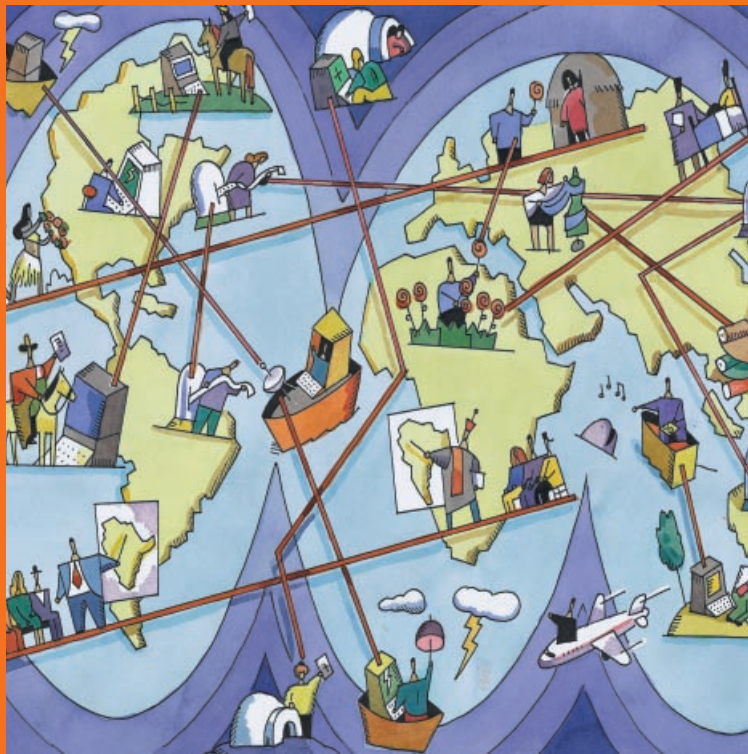


# E-sourcing: 21st Century Purchasing



## Executive Summary

The days of pushing paper are swiftly drawing to a close in the world of procurement. As e-business transforms the market for goods and services globally, it is redefining the way companies manage their supply chains. E-sourcing — whether through an electronic catalog, online auction or virtual buying community — is emerging as one of the quickest and least painful ways for companies to boost their bottom line in an increasingly competitive economy.

E-sourcing does more than establish an electronic venue for buyers and sellers to meet. It also streamlines workflows, enhances flexibility and drives transparency in the buyer-seller relationship. By e-enabling the procurement process, e-sourcing improves the accuracy and availability of information on both the supply and demand side, facilitating collaboration as well as control and compliance. That knowledge makes for more informed negotiations and richer arbitrage opportunities. Finally, e-sourcing frees up purchasing personnel to focus on more strategic concerns such as supply base development and relationship management, linking suppliers into up-front innovation processes and value chain restructuring.

E-sourcing solutions create value by: 1) lowering spend costs; 2) streamlining processes; and 3) enabling new business development. While e-sourcing's scope and success will vary by industry and type of buy, there are five central principles that should guide any company's e-sourcing strategy:

- **Sustainable benefits arise only from eliminating waste or creating value**
- **Customize solutions according to commodity characteristics**
- **Decide how and where you can be a market maker**
- **Leverage “off-the-shelf” e-sourcing solutions**
- **Don't underestimate the internal change required to realize benefits**

While most of these principles apply to all companies assessing e-sourcing, the market maker concept pertains primarily to buyers with significant market clout and/or first-mover advantage. These potential “aggregators” can use Web-based technology to move beyond their extended enterprise and create new virtual marketplaces within their industries. Ford, Boeing, Weyerhaeuser, Chevron and British Telecom are just a few of the companies that are already moving in this direction. The market sites they are developing not only increase competition among suppliers, but they extract value from others in the industry who may wish to participate. The potential of these electronic keiretsus is enormous.

Companies that are the most successful at implementing e-sourcing are able to: adopt a holistic approach, build on sound strategic sourcing capabilities, realize that arbitrage is not the name of the game, understand that this isn't alchemy but change supported by market logic, use e-sourcing as a total business proposition and are comfortable with controlling the market versus letting the market control them.

## E-sourcing: 21st Century Purchasing

A Viewpoint by:

Hugh Baker	Jim Roth
J. Scott Cade	Detlef Schwarting
Monique Oudijk	John Van Leeuwen
C.V. Ramachandran	

**T**he word purchasing used to conjure up a world of special deals, endless approvals and forms signed in triplicate. No longer. Those days have long since passed at most companies as sophisticated sourcing strategies and processes have steadily taken hold. Still, as digital technologies reshape the market environment in which every industry operates, the opportunities for further and, arguably, even more dramatic gains in efficiency and effectiveness are evident in the procurement arena.

Just as the Internet is transforming the marketplace for finished goods and services, so too is it overhauling companies' supply relationships. In fact, e-sourcing is emerging as one of the quickest, surest and least painful ways for companies to boost their bottom line in an e-commerce economy.

E-sourcing streamlines workflows, enhances flexibility and drives transparency in the buyer-seller relationship. By automating and speeding up the transaction end of the purchasing process, e-sourcing frees up purchasing personnel to spend more time on a strategic level—tackling the total value chain for the business and delivering the right supply relationships.

While its scope and success will vary by industry and type of buy, e-sourcing—whether through an e-catalog, online auction, electronic RFQ process, or other method—is almost invariably a good idea that should be implemented sooner rather than later. While some large companies are spending significant sums to create e-marketplaces in their respective industries, huge systems investments are not a requirement. In fact, many tools

and Web sites already in place or in development can pave the way to a more productive and mutually beneficial relationship with suppliers across industries and markets.

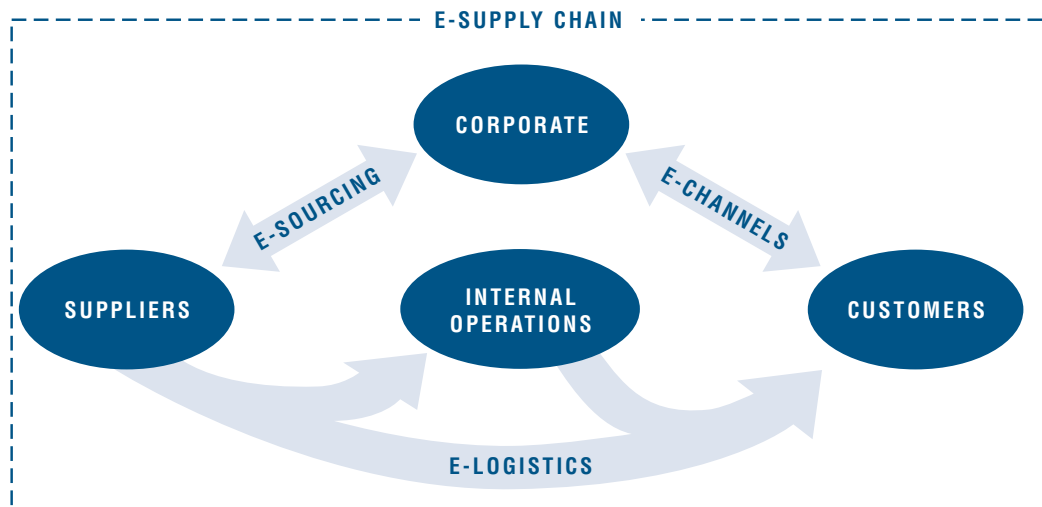
## The Internet Is Setting the Stage

Dismissed as a blip on the economic radar screen only a few years ago, the Internet is now effectively redefining the standards

of performance, speed and price in a global marketplace. It is eradicating market barriers, empowering customers and enabling brand new business models.

