and IT managers identify best practices for selecting, deploying, and managing deployment of e-Procurement technologies.

Procurement and supply chain management provide the single greatest opportunity to control costs, manage quality, and improve responsiveness.

Procurement Will Be Key to Survival

With the global economy slipping into a recession, cost cutting has become a priority for most businesses. After reducing headcount and streamlining internal processes, companies are now looking to trim the fat and inefficiencies from their extended network of supplier partners. Procurement and supply chain management are at the head of this charge.

Long overlooked as backwater functions, procurement and SCM are being embraced by top-level executives — including CEOs and CFOs — as key to remaining competitive in today's economy. The reason? On a global basis, businesses spend over \$20 trillion on external goods and services each year. Any reductions in these costs result in dollar-for-dollar improvements in profits.

In addition to cost reductions, procurement and SCM drive a company's responsiveness and performance in the market. A properly organized and managed supply chain can deliver significant competitive and cost advantages to the market. Conversely, inappropriate supplier selection or poorly organized supply partners can negatively impact an organization's ability to compete.

The Procurement Landscape

Procurement activities can be segmented in many ways. For the purposes of this report, Aberdeen divides procurement (and e-Procurement technologies) into three primary categories:

1. Indirect procurement — which involves the selection, purchase, and management of a wide range of non-production goods and services — from basic office supplies to complex business services, such as printing, advertising, and temporary labor.
2. Direct procurement/supply chain management — which involves the organization, planning, and management of procurement and supply chain activities associated with acquiring the raw materials, parts, and assemblies necessary to manufacture finished products.
3. Sourcing — which involves the identification, evaluation, negotiation, and configuration of products, services, and suppliers for both indirect and direct materials supply chains.

e-Procurement Delivers Rapid and Real Results

At the highest level, Internet-based procurement (e-Procurement) creates private, Web-based procurement markets that automate communications, transactions, and collaboration between supply chain partners. Most e-Procurement solutions have been developed to address one of the three primary areas of procurement operations: indirect procurement, direct procurement/SCM, and sourcing.

Aberdeen's ongoing research of enterprises' experiences with Internet-based procurement automation technologies indicates that companies have been able to achieve significant cost and process benefits by automating key procurement activities.

Specifically, e-Procurement solutions addressing indirect procurement operations have resulted in reduced prices paid for indirect goods and services; improved contract compliance; shortened procurement and fulfillment cycles; reduced administration costs; and enhanced inventory management.

e-Procurement solutions targeting direct procurement activities have resulted in improved visibility of customer demand and supply chain capacity; increased accuracy of production plans and forecasts; reduced inventory and operations costs; shortened procurement cycles; and enhanced responsiveness.

Enterprises utilizing Internet-based sourcing (e-Sourcing) technologies have been able to negotiate significant unit cost (i.e., "price") reductions; shorten sourcing cycles; enhance decision-

making capabilities; and gather improved product, market, and supplier intelligence.

Identifying e-Procurement Best Practices

In May 2001, Aberdeen began gathering information from e-Procurement solution vendors on what the vendors believed to be their most successful customer implementations. We examined more than 50 e-Procurement implementations, categorizing them into one of three categories: indirect procurement automation, direct procurement/SCM automation, and e-Sourcing.

We conducted blind evaluations of these implementations based on multiple metrics, including usage, spending volume, process efficiencies, and cost savings. As a result of these evaluations, we identified enterprises in each of the three categories that represented best practice deployments. During our research, we also identified several companies that had successful e-Procurement deployments in two or more of these categories. We have placed two of these enterprises in a fourth category called *e-Procurement All-Stars*.

This report contains detailed case studies of each of the 18 best practice e-Procurement deployments. All winning enterprises are represented in Table 1. Detailed profiles of all these enterprises and their e-Procurement deployments appear in the full report. This abridged report contains only profiles and a select few of the winning enterprises.

This free, abridged version of *Best Practices in e-Procurement*, an Aberdeen research report, is made possible by certain e-Procurement solution providers. Names and contact information for these sponsoring e-Procurement solution providers appear in Appendix C.

Table 1: Best Practices in e-Procurement Winners

Category	Winning Enterprises	e-Procurement Solutions Used
Indirect procurement	Canandaigua National Bank and Trust Countrywide Home Loans FedEx Corporation Finning International iGate Capital Universal Studios UNNICO	Works PurchasingNet Ariba Verian PeopleSoft, Commerce One Zeborg elcom
Direct procurement	A-Plus Manufacturing (acquired by C-MAC) Diversified Systems Georgia Pacific Komatsu Mining Systems	Tradec Agile Software Nistevo Baan
e-Sourcing	Ametek Millennium Chemicals SPX Sun Microsystems Volkswagen	Dun & Bradstreet B2EMarkets FreeMarkets iPlanet, FreeMarkets, Procuri, ICG Commerce eBreviate
All-Stars	Eastman Chemical John Hancock	Commerce One, Diligent Software Systems Frictionless Commerce, iPlanet

Source: Aberdeen Group, December 2001

Chapter Two:

Summary of Findings

With an increased emphasis on cutting costs and enhancing productivity, e-Procurement has experienced major growth in recent years. Considering the current economic condition, Aberdeen views e-Procurement as one of the few enterprise software sectors that will continue to demonstrate strong growth over the next 12 to 18 months.

Ten Keys to e-Procurement Success

As Aberdeen conducted research for this report, a number of key findings emerged. The most compelling is that, despite some recent bad press, e-Procurement works, and companies are gaining significant and rapid value from its use. As with any enterprise software installation or business initiative, organizations have had to overcome cultural, process, and technical hurdles in order to access the complete value of e-Procurement. Aberdeen's research found that the most successful e-Procurement deployments had the following 10 common characteristics.

1. *Technology is not a strategy.* Successful e-Procurement deployments utilize technology to *support* a larger procurement strategy. They do not view e-Procurement as the strategy itself.
2. *Know what you spend.* Prior to launching any e-Procurement initiative, companies must understand how much they spend, on which products, and with which suppliers. A preliminary spending analysis can identify opportunities for improving contract compliance, aggregating spending, and rationalizing the supply base. Spending analysis can also determine the most effective method for rolling out e-Procurement.
3. *Have a plan.* Before installing the first byte of e-Procurement technology, a company must devise a comprehensive plan for deployment as well as clearly defined goals and milestones for continued improvements and success.
4. *Begin by benchmarking.* The companies that have experienced the most success with e-Procurement have all started by mapping their internal process flows. This benchmarking activity identifies non-value-added processes that need to be reconfigured or eliminated prior to deploying e-Procurement. Companies attempting to deploy e-Procurement without

- benchmarking their own procurement processes are at risk of automating inefficient and costly processes.
5. *Drive e-Procurement from the top.* As with any business initiative, the level of success of any e-Procurement initiative is inherently tied to the support it receives from “C-level” executives. e-Procurement touches every aspect of the business, requiring significant change management across the enterprise. Successfully deploying these technologies requires top-level executives to become chief advocates for e-Procurement.
 6. *Get support from the trenches.* While top-level support is important, user adoption is absolutely essential. The most successful e-Procurement deployments have all included programs for training, and they have continually demonstrated value to potential users.
 7. *Designate a champion.* The most successful companies have designated a champion to coordinate, monitor, and manage enterprise-wide deployment of e-Procurement technology. Typically pulled from the purchasing and/or IT department, this e-Procurement champion is responsible for driving system deployment and adoption, measuring results, communicating successes, and repairing glitches. Importantly, this champion is often measured and receives incentive based on the overall adoption and success of the e-Procurement deployment.
 8. *Supplier participation requires a carrot and a stick.* Supplier participation has been a thorn in the side of many e-Procurement initiatives. The most successful companies have overcome such challenges using a mix of supplier incentives and demands. Specific strategies include educating suppliers on the value of e-Procurement, providing tools and services for easing participation, and driving additional business to participating suppliers. These companies also create penalties for non-participants. They range from charging suppliers a fee for continuing to exchange documents via fax to limiting the volume of business awarded to noncompliant suppliers.
 9. *Start with the low-hanging fruit.* To gain acceptance and adoption of e-Procurement, a company needs to demonstrate value to all participants — from front-line employees to top-level executives and external supplier partners. The most successful companies have won early support for e-Procurement by identifying the areas of spending that could return the biggest benefits and savings in the shortest amount of time.

