



Why B2B e-markets

By William C. Copacino and Roger W. Dik

From procurement to product design to supply chain planning, e-markets are
have stumbled, to be sure. But the resulting shakeout means that online

A man in a white shirt and grey trousers is looking down at a smartphone in his hands. He is standing in a busy outdoor market. In the background, there are people, including a woman in a yellow and brown patterned shawl, and a stall with a red canopy. The scene is filled with activity and traditional market elements.

are here to stay

transforming the way organizations do business. Early efforts
B2B commerce is a permanent feature on the business landscape.

One of the casualties of the Great Dot-com Shakeout of 2000 has been the B2B e-market. Technology failures, financial woes and other setbacks have brought unwelcome publicity to these online exchanges, which new economy pundits once predicted would replace traditional relationship-based buying and selling.

What happened? Mainly a recognition that the costs to most businesses—transaction fees for buyers, content management costs to suppliers and integration costs for everyone—were often higher than expected and the benefits to participants more elusive than anticipated. These and other issues were exacerbated when suppliers failed to join e-markets en masse, as was widely expected. Liquidity, rather than the build-out of capabilities, quickly became the number one priority for many e-markets as they struggled to survive.

But despite well-publicized e-market failures, Accenture believes online B2B commerce is a permanent fixture on the business landscape. Three robust models have emerged—the public independent trading exchange, the industry-sponsored marketplace and the private exchange—and they will change the way business is conducted. Most companies will adopt a portfolio approach to e-market participation, using different models for different business requirements.

A look at each type's strengths and weaknesses goes a long way to explaining why there's currently no one-stop shop. Each e-market model has advantages, but it is the adaptive and collaborative capabilities of the private exchange that explain its particularly important role in the next wave of B2B commerce (see chart, page 26).

Public independent trading exchanges

In recent decades, few business phenomena became media darlings—or captured investors' interest—as quickly and completely as independent trading exchanges. These exchanges generally were established to serve a particular industry or product group. The value proposition included the discovery of trading partners worldwide, a single venue for conducting business, virtual management of business relationships and visibility to prices around the globe.

Despite the significant venture capital invested in independent trading exchanges and the thousands of companies formed, real success stories are hard to find. In October 2000, for instance, Commerx, the parent company of PlasticsNet and MetalClick, announced the resignation of its two cofounders and CEOs, and it withdrew a planned IPO. PaperExchange and BuildNet also withdrew IPOs last year, while Fleetscape.com, a truck-parts exchange, and Chemdex, a well-known chemicals exchange, went out of business. A rapid consolidation among such exchanges is now under way.

New strategies needed

In general, independent trading exchanges ran into trouble because their business models misjudged how much, and for which services, customers were willing to pay. This issue often was compounded by management teams comprised of industry outsiders who lacked expertise in the markets they were trying to serve.

More fundamentally, basic economics worked against these exchanges. Where low barriers to entry exist, many participants will enter. The result: extreme competition and low margins. The original idea of an electronic marketplace for the chemicals

industry was innovative, for example, but so easy to implement that 30 such e-markets emerged—among them CheMatch, e-Chemicals, ChemB2B.com, ChemCross, OneChem, ChemicalDesk, ChemRound and Chemdex. No single exchange was able to capture a dominant share of transactions, resulting in most entrants either redefining their business strategy, merging with competitors or simply going out of business.

For long-term survival, independent trading exchanges need more differentiated, hard-to-replicate capabilities that serve a particular vertical or horizontal niche—which is more easily accomplished in highly fragmented industries. Take BuildNet in the construction industry. This exchange now goes beyond merely trading products to providing specialized solutions for such industry-specific problems as job-lot scheduling and materials planning.

Other independent trading exchanges will find that their most favorable roles focus on low-risk trading activities, such as purchasing materials for maintenance, repair and operations, or on functional niches, such as disposing of surplus materials. Still others will partner with the major industry-sponsored marketplaces to bring focused, specific services to an industry. For example, ingredient marketplaces Novopoint and Foodtrader.com deliver specialized capabilities through their relationship with Transora, the packaged food and beverage industry-sponsored marketplace.