The Internet enables more than a low cost, information-rich, interactive channel; it is a powerful and swift change agent that is sweeping across industries of all types. It is an open, flexible network that is growing in strength and value as it grows in reach. It is a market equalizer that can

Exhibit 1. Internet-Enabled Opportunities



### WHY IT IS DIFFERENT?

- Readily connected on a global basis
- Low cost of deployment and low cost of use for customers
- Interactive format/easy to use
- Rich multimedia environment
- Standardized technology (non-proprietary/open standards)
- Extensive information source

### MORE THAN AN ALTERNATE CHANNEL

- Network effect – value of the network grows exponentially with number of participants (enabled by low cost of connections and open standards)
- Low switching and transaction costs enable dynamic reconfiguration of relationships (customers no longer “locked-in”)
- Enables entirely new business models for commerce (e.g., real-time demand/supply matching)
- Customers empowered – pull rather than push; customers buy and not sold to

Source: Booz-Allen & Hamilton

lower switching costs and allow smaller companies to compete on relatively equal footing with industry leaders. It is an incubator for new models of commerce (e.g., real-time demand, supply matching). And it is a powerful streamlining force that distills the supply chain in any business to its simplest form, eliminating historical links that encumbered efficiency (see Exhibit 1).

## An Explosion in E-sourcing Activity

While much of the hype surrounding the Internet has focused on business-to-consumer sales, the business-to-business market is the far larger and more immediate opportunity. E-sourcing is a huge and rapidly growing component. By “e-sourcing,” we refer to companies’ efforts to take advantage of Internet-enabled purchasing tools to

improve the efficiency and effectiveness of their overall spend. E-sourcing takes any number of forms from buy-side and sell-side e-catalogs where suppliers can exhibit their wares to electronic RFQ (request for quotation) procedures that allow purchasers to post specifications and solicit bids to cyberspace commodity exchanges where buyers and sellers can meet and trade (see Exhibit 2).

Whether it’s online exchanges such as e-STEEL, Chemconnect and EnergyMarketplace or the auction models of

### Exhibit 2. Multiple Aspects of E-sourcing

#### Electronic Catalogs

- Suppliers establish custom catalogs for buyers
- Buyers work with pre-established supplier catalogs and prices to procure materials and services
- See box below for catalog options

#### Bidding

- RFQ is sent electronically to different suppliers on an as needed basis
- RFQ responses are received and evaluated electronically

#### English Auction

- Auction initiated by one seller
- Seller wants to sell surplus capacity/production
- Price rises during auction
- Price paid is dependent on bids of other buyers
- Last bid known to all

#### Reverse Auction

- Auction initiated by one buyer
- Buyer specifies demand and sends RFQ with time limit to multiple suppliers
- Suppliers submit price quotes and are able to view other quotes submitted (sanitized). Furthermore, they are able to reduce price quotes during auction
- Price drops during auction
- Last bid known to all

#### Market Exchange

- Perfect electronic marketplace where multiple buyers and sellers can meet and exchange goods (and services) at spot price
- Market clearing price depends on supply/demand balance

DEGREE OF INTERACTION 

#### ELECTRONIC CATALOG OPTIONS

##### Static Product Catalog

- Catalog content is static and has to be updated on a regular basis by vendor
- Predetermined price agreed upon by seller and buyer
- Content from multiple vendor(s) is integrated into one database and can be searched and compared
- Ideally, business unit-specific views can be defined

##### Static Configurable Product Catalog

- Catalog content is static and has to be updated on a regular basis by vendor
- Predetermined price agreed upon by seller and buyer
- Content from multiple vendor(s) is integrated into one database and can be searched and compared
- Ideally, business unit-specific views can be defined
- Products can be configured along a set of pre-defined criteria (e.g., IT hardware)

##### Dynamic Product Catalog

- Catalog content from multiple vendors) is generated at the same moment as the user accesses the catalog
- Price dependent on availability of product/service

Source: Booz-Allen & Hamilton

FreeMarkets and TradeOut, e-sourcing has dramatically improved the efficiency of supply relationships by facilitating automated, comprehensive, market-clearing mechanisms. These mechanisms are enabling a range of buyer-supplier interface models from one-to-one formats to one-to-many models to multiple buyers interacting with multiple suppliers across both horizontal and vertical markets. However, it is important to note that not all e-sourcing formats are designed to enhance the buyer's access to perfect information. Reverse auctions such as that for airline tickets on Priceline.com give the supplier the opportunity to "shop" among different buyers and set the market price.

## The Benefits

E-sourcing does more than establish an electronic venue for buyers and sellers to meet, it also streamlines workflows, enhances flexibility and drives transparency in the buyer-seller relationship. By e-enabling the process, e-sourcing improves the accuracy and availability of information on both the supply and demand side, facilitating collaboration as well as control and compliance. That knowledge makes for more informed negotiations and richer arbitrage opportunities.

Additionally, e-sourcing provides a unique opportunity for companies to leverage their

purchasing scale or industry knowledge to launch a new business venture.

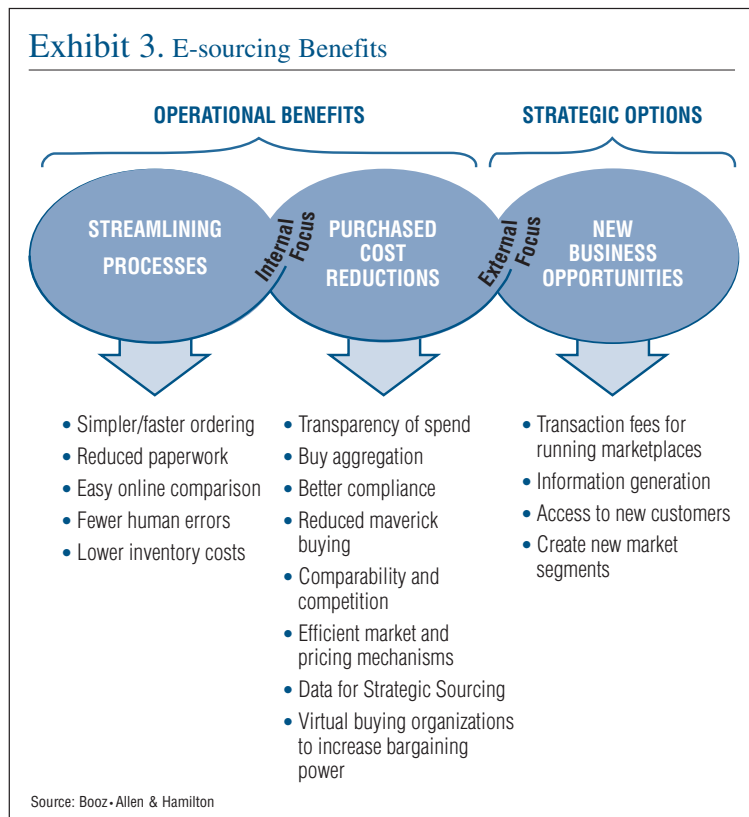
Specifically, e-sourcing solutions create value by: 1) lowering spend costs; 2) streamlining processes; and 3) enabling new business development (see Exhibit 3).