10. *Measure, measure, measure.* There's truth in the old adage, "You can't improve what you can't measure." To drive continuous improvements in e-Procurement, companies monitor user adoption, contract compliance, process improvements, cost savings, and supplier performance on an ongoing basis. These measures can be used to demonstrate the value of e-Procurement to all constituents. These measures also help identify areas for improvement or process realignment.

Chapter Three:

Best Practices in e-Procurement: The Case Studies

It is difficult to define what a best-in-class e-Procurement implementation should look like. e-Procurement is about enhancing collaboration, streamlining processes, controlling costs, and enhancing information exchange within and across organizational boundaries. Every enterprise has different needs, capabilities, constraints, and organizational and supply chain structures. As a result, each company will deploy and utilize e-Procurement in a different way.

However, in its search for best practices in e-Procurement, Aberdeen examined the results of deployments of indirect procurement automation, direct procurement/SCM automation, and e-Sourcing technologies. Specifically, we evaluated enterprises on: the number of employees enabled on the e-Procurement system; the number of suppliers enabled on the system; the number of transactions (i.e., purchase orders (POs) and/or sourcing events); the dollar value of items channeled through the system; and the time and cost savings achieved. To balance the playing field, we examined these factors in relation to the overall size and spend of individual enterprises.

Aberdeen selected enterprises as demonstrating best practices in each category of e-Procurement: indirect procurement automation, direct procurement/SCM automation, and e-Sourcing. We also identified several companies that had successful e-Procurement deployments in two or more of these categories. We have placed two of these enterprises in a fourth category called *e-Procurement All-Stars*.

In this abridged report, Aberdeen profiles these best practice e-Procurement strategies, deployments, and the results of a select few of these enterprises. These case study profiles appear in alphabetical order by enterprise name.

A-Plus Manufacturing Views Online Procurement as Key to Staying Ahead in High-Tech Industry

Executive Summary

Pressures to speed time-to-market cycles and reduce costs has a growing number of original equipment manufacturers (OEMs) outsourcing product assembly and manufacturing. Outsourcing is particularly prevalent in high-tech industries where product life-cycles are often measured in months and where keeping pace with the latest production procedures is both costly and challenging.

More than 90% of electronics OEMs use contract manufacturers — now known as electronics manufacturing service (EMS) providers — for multiple manufacturing jobs. As companies pare payrolls and cut costs, the use of EMS providers will only increase. In fact, one industry survey finds that 85% of electronics OEMs will increase their outsourced production during the next 12 months.

In response, EMS firms must operate more efficiently and at a lower cost than ever before. A-Plus Manufacturing Corporation, a leading EMS provider with revenues over \$150 million, views automating its direct procurement processes as key to meeting such demands. A-Plus deployed Tradec's Quote Management System (QMS) to streamline the bid-and-quote process with its suppliers. As a result, the firm has significantly improved buyer productivity, shortened procurement cycles, and enhanced response to customer demands.

Business Challenge

A-Plus Manufacturing, a division of C-MAC Industries Inc., provides turnkey manufacturing for complex, high-density, and high-

e-Procurement Best Practices	Company Name
	A-Plus Manufacturing
	e-Procurement Solution Provider
	Tradec
	Process Time Savings
	Reduced quote cycles by 60%
	Process Cost Savings
Reduced FTEs for procurement	
Purchased Product/Service/Material Cost Savings	
Yes	
Additional Savings/Benefits	
Better responsiveness, lower inventories	

mix printed circuit boards (PCBs) and box-build assemblies for the telecommunications, video, medical devices, industrial, and military markets. A-Plus supports a global customer base with 400 employees located in multiple assembly locations in Silicon Valley.

Like many EMS providers, A-Plus had been grappling with a double-edged sword — rapidly increasing demand from a global customers and razor-thin profit margins.

Selection Criteria

To meet such challenges, A-Plus knew it would need to overhaul its antiquated method for managing and analyzing supplier quotes. For years, the company used a labor-intensive quote management process that relied heavily on paper-based request for quote (RFQ) documents, redundant data entry, and myriad phone calls, faxes, and e-mails for every purchase. This time-consuming process hampered A-Plus' ability to rapidly respond to customer requests. It also placed significant burdens on A-Plus' supply base.

“We used to send out a complete quote package to suppliers regardless of whether they could support the business or not,” said David Kichar, director of Supply Chain Management (SCM) at A-Plus, adding that suppliers would need to wade through thousands of line items to find the items that they were qualified to bid on. “Some suppliers reformatted everything we sent them, so our buyers would have to cut and paste bids from different spreadsheets in order to do analysis.”

Due to such inefficient processes, it could take A-Plus as long as two to three weeks to implement a change order or forecast across its supply chain.

In 1999, A-Plus decided to automate its direct procurement processes to shorten quote turnaround times and enhance visibility across its supply chain. The EMS provider began its search for a Web-based solution that was easy to use, could automate the entire quote cycle, and could enable communication and collaboration across multiple tiers of the supply chain. The procurement solution also needed to support integration with A-Plus' existing business systems, including its Materials Resource Planning (MRP) solution.

Deployment

After a brief evaluation process, A-Plus found that Tradec's QMS solution met its key requirements. The Tradec solution also provided sophisticated analytics tools for reviewing and comparing supplier proposals and for tracking performance metrics. In addition, QMS included a bill of materials (BOM)/approved mate-

rial list (AML) warehouse that enables users to automatically organize parts for inclusion in a generic or supplier-specific RFQ package.

Tradec's Web-hosted model proved to be a key factor in driving adoption of the system across A-Plus' procurement organization and its supply base. A-Plus piloted the QMS solution with a handful of suppliers in November 1999. By 2001, the EMS provider was managing nearly 85% of its direct purchases through the system.

Results

The key benefit A-Plus Manufacturing has seen from deploying the Tradec solution is cycle-time savings for both A-Plus and its suppliers. By using the solution, A-Plus has reduced the time quoting cycles by more than 60%. Faster procurement cycles have freed up buyers to focus on more value-added tasks, like supplier qualification and quality assurance. It has also allowed A-Plus to bid on more business.

“To some extent, the previous way we managed procurement kept us from bidding on new business,” said Kichar. “We weren't able to create and evaluate bid packages fast enough, and our suppliers were taking days to turn around quotes. With Tradec, we have been able to shorten procurement cycles and actually secure the parts we need to service new business.”

Such efficiencies have helped A-Plus consolidate direct procurement activity to a single quoting “hub,” keeping full-time-employee (FTE) headcount to a minimum.

The Tradec solution has also improved information transparency and analysis for both A-Plus' buyers and its supply base. Armed with accurate information, suppliers have been able to sort and analyze A-Plus' requirements more quickly, resulting in faster quote turn-around times as well as more competitive bids. By consolidating quotes into a single format, QMS has helped A-Plus buyers better analyze bids to identify the mix of parts and suppliers that can return the lowest total cost.

Kichar also credits the Tradec solution for A-Plus Manufacturing's ability to quickly adjust its operations during the recent economic downturn. “Accurate data and speed are key to success in outsourcing,” said Kichar. “We still have competitors that can't communicate with their suppliers or customers in a timely fashion. As a result, they now have high inventories because they couldn't respond quickly enough to [turn off supply] even when their orders had stopped.”

Lessons Learned

Aware of how suppliers contribute to its own ability to respond to customer demand, A-Plus expended significant effort to ensure that its supply base understood and accepted the Tradec tool *prior* to deployment.

“In any e-Procurement implementation, you need to bring suppliers in as partners,” said Kichar. “You can’t just force a new system on suppliers or you will never get acceptance or results. We sat down with suppliers, reviewed their quote data and demonstrated how the [Tradec] system provided them with more accurate [demand] data in a condensed format.”

Future Outlook

With an increased portion of its business and suppliers coming from overseas, A-Plus is pushing Tradec to develop functionality to manage cross-border logistics costing and multi-currency calculations.