Strategically well-positioned independent trading exchanges will continue to play an important role in a company's portfolio of e-markets, but they won't be the dominant model predicted during the dot-com revolution.

Industry-sponsored marketplaces

Industry-sponsored marketplaces were one mechanism for traditional companies to fight back against dot-coms with their own e-commerce strategies. These marketplaces offered major industry players the opportunity to capture directly the online benefits and control of the B2B services provided to participants.

Founders of industry-sponsored marketplaces typically represent a substantial portion of a given industry's trading volume, thus marginalizing potential competitors. Consider Quadrem, an electronic marketplace for mining, minerals and metals companies. Its 21 founding members represent almost two-thirds of the industry's total market capitalization and more than one-quarter of its buying power. Covisint and Exostar sought to harness similarly powerful industry participants in the automotive and aerospace industries, respectively. (For a related article, see page 76.)

Speed and agility

Despite high-powered founding members, many industry-sponsored marketplaces are struggling with their own set of problems. Establishing a marketplace that can serve the needs of its many founders, as well as meet the specific requirements of any individual member, is inherently challenging. Online commerce demands speed and agility, yet the sheer number of powerful owners can make decision making slow and cumbersome.

Many industry-sponsored marketplaces also have struggled with governance issues. It is not surprising that for many, the build-out of capabilities is proceeding more slowly than members anticipated.

It has also proven difficult to find industry participants—particularly leaders with a history of strong

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supply chain management capabilities—that are willing to publicize business information considered sensitive and proprietary. And like their independent trading exchange counterparts, many industry-sponsored marketplaces are finding that building their supplier base is taking longer than expected.

Industry-sponsored marketplaces will endure; however, their role likely will emphasize standard setting, indirect procurement and, over time, the creation of robust capabilities for direct materials procurement. They will also have a clear advantage in providing community content—industry news, education, job postings—and specialized services for their industry.

In select markets (such as aerospace and defense) that require the coordi-

nation of engineering efforts across many companies, industry-sponsored marketplaces will facilitate improved design collaboration among members. From its outset, Exostar, the global aerospace and defense exchange, emphasized that buying and selling would be only one part of a more comprehensive, collaborative environment. Soon participants will be able to engage in real-time product collaboration while ensuring that proprietary and sensitive information is kept private from other members.

Private exchanges

To varying degrees, each B2B e-market model can complement and extend traditional ERP capabilities; however, private exchanges will enable the deepest integration between a company and its trading

partners. Private exchanges leverage existing enterprise systems to enable supply chain collaboration and visibility. It is no accident that many early adopters of private exchanges were supply chain leaders who saw private exchanges as a way to extend their competitive advantage.

Another strength of the private exchange is its ability to support a company’s unique strategy and requirements. Dell, Cisco, Motorola, Wal-Mart and others use private exchanges to provide a level of intimacy with their trading partners that is not achievable currently in a public marketplace (see box, page 28). Consider these examples:

At Taiwan Semiconductor Manufacturing Co., private exchange technology makes it possible for geographically

The e-market portfolio

In the world of e-markets, there are no one-stop shops. Although many models can support a variety of business functions, none is able to support all functions equally well. Creating a portfolio of e-markets—to optimize everything from community content to supply chain collaboration—is the best solution. The chart below rates the various capabilities of the three e-market models from one star (minimum capability) to three stars (strong capability).

	Independent trading exchanges	Industry-sponsored marketplaces	Private exchanges
Community content	★	★★★	★
Procurement (indirect materials)	★★★	★★★	★
Procurement (direct materials)	★★	★★	★★★
Settlement and payment	★★★	★★	★
Fulfillment and logistics	★★	★★	★★★
Product development	★	★	★★★
SC planning and collaboration	★	★★	★★★
Customer service and support	★★	★★	★★★

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dispersed engineers to collaborate on chip-design projects. The system is secure: Users cannot copy or download the layout, and the database on which the design resides is protected by TSMC's corporate firewall. Engineers with access along TSMC's supply chain can view part or all of a given design simultaneously, isolate and mark individual circuits or lines, trace circuits and provide comments for all to see.