Many of the benefits accrue to the bottom line through significant spend cost reductions. Indeed, much of the rush to migrate sourcing programs online is the widely held belief that there is a great deal of easy money left on the table—i.e., e-sourcing can reduce costs by consolidating buying across an enterprise and help large companies capitalize on volume discounts through virtual scale. Office supplies ordering alone, as the sidebar suggests, provides fertile ground for e-sourcing, and the benefits can extend well beyond office supplies to all elements of a company's direct and indirect buy.

These savings can be significant, for example, IBM has estimated that they have saved 10–15% on a \$12 billion spend in 1999. And Chevron has predicted overall cost reductions of 15–25% on all their goods and services purchased online.

Additionally, by eliminating routinized tasks like transaction processing (see Exhibit 4), e-sourcing can free up purchasing personnel to focus on more strategic issues:

- Comprehensive supplier screening
- Supply base development and relationship management



- Linking suppliers into up-front innovation processes
- Value chain restructuring
- Internal capability building

Finally, while most organizations look to e-sourcing to further reduce purchase costs, it also can be a revenue-generating tool. For example, companies such as Ford, GM and DaimlerChrysler are joining together to establish virtual marketplaces (see Exhibit 5).

## The Challenges

Executed correctly, e-sourcing can be a true win-win, attracting the full participation of all players along the supply chain in the building of a more efficient and effective extended enterprise. Its benefits can impact all elements of the procurement process, from the strategic (i.e., identification of new business opportunities) to the operational (i.e., ordering and delivery processes). However, it does represent substantial challenges. Our experience with clients across multiple industries suggests that to be successful, companies need to be vigilant and manage the implementation process carefully.

The concerns we hear expressed are fairly consistent across industries. Before undertaking an e-sourcing program, companies need to evaluate its likely impact on the entire supply chain, as well as on market

OFFICE SUPPLIES USING ELECTRONIC CATALOGS	
<p style="text-align: center;"><b>BEFORE</b></p> <ul style="list-style-type: none"> <li>• Plants, business units and departments source identical office supplies from different suppliers, unaware of the total spend.</li> <li>• Though these groups source from common suppliers, prices can vary depending on individual negotiating skills.</li> <li>• Prices rarely reflect the total volume purchased across the company.</li> <li>• Order processing usually done manually via phone calls or faxes.</li> <li>• Management approval required for each requisition.</li> <li>• Sometimes, a separate payment is processed for each requisition adding to the account payable workload.</li> </ul>	<p style="text-align: center;"><b>WITH E-CATALOG</b></p> <ul style="list-style-type: none"> <li>• A single Web interface is used to order any office supplies worldwide using a common price list negotiated regularly.</li> <li>• Negotiated prices based on the annual volume purchased by the entire organization lead to larger discounts.</li> <li>• Office supply expense statistics can be monitored easily and each group's budget adjusted accordingly.</li> <li>• Payment can be consolidated automatically, monthly.</li> <li>• Paperwork is minimized.</li> <li>• Approval rules are based on requisitioner's seniority or amount purchased and are built into the system.</li> </ul>

structures. Companies should consider carefully the total scope of their buy and long-term profitability, not just what can be procured easiest and cheapest in the immediate term. Arm's length transactions with a broad supply base can negate the benefits that derive from deep supplier partnerships, particularly when it comes to more customized and engineered products. Who owns the warranty claims and costs in such a populated universe? Will you get the same level of innovation and functionality with some new e-supplier as you do with your vendor partner of a decade? Will the cost of certifying these new suppliers eliminate the savings generated?

### Exhibit 4. Typical Sourcing Transactions Impacted

#### SUPPLIER SELECTION

- Demand management
- RFP/RFQ
- Negotiation
- Contract with suppliers
- Central catalog

#### ORDERING AND DELIVERY

- Demand broadcast
- Local ordering (catalog selection)
- Automatic order
- Electronic receipt of order
- Delivery
- Monitoring

#### SUPPLIER MANAGEMENT

- Compliance
- Supplier development
- Managing investments
- Building collaboration

Source: Booz-Allen & Hamilton

Moreover, quality and delivery reliability need to be taken into account particularly when e-sourcing segments of the direct buy. Unlike the investment community, the supply community in several industries does not have a standardized assessment technique. There is seldom a universally accepted gauge and

measurement of quality and performance that all potential buyers can use to assess all suppliers.

In addition to quality concerns, executives often worry that e-sourcing will demoralize the purchasing department. They openly ask how these new solutions will be integrated with their existing back office systems and

how the organization will manage the changes that a move to e-sourcing will necessitate. These concerns can present legitimate obstacles to the successful rollout of an e-sourcing program—if left unaddressed—but all are readily surmountable if companies dedicate the appropriate focus and resources to this initiative.

### Exhibit 5. Car Makers Plan Net Exchange

“The Motor City is rolling out a new model: a massive dot-com start-up with revenue that could turn Silicon Valley green with envy. General Motors Corp., Ford Motor Co. and DaimlerChrysler AG agreed to join forces to create a single automotive-parts exchange run through the Internet.

The exchange, which will be an independent company with plans for an initial public offering, will profit from what the auto industry does best—spend money, hundreds of billions of dollars of it a year, on millions of the parts that go into building cars.

Once it is fully operational, the combined exchange is expected to handle \$240 billion in annual spending world-wide by the three car companies. In addition, a substantial portion of the \$500 billion that each auto maker’s suppliers spend each year is expected to flow through the system. Because there is some overlap among the suppliers, executives couldn’t estimate total potential trading volume.

The as-yet-unnamed company combines Ford and GM’s exchanges, operated by Oracle Corp. and Commerce One Inc., respectively. Until last week, the exchanges were fierce competitors. DaimlerChrysler is joining after deciding against creating a third exchange. The idea of that third exchange was roundly denounced by auto suppliers who have pushed auto makers to come up with a single standard for exchanges almost from the day GM and Ford announced their plans in November.