“As we move to a global economy, we need to take into account logistics and currency issues,” said Kichar. “Accurate and current currency information can provide an opportunity for additional cost savings and profit improvements. We want to use this information for forecasting and planning our procurement.”

Aberdeen Conclusions

A-Plus Manufacturing was among the first EMS providers to leverage e-Procurement technology to automate and streamline interactions with its direct-material suppliers. Using Tradec’s QMS Web-based quote-management tool, A-Plus has achieved measurable benefits and significantly improved its responsiveness to rapidly changing market demands. Not content to rest on its laurels, A-Plus plans to use the Tradec solution to service customers and manage suppliers in new, global markets.

e-Procurement Gives Eastman Chemical Company a Strategic Edge

Executive Summary

Facing nimble competition and pressures to reduce costs, Eastman Chemical Company set out in the late 1990s to put discipline into its disjointed purchasing organization. The 81-year-old global chemicals manufacturer's strategy was straightforward — develop and manage more strategic supply chain relationships with the help of the latest, Internet-based technologies. First, Eastman deployed the Commerce One platform to automate and control indirect purchasing. Next, the company selected

Diligent Software Systems to standardize and streamline its sourcing processes for selecting strategic supplier partners. Together with Eastman's supplier rationalization strategies, these solutions helped Eastman speed process cycles, improve decision-making, and achieve significant price reductions.

e-Procurement Best Practices

Company Name

Eastman Chemical Company

e-Procurement Solution Provider

Commerce One; Diligent Software Systems

Process Time Savings

Reduced order-to-fulfillment by 86%;
cut sourcing cycles in half

Process Cost Savings

Annual savings of \$100,000

Purchased Product/Service/Material Cost Savings

5% to 10% price reduction through improved contract compliance; 13% price reductions, on average, through online negotiations

Additional Savings/Benefits

Facilitated supply base rationalization

Business Challenge

Founded in 1920 to supply photographic chemicals to its then-parent Eastman Kodak Company, Eastman is a global provider of more than 400 chemicals, fibers, and plastics. Employing 16,500 people in more than 30 countries, Eastman is headquartered in Kingsport, Tennessee, with worldwide regional headquarters in Coral Gables, Florida; The Hague, Netherlands; and Singapore. Eastman has manufacturing facilities in five states in the U.S. and in 18 countries abroad. Across all operations, Eastman spends \$2.7 billion annually on goods and services.

Until the late 1990s, Eastman relied on a highly decentralized procurement structure with buying decisions and processes defined at the local level. As a result, the company struggled with high administration costs, off-contract (“maverick”) buying, and sub-optimal negotiation leverage with suppliers. In 1997, an internal project team recommended a two-pronged strategy to address these issues: (1) Adopt a channel supply program for key maintenance, repair, and operations (MRO) commodities; and (2) leverage Internet-based technologies to automate and streamline corporate procurement processes.

It’s not surprising that Eastman first targeted the procurement of non-production (“indirect”) goods and services as the first area for improvement. The company was spending \$900 million with more than 7,500 indirect suppliers worldwide.

Previous attempts to automate indirect purchasing through its SAP R/2 system did little to reduce the costs and cycle times associated with processing purchase requisitions. Similarly, a corporate procurement card program failed to enforce the use of Eastman’s preferred suppliers or compliance with corporate contracts.

Eastman realized streamlining its purchasing would require implementing an entirely new system that simplified the requisitioning process while enforcing contract compliance with a small base of strategic supplier partners. Selecting these strategic “channel partners” required Eastman to update its manual sourcing processes, which were cumbersome to manage and took months to complete.

Selection Criteria

Eastman worked with Andersen Consulting to evaluate several solutions, choosing Commerce One EnterpriseBuyer for procurement and workflow functionality and Commerce One MarketSite for transaction-management and value-added services. The strengths of the Commerce One solution were Web-based usability, support for the Microsoft Windows NT platform, integration with SAP R/2 and R/3, and effective catalog management.

e-Sourcing dovetailed nicely with Eastman’s e-Procurement strategy. After analyzing the leading vendors, Eastman chose Diligent’s SourceSelect for its advanced functionality for supplier selection, its request for quote (RFQ) builder, and its multi-parameter analysis capabilities. Diligent’s product vision aligned with Eastman’s long-term plans for supply chain rationalization and management.

Deployment

With assistance from Andersen Consulting, Eastman deployed the Commerce One solution from project inception to pilot in four

months. In January 1999, the company began conducting transactions through the system in a limited pilot that included 50 requisitioners and its leading office supply distributor's catalog. Eastman has extended e-Procurement to 800 requisitioners across four U.S. sites and is processing 1,800 purchase orders (POs) per month through the system.

The system's online catalog enables users to search through 350,000 items ranging from office supplies and computer products to strategic MRO items. Eastman established rules within Commerce One EnterpriseBuyer to automatically translate any purchase requests below \$2,000 into a formal purchase order (PO). These POs are transmitted to Commerce One MarketSite, which uses the Web to channel PO and other communications to the appropriate supplier. (Purchases above \$2,000 are processed in Eastman's SAP R/3 system.)

Eastman has wisely married its e-Procurement rollout with an initiative to rationalize its supply base to a few, strategic supply channel partners that manage all Eastman's requirements for a particular product category, such as office supplies. As part of its supply channel strategy, Eastman has restricted the number of unique suppliers represented on the Commerce One system.

Eastman deployed Diligent's SourceSelect in August 2000 to identify and evaluate supply channel partners for indirect commodities. The company also used the Diligent system to negotiate long-term contracts with direct materials suppliers. All told, Eastman had run 11 sourcing events through the Diligent system by August 2001.

(It should be noted that Eastman has also used ICG Commerce to run an auction for commodity-level packaging materials; Moai Technologies to run auctions for select raw materials and energy; and the ChemConnect marketplace to access spot market prices for basic raw materials.)

For direct materials, Eastman is placing orders via supplier-hosted Web sites, such as Dow.com. The company has also established system-to-system integration from its SAP R/3 system to the order-management systems of strategic suppliers using industry standard eXtensible Markup Language (XML) and a WebMethods' server.

Results

Through the use of Commerce One's EnterpriseBuyer, Eastman has cut prices paid by 5% to 10% through increased contract compliance, shortened order-fulfillment cycles from a week to 24 hours, and lowered administration costs by \$100,000 annually through attrition-based reduced headcount. Commerce One MarketSite has cut transaction costs by enabling Eastman and its suppliers to

transition document exchange from costly electronic data interchange (EDI) value-added-networks (VANs) to the Internet. All told, Eastman was able to realize a 126% return on investment (ROI) on the Commerce One solutions in just 10 months.

The key benefit Eastman has realized from Diligent's SourceSelect solution is the ability to evaluate a larger group of suppliers based on a broader range of parameters than it could with its traditional, manual-based sourcing processes. This increased visibility into the cost structure of supplier bids has helped Eastman determine the total cost of doing business with a supplier. It has also reduced sourcing cycles by 25% — taking it from 4 months down to a few weeks. Eastman expects to cut sourcing cycles even further as its buyers and suppliers become more familiar with the Diligent solution. Such time reductions will free up Eastman's buyers to apply strategic sourcing to a broader range of expenditures.

Lessons Learned

Eastman has learned that technologies should be used to adapt and improve preferred business processes. Eastman is using Diligent for collaborative activities with suppliers, not just big corporate sourcing events. The company is using the platform to survey suppliers on capabilities and to handle routine communications that in the past were done by paper or telephone.

Future Outlook

Eastman plans to expand the use of both the Commerce One and Diligent solutions globally, with Commerce One BuySite being used in Singapore already. Eastman also plans to deploy Diligent Contracting to further solidify the link between its sourcing and on-going procurement activities.

In addition, Eastman is integrating the catalog-based e-Procurement system with its SAP R/3 system. Eastman is currently deploying a supplier hub that will allow suppliers who receive SAP R/3 generated orders to receive and respond to orders through acknowledgements, advance ship notices (ASNs) and invoices via a Web browser interface.

