white paper

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B2B E-Commerce Comes of Age and Drives Shareholder Value

The refrain is now common. Business-to-business (B2B) e-commerce is exploding. Trillion-dollar market estimates by 2003 and 90% compound annual growth rates are causing the bright spotlight that used to shine on business-to-consumer (B2C) companies to shift to B2B opportunities. Three years ago the story was AOL and Yahoo. Two years ago, it was Amazon. Last year it was eToys and eBay. This year it is Ariba, Chemdex, Commerce One, and VerticalNet that have broken through the mindshare clutter. While the B2C milestones have helped define technology standards, transaction capabilities, buying experiences and business models, we believe that B2B e-commerce will be the vehicle that truly delivers on the promise of the Internet.

Awakening of the B2B Slumbering Giant?

The emergence of B2B e-commerce is similar in magnitude to the industrial revolution that spawned new manufacturing methods, distribution channels, and buyer-supplier relationships. Similarly, B2B e-commerce represents another revolution that is fundamentally reshaping business relationships and is causing dramatic shifts in channel power as information and communication imbalances disappear. Moreover, just as B2C e-commerce empowered consumers and several nimble retailers with more commerce options and lower costs, B2B e-commerce is presenting buyers and suppliers with compelling value propositions to both lower transaction costs and increase the value captured in business relationships. These value propositions are opening the door to a new set of players that focus on facilitating buyer and supplier adoption of e-commerce capabilities.

To be clear, businesses are in the very early stages of e-commerce adoption. The underlying technology is still being refined. Businesses predicated on new models are being introduced daily, hoping to deliver innovative value propositions. Companies such as Celarix and Electron Economy, which are focused on solving supply chain and fulfillment complexity, are only now emerging.

So what? What's in it for me? Plenty. Electronic commerce presents opportunities to increase revenues and decrease supply chain and customer relationship costs, translating into higher margins that deliver higher shareholder value – key drivers of the CEO agenda. For visionary entrepreneurs, e-commerce presents an opportunity to create new businesses, new industries, and enormous value for their investors and customers.

In our conversations with executives and entrepreneurs we cover a common set of questions. What does the e-commerce solution and competitive landscape look like today? What trends are driving e-commerce adoption and marketplace evolution? How can I leverage the Internet and e-commerce opportunities to create value? This article explains how the diverse, competitive, and complex landscape is being driven by the rate of buyer and supplier adoption of e-commerce practices in different sectors. Moreover, we discuss the paths, pitfalls, and benefits associated with embracing e-commerce opportunities.

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Section I – A Snapshot of B2B E-Commerce in the New Millennium

B2B E-Commerce Today – New Economics and New Channel Powers

Since the advent of the Industrial Revolution, one paradigm has reigned supreme in business-to-business commerce – supplier power. In recent years, some very large corporate buyers such as AT&T, Compaq, and General Motors recognized that their buying volume granted them certain channel powers that allowed them to dictate pricing and service levels for some commodities. However, strategic sourcing luxuries are reserved for only the largest buyers and only for a limited number of commodities. The time and expense associated with gathering expenditure data, negotiating new pricing with suppliers, and then managing contracts have been undertaken by many large corporations only to find that the benefits don't stick. Although they may have negotiated lower prices, the true benefits can be elusive if they are unable to deliver the enterprise's demand.

The Internet is inverting the economics of procurement. Electronic commerce technologies are not only extending traditional value propositions to new classes of buyers and suppliers, they are also presenting entirely new value propositions. Buyers have access to more information, buying tools, and electronic access to suppliers. This translates directly into better commodity pricing and lower transaction costs. Additionally, new channel intermediaries are providing buyers large and small with access to these value propositions as well as providing significant value to suppliers such as increased access to qualified customers, lower transaction, and customer service costs. The result of these changes? Channel power is shifting to Internet-enabled buyers and the new intermediaries, B2B marketplaces.