Cisco's private exchange allows customers to configure, place and check the status of orders independently and online. More than 90 percent of Cisco's orders come in through the exchange. Order cycle time has been slashed from as long as eight weeks to as short as one week.

Customer satisfaction ratings are up at the systems maker. Because changes in demand go directly and instantaneously through the supply chain, suppliers can adjust their inventory levels and production schedules accordingly.

The exchange has also helped Cisco reduce materials costs by more than \$170 million and labor costs by about \$108 million, cut inventory nearly in half and double inventory turns. Its suppliers' engineers can assemble in minutes document packages that used to take a day or two to put together. As a result, one stage of the new-product prototype phase has been eliminated and, on average, the remaining four stages have been shortened by more than one week. The resulting improvement in time to volume and scalability has brought an additional \$338 million into Cisco's revenue line.

In response to customer feedback, in December 2000 Bayer launched an expanded and improved version of BayerOne, which links customers of all five of the company's poly-

mers and chemicals divisions. This lets customers customize their own account reports to include as much or as little of the available information as they want, as well as have their reports compiled and e-mailed to them automatically, as often as they want. In the future, BayerOne may be expanded to include features such as inventory management and direct B2B transactions.

Adaptability

One of the most impressive advantages of the private exchange is its adaptability: Companies can tailor the basic concept to fit their own strategic needs or operating idiosyncrasies, although most are either buyer- or seller-based.

Buyer-based private exchanges aim to make supply chain management functions more efficient and effective. At the most elementary level they allow for online ordering, confirmation, shipment notification and invoicing. More sophisticated exchanges provide for collaboration with suppliers on forecasts, supply planning, product design, exception management and other functions. For example, Wal-Mart makes a two-year history of customer transaction data available to suppliers through its private exchange. In return, suppliers analyze sales-trend data and make recommendations about store assortments, market segmentation and inventory management.

Seller-based private exchanges add value for key customers. They may remind customers to order certain regularly purchased items, or even allow the seller to examine the customer's inventory and replenish it automatically. Customers may also be empowered to collaborate on product design, track orders and otherwise join forces with the seller. Cisco's private exchange is one of

Private exchanges will enable the deepest integration between a company and its trading partners.

the most ambitious and comprehensive seller-based exchanges.

Value propositions

While the breakthrough collaborative capabilities of the private exchange ensure its dominant position in the coming months, a private exchange is not for all companies.

In industries where the supply chain is simple and straightforward, there may not be enough supply chain inefficiency to justify building a private exchange. Industry-sponsored marketplaces or independent trading exchanges may serve those companies better.

When the supply chain is complex, small companies will have to weigh the startup costs carefully against benefits. One approach that has proven successful is for the channel master to build out the private exchange infrastructure and allow participating companies to leverage its capabilities. In this instance, smaller businesses receive advanced capabilities for minimal cost and the channel master receives significant improvements in supply chain efficiency. Over time, additional low-cost options will become available for firms as technology standards develop, startup costs fall and private exchange hosting services evolve.

Even larger companies with complex, unpredictable supply chains should take a close look before investing in a private exchange infrastructure. When the product cycle is long, the number of suppliers or customers small, outsourcing infrequent and engineering rather simple, it may not make sense to build a private exchange. Lower-cost alternatives could deliver equivalent results.

For example, most industry-sponsored marketplaces recognize that

their participants are interested in private exchanges, and many are identifying ways to provide participants with hosted private exchange rooms and collaborative tools. Under this arrangement, the marketplace benefits as both public and private transactions continue to be conducted in its forum, while the participants have access to basic collaborative capabilities at a lower cost than they would have if they had built out their own infrastructure.