Aberdeen Conclusions

Eastman achieved the strategic supply chain vision it set for itself four years ago by establishing the technology infrastructure to streamline processes, gain leverage with suppliers, and improve supply chain visibility and communications. The company followed through by deploying e-Sourcing tools to ensure it was selecting an optimal base of supplier partners. This multi-faceted strategy places

Eastman among the e-Procurement Best Practice All-Stars. It is also presents a model other procurement organizations would be wise to emulate.

FedEx Taps e-Procurement to Keep Operations Soaring, Costs Grounded

Executive Summary

FedEx Corporation delivers nearly five million packages a day; this makes operations support at FedEx Corp. a mission-critical function. To keep all levels of operations — from delivery fleets to IT (information technology) infrastructure — in top-notch working order, FedEx needed to streamline and automate its paper-based procurement processes. FedEx chose Ariba Inc. to provide the technology infrastructure to support its e-Procurement initiatives and saw a full return on investment (ROI) within three months. FedEx was able to save time and money in purchase order (PO) processing, to achieve more competitive pricing from suppliers, and give its own employees better, if not overnight, response.

e-Procurement Best Practices

Company Name

FedEx Corporation

e-Procurement Solution Provider

Ariba Inc.

Process Time Savings

Purchase request to goods delivery: 17 to 19 days to two days, depending on goods

Process Cost Savings

Yes

Purchased Product/Service/Material Cost Savings

Up to 40%, depending on goods purchased

Additional Savings/Benefits

Able to re-deploy people to more strategic tasks, extend system to contractors

Company Background

FedEx Corp. is a \$20 billion global enterprise, consisting of FedEx Express, FedEx Ground, FedEx Freight, FedEx Custom Critical, FedEx Trade Networks and FedEx Services. FedEx has over 370 facilities in the U.S. and Canada alone, and a presence in over 211 countries worldwide.

In total, Fedex spends over \$7 billion dollars annually on indirect goods and services. These include office supplies, cell phones, pagers, food services and catering, delivery carrier supplies, vehicle parts, technology (such as PCs, routers and hubs), and books, magazines and other subscriptions.

Business Challenge

“Our business is getting a package from one place to another in a short time,” said Chris Cawein, manager of business systems at FedEx Express. “If we need something to get a plane off the ground, a truck on the road — anything that affects our organization — we have to make sure we have it.”

Although FedEx had a centralized purchasing infrastructure, the company relied on inefficient paper-based processes to manage indirect purchase requisitions, ordering, and fulfillment. When the company needed an item, FedEx employees would fill out purchase requests by hand and mail these to the central logging facility. Clerical employees would keypunch these requests into a home-grown tracking system where requisitions were assigned to a buyer. The buyer would try to source and buy the items requested, eventually creating a paper purchase order, which had to be keypunched into the legacy system as well. “It was a very labor-intensive and manual process,” said Cawein.

Selection Criteria

FedEx identified e-Procurement as a key strategy to automate and streamline the whole procurement process. In early 1999, FedEx evaluated a number of e-Procurement solutions based on three primary factors:

1. Ability to integrate with a heterogeneous computing environment;
2. Inclusion of dynamic workflow to deliver better control over corporate purchasing; and
3. Delivery of powerful reporting tools to facilitate spend analysis and purchasing pattern identification.

The company selected the B-to-B Commerce Platform from Ariba to satisfy these requirements, and for the ease of use of the Ariba Buyer system.

Deployment

Deployment went quickly; FedEx Express implemented the Ariba system within a month. The company was able to load its existing business rules and establish new rules in the same timeframe it took to simply map a new process and finalize a plan for business system implementation in the past.

FedEx began seeing a ROI, as processing requisitions — the time a person requests an item until the item shows up at the person’s

desk — shrank from weeks to days. While it previously took four to five days for a purchase order requisition to move through the approval chain and get signatures from the appropriate parties, approvals can now happen within one day.

To date, 12,000 to 13,000 employees have used the system, but FedEx plans to give 20,000 to 25,000 users access to the e-Procurement system. Additionally, the Web-based front-end allows any worker authorized to work on FedEx's behalf, such as outside contractors like auto mechanics that maintain the FedEx fleet in smaller cities, to also order through the e-Procurement system.

Eighty percent of U.S. Fed Ex employees have access to the system today; eventually over 220,000 people could be using the system, as FedEx expands its implementation to Europe, North Africa, Asia Pacific, and South America. Indeed, FedEx plans to expand e-Procurement to its other operating companies as well.

FedEx Corporation, FedEx Express, and FedEx Services, the sales, marketing, and the IT support unit, are currently using Ariba Buyer, but FedEx is aggressively rolling Ariba technologies out to all of the FedEx Corp. companies. This includes an implementation of Ariba marketplace offerings at FedEx Ground, where the opportunity for process and product cost savings among its network of buyers exists.

Results

Since the advent of Internet automation in purchasing at FedEx, overall purchasing cycle times have been reduced from 20% to 70%, depending on items purchased. For example, purchase requests for PCs have gone from taking 17 to 19 days to process to just two days.

Ariba Buyer has helped FedEx manage an increased number of purchase requests with fewer people. In addition, FedEx has been able to transfer procurement professionals to more strategic activities.

By implementing company-wide strategic sourcing initiatives three to four years ago, FedEx reduced the number of suppliers by more than half, from 90,000 to 110,000 down to 40,000 to 50,000. Of the 2,500 suppliers that FedEx does regular business with, 75 are currently enabled on the Ariba system. These Ariba-enabled suppliers represent FedEx's largest volume buys. The improvement in these contracts alone has saved FedEx money above and beyond the cost of the Ariba Buyer system.

The main ROI factor was additional competition among vendors alerted to new purchasing contracts with the Ariba Buyer product.

“Now suppliers know they are going head-to-head,” said Cawein, “so they very aggressively price products to gain business.”

For example, in the technology arena, FedEx has seen savings of up to 40% since it started purchasing PCs through the Ariba system. With FedEx spending \$378,000,000 on IT in its 2001 fiscal year that amounts to huge savings.

Today, only about 20% of FedEx’s 25,000 yearly requisitions go through the Ariba Buyer system; FedEx expects additional savings as purchases in other product areas start flowing through the system as well. The number of requisitions processed through the Ariba Buyer system will increase dramatically, Cawein noted, as the company steps up its compliance efforts over the next year.

Aberdeen Conclusions

FedEx Corporation had everything to gain by automating its procurement practices — money saved in processes, products purchased, and better response times to the day-to-day requests that keep the overnight leader in business. It was able to recoup the money invested in Ariba technologies quickly, and the savings are poised to grow, as it exemplifies what disciplined purchasing and well-informed sourcing can be. With just one-fifth of its procurement spend being automated and tracked through the system, FedEx should continue to expand its e-Procurement activities in terms of users, suppliers, and deployment footprint worldwide to garner even more buying benefits.

KMS Creates Supplier Portal to Better Manage Its Supply Chain

Executive Summary

Capital equipment manufacturing is an industry based on change. Faced with building high-value products with long production cycles, makers of heavy machinery, manufacturing equipment, and other capital products must juggle a vast array of parts and subassemblies, unique product configurations, complex logistics scenarios, and countless change orders. To be successful, these companies must manage a network of supply partners that can be rapidly assembled and dissolved, as needed, to provide optimal response to customer demand. Leading capital equipment manufacturers realize that such responsiveness depends on their ability to electronically communicate and collaborate with their supply bases.

Faced with this reality, Komatsu Mining Systems (KMS), a \$500 million global manufacturer of construction and mining equipment, last year moved to create a private, Web-based network that could both integrate with its existing Baan Enterprise Resource Planning (ERP) system and automate direct procurement processes with key supplier partners. In conjunction with SysComSoft, one of Baan's systems integrator partners, KMS created a Web-based supplier portal that exposes the company's ERP system to approved supplier partners, enabling a wide range of fully automated inter-enterprise processes — from basic purchase order (PO) exchange to joint-planning and scheduling. Based on the iBaan B2B Server platform, KMS's supplier portal has dramatically increased information

e-Procurement Best Practices	Company Name
	Komatsu Mining Systems, Inc.
	e-Procurement Solution Provider
	Baan
	Process Time Savings
	Reduced administrative tasks by 120 hours per week; cut parts lead times in half
	Process Cost Savings
Yes	
Purchased Product/Service/Material Cost Savings	
N/A	
Additional Savings/Benefits	
Increased supply chain visibility; improved responsiveness to changes	

visibility and provided process efficiencies for all supply chain participants.