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E-Commerce Value Propositions Are Spreading Rapidly – First Suppliers, then Buyers, then B2B Marketplaces

Supplier-Centric Developments

First suppliers published information on the Web. A simple value proposition: publish brochure-ware on the Internet and make it easier for customers and potential customers to access and less expensive to update. Then suppliers such as W.W. Grainger, the nation's leading business-to-business distributor of maintenance, repair, and operating supplies and related information, recognized an opportunity to expand sales volume by providing transaction capabilities on their Web site. About the same time, companies such as Dell and Cisco turned to e-commerce to reduce sales and service support costs by transferring sales to the Web and away from costly call centers and field sales representatives. Other suppliers, such as Ingram Micro, a wholesale distributor of computer-based technology products and services, adopted electronic auctions to achieve better excess inventory disposition pricing. As in the past, benefits accrued to the suppliers. However, as more suppliers came online, pricing differences became easier for buyers to access due to lower search costs. With this buying came the often tedious need to surf multiple supplier Web sites to compare pricing, service level, and quality, and it presented new challenges in controlling off-contract buying. Could there be a better way?

Buyer-Centric Developments

These activities were closely followed by the availability of Web-enabled tools designed to meet buyer needs. Electronic procurement software packages were developed by companies such as Ariba and Commerce One to create process, demand management, information, and transaction efficiencies for large buying organizations. British Telecom, CIBC, Citigroup, Chevron, Eastman Chemical, FedEx, and Transamerica are a few of the Fortune 500 companies with the resources and buying power to deploy enterprise-level e-procurement systems. While implementation of these systems combined with the required process and organizational changes can often cost millions of dollars, these changes can translate into considerable benefits. And despite initial concerns, suppliers found that they to were able to achieve broad benefits as well by conducting business online. These benefits included: lowers sales costs combined with broader reach, accurate electronic orders, better customer service, the potential to plan production around demand, and more.

B2B Marketplace Developments

B2B marketplaces are the frontier that promises to extend buyer benefits beyond the Fortune 500 and offer new value propositions to Fortune 500 buyers. These new supply chain or channel intermediaries are also positioned to provide benefits to suppliers, large and small. Smaller buyers benefit from lower published pricing and product search costs. Buyers of all sizes are benefiting from better pricing by employing reverse auction tools and electronic requests-for-quotes facilitated by such companies as BizBuyer, Commerce One, and Moai. These solutions allow buyers to access far more suppliers than ever before and use e-commerce tools, data, and strategic sourcing to rationalize their supplier base. Suppliers win also by gaining access to new classes of buyers and are experiencing lower transaction costs through intermediaries such as Chemconnect and PlasticsNet.

With that said, B2B e-commerce is in its infancy. Channel power struggles are uncertain. Will buyers win? Will new intermediaries dominate or fail? Will sup-

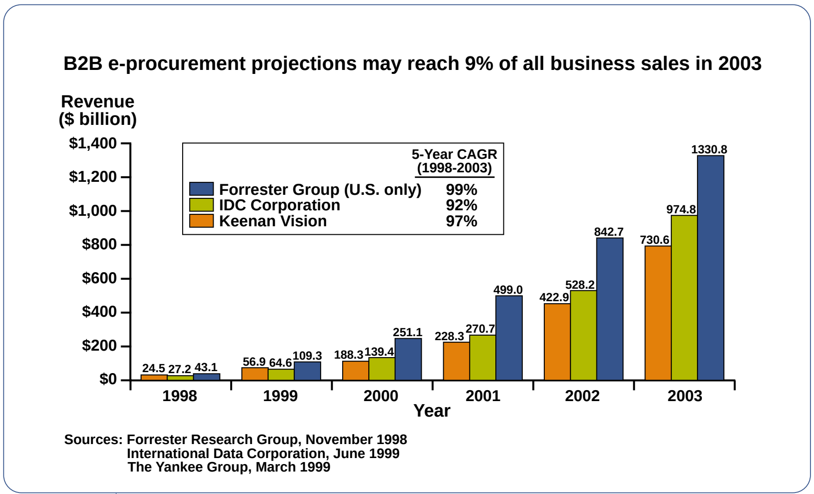

Figure 1.0 **B2B growth projections**

pliers reassert their power? Moreover, the ability to scale buying activity and supplier connectivity, and navigate the myriad fulfillment challenges is still unproven. Where will buyers congregate? Will integration with suppliers ever allow widespread or true real-time price, inventory, and order-tracking capabilities? Will B2B companies succeed in fulfillment where B2C companies to date have come up short?