The unusual decision to collaborate puts the car companies—leading examples of the old industrial economy—in the driver’s seat of what could become the biggest business-to-business bazaar in the Internet-driven New Economy. It is intended to set a global standard for online purchasing in the auto industry and perhaps in other industries.”

*The Wall Street Journal*, February 28, 2000

## The Central Principles

Wherever a company resolves to apply e-sourcing as part of its business practices, the results can be powerful. Booz:Allen & Hamilton has developed considerable expertise in this area—helping clients both in building strategic, ongoing e-sourcing capabilities and in realizing “quick-hit” savings. Our experience has helped us identify five central principles that companies should keep in mind as they assess e-sourcing’s potential within their organization.

### ***1. Sustainable benefits arise only from eliminating waste or creating value***

The transparency and immediacy of Internet pricing comparisons can be a very alluring siren’s song, tempting many companies to engage in heavy, opportunistic spot buying. While such purchases can bring down short-term expenses dramatically, they are, at best, a “quick fix.” Sustainable savings derive from more permanent and proactive solutions that

either fundamentally alter market economics or remove embedded inefficiencies in the purchasing process. Examples include:

- Increase manufacturing scale and utilization at suppliers
- Afford access to a broader, more cost-advantaged supply base
- Provide real-time matching of supply and demand
- Eliminate middlemen
- Reduce transaction costs
- Improve compliance
- Reduce logistics and distribution costs
- Enable access to “undiscovered” technologies

E-sourcing can transform the procurement landscape, opening it to new players, expediting the flow of more accurate

and complete information and clearing out the debris that has traditionally gummed up the purchasing process.

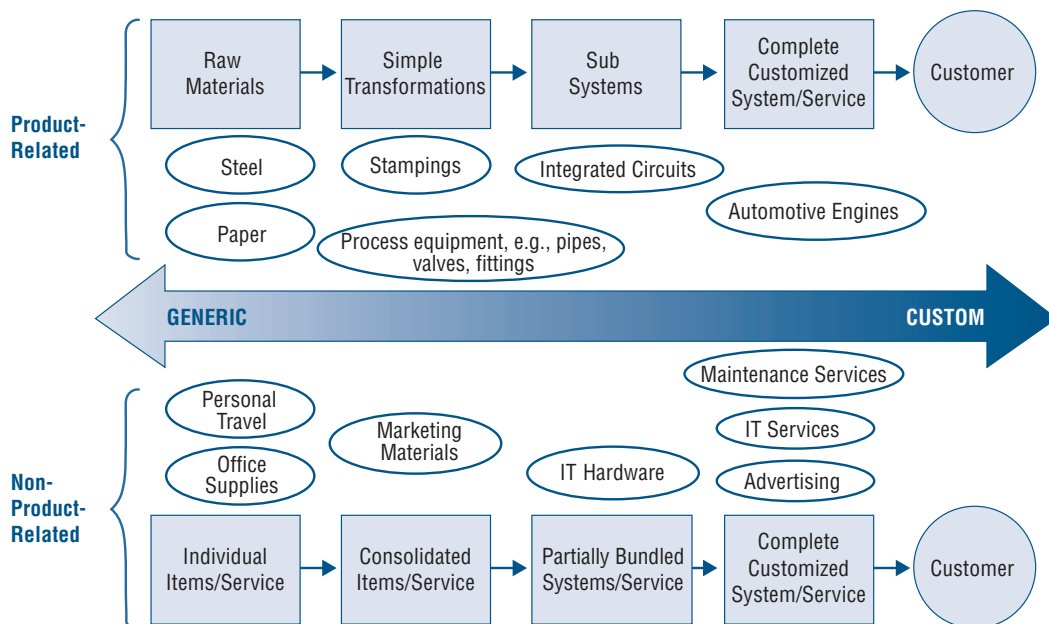
Already, these types of solutions are taking hold in the trenches of the business world as industry players and third parties aggregate buyers and sellers in vast electronic marketplaces. On the buy side, purchasers use search engines and special purpose intermediaries to identify and qualify suppliers who can fulfill their specific requirements. On the sell side, improved access to real-time demand is allowing vendors to sell into these virtual exchanges at market clearing prices. Moving forward as industry supply bases become “plugged” into the marketplaces, companies can and will be able

to use these destinations as supply chain management and collaboration hubs.

## II. Customize solutions according to commodity characteristics

E-sourcing is not the first advance to hit the world of corporate purchasing. Over the past decade, many processes and tools have been introduced to optimize the efficiency and effectiveness of the procurement function (e.g., balanced sourcing, strategic partnerships). The extent to which companies have successfully implemented these recommendations will influence the impact e-sourcing can have on their cost structure and operations efficiency.

Exhibit 6. E-sourcing Solutions Vary by Commodity



Source: Booz-Allen & Hamilton

More significantly, the purchased item's position on the value chain influences tremendously the applicability of e-sourcing. In general, the lower the value-added content in a good or service, the more commodity-like its behavior in the marketplace (see Exhibit 6). The ubiquity, accessibility and transparency of e-sourcing make it an ideal solution for these purchases. It is no surprise then that e-sourcing initiatives are typically launched at this end of the value chain. Specifications are more straightforward in commodity buys, quality issues are less of a concern, and relationships between buyer and seller are more transactional than collaborative.