Business Challenge

As a leading manufacturer of mining equipment, KMS prided itself on developing and delivering high-quality products ahead of the competition. However, elevated customer demands and increased competition were forcing KMS to develop new, highly customized products faster and at a lower cost than ever before. The manufacturer realized that meeting such demands would require dramatic improvements in how it managed and interacted with its direct materials supply base.

Aware of the successes early movers had transitioning certain business operations to the Internet, KMS set out to develop a private, Web-based portal that could facilitate communications and collaboration with its direct materials supply base.

Selection Criteria

Having deployed Baan's ERP solutions to automate and manage internal operations, KMS made integration into these systems a key requirement. "We wanted a single source of support for the e-Procurement product and our ERP solution," said Ken Ryburn, director of Information Technology (IT) development for KMS.

Considering these criteria, it is not surprising that KMS selected Baan's iBaan B2B Server, primarily because of its ease of integration with their existing ERP system. The iBaan B2B Server automates transmission of eXtensible Markup Language (XML)-based transactions over the Internet, giving KMS a standard method for exchanging standard business documents — such as POs and advanced shipping notices (ASNs) — with suppliers over the Web, regardless of their size or technological sophistication. The iBaan B2B Server also provided a platform to facilitate system-to-system process flows between KMS and its suppliers.

Deployment

Pioneering the supplier portal concept, KMS had no playbook to follow. At the time, Baan was still building out its Web-based iBaan suite of products and solutions from vendors that did not support the appropriate level of integration with KMS's back-end systems. Unwilling to wait for new functionality, Komatsu enlisted the expertise of SysComSoft, which had considerable experience deploying Baan solutions.

Komatsu mapped out the process flows for its direct procurement activities and identified how these processes could be represented

and improved through automation programming by SysComSoft. The resulting processes were instantiated in role-based workflows between KMS's Baan ERP solution and the iBaan-driven supplier portal. Authorized suppliers could access the supplier portal via a standard Web browser or download documents directly into their own business systems, in essence giving suppliers real-time access to Komatsu's ERP systems.

KMS and SysComSoft tested the fruits of their labor with a limited pilot of Komatsu's supplier portal in September 2000. At the time, KMS connected one dozen suppliers to the portal for the purpose of exchanging POs, order forecasts, order reports, and changes. By September 2001, 370 of KMS's most critical direct materials suppliers were enabled on the supplier portal, and the company had exchanged nearly 10,000 POs through the system. KMS continues to bring new suppliers online each week.

Results

One of the most dramatic benefits Komatsu has realized since deploying its supplier portal is reducing the time it takes to propagate changes in plans, forecasts, and POs. In the past, such changes were communicated via a disconnected array of electronic data interchange (EDI), faxes, mailings, and phone calls. For example, it was taking one week, on average, from the time a materials requirements plan was issued from its Baan system until a (PO) reached the supplier. By transmitting business documents via the supplier portal, KMS has been able to share production and purchasing changes to suppliers in real time.

Such visibility has cut cycle times for nearly all supplier-related activities. One example: KMS reported that since using the supplier portal, lead times for parts delivered from its core suppliers cut in half, dropping from more than 60 working days, on average, to 30 days or less.

The supplier portal is also driving significant productivity improvements within KMS. The company estimates that each buyer was spending about two hours a day managing paper-based communications with suppliers. Across the KMS buying group, the portal has saved nearly 120 hours per week in non-value-added time. In addition, KMS estimates that automating supplier interactions has eliminated more than 3,000 pages per month of correspondence that was once printed, faxed, and mailed to suppliers.

Suppliers have equally benefited from Komatsu's supplier portal. "In the past, suppliers received our plans by fax and had to rekey these into their own systems," said Ryburn. "Now they can download plans and orders directly from the Web in an Excel format

to do their own analysis of the data. We also give them a forecast report of the material we need in the future.” One supplier reported that it was saving 20 hours every other week merely from being able to download KMS’s forecasts into its systems instead of keying it in by hand.

Lessons Learned

“We recognized early that if we were going to get our supplier partners to participate in this [supplier portal] concept, we would need to provide them with some value in return,” said Ryburn. “This realization has been key to why our site is so successful in gaining supplier adoption and trust.”

Future Outlook

Building on its early successes with supplier-facing functionality, KMS is currently deploying capabilities to support the online exchange of detailed request for quote (RFQ) documents and engineering drawings via the Web.

The company also has plans to deploy functionality that will let suppliers create and print shipping labels directly from the portal. The next phase in this process will be to integrate radio frequency (RF)-based receiving functionality into its supplier portal so that items scanned with an RF scanner at the loading dock can automatically be registered in the system. Once operational, RF-based receiving will enable fully automated three-way match, audit, and payment of supplier invoices, eliminating KMS’s lengthy, manual, and error-prone settlement processes and giving suppliers immediate payment on product receipt.

And, with its iBaan-based supplier portal in place, KMS is considering deploying other components of the iBaan Procurement solution, including iBaan Portal, a buyer-side portal for the tracking and analysis of key performance indicators; iBaan Decision Manager, Baan’s data warehouse product; and iBaan e-Procurement, a workflow-based solution for the purchasing of engineering prototypes and indirect materials.

Aberdeen Conclusions

Komatsu’s supplier portal debunks the myth that e-Procurement is focused on squeezing more out of suppliers. On the contrary, KMS’s portal initiative is a model for effective supplier relationship management. Existing and planned enhancements to the supplier portal should position Komatsu to create and manage efficient supplier relationships that can effectively respond to the challenges of the complex capital-equipment manufacturing sector.

SPX Makes e-Sourcing a Key Driver of Its “Value Improvement Process”

Executive Summary

Companies in every industry are under increasing pressures to reduce costs, to compete globally, to shrink time-to-market cycles, and to deliver customer-specific products. The weakening global economy has magnified these pressures. In this hyper-competitive economic environment, the most successful companies will be those that can organize their assets to deliver consistently the right quantity of the right products to market at the lowest total cost and for the maximum profit.

SPX Corporation, a US\$5 billion global provider of technical products and systems, industrial products and services, flow technology, and service solutions, is acutely aware of these pressures — and is positioned to respond. The Muskegon, Michigan-based multi-industry firm has instituted an enterprise-wide “Value Improvement Process®” designed to streamline processes, reduce costs, and acquire, divest, and assemble assets for maximum customer value and profit. SPX’s procurement and supply chain operations have been key drivers of this initiative and its success.

SPX recently focused on automating its sourcing activities, tapping FreeMarkets to shorten sourcing cycles and to negotiate significant price reductions — all while maintaining a high level of quality and service within its global supply base.

Business Challenge

SPX is a fast-growing company with 34 business units and operations in 34 countries. The firm boasts a highly diversified product

e-Procurement Best Practices	Company Name
	SPX Corporation
	e-Procurement Solution Provider
	FreeMarkets
	Process Time Savings
	Yes
	Process Cost Savings
Yes	
Purchased Product/Service/Material Cost Savings	
10% unit cost reductions, on average	
Additional Savings/Benefits	
Increased buyers’ skill sets; standardized on global-sourcing strategies	

mix, ranging from storage area network products and telecommunications equipment to electrical transformers and vehicle components. As part of its value improvement process, SPX adjusts its operations — including acquiring and divesting businesses — in response to changing market demands. This “rightsizing” strategy has helped SPX remain among the top providers within the product and market sectors in which it competes. It also has forced the multi-national firm to devise strategies for managing an operational infrastructure that is constantly in flux.

Selection Criteria

To assimilate and control its diverse and geographically dispersed business operations, SPX has instituted corporate-wide procedures based on Economic Value Added (EVA) financial measurement methodology. The EVA methodology ensures that all business decisions and processes are aligned and executed for maximum profit. Procurement has played a leading role in SPX’s value improvement initiatives.