Section II – B2B E-Commerce Moving Forward

Which Catalysts are Defining the Evolution of E-Commerce?

Executives, entrepreneurs, and venture capitalists are all placing bets on how the market will evolve and who will be on the winning end of the channel struggles. To answer these questions and others, Andersen Consulting has developed a scenario planning framework around traditional purchasing practices, three new marketplaces listed above (supplier-centric, buyer-centric, B2B marketplaces) and the catalysts driving e-commerce today: buyer and supplier adoption rates. With each scenario comes different business and operating models, value propositions, and vendor solutions.

The two factors that Andersen Consulting believes will determine the rate at which we arrive at the trillion-dollar e-commerce world are:

- Buyer B2B adoption rate: the extent to which buying organizations are able to migrate from paper-based or EDI platforms to automate B2B transactions using e-commerce enablers and new market mechanisms.
- Supplier B2B adoption rate: the extent to which manufacturers, distributors, and other intermediaries are able to use enabling technologies and new business models to deliver new value to their customers and themselves.

Taken together, these two factors identify the four market scenarios in which organizations currently are transacting and could transact. Four marketplace scenarios define how buying and selling organizations will transact in B2B e-commerce: traditional, supplier-centric, buyer-centric, and B2B marketplaces (see Figure 2.0).

Today each of these worlds exists in varying stages of development. Market leaders and innovators are aggressively in "land grab" mode trying to execute new business models and lock in major customer segments. For instance, Ariba, Commerce One, and Oracle are battling for Fortune 500 clients for their procurement application software. Ford's AutoXchange is competing head-on with General Motor's TradeXchange to create electronic trading markets in the automotive industry. Chemdex and SciQuest are battling to attract a critical mass of researchers in the life sciences arena. Metalsite and eSteel are battling in the metals segment. And while this is going on in the United States, similar competition is emerging in other parts of the world, such as Ariba and Telefonica teaming up against Commerce One and Banacci to create Latin American e-commerce marketplaces.

Traditional Scenario – Suppliers and Large Buyers Win

The lower left quadrant represents everything that you would expect of the pre-Internet and pre-e-commerce era. It is a world of paper-based solutions and supplier-dictated pricing. Because of their cost and complexity, EDI connections that rely on proprietary networks are suitable for only the largest corporations and generally are reserved for key production resources. Relationships here are fragmented, and there is considerable informational disparity between buyers and suppliers. In general, suppliers have an information advantage and, therefore, channel power. Only very large buyers such as Fortune 500 companies can set their own prices and then only for a small subset of commodities. For the balance of commodities, Fortune 500 and most other buyers are price takers – that is, suppliers control the price and service umbrellas for products and services.

Supplier-Centric Scenario: Early Inroads in B2B E-Commerce

As the Internet became commercially viable, the first B2B e-commerce wins came from seller-centric offerings in the upper left quadrant. Suppliers recognized opportunities to make old practices more efficient and maintain their one-to-many relationships that they had cultivated. Buyers in turn were forced to access multiple Web sites to conduct buying. Going forward, this quadrant will continue to provide suitable solutions for small and mid-sized businesses, but will only serve large buyers on rare occasion. Companies such as Dell, W.W. Grainger, and Works.com are well positioned to succeed in this space. Moreover, most suppliers will reap benefits from additional spot-buy sales and lower transaction and customer service costs as a result of having a presence of this sort.

Buyer-Centric Scenario: Introducing the "Electronic Avon Lady"

While some suppliers were investing to publish electronic catalogs, early adopters of intranet buying solutions were forcing other suppliers down this same path. Ariba and Commerce One have defined the buyer-centric world in the lower right quadrant by developing applications to streamline many-to-one buying for Fortune 500 companies. They provide strong buyer value propositions in demand management and process savings. Buyers in this category are large enough to negotiate terms that even the largest commodity suppliers are willing to concede. As a result, large volume buyers have become price makers. With that said, the suppliers learned that being price-takers was not all bad. Not only do they gain greater market share within these corporations, but they also are able to reduce sales costs, reduce order entry errors, receive faster payment, and optimize production based on real-time market demand.