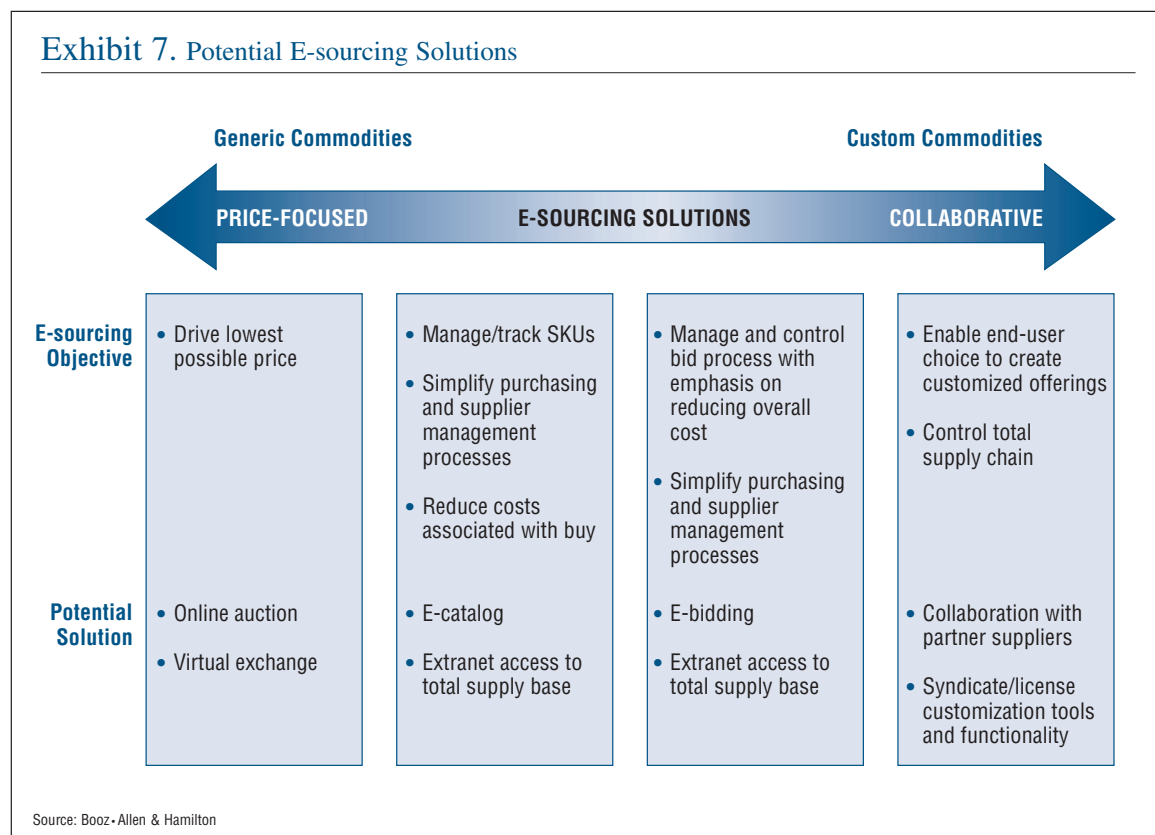
More highly engineered products and services also can benefit from a carefully implemented e-sourcing program, since e-sourcing frees up and accelerates the exchange of information between buyer and supplier (see Exhibit 7). Robust information flows can provide better insight into user requirements, which translates into greater success in new product development and more accurate fulfillment of customer demand. Even more important, however, is the real-time design collaboration facilitated by e-sourcing's Web-based technologies.

While most e-sourcing initiatives quickly reap the low-hanging fruit in purchase cost reductions, many struggle

to extract the full benefit of the information and scale they can now muster to realize savings across the enterprise (see Exhibit 8). For instance, in a manufacturing environment, many companies move quickly to apply e-sourcing to elements of their indirect buy (e.g., travel, office supplies) but are more reluctant to apply these new tools to their product-related buy.

Such hesitation is understandable. Quality and delivery reliability are of paramount importance in sourcing those goods that are product-related. If a trial vendor relationship fails to deliver, the consequences to a company's own product are immediate and visible to

**Exhibit 7. Potential E-sourcing Solutions**



the end-customer. Obviously, manufacturers will take greater care in moving this element of their buy online.

Still, product-related buying is at least equal, if not greater, in volume to non-product-related purchases. It is certainly worth a purchasing leader's time to consider the potential benefits that could arise from e-sourcing the product-related buy as well. The trick is to identify segments of the product-related buy that can be precisely specified (or commoditized) and challenge suppliers to rise to this requirement on a consistent basis. For example, in the aerospace industry, valves that are not flight-critical can be specified

STEEL: ACCESSING ELECTRONIC MARKETPLACES	
BEFORE	WITH E-MARKETPLACE
<ul style="list-style-type: none"> <li>• Several companies still buy most of their steel requirements through long-term agreements with large integrated mills.</li> <li>• Often, validation requirements and switching costs dissuade the buyers from sourcing elsewhere.</li> <li>• Although negotiated contracts for fixed quantities can favor large buyers with discounts, fluctuations in demand usually result in higher prices charged for extra steel and mix changes.</li> </ul>	<ul style="list-style-type: none"> <li>• Access to e-marketplace can offer a price-effective alternative for secondary/back-up sources of steel</li> <li>• "Stockists" accumulate discounted steel surplus from certified steel suppliers. Companies can buy from them incremental needs not covered by the integrated mills contracts.</li> <li>• Low-grade steel needs can also be purchased from other, less expensive suppliers.</li> <li>• The trick is to define specifications precisely.</li> </ul>

### Exhibit 8. E-sourcing Cost Reduction Potential

SOURCE OF SAVINGS	SAVINGS RANGE (As Percent of the Total Buy)	APPLICABLE TO	DEPENDENCIES
Compliance	2% – 10%	<ul style="list-style-type: none"> <li>• Standardized segments of the buy where contracts exist</li> </ul>	<ul style="list-style-type: none"> <li>• Ability to mandate policies and contract usage</li> </ul>
Leverage from aggregate spend	2% – 20%	<ul style="list-style-type: none"> <li>• Standardized segments of the buy</li> </ul>	<ul style="list-style-type: none"> <li>• Competitiveness of incumbent suppliers</li> <li>• Prior supply base rationalization</li> </ul>
Web-based specialist markets	1% – 5%	<ul style="list-style-type: none"> <li>• Segments of the buy where marketplaces exist</li> <li>• Otherwise create markets</li> </ul>	<ul style="list-style-type: none"> <li>• Market efficiency</li> <li>• Efficiency of bidding process</li> </ul>
Knowledge management	3% – 15%	<ul style="list-style-type: none"> <li>• All segments of the buy</li> </ul>	<ul style="list-style-type: none"> <li>• Effectiveness of current sourcing strategy and tools</li> <li>• Sophistication of access to supplier knowledge</li> </ul>
Transaction streamlining	~1%	<ul style="list-style-type: none"> <li>• Up to 90% of process costs</li> </ul>	<ul style="list-style-type: none"> <li>• Capture both buy and sell side transaction process improvements</li> </ul>

Source: Booz-Allen & Hamilton

in sufficient detail to allow them to be purchased via electronic auctions.

E-sourcing is a business model that can potentially encompass a company's total spend, but not overnight. This is an evolving arena in which enhancements are continually introduced. Companies will realize the benefits of e-sourcing incrementally over time, starting with those elements of their spend where benefits are immediate and specifications are more easily defined. Ultimately, however, the e-marketplace is likely

to become the venue of choice for all components of the spend.

