

Industry Briefing

eCollaboration – the Evolution of the Extranet

Executive Summary

Electronic trade between businesses isn't new. What has changed is the opportunity provided by the Internet for businesses not just to trade but to collaborate in all aspects of their business. But to succeed the evolution from extranet to business-to-business marketplaces and eCollaboration, needs to be matched by changes in the technical infrastructure and the way the enterprise is managed.

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EDI Steps to Follow

The first step to eCommerce among businesses was EDI (Electronic Data Interchange). It still gives many large corporates a competitive edge, enabling them to process high volumes of highly structured data. According to the U.S. Commerce department some 250,000 companies across America use it to support \$3 trillion of business.

Such networks simply route transactions between buyer and seller. Such point-to-point connections are fine for routine orders which can be processed automatically. Automation reduces errors and processing time for transactions – although at a cost. Traditionally, the price of entry for such systems has excluded smaller competitors. What's more such systems only automate transactions between existing partners, they don't enable us to develop new markets or allow dynamic trading.

Extra Help from the Web

The Internet has changed that. It does enable secure, interactive information exchange. Using the Internet as the backbone it's easy for us to deploy and manage the sharing of information across networks whether internally, through an intranet, or with selected partners and customers through an extranet.

Through improving the timeliness and quality of information it has been possible to introduce new efficiencies that have increased productivity, improved inventory management, opened new avenues for revenue and encouraged a greater sense of trading loyalty between the company and customer.

For eBusiness to flourish there needs to be trust. But that can only be achieved if you have the technology in place to ensure the performance, reliability, and security of the system. As businesses we need to ensure that our internal corporate systems remain protected when, through the extranet, we open up access to certain specific and approved resources.

In fact, there are two levels of security to track – structural security and transactional security. Structural security is largely who has access to the network. Data encryption tools, firewalls, intrusion detection, and access control mechanisms can all provide this.

But once connected to the network it is important to check what users do. Transactional security looks at such issues as user authentication and non-repudiation. In effect every request made to the extranet server is a transaction. These requests can cover a broad range, from financial reports to software downloads. In order to conduct viable e-commerce, there needs to be trust, achieved through being able to verify and validate such transactions.

Extranets and beyond

While extranets have opened up trade between existing suppliers and customers, web-based technology also provides a solid foundation for extending eBusiness. From simple, web-enabled eCommerce we can now group with our trading partners – either through private or third-party web sites – into communities. These communities have themselves evolved from simple portals offering industry relevant information (some with limited commerce) into fully-fledged marketplaces.

Variously called NewCos, ehubs, industry-sponsored exchanges, new market makers, eMarketplaces, or trading communities, just about every major vertical industry has announced some type of collaborative online marketplace. Whether it's aviation parts or paper, the aim of these business-to-business (B2B) marketplaces is to use the Internet to squeeze inefficiencies out of the supply chain, save costs and increase revenues.

US Investment house Morgan Stanley Dean Witter (MSDW) estimated in a recent white paper that there are currently 700 such B2B marketplaces, with 2000 expected by the end of the year and 5000 by the end of 2002.

In a poll of more than 500 corporate leaders, Forrester Research found that nearly three-quarters (71 percent) plan to extend their business processes to eMarketplaces by the end of next year. They have gone further and predicted that eMarketplaces will eventually capture more than half (53 percent) of all online B2B transactions.

Xchanging Places

Inevitably, there will be difficulties. In industry-led exchanges (such as the big three auto makers – Ford, General Motors and DaimlerChrysler – that have formed a new auto parts exchange AutoeXchange) there are concerns that long time competitors will find it difficult to suddenly share their innermost corporate information such as pricing, inventory or design specification.

But the tremendous savings to be had – it's estimated the cost of purchasing goods or services can be reduced by some 25-40 percent – would seem too compelling an opportunity to miss.

Similarly, hard-pressed suppliers need to be convinced that eMarketplaces are not just a way of squeezing their margins further. In fact, for any exchange to work there must be a value-added proposition for both buyers and suppliers. Which group is likely to benefit most will depend on the level of fragmentation in the market. Analysts believe it will be optimal where no single buyer or seller controls more than 1 – 2 percent of the market, which is also where independent market makers will prosper over industry-led consortia.

Who gains?

As we join in the new marketplaces, buyers and sellers will gain value by harnessing the Internet's ability to aggregate disparate pieces of information.

Suppliers

For suppliers, business online does create greater transparency. Ignorance is out. Suppliers can no longer count on buyers paying high margins because they know no better.