Buyer-centric solutions, however, are designed for large enterprises. In fact, the original solutions were available only in enterprise editions with price tags in the seven digits. Buyer-centric solutions focus on aggregating large catalogs of commodities from existing suppliers and placing them in searchable databases where buyers can easily access items and create purchase orders. The considerable effort involved in establishing these systems, reliance on process and demand management savings, and their high cost make buyer-centric solutions inappropriate for most small or mid-sized businesses. But what about organizations that lack the procurement volume to invest in e-procurement? What about organizations unwilling or unable to spend millions to make procurement more efficient? Is there anyway they can access e-commerce value?

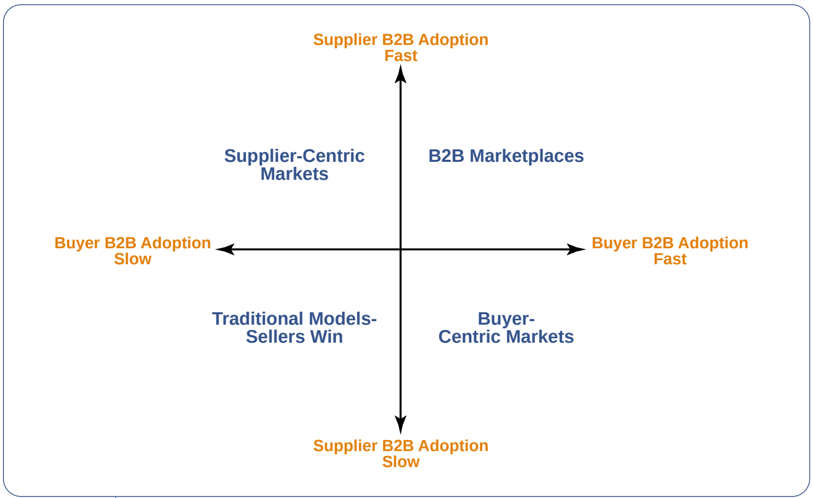

Figure 2.0 **B2B marketplace scenarios**

B2B Marketplaces Scenario: Creating Entirely New Buying Alternatives

The upper right quadrant consists of entirely new business models and new businesses. Some have a bias in favor of suppliers. Some have a bias in favor of buyers. Some claim neutrality. What they intend to do well is bring together previously fragmented communities of buyers and suppliers through many-to-many platforms. These communities can be designed for large or small companies and potentially for both. Unlike the buyer-centric scenario that requires large capital investments for "inside the firewall" solutions, we are now seeing a variety of hosted services and procurement portals targeting both horizontal and vertical markets with transaction-based pricing instead of the seven digit up-front costs.

Winners in this space will organize communities in industries with thousands of buyers and suppliers to facilitate trade. They will provide tools to manage information, suppliers, and customer relationship management activities, to buy and sell more efficiently as well as publish industry-oriented content. Moreover, they will provide multiple value propositions to both suppliers and buyers.

B2B Evolution – Favoring Buyers or Suppliers or Both

Three strategies are emerging as viable options for businesses in each of the quadrants:

- Focused entrenchment
- Migration
- Multiple markets

Focused entrenchment: A focused entrenchment strategy involves making a decision to either help buyers or suppliers, and requires a company to be dedicated to one quadrant. Companies such as Harbinger, a worldwide provider of business-to-business e-commerce software, services, and solutions, are committed to helping suppliers navigate e-commerce complexity by deploying, maintaining, and even hosting electronic catalogs. Moreover, marketplaces such as ChemConnect have no intention of committing solely to supplier-centric or buyer-centric solutions, but are committed to developing many-to-many trading communities.