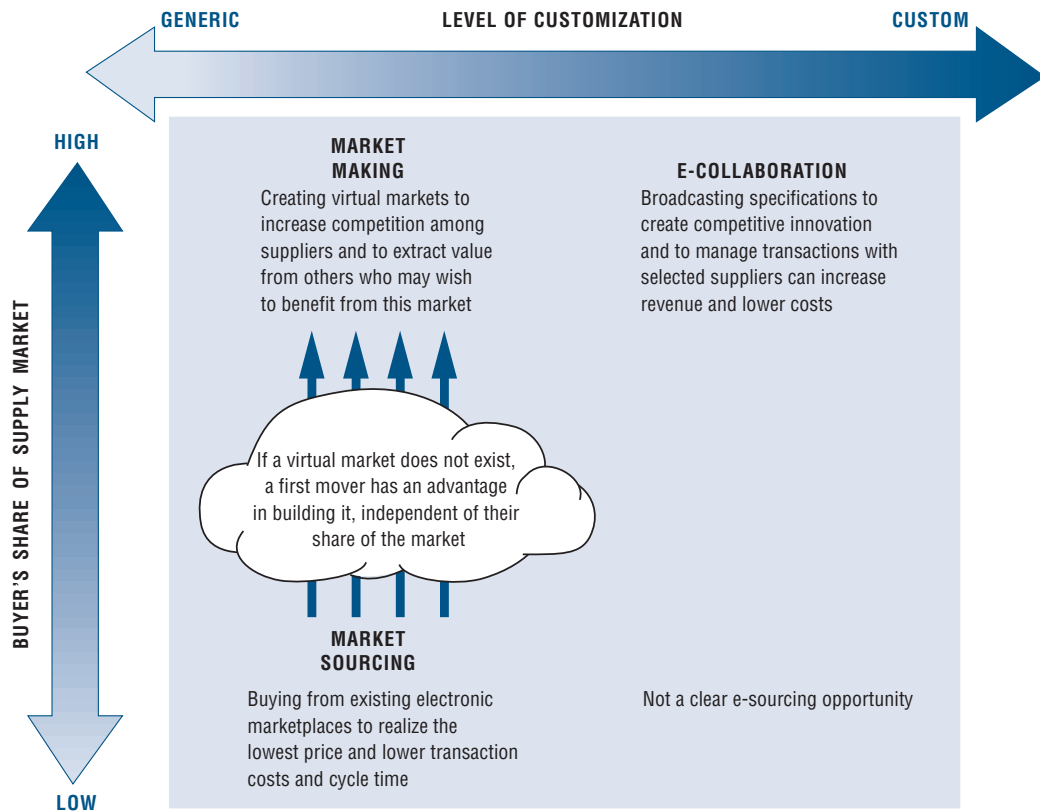
### III. Decide where and how you can be a market maker

The unique characteristics of the supply environment in a particular industry will dictate the e-sourcing opportunities that may or may not be available to enterprising players (see Exhibit 9). In an environment characterized by generic or commodity-like products where each buyer's share of demand is low, existing e-sourcing solutions (e.g., e-catalogs, e-auctions) fulfill both buyers' and suppliers'

needs with modest incremental investment. There is very little reason to think "outside the box" and develop a brand new solution.

But not every market environment lends itself to pre-packaged solutions. In supply environments characterized by a high degree of customization and high demand share, e-collaboration prevails. Using this approach, buyers still take advantage of the Internet to not only capture innovation across a broader universe of qualified suppliers but also share design specifications and engineering documents in an interactive,

Exhibit 9. E-sourcing Positioning Matrix



Source: Booz-Allen & Hamilton

real-time mode without expensive EDI linkages.

Finally there exists the opportunity among commodity purchasers with substantial buying clout to use electronic technology to “make” a whole new virtual market.

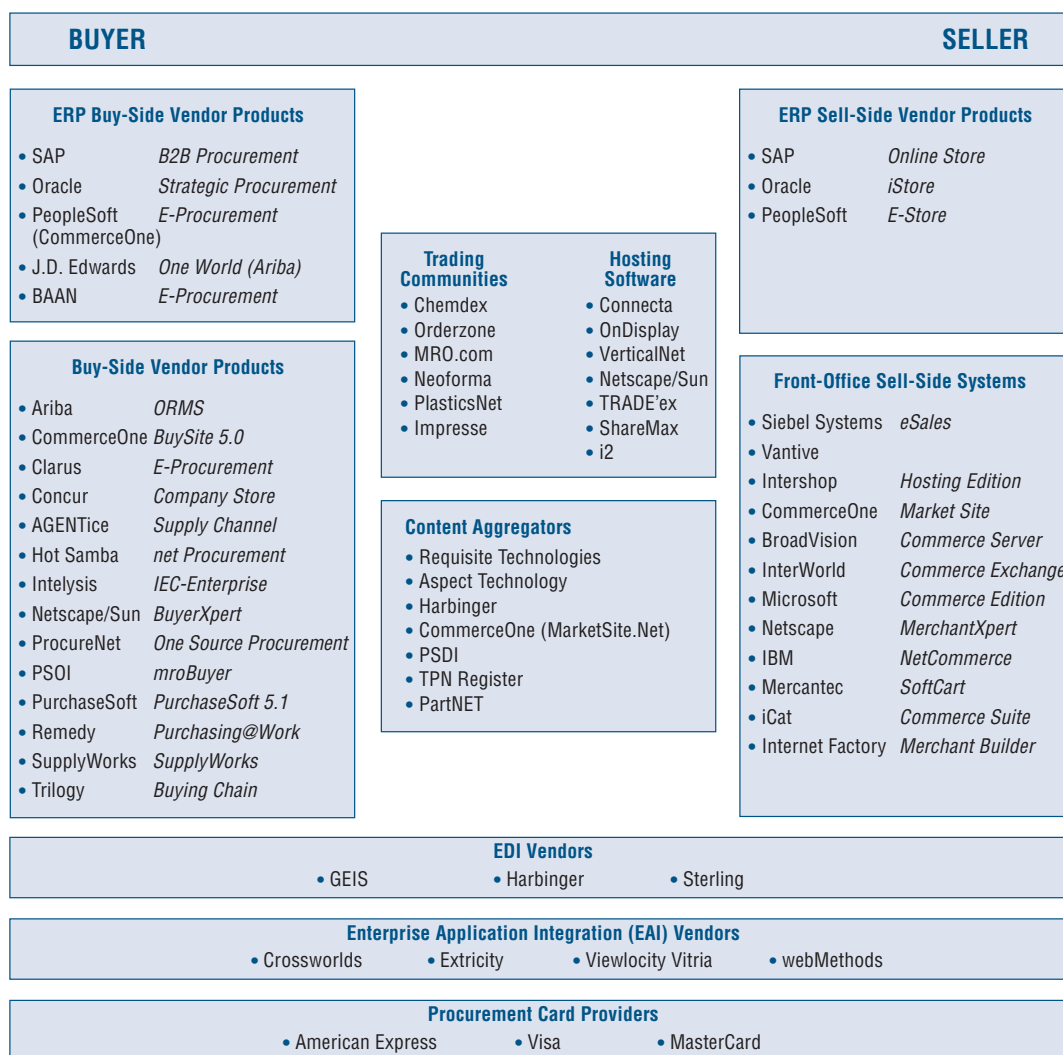
Ford, General Motors, DaimlerChrysler, Boeing, British Telecom, Deutsche Telecom, Weyerhaeuser and Chevron,

among others have all pursued this alluring prospect, teaming with e-commerce vendors, Oracle, Commerce One and Ariba to launch industry-wide online exchanges for the goods and services they purchase. These market sites not only increase competition among suppliers, but they extract value from others in the industry who may wish to participate. These

virtual marketplaces consolidate industry buys, affording large and small competitors alike with the benefits of increased scale. Even when they do not have high market share, companies can develop these proprietary e-sourcing solutions and “sell” them to other market participants, creating, in effect, electronic keiretsus.