But such price transparency doesn't mean that prices will necessarily drop – just that they will be more uniform. Most of us in large corporations have already established procedures to ensure we get the best prices. It doesn't change online – the process just becomes more efficient, so the cost of acquiring that product or service will drop.

Suppliers will also want to establish relationships where price is not the sole criteria and customers value their products and services using other metrics, such as quality or technical specification. In fact, MSDW say, the evidence from auctions is that in more than half the cases buyers don't select the lowest bid – they do rely on other criteria.

Buyers

More information is always good for the buyer who can use it to find where the goods he needs are cheaper, better, higher quality, or more readily available.

Eventually the greatest competitive advantage for them will come when they can use the exchange to not only ensure greater consistency in their buying policy, but also to synchronize demand and supply chains with their partners. This will enable them to reduce inventory and order cycle times.

C for Marketplace

For any marketplace to succeed it needs a critical mass of buyers and sellers, and that will only be achieved where the trading community has deep industry expertise. To achieve that, say US management consultants A.T. Kearney, you need to implement the three Cs of business-to-business – Commerce, Content and Connection.

Commerce – It is only by understanding the industry that we can determine which is most appropriate commerce model for a site.

What benefit is gained from the marketplace will depend on the way they work and the value they add. Value will come either through aggregation or matching.

Aggregation – involves bringing in large numbers of buyers and sellers under one roof, usually by putting multiple product catalogs online. As a form of one-stop shopping it reduces transaction costs, but prices are effectively fixed.

This style of marketplace is best for industries where there is low price volatility, purchases are time-critical and it is costly to search for products.

Matching – where buyers and sellers come together to negotiate prices in real-time. Under dynamic trading models the bidders set the price. Such models include auctions where the sale is based solely on price. It can be one seller, many buyers (such as Autodaq where second-hand automobiles are sold to dealers) or can be reverse auctions with one buyer, many sellers (such as 58k.com which offers reverse auctions of printing jobs).

Dynamic trading models are best where there is high price volatility, a highly fragmented market either amongst buyers or sellers, and the purchase is not time critical.

There are other dynamic trading models developing which go beyond price as the sole basis for a sale. Some auctions (dubbed Hyperauctions by A.T. Kearney) enable buyers to specify several buying criteria (quality rating, technical specification, brand) and set contingencies (budget limits etc). As transactions are automatically executed, based on preset preferences, it combines, say A. T. Kearney, the benefits of offline purchasing with efficiencies of online transactions.

In the most developed exchanges (Liquid Exchange) these transactions can be done in real-time so people know they can buy – or sell – at the published price.

Content

Properly handled content enables us to build relationships. In the first place, it is imperative to provide the right type of commerce-related content (i.e. price and product-related information, company profiles, inventory listings, etc.) and value-added content (i.e. general industry information, community forums, career services, etc.) to attract buyers and sellers to the site. What's more they are more likely to become loyal customers where there is the information online that helps them make informed purchasing decisions.

Connection

Two types of connection can be distinguished - Intraconnection and Interconnection.

Intraconnection – involves balancing internal processes so for every debit, or credit, entries can be made automatically. This is likely to involve some limited integration of ERP, or legacy systems.

Interconnection – The ultimate ambition is to connect other elements of the supply chain that can add value in the transaction by providing an end-to-end service, such as finance, logistics, order fulfillment, maintenance etc.

Collaborative Commerce

Such eCollaboration is the real transformation in webifying commerce. It is not simply linking buyer to seller but connecting supply chain to supply chain. The web is a wonderful platform to create new partnerships easily and inexpensively.

Currently, many businesses inefficiencies arise because complex, collaborative processes are done manually, without any proper workflow system in place. Getting the right information to the right people at the right time is challenge enough within any large organization but becomes exponentially more difficult when several large enterprises are working together.

Any commercial transaction will involve several areas of the supply chain, but often they will work independently and their processes are not apparent to other parts of the chain. By putting those processes online they become visible to all. We can then refine and improve them as necessary. In effect, such process transparency enables us to see what we don't know.

The Internet brings unprecedented levels of process transparency. It can enable us to streamline inter-company processes, eliminate redundant procedures, coordinate logistics and intelligently plan for changing market conditions.

Conclusion

The lowered costs and efficiencies opened up within companies by web-enabled collaboration can be just as great within markets. But such eCollaboration is not just about reducing the cost of acquiring customers or sourcing suppliers. Its transforming value will come where supply chain is linked to supply chain, to accelerate the flow of commerce. No one link in the supply chain can work alone. Competition today is between supply chains, rather than individual companies, and the competitive edge will go to those trading communities which best collaborate to identify and meet the needs of their customers.