Unlike many large enterprises, SPX has maintained a decentralized purchasing structure, giving each business unit the autonomy to organize and manage suppliers required to meet the unique needs of the products it manufactures and the markets it serves. All of SPX’s purchasing groups participate in a global purchasing council that facilitates the sharing of procurement best practices.

While such efforts were well-intended, SPX could not ensure that its business units had the skills or resources to implement the best practices identified. The purchasing council viewed Internet-based sourcing as a means to elevate the skill set of buyers and to institutionalize common procedures across the enterprise.

The council set out to identify an e-Sourcing solution that would allow SPX to deploy best-in-class sourcing procedures and to achieve significant price (“unit cost”) savings while maintaining the integrity and quality of its supply base. After evaluating several vendors, SPX selected FreeMarkets for its product category expertise, for its proven sourcing methodologies, and for its considerable experience in creating and managing online negotiation events on a global basis.

Deployment

In April 2000, SPX licensed FreeMarkets’ FullSource solution, which includes FreeMarkets’ auction platform coupled with FreeMarkets’ supplier network, commodity expertise, and market-making and market operations services. This initial pilot returned an

average 15% reduction in unit cost, prompting SPX to roll out the FullSource solution on a global basis.

By August 2001, SPX had run more than 30 online negotiation events through FreeMarkets for a total of US\$150 million of purchases in 20 different commodity areas including metals, stampings, machining, transportation, and temporary labor. The company began using this solution at a single location in April 2000, running pilot events for printed circuit boards (PCBs), metals, castings, and wirings. SPX has been careful to use multi-parameter request-for-quote (RFQ) and auction formats to ensure that non-price factors — including quality, delivery, and switching costs — are amply considered in every sourcing event.

As SPX buyers grew more experienced with online negotiations, the company extended its license to include FreeMarkets QuickSource, a fully hosted software application that enables enterprises to create their own markets.

Results

Since deploying FreeMarkets, SPX has been able to achieve significant unit cost savings, ranging from 0.5% to over 20%, depending upon the commodity being sourced. SPX attributes such savings to the extensive knowledge FreeMarkets has in specific commodities and markets, as well as to the global accessibility of Internet-based auction technologies.

“Most of our divisions are in remote U.S. locations and could not reach a significant number of suppliers on a global basis,” said Bob Ward, Director of Global Sourcing at SPX. “FreeMarkets has given us the ability to evaluate and negotiate with suppliers in other parts of the globe.”

FreeMarkets’ ability to deliver enhanced supplier information and proven sourcing methodologies have helped raise the skill set of SPX buyers. It has also improved SPX’s processes for identifying and negotiating with suppliers. Prior to deploying FreeMarkets, SPX used a labor-intensive sourcing process that relied on faxes, e-mails, and phone calls. Supplier proposals were evaluated using basic spreadsheet applications, limiting the depth to which a buyer could compare and analyze suppliers’ bids.

With FullSource automating data collection, publication, and revisions, SPX’s buyers have been able to focus on more strategic tasks, such as qualifying new suppliers and thoroughly analyzing bids. These efficiencies have allowed SPX to apply strategic sourcing to spending areas — such as temporary labor, transportation, maintenance, repair, and operating (MRO) supplies — that previously had been overlooked due to time and resource constraints.

Lessons Learned

Knowing that continued success required widespread acceptance and adoption of the online sourcing model across its global enterprise, SPX utilized three strategies for rolling out FreeMarkets:

1. Enlist “C-level” executive support;
2. Target areas of spending that could return the greatest savings in the shortest amount of time; and
3. Continually monitor performance and compliance.

“Our chairman is very involved with the purchasing council and was an early supporter of this [e-Sourcing] initiative,” said Ward. “His support helped make adoption go a lot quicker. We also went after the low hanging fruit first in order to test the FreeMarkets model and to provide the greatest opportunity for savings and success. We constantly monitor the performance of our online negotiations, as well as our compliance, to ensure that negotiated savings are actually realized.”

Future Outlook

SPX will continue to use the FreeMarkets FullSource solution for complex negotiations and for penetrating new supply markets. Having gained familiarity with online negotiations, SPX will begin to manage sourcing events for routine and standard products internally, using FreeMarkets QuickSource tool. Together, these solutions offer SPX a common platform for further standardizing and improving sourcing procedures across the enterprise.

Aberdeen Conclusions

In less than a year, SPX has been able to realize significant sourcing-process improvements as well as multi-million dollar cost savings — without sacrificing the product quality or level of service it received from its suppliers. Aberdeen anticipates that e-Sourcing will be a major contributor to SPX’s continued efforts to drive value-based improvements across its diverse and geographically dispersed organization.

e-Sourcing Is Standard Operating Procedure at Sun Microsystems

Executive Summary

Time-to-market, technology innovation, and product quality are the yardsticks by which high-tech manufacturers have been measured. Electronic Original Equipment Manufacturers (EOEMs) that deliver the right products to market faster than the competition can realize greater profit margins and business volumes. However, the window for success in the high-tech sector is extremely narrow.

With product life-cycles measured in months and high-tech products losing as much as 20% of their value in a single business quarter, high-tech manufacturers have little room for error. Producing more product than the market demands can leave EOEMs with worthless inventory on their books. (Witness the billions of dollars of finished electronic goods and component inventories currently on shelves worldwide.) On the other hand, going to market without ample capacity can result in customer angst and missed sales opportunities.

Avoiding such risks requires EOEMs to quickly source the right amount of electronic components and assemblies at the lowest total cost. Unfortunately, sourcing cycles in the electronics industry average between three months and five months. In fact, even leading manufacturers report that the sourcing process can constitute as much as one-third of the time-to-market cycle for new products.

Faced with such challenges, Sun Microsystems Inc., a leading provider of computer hardware, software, and services, set out to speed and improve its sourcing procedures by deploying Internet-

e-Procurement Best Practices	Company Name
	Sun Microsystems, Inc.
	e-Procurement Solution Provider
	iPlanet, FreeMarkets, Procuri, ICG Commerce
	Process Time Savings
	Cut sourcing cycle times in half
	Process Cost Savings
Not available.	
Purchased Product/Service/Material Cost Savings	
Negotiated 20% unit cost reductions, on average	
Additional Savings/Benefits	
Improved sourcing discipline and process standardization; enhanced market data	

based sourcing and dynamic bidding technologies as part of its overall sourcing strategy. Mixing internally developed software applications from iPlanet, Sun's business software applications division, with commercially available e-Sourcing solutions from FreeMarkets, ICG Commerce, and Procuri, Sun has created an e-Sourcing framework that has helped cut sourcing cycles in half and reduce the unit costs of its direct materials by 20%. e-Sourcing has also helped Sun to instill discipline into its sourcing process and to access improved market intelligence.

Business Challenge

As a leading provider of high-end servers, computer equipment, and business software, Sun has always prided itself on getting high quality, innovate products to market first. Key to Sun's success has been its ability to identify and groom close relationships with leading electronic component and assembly suppliers. In recent years, increased competition and downward pricing pressures forced Sun to take a hard look at its cost structure — both internally and across its supply chain. Those challenges led Sun to develop a strategic sourcing program that could achieve four key goals:

1. Identify true market pricing for select commodities;
2. Make more informed sourcing decisions;
3. Shrink sourcing process cycle times; and
4. Drive process discipline and visibility — within Sun and across its supply base — into the request-for-quote (RFQ) creation and sourcing process.

Selection Criteria

Sun viewed e-Sourcing in general, and dynamic bidding in particular, as a key pillar of its sourcing strategy. An early adopter of emerging procurement technologies and strategies, Sun approached e-Sourcing cautiously, refusing to take risks with unproven applications or services. In fact, Sun's leading criterion for selecting an e-Sourcing solution was the success of the solution's previous deployments, particularly in the area of direct materials negotiations. Other factors weighing in Sun's decision included the depth of the solution vendor's market-making and dynamic-bidding knowledge, and the sophistication of the e-Sourcing or auction tool itself.

After surveying the market in 2000, Sun created a unique e-Sourcing framework that combined a mix of sourcing and reverse auction

technologies from FreeMarkets, Procuri, ICG Commerce, and iPlanet, a Sun-Netscape Alliance.