Migration

Migration strategies are being employed by companies that are either not succeeding in the quadrant they originally entered or are seeking greater opportunities in an adjacent quadrant. For example, Elcom, a company that develops, licenses, and uses Internet-based e-procurement systems, has not achieved broad recognition or critical mass in the buyer-centric market. However, they have recognized an opportunity to use their buying platform as a hosted solution that could be offered to large or mid-sized companies. Moreover, they took the additional step of developing StarBuyer, an online catalog with public pricing where customers can buy goods and services through a single interface. These actions are moving Elcom away from the buyer-centric to the B2B marketplace arena.

Multiple Markets

At this point, however, many companies are not willing to commit to one quadrant because of the tremendous opportunities available and the usefulness of their technologies in multiple markets. From the onset, Commerce One developed a platform that was suitable for buyer-centric solutions or B2B marketplaces and have customers in both quadrants. Ariba, the early leader in buyer-centric e-procurement solutions, recently acquired Tradex to give itself more functionality and a greater presence in the B2B marketplace arena. Aspect Development, whose solutions provide digital catalog content management and decision-support tools for high-tech industries, not only deploys and maintains catalog content for suppliers, but also is spawning vertical marketplaces for many-to-many communities. Moai Technologies is providing auction software for large suppliers and for B2B marketplaces. Straddling multiple markets is attractive, but it carries inherent risks for those companies with limited time and resources. The largest, most aggressive businesses employing this strategy will succeed while others will be forced to adopt an entrenchment strategy as competition and resource constraints begin to take a toll.

Section III: Opportunities for Delivering Shareholder Value

So where is the value and what should I do to capture it? The first place to start is procurement of indirect goods. This section describes the types of benefits organizations can achieve, likely migration options for capturing value, a number of enablers required for success and several barriers that will threaten the process.

Early adopters that have combined strategic sourcing with e-procurement have been able to achieve savings of 10 to 30% per billion of indirect goods and services purchases by changing the way they buy. Benefits from transforming procurement fall into the following categories:

- Reducing price paid by consolidating

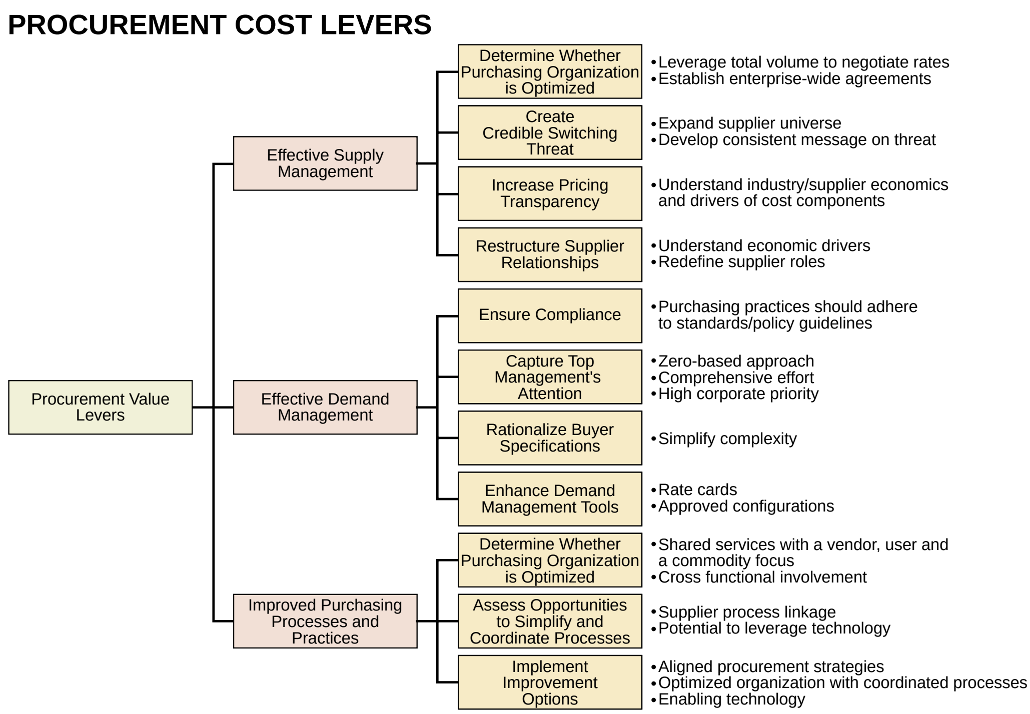

Figure 3 .0 **Procurement Cost Levers highlight the different ways in which organization can track the benefits that come from transforming procurement.**