More tailored private exchange capabilities often may be a necessity for companies in engineering-intensive industries with unique design and production requirements, high degrees of supply chain collaboration, rapid cycles, and volatile supply and demand.

Dell's extraordinarily short cycle time, for example, is an important competitive advantage. Joining an industry-sponsored marketplace

Private exchanges: Best practice from Motorola

Motorola's commercial, government and industrial solutions sector had a problem. The unit specializes in two-way radios for business and government communication. Its product line is diverse, and some users require custom features—special frequency bands, for example—that make their radios unique.

Customer relationships similarly are multiform. The unit relies on a network of dealers to handle sales and service for a portion of the product line, but large customers with special contracts may receive support through different channels or through a direct sales force. Motorola used to rely upon a complex system of call centers and reams of printed material that often was more confusing than helpful to customers.

Explains Kent Buchanan, vice president and general manager of global e-business and Motorola Online, "In order to buy from us, customers had to know *how* to buy from us. They needed to know which was the right phone number or the right call center for the product. Dealers had to call different points in Motorola to do different transactions. We found ourselves saying there had to be a better way."

So Motorola assembled a team to benchmark best practices and identify ways to close the gap between what customers demanded and what the company was delivering. This effort led to the implementation of Motorola's private exchange.

Since the beginning of 2001, Motorola's dealers and customers have been able to log on to a single site that not only provides comprehensive product information but also allows them to get thorough service data and information about their accounts. Motorola even has given its business-to-business customers the authority to determine who can place orders, who can get account information and so on. Since control is in the customer's hands, if an employee changes jobs, the customer can make the necessary changes in authorization immediately.

Customer reception has been highly positive. Satisfaction scores are up, and Motorola's new exchange has cut the order-to-shipment cycle from weeks to hours for some products. Phone calls asking about the status of repairs are down 50 percent. "It appears to be good for everybody," Buchanan says.

would bring Dell's capabilities to its competitors, so Dell relies on its own private exchange to outpace competitors while keeping its proprietary supply chain management practices secret.

Companies with a dominant position in their industries, or world-class supply chain management capabilities, sometimes will choose to build their own private exchanges. In these instances, the capabilities available in an industry-sponsored marketplace fall far short of their specific business requirements and supply chain management processes.

Wal-Mart already has done an outstanding job of aggregating and leveraging its purchasing power. Any benefits Wal-Mart might receive from joining an industry-sponsored marketplace are outweighed by the advantages of an e-market that's tailored to its own needs. Moreover, its dominant market position ensures that key suppliers will participate in Wal-Mart's B2B e-market initiatives. So a private exchange is eminently sensible.

Managed portfolios

Each online B2B model seeks to make one or more of these necessary functions more efficient: supplier discovery, price visibility, product tracking, logistics, product development, procurement, supply chain planning and collaboration, and services management.

Yet no one e-market model can deliver all the above benefits. For a company to have a full host of capabilities, it will need to have a strategically and dynamically managed portfolio approach that aligns e-market types and capabilities with business need.

For example, Dow Chemical is involved in almost 10 different

online marketplaces to best meet its diverse needs. Dow's customers can use the private exchange MyAccount@Dow to buy from the company. Dow also participates in the industry-sponsored marketplaces Omnexus and Elemica to sell plastics and chemicals, respectively. In addition, the company uses ChemConnect (an independent exchange in which it has an equity stake) for auctioning direct materials as well as for finding new suppliers.

Accenture expects the effective management of an e-market portfolio to be an important sign of industry leadership in the coming decade. Companies already are using independent trading exchanges and industry-sponsored marketplaces to more effectively buy, sell and exchange information. Moving forward, e-markets, led first by the private exchange, should enable the next wave of supply chain management synchronization and collaboration gains.

As B2B e-commerce continues to evolve, remaining on the sidelines could be a costly mistake. There already is a growing gap between the supply chain capabilities of an industry leader and those of its average competitors. Those companies that fail to recognize that e-markets entail more than buying and selling goods risk losing even more ground to their competition. ■

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