The opportunities in this arena are countless, both in terms

## Exhibit 10. Current Information System Solutions



Source: Booz-Allen & Hamilton

of vertical and horizontal markets. Indeed, negotiations are under way in the aerospace, health care, industrials and other sectors to set up similar virtual exchanges. BP Marine, for example, joined forces with Shell Marine and FAMM to develop a marine industry Internet site. The site, called OceanConnect.com, is positioning itself to be the marine market space for fuels.

It is in this arena that e-sourcing could bear its most prodigious fruit—and not just in lower prices. The e-commerce vendors have offered their e-marketplace partners a share of these new ventures as part of the deal. In fact, analysts estimate that ultimately these stakes could provide more of a return to companies like Ford and GM than the actual marketplaces themselves.

#### IV. Leverage “off-the-shelf” solutions

There are several software applications on the market today designed to help companies launch e-sourcing immediately (see Exhibit 10). For the most part these are Web-based solutions, requiring minimal investment compared to the EDI systems of the recent past. These solutions have helped level the playing field in e-business with

small to mid-sized businesses quickly capturing value that was previously reserved for larger companies.

Whatever approach companies adopt—whether forward-integrating existing ERP applications using hosting software to create virtual buying communities, or aggregating content into online catalogs—they should select from a range of options designed to facilitate both sides of the supply relationship—unless a unique customized solution is required.

#### V. Finally, don’t underestimate the internal change required

While e-sourcing may be relatively easy and inexpensive to launch compared to other internal re-engineering efforts, it impacts most internal processes (see Exhibit 11). E-sourcing affects nearly every link in the supply chain from vendor development to logistics to customer service, impacting not only physical but also information flows. By dramatically lowering the cost of data capture, e-sourcing allows purchasing managers greater insight into demand requirements, which influences how

### Exhibit 11. Internal Challenges in Adopting E-sourcing

#### Key Internal Challenges

<b>Change Management</b>	<ul style="list-style-type: none"> <li>The revolution threatens incumbent materials and purchasing staff while freeing end-users. Will they be agents for change?</li> </ul>
<b>New Organizational Roles</b>	<ul style="list-style-type: none"> <li>E-sourcing de-centralizes the purchasing activities removing an important controlling activity. Can management and finance accept this? Particularly contacts with vendors?</li> </ul>
<b>Speed of Implementation</b>	<ul style="list-style-type: none"> <li>Internet speed is measured in hours and days rather than weeks and months. Can change be embraced without the typical meetings and approval processes?</li> </ul>
<b>Managing Existing Suppliers</b>	<ul style="list-style-type: none"> <li>The current supply base is threatened by the potential new competition, particularly from spot purchases. Will they willingly link to the system? How will the gains from previous close relations be sustained?</li> </ul>
<b>Content Management Strategy</b>	<ul style="list-style-type: none"> <li>Maintaining product lists and catalogs have hobbled pre-Internet automation attempts. How can content be managed and controlled more efficiently?</li> </ul>
<b>Integration with Back Office Systems</b>	<ul style="list-style-type: none"> <li>ERP vendors have been slow to develop complete solutions</li> <li>Most market solutions have extensive integration support</li> </ul>

Source: Booz•Allen & Hamilton

manufacturing operations are set up. Moreover, e-sourcing solutions generally need to be integrated with existing ERP systems. In short, e-sourcing requires significant shifts in process, systems and culture. If the necessary internal infrastructure changes are not made to accommodate these new tools, much of the potential can be squandered.

For example, e-sourcing bridges the divide between traditional functional silos, and distributes purchasing authority across the organization. In so doing, it empowers buyers and transforms the role of the purchasing function, reducing the administrative and record-keeping component, and emphasizing the strategic negotiating and commodity allocation skills. End-users can now order directly over the Internet, with compliance imposed electronically. Central purchasing no longer “controls” supply budgets and the approval process; the system now supervises the bulk of the day-to-day buying based on spending “rules” that have been pre-programmed.

E-sourcing also introduces wholesale changes in fulfillment. As e-commerce vendors whet consumer appetites for build-to-order products delivered in a matter of days, companies of all

descriptions have been forced to take note and adjust their infrastructures accordingly. No longer do most companies have the luxury of waiting for signoffs. Instead, manufacturing lines leverage direct and instantaneous links to component suppliers.

Finally, e-sourcing has obvious implications for existing supply relationships, implications that need to be handled carefully. Companies that source highly engineered components will need to reach out to existing suppliers and reassure them of the continued value of their services. E-sourcing has its place, and companies need to be judicious in how they apply these solutions so as not to disrupt critical supply agreements already in place and needed for future success.

## Booz-Allen’s Approach to E-sourcing

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While each company’s implementation of e-sourcing is likely to differ depending on unique market and company conditions, our experience suggests that there are some common elements that characterize the assessment and successful implementation of e-sourcing solutions (see Exhibit 12).

Phase 1 involves a quick assessment of current supply needs, supply industry dynamics, customer requirements, current sourcing strategies and infrastructure to determine where the benefits of e-sourcing might best apply. Typical questions considered during this diagnostic or “baseline” phase include:

- What is the e-sourcing value proposition—commodity by commodity?
- What are the appropriate tools for delivering on e-sourcing’s potential, and what should be owned versus outsourced?
- How should we organize internal operations (procurement, engineering and other functions) to take advantage of “e-business” opportunities?

Once a company has evaluated both its external and internal environment and defined the scope and objectives of its e-sourcing initiative, it starts to “launch and learn.” Phase 2 involves the development and implementation of pilot programs in select areas of a company’s spend. Quick and dirty, these early experiments help companies both learn which approach works best and shift the culture to be e-based. The only guarantee is that things will go wrong and need to be fixed on the fly. Meanwhile, the purchasing function starts

developing the necessary infrastructure—the platforms, processes and organization—needed to start the culture change and roll out e-sourcing “success stories” to other areas within the enterprise. During this phase, the following questions should be addressed:

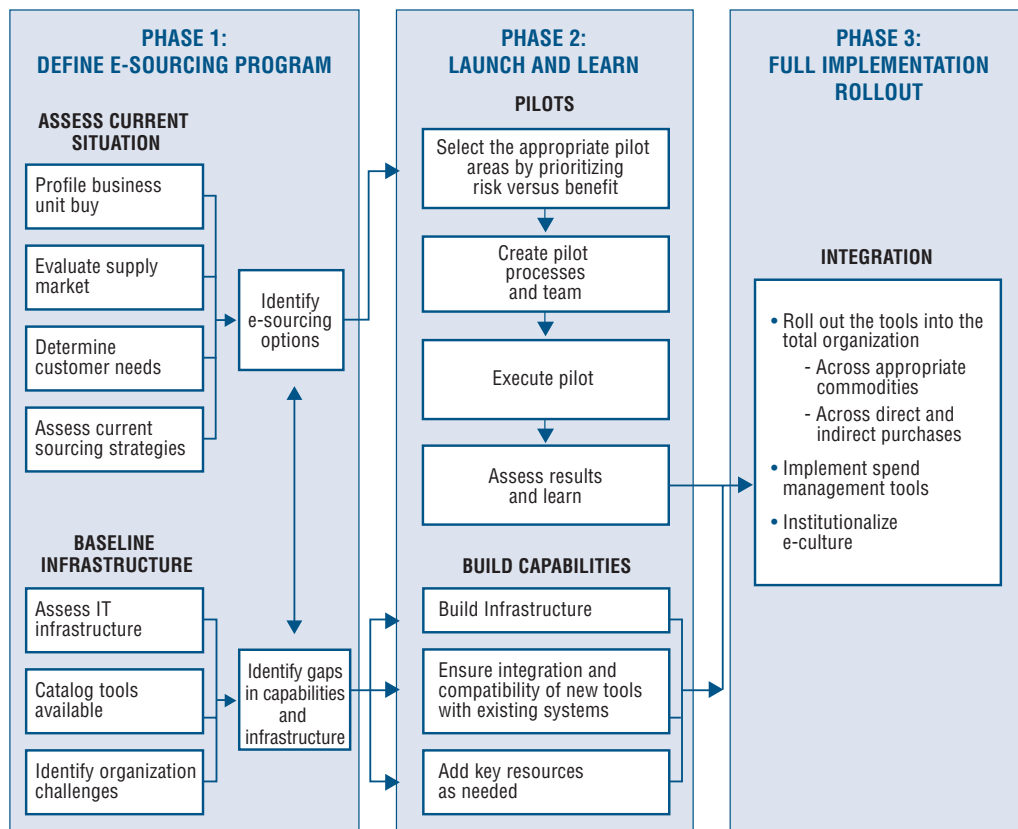
- What are the potential implications on relationships with current suppliers as we migrate purchasing processes online?

- How will our supply base need to change to satisfy new demand requirements (e.g., smaller lot sizes, more flexible manufacturing)?
- Will e-sourcing affect relationships with customers?

During Phase 3, e-sourcing becomes institutionalized. The organization is transformed in waves across both indirect and direct purchases and incrementally, but rapidly, migrates online as part of a coordinated, company-wide e-sourcing program.

Booz·Allen & Hamilton can help you tailor this methodology to the specific requirements of your organization and supply base and implement a best-fit e-sourcing approach across your entire buy, one that builds on the basic precepts of strategic sourcing to research, evaluate and structure an optimal e-sourcing solution.

Exhibit 12. E-sourcing Methodology



Source: Booz·Allen & Hamilton

## In Summary

Ultimately, the companies that derive the greatest benefit from e-sourcing will be those that:

- **Adopt a holistic approach** — Most successful e-sourcing solutions encompass the entire value chain.
- **Build on a sound foundation** — E-sourcing is a tool that allows companies to build on the strategic sourcing capabilities they have already put in place (e.g., cost modeling, supplier selection, etc.). In the absence of these strategic cornerstones, e-sourcing’s value is severely diminished.
- **Arbitrage is not the name of the game** — While much of the activity in e-sourcing today revolves around spot buys and transactional savvy, these maneuvers provide only a short-term high.
- **This isn’t alchemy** — While new saving opportunities on the Web seem to materialize daily, the only sustainable solutions are those supported by market logic and fundamental economic rules.
- **The Internet is a fast-changing, dynamic environment** — The only way to win is to play — today. Waiting for the dust to settle is a naive and, ultimately, futile strategy. Launch and learn.
- **IT expertise is not enough** — E-sourcing is a total business proposition that should not be “delegated” to the information technology division.

- **Those who snooze, wake up in a whole new world** — The question that should be nagging at every chief executive today is “What should my supply base look like now and in 2–4 years?” Those who have the opportunity to “make” markets and don’t seize it will pay a premium later to those who do.

E-sourcing is a fundamental step in the march toward an electronic economy. It is a work in continual progress that attacks a company’s cost structure in waves. While any number of

tools are available today to help companies migrate more of their purchasing online, the landscape is dynamic; there is no end game. As with all of the tools of e-business, e-sourcing is an exercise in “launch and learn.” Since too much analysis can lead to paralysis, it’s important that companies start implementing these tools with alacrity, while establishing in parallel mechanisms that can assess results, implement modifications and prioritize future applications.

FASTENERS: USING ELECTRONIC AUCTIONS	
BEFORE	WITH ELECTRONIC AUCTIONS
<ul style="list-style-type: none"> <li>• Company did not have a formal strategy for sourcing fasteners from manufacturers or distributors.</li> <li>• When buying direct from a manufacturer, lowest quote was only decision criterion.</li> <li>• Sourcing methodology encouraged distributors to maintain their gross margin and not share rebates.</li> <li>• Decision to develop a “strategic” fastener supplier resulted in premium paid to this supplier, even though the buy was a standard item at another supplier.</li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring market prices through electronic auctions helped segment fasteners and identify the appropriate sourcing channel.</li> <li>• Electronic auctions facilitated strategic decision to use lowest price sources to replenish inventory or outsource it entirely.</li> <li>• One could buy from a single distributor provided that fastener prices charged to the client reflected the fastener market price — monitored through electronic auction bids by both the distributor and the client.</li> </ul>

## What Booz·Allen Brings

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**B**ooz·Allen & Hamilton is a global management and technology consulting firm. As world markets mature and competition on an international scale quickens, our global perspective on business issues grows increasingly critical. In more than 90 countries, our team of 9,000 professionals serves the world's leading industrial, service and governmental organizations. Each member of our multinational team has a single common goal—to help every client we serve achieve and maintain success.

Our broad experience in the world's major business and industrial sectors includes aerospace, agriculture, automotive, banking, basic metals, chemicals, construction, consumer goods, defense, electronics, energy, engineering, entertainment, food service, health care, heavy industry, high technology, insurance, media, oil and gas, pharmaceuticals, publishing, railways, retailing, steel, telecommunications, textiles, tourism, transportation and utilities.

Booz·Allen is uniquely positioned to assist clients in developing e-sourcing capabilities due to our strategic focus, strong sourcing heritage and extensive industry expertise. We have a global e-sourcing

community embedded in a larger business-to-business e-commerce group. In addition, we have over 200 professionals with deep Internet technology and implementation expertise. Our staff has the unique capability to combine strategic focus with technology implementation. This results in a rapid strategy-to-implementation process required to be successful in the e-world.

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