Deployment

Sun began its e-Sourcing initiative in May 2000 by running 15 controlled pilot events for particular direct materials, such as printed circuit boards (PCBs). The manufacturer quickly extended its e-Sourcing initiative to cover a wide range of direct materials parts and assemblies, and select, indirect expenditures, as well.

By June 2001, Sun had run 100 online bidding events involving trusted supplier partners from around the world. All told, during the first year of its e-Sourcing initiative, Sun ran dynamic bidding events for over US\$1 billion worth of materials and services online, making it one of the largest users of e-Sourcing.

Results

Through its e-Sourcing initiative, Sun has been able to negotiate annualized savings of 20%, on average, across all product areas. It is important to note that these savings reflect the awarded price, which was not always the lowest bid. Sun sourcing policy requires that awards be based on the total cost of doing business with a supplier.

Sun has also cut the cycle time for repetitive sourcing decisions in half, from six weeks to three weeks or less. However, Sun believes the biggest benefit of e-Sourcing is that it offers enhanced process control and consistency in the sourcing process across the enterprise.

“[e-Sourcing] has driven a higher level of discipline into our sourcing practice,” notes Tony Cavotta, senior manager of eSolutions and Dynamic Bidding at Sun. “It has helped us preserve our key supplier relationships and access more valid data.”

Suppliers have also benefited. Sun rationalized its supply base years ago, engaging in long-term commitments with a select group of supplier partners. As a result, Sun has primarily used e-Sourcing to automate, streamline, and enhance negotiations with its existing suppliers.

“[e-Sourcing] has provided our suppliers with greater visibility into our requirements and equal access to information,” Cavotta explains. “All suppliers are getting unbiased data on how they stack up against the market in real time.”

Lessons Learned

Sun strategically designed an e-Sourcing plan that simultaneously hedged risks and ensured compliance. Aware that the e-Sourcing

market was still in its infancy, Sun avoided tying itself to a single technology, instead using a mix of commercially available, proven solutions, and internally developed applications and sourcing methodologies.

Sun also knew that success relied on rapidly gaining participation both internally and among suppliers. According to Cavotta, “One of our big mantras has been process credibility. We recognize that if suppliers and internal participants don’t trust this process, the whole value proposition is blown.”

Sun’s procurement team gained support for e-Sourcing from the very top, with CEO Scott McNealy publicly advocating the value of dynamic pricing and online negotiations. The team also trained suppliers on the use of dynamic bidding systems and educated them on the value of e-Sourcing. However, the key reason for Sun’s success is the company’s early realization that e-Sourcing is about improving processes. “This is a change-management game,” notes Cavotta. “It’s not about software or technology; it’s about changing processes.”

Future Outlook

Buoyed by early results with e-Sourcing, Sun plans to establish dynamic bidding as a routine sourcing activity across all its business units and for an increasing number of commodities. The manufacturer also plans to integrate dynamic bidding solutions with related software applications, such as contract management and supplier score-carding systems. Finally, Sun plans to help its suppliers use dynamic bidding for their own sourcing initiatives, driving further process improvements and cost benefits across the sub-tier supply base.

Aberdeen Conclusions

Sun’s success demonstrates that adopting new technologies need not be risky. Using a well-defined strategy that includes garnering executive support and preserving supplier relationships, Sun was able to rapidly deploy an e-Sourcing framework that dramatically reduced costs, streamlined processes, and instilled sourcing discipline across the enterprise. Such achievements should help Sun in its quest to deliver the most innovative products to market faster and at a lower cost than its competitors.

UNICCO Deploys e-Procurement to Save Money and Win Customers

Executive Summary

As a facilities services company, UNICCO thrives by providing the materials and people that keep other businesses up and running. To support these needs, UNICCO has made the strategic decision to deploy elcom Inc.'s e-Procurement offering. UNICCO's goal was to use the elcom solution to keep UNICCO's business running efficiently, and to save time and money by consolidating and standardizing its almost \$90 million maintenance repair and operations (MRO) spend across North America.

The technology investment, coupled with process design improvements and a company focus on leveraging national programs, is paying off in saving the firm over a half a million dollars in the first six months of implementation, and cutting UNICCO's purchasing process cycle in half. The automated Web-based system has also given UNICCO an edge in securing new customers, as it is now able to offer clients quick access to necessary facilities supplies and services at the click of a mouse.

Company Background

UNICCO Service Company is a top provider of integrated facilities services to more than 2,000 commercial, industrial, and institutional clients throughout the U.S. and Canada. The firm offers a wide variety of services from administrative and office support; to specialized cleaning such as laundry, granite and marble, and drains; to heating, ventilation, air conditioning (HVAC), electrical system

e-Procurement Best Practices	Company Name
	UNICCO Service Company
	e-Procurement Solution Provider
	elcom inc.
	Process Time Savings
	Weeks to days
	Process Cost Savings
Cut PO process costs by 40%	
Purchased Product/Service/Material Cost Savings	
\$500,000 in first six months	
Additional Savings/Benefits	
Improved data gathering and system integration	

and lighting installation; to buildings, grounds, plant, and vehicle maintenance.

Employing 20,000 people across North America from 16 offices in the U.S. and five in Canada, UNICCO has revenues of more than \$600 million annually. Citing 25% of the Fortune 100 as clients, the company prides itself on being responsive to customers, boasting one of the highest retention rate in the facilities services industry with 20 of its largest accounts doing business with UNICCO for an average of 10 years.

Business Challenge

UNICCO has an annual spend of \$160 million, with \$85 to \$90 million going to MRO materials. Thirty-five percent of its MRO spend is for subcontracted work it farms out to partners, like landscaping and security services. The company processes over 100,000 purchase orders (POs) annually, using 9,000 active suppliers. Hundreds of employees are empowered to purchase goods, which contributes to the fact that 80% percent of its invoices are for less than \$300.

Despite such high purchasing volumes, however, UNICCO had a decentralized procurement organization, relying on paper requisitions and POs. Independent business units managed their own purchasing, often working with local suppliers, in the face of corporate attempts to establish national contracts. This resulted in a high degree of maverick spending, ranging from 75% to 80%.

Overall, communication was poor between requisitioners and procurement officers within the business units, as well as between the procurement departments and suppliers. And with no real comprehensive centralized vendor management programs in place, UNICCO could not enforce procurement policies, nor negotiate preferred rates with suppliers for volume business across organizational units.

“We weren’t getting the bang for our buck leveraging our national spend,” said Jeff Peterson, Vice President, Information Technology/Shared Services. “We needed to push to create national programs and put the technology in place to support a standard process.”

In addition, UNICCO anticipated a considerable increase in purchasing workload as the company experienced 6% to 7% revenue growth each year. With the existing procedures poorly managed and disjointed, UNICCO needed a company-wide solution that would facilitate national purchasing reporting and vendor management.

Selection Criteria

UNICCO addressed its need for an e-Procurement solution in early 2000 as part of an overall business process re-engineering initiative to create a shared services business model for its separate business units. Purchasing was to be one of the first shared services to be deployed, and UNICCO wanted a system that was easy to use, could be implemented quickly, and did not have to be built internally.

UNICCO selected elcom Inc.'s PECOS Internet Procurement Manager (PECOS.ipm) as its e-Procurement platform because the remotely-hosted solution eliminated internal IT commitments, in terms of both development and maintenance efforts. Its application service provider (ASP) model was also important to UNICCO because it represented a "practice what you preach" solution for the company as a provider of outsourced services.

elcom's supplier enablement initiatives also attracted UNICCO's interest. elcom partnered with Arthur Andersen to offer "Supplier Summits" where the companies bring together all of a customer's suppliers to educate them on what they need to do to participate in the e-Procurement system by way of catalog content and receiving orders. This approach took all the "heavy lifting" away from UNICCO, which didn't have to worry about on-going content and system maintenance.

Finally, the PECOS Internet Procurement Manager was able to integrate with UNICCO's existing Enterprise Resource Planning (ERP) system from JD Edwards. UNICCO wanted a sophisticated workflow that could tie the necessary approvals and budget integration into its back office as well.