purchases enterprise-wide with suppliers who can deliver with the lowest total cost of ownership
- Reducing the cost of buying by centralizing and streamlining processes while providing business users the ability to self-service their own demand
- Buying less and better (managing demand) by proactively influencing business buyers to buy what they need from the preferred suppliers
- Managing suppliers by proactively generating information automatically as a by-product of day-to-day transactions that provides real-time knowledge and feedback
- Growing revenue by extending complementary procurement service offerings that increase your customer's or supply chain partner's profitability and effectiveness

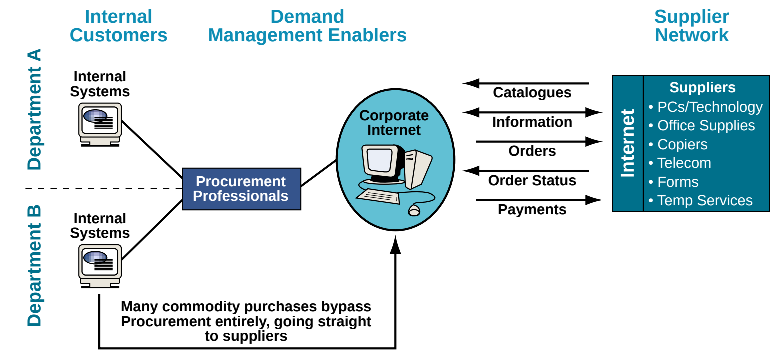

Figure 4.0 **New E-Procurement Operating Model**

Migration Options for Buying Organizations

Most large organizations are starting in the lower left (traditional) quadrant when it comes to indirect procurement. There are several migration paths organizations are taking in search of procurement related savings. While some give the appearance of savings, they may in fact drive costs and overall spending up.

Option #1- Seller-Centric Panacea (Buyer Beware)

Devoid of an overall procurement strategy, decentralized buying organizations are likely to take advantage of supplier-centric Web sites to order directly. While this gives the appearance of effective procurement, there are a number of drawbacks to this strategy:

- Fragmented buying across multiple suppliers – failing to have enterprise-wide sourcing – suppliers now proliferate as buying divisions go online with their favorite suppliers.
- Perception of decentralized control – decentralized organizations further strengthen their claim on procurement and likely develop redundant, non-standard purchasing systems and drive up costs.
- Potentially increased spending – with this access, it is likely that spending will increase, due to a lack of an overall approach to proactively manage demand.
- Minimal buying information – suppliers now control spending data leaving clients with the only option of "reading the accounts payable tea leaves" to try to understand where and with whom they are spending.
- Lost control – left decentralized, the corporate CFO has little power and finds the organization cannot manage procurement effectively.

Decentralized buying is the CFO nightmare that is now being addressed by many large organizations. Given the need for bottom-line profits, many CFOs find it unacceptable not to be able to answer easily the questions "What are you spending? With whom? For what?" Increased financial pressure will mean more organizations will find this situation untenable. Some may resort to strategic sourcing to rationalize suppliers and negotiate lower prices, which may be a good short-term strategy, though experience shows that savings are rarely sustained without launching similar initiatives every three years. So what options do they have for more fundamental change and recurring savings?

Option #2- Buyer-Centric E-Procurement Solutions (Transform Thyself)

Many organizations will decide to adopt buyer-centric solutions found in the lower right quadrant. This is typically driven by corporate and divisional CFOs in industries that are under pressure to deliver increases in the bottom line. Ideally, many of these organizations have engaged in strategic sourcing but find that they cannot make the benefits last without e-procurement. With these solutions, they can now publish catalogs with preferred supplier deals on desktops enterprise-wide, allowing commodity users to interact and transact with the assistance of automated approval workflow.