Deployment

UNICCO kicked off the PECOS.ipm implementation process in October 2000, rolling it out in a three-month pilot program with 60 users at two business units. Full deployment was reached by July 2001, with over 300 users trained and 100 people currently using the system. UNICCO has set a target of 500 employees empowered to use it in total.

UNICCO has 40 supplier catalogs so far, with another 20 to 25 pending. The goal is to get 100 to 200 suppliers in the biggest spend areas with online catalogs or via punch out technology to facilitate vendor management and control. The purchasing department then plans to negotiate discount prices moving forward.

So far, UNICCO has automated the purchase of areas such as janitorial supplies and equipment, industrial supplies and equipment, computer supplies, shipping services, and copy services. Currently,

20% of total spending is going through the system, which Peterson attributes to its relatively early application life cycle stage. However, he is making a big push in compliance efforts this year, and hopes to eventually see 75% to 80% of total spend being processed online. UNICCO also uses P-cards for specific service categories and is looking to integrate that buying channel into the elcom solution.

Results

Overall, Peterson noted implementing an e-Procurement system has shown UNICCO lowered administration costs, improved data gathering, increased purchasing contract compliance, reduced requisition cycles and improved systems integration.

In hard-dollar savings, UNICCO was able to recoup \$500,000 in product cost savings from better commodity analysis and aggregate spending with just 25 suppliers. The system has allowed the firm to better manage its spend and negotiate reductions above its normal preferred vendor discounts.

The biggest internal plus for UNICCO has been improved transaction management, dropping administrative costs 40% per purchase order. Cycle times have decreased dramatically as well — while in the past requisition process times varied from site to site, the worst case scenario has gone from “months and weeks” to receive goods, to “days and hours,” Peterson said.

In addition, PECOS.ipm now gives UNICCO better data on what is being spent and where. In the past, the little purchasing data that was captured in the enterprise resource management (ERP) wasn't coded correctly and it couldn't be analyzed accurately.

“It was like pulling teeth, getting information out of our ERP system in the past,” said Peterson. “Now we can hold suppliers accountable.”

UNICCO also sees having an e-Procurement solution as a strategic advantage. It gives the company more credibility with customers, as UNICCO provides the opportunity to clients to buy MRO material through its own channels. Peterson attributes having an e-Procurement system as a contributing factor in winning some new key accounts.

“If you are not in the e-Procurement game in our industry, the high-profile customers look at you kind of funny,” he concluded. “The implementation of an e-Procurement process and solution is part of building an e-Business framework, which provides customers the account management tools to help manage facility costs.”

Aberdeen Conclusions

UNICCO had no excuse for manual procurement procedures given its status as an outsourcing services organization with responsibility to provide the products and personnel to keep organizations running efficiently. So indeed practicing what it preaches, UNICCO took advantage of the outsourcing model to deploy e-Procurement through elcom, which was quickly and efficiently able to step in and set up and run the system, as well as enable suppliers. UNICCO has set a goal of reducing suppliers by 50% in implementing e-Procurement, and should follow through in streamlining its vendor base by at least that amount. With half a million dollars in savings to date, the company is poised to reap considerably more unit cost reductions as it truly consolidates and controls its spend across North America.

Author Profiles

Tim Minahan, Vice President, Supply Chain Research

Minahan provides analysis and assessment of business-to-business Internet commerce and EDI solutions for procurement, sourcing, logistics, and supply chain management. He specifically focuses on supply chain and procurement technology solutions that drive unit cost savings, reduce process costs and cycle times, support self-service procurement capability, integrate with key back-office and trading partner systems, and provide metrics that enable management to improve design and administration of the supply chain and to better utilize corporate purchasing dollars. Minahan continually consults with early implementers of these applications to identify world-class supply chain and e-Procurement strategies and to determine the strengths and weaknesses of technology solutions and services that are competing in the supply chain software market.

Minahan recently published a research report on e-Sourcing, and he has completed survey research on e-Procurement user experiences, solution functionality, and catalog management functionality. He is currently conducting research into end-user experiences with e-Sourcing and auction technologies as well as functionality research of leading Logistics Resource Management (LRM) solutions.

Minahan joined Aberdeen after a decade of researching, reporting, and advising on procurement, supply chain management (SCM), e-Commerce, computer policy, and technology issues. He previously served as senior editor of SCM for *Purchasing* magazine, editor for *Electronics Purchasing*, and a technology reporter for *Government Computer News*. Minahan has a B.A. from Boston College.

Christa Degnan, Research Analyst

Degnan researches the purchasing requirements and indirect spend of businesses, government agencies, and educational institutions. She analyzes how these organizations can optimize their operational dollars. Degnan then consults with the software vendors and service providers that support the automation of the procurement and expense management processes online to help them develop and position their offerings to best meet end-users' business needs.

Degnan has conducted survey research on e-Procurement user experiences and the functionality of software and service vendors' solutions. Her findings were published in the Market Viewpoint,

e-Procurement: Finally Ready for Prime Time (March 2001). She has also worked to quantify the specific benefits of e-Procurement implementations via case studies in the banking and healthcare industries, as well as in South East Asia. Most recently, Degnan studied early efforts to automate the purchase of complex business services such as travel, printing, and contract labor, and she discussed the drivers of this emerging market in the Executive Viewpoint, *Thinking Outside the Catalog: Online Services Procurement (OSP)* (October 2001).

Degnan brought nine years of experience in the technology industry to Aberdeen, including reporting beats on Internet business applications at *PC Week* (now *eWeek*) and a New England regional technology paper, *Mass High Tech*. Most recently, Degnan was the managing editor of *Computer.com*, where she was part of the team responsible for architecting and implementing the content/commerce/community Web site. Degnan holds a B.A. from Barnard College, Columbia University, incorporating studies at University College, University of London.

Appendix A:

Lexicon of Acronyms and Abbreviations

API	Application Programming Interface
APS	Advanced Planning and Scheduling
ASP	Application service provider
ATP	Available-to-promise
BOM	Bill of Materials
BPN	Business Process Networks
BTO	Build-to-order
EAI	Enterprise Application Integration
ERP	Enterprise Resource Planning
JIT	Just-in-time
LRM	Logistics Resource Management
MRO	Maintenance, Repair and Operating
MRP	Material Requirements Planning
PO	Purchase Order
OSP	Online Services Procurement
RFI	Request for information
RFP	Request for proposal
RFQ	Request for quote
SCEM	Supply Chain Events Management
SCM	Supply chain management
XML	eXtensible Markup Language

Appendix B:

Related Aberdeen Research

Aberdeen Group has produced several publications that provide complementary market research and strategic market information relating directly to e-Procurement:

- *Logistics Cost Management: Speeding Global Business*, White Paper (May 2001);
- *e-Procurement: Finally Ready for Prime Time*, Viewpoint (March 2001);
- *Strategic e-Sourcing: A Framework for Competitive Advantage*, Report (March 2001);
- *Logistics Resource Management: It's Not Just About Moving Goods Anymore*, White Paper (September 2001); and
- *Thinking Outside the Catalog: Online Services Procurement*, Viewpoint (October 2001);

Information on these and any other Aberdeen publications can be found at www.aberdeen.com or by e-mailing info@aberdeen.com.

Appendix C: **e-Procurement Vendor Contact Details**

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Mountain View, CA 94043

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www.ariba.com

Baan

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P.O. Box 41
3780 BA Voorthuizen
Netherlands
+31 342 47 7500
www.baan.com

Diligent Software Systems Corp. (formerly Webango Inc.)

3508 Bassett Street
Santa Clara, CA 95054

(408) 562-9925

Commerce One Inc.

CarrAmerica Corporate Center
(Buildings #1 & #4)
4440 Rosewood Drive
Pleasanton, CA 94588

(800) 308 3838
www.commerceone.com

FreeMarkets Inc.

FreeMarkets Center
210 Sixth Avenue
Pittsburgh, PA 15222

(888) 434-0500
(412) 434-0500
www.freemarkets.com

elcom inc.

10 Oceana Way
Norwood, MA 06062

(800) 446 9904
www.elcom.com

iPlanet e-Commerce Solutions

901 San Antonio Rd.
Palo Alto, CA 94303

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ICG Commerce Inc.

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Tradec Inc.

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