Andersen Consulting can help these organizations to develop new e-procurement operating models (see Figure 4.0) which transform procurement end to end. Such models combine "inside the firewall" infrastructure with Internet communications directly to suppliers. More specifically, they rely on:

- The application to gain access to customized catalogs with pre-negotiated items and prices from preferred suppliers
- The intranet to consolidate the organization's buying with electronic desktop catalogs, automated approval routing, and integration with financial systems

- The Internet to check availability electronically, place orders, track order status, and make payments

Underlying this new business model are a series of key enablers:

- Intranet-enabled processes to reduce the cost of buying and selling through the use of automated workflow, electronic catalog access, ordering, and more
- Enterprise resource planning systems integration to provide critical information, enable workflow, capture critical information, link with general ledger and financial systems, and generate management information
- Technology infrastructure to provide the networks and connections to allow information to flow seamlessly within and outside the enterprise
- Change management to initiate fundamental behavioral and organizational change required to realize and sustain benefits

While this is a logical migration path taken by many of the early adopters, it requires organizations to commit millions of dollars to roll out these solutions enterprise-wide. Moreover, a number of barriers and "disablers" typically stand in the way of successfully implementing these programs:

- Financial commitment: Organizations are challenged to fund the initiative, given the large up-front license, customization, installation, and integration costs.
- Politics of procurement: Even with a go-ahead, organizations implementing shared services procurement are challenged to wrestle control away from decentralized buying organizations.
- Market confusion: Given the variety of solutions and alternative business models, organizations can spend months in the request-for-proposal or request-for-information vendor churn, often with little to show for their efforts.
- Implementation complexity: Simply put, it's hard to integrate disparate solutions while transforming processes and the organization.
- Supplier adoption: Realizing benefits requires suppliers to deliver electronic content and e-commerce-enabled processes and interfaces, which in many cases simply do not exist today.

Despite these barriers, an increasing number of organizations are able to build the procurement strategies and migration plans to deliver badly needed bottom-line relief.

Option #3: Transformed B2B Markets – Best Practices Procurement

Many organizations want to move to buyer-centric solutions, but they find themselves in "e-procurement gridlock," stuck with traditional procurement inefficiencies due to "disablers." Perhaps by waiting, some buying organizations believe that alternative solutions will come along that may cost less to implement and deliver benefits sooner, and they may be right.

A number of solutions now are being introduced that allow organizations to outsource technology and process management. Requiring buyers to have a browser and Internet access, these sites provide access to approved commodities and suppliers at contracted prices or an efficient channel for the inevitable spot buys. In addition to these services, a number of industry-specific catalog hosting sites, auctions, exchanges, and bartering systems are beginning to take hold. All of this presents new opportunities to reduce prices and process costs by paying for the service per transaction instead of large up-front subscription or software licensing fees.

Final Thoughts and Recommendations

Andersen Consulting believes that businesses will rapidly see the promise of the Internet being delivered through B2B e-commerce and will adopt indirect goods – and eventually direct goods – procurement via the Web. Finally, we believe that history is making a comeback with a "return to timesharing." Where companies used to share time on mainframes due to cost, they will now adopt outsourced procurement enablement to reduce cost and complexity. A variety of outsourcing alternatives will allow organizations to buy services that will facilitate management of supplier relationships, buyer relationships, information, and transaction services.

So what should you do? If you are reading this white paper, you are likely to be interested in what one of our clients refers to as "figuring out how you can take the dollars off the table and put them in the pocket." While this can be done, one cannot underestimate the challenges associated with enterprise-wide change. Our strong recommendation is that organizations diligently try to understand which of the scenarios can deliver the most value and do so the fastest. Based on this effort, they can put in place a B2B procurement strategy focused on answering where, when, and how the benefits can be realized. For new businesses, the decision is which benefits do you want to deliver to buyers or suppliers. Those answers will determine marketplace strategies and allow them to effectively facilitate e-commerce adoption and benefits realization for buyers and suppliers of all sizes.

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