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iSeries

iSeries Connect business to business primer







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## iSeries Connect business-to-business primer

The iSeries Connect business-to-business (B2B) primer is written to help you understand the basics of B2B, the differences between B2B and B2C, and the reasons behind implementing a B2B web strategy in your business.

The story you see in the press is not just about someone else's business. Make no mistake, action is absolutely essential. But while action is required, acting wisely is even more important. You have three choices in how you prepare your business for B2B:

- Ignore the industry trends and leave your business unchanged. However, before you decide on this course of action, make sure you understand what B2B is and what opportunities you may be missing:  
**Scenario one: B2B basics**
- Take halfhearted steps to adapt for B2B, superficially changing some of your business processes but leaving your core processes unchanged:  
**Scenario two: Developing a B2B web strategy**
- Recognize the enormous opportunity offered by B2B, transform the way you do business, and secure your business' survival in the new Internet economy.  
**Scenario three: iSeries Connect as your e-marketplace solution**

For information on how to connect your business to Connect for iSeries, see IBM Connect for iSeries.

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### Scenario one: B2B basics

You just do not know what this B2B hype is all about. As the head of procurement in a medium-sized chemical company, you are watching your competitors push into the world of Internet sales and e-marketplaces. You are hearing about them spending millions of dollars to get back-end systems in place. However, you do not see the business justifications to implement such a strategy in your company.

Implementing B2B solutions in your company, especially e-commerce and supply chain management (SCM) solutions, can be confusing. However, understanding traditional forms of business transactions can help you both understand and justify the need for B2B solutions in your business.

#### Traditional supply chain management

- Traditional sales and paper catalogs
- Electronic Data Interchange (EDI) systems

#### A different kind of shopping cart

- What does it mean to be an e-business?
- What are the differences between e-business, e-commerce, and commerce?
- What is B2C?

#### B2B fundamentals

- What is B2B?
- How is B2B different from B2C?
- What types of B2B applications are available?
- How is B2B affecting the economy, and what are the future predictions of B2B revenue opportunities?

### Traditional supply chain management

*Salesperson* is becoming an outdated term in today's Internet economy. Before the Internet, before Electronic Data Interchange (EDI), even before the advent of the personal computer, businesses bought and sold raw materials and finished goods through salespeople. Fifteen years ago, your chemical

company purchased raw materials by calling up your sales representative of the supplier you wanted to buy from. The salesperson took your order, processed the order internally, and a week or so later your raw materials were delivered. You had a large catalog of items from each supplier and had to manually search to find the items you needed. Most of your frequently ordered items were bookmarked, but to order something new usually required more time. You also did not have a quick, easy way to compare prices and product specifications between your suppliers.

It is not that your company has not tried to keep up with technological changes and advancements in supply chain management (SCM). You watched your information technology department deploy a personal computer (PC) to each employee. You were on the team that oversaw the development of an EDI system between your company and your three major buyers. When the Internet became an industry standard, your company gave access to all employees.

However, in the early 1990s, the Internet was only seen as an information source. Most web sites were static; they only provided information about a company and its products and a way to contact a company. Some companies began placing their product lines on the Internet, but customers still had to call or fax their orders. Searching for items became easier, but both the vision and the technology to use the Internet as a business tool were absent.

You prefer the personal sales call or the now-familiar EDI technology to manage your supply chain. You do not see the Internet as a potential way to buy and sell for your company.

Although EDI can be considered a form of B2B e-commerce, there has been much technological development in modern B2B e-commerce and SCM that takes advantage of the relatively inexpensive and ubiquitous nature of the Internet. The first step to understanding B2B, however, is to take a look at business-to-consumer (B2C) transactions. This is where the business revolution truly began.

### **A different kind of shopping cart**

## **A different kind of shopping cart**

As Internet and networking technology grew, so did the possibilities of different kinds of transactions between businesses and consumers. Businesses became fascinated with the idea of becoming an e-business. Using Secure Socket Layers (SSLs) and network firewalls, businesses were able to conduct complete transactions online, provided that the customer paid for purchases with a credit card. E-commerce was beginning to replace commerce as the preferred way to shop. The electronic "shopping cart" icon was beginning to replace the wheeled shopping cart for many customers. A new phenomenon was taking place, a phenomenon that the industry labeled B2C. The transactions that take place electronically between businesses and consumers are collectively known as B2C transactions.

You are beginning to see just what it means to say that the Internet is providing some enormous revenue opportunities for your business, and you want to know more information:

- **What it means to be an e-business**
- **The differences between e-business, e-commerce, and commerce**
- **What B2C is**

## **What it means to be an e-business**

Becoming an e-business means:

- You are improving your business processes using Internet technologies.
- You are leveraging your intranet, extranet, or Internet to bring together your customers, vendors, and suppliers electronically.
- You are web-enabling your business to sell products, improve customer service, and get maximum results from limited resources.



- You are embracing a full range of network computing applications: intranets, extranets, online customer care, online government and health care services, distant learning, and e-commerce.

Maybe now we have got your attention. The concept of becoming an e-business is not all that frightening; in fact, you see a lot of potential using electronic media as a means of generating more buyers and suppliers, and consequently, generating more revenue for your company. You are intrigued by the concept of all buyers and suppliers communicating on a common interface called the Internet. Let us solidify the differences between e-business, e-commerce, and commerce before we move on to how we are going to implement B2C solutions (and B2B solutions, where the real money is to be made) in your business.

### **The differences between e-business, e-commerce, and commerce**

## **The differences between e-business, e-commerce, and commerce**

All businesses conduct commerce. Commerce is the exchange of money for goods or services between businesses and consumers. E-commerce is doing commerce using electronic technology such as intranets, extranets, and the Internet.

Simply put, e-commerce can be thought of as buyers buying and sellers selling through electronic technology. Every business is both a buyer and a seller of goods or services and can potentially use e-commerce in one or both of those capacities. However, two important parts of e-commerce follow:

- Integration of buy and sell transactions
- Payment processing that takes place over the Internet using electronic, back-end systems

If your business does not have back-end integration, the introduction of e-commerce probably will not produce the efficiency and increased revenue growth seen in other companies that use electronic technology.

Although e-commerce usually involves catalogs and payment processing, not every business requires a catalog. For example, a local government that allows payment of taxes or fines over the Internet is conducting e-commerce. Associations that allow members to register and pay dues over the Internet are conducting e-commerce. Companies that purchase custom-ordered parts over the Internet usually do not use a catalog, but rather have some other means for conducting that transaction, such as a configurator or a custom-ordering process.

There are many aspects to e-commerce, but the most commonly thought of application is a B2C application. A common B2C application is a web-based catalog that buyers order products from and sellers receive payments from, such as amazon.com.

### **What B2C is**

## **What B2C is**

B2C stands for business-to-consumer. B2C includes all e-business between businesses and individuals, from retailing over the Internet to Web-enabled services such as banking. B2C transactions are e-commerce transactions that occur between a business and a consumer. Most likely, you have used B2C applications without realizing it. If you have purchased anything over the Internet, you have used a form of B2C.

With the explosion of Internet use throughout the 1990s, B2C transactions have flourished. It is now commonplace to shop online in the privacy of your own home for an item that you want. A B2C transaction is fairly simple. You first connect to the Internet through your internet service provider (ISP). Once you are connected, you open your browser to view the seller web site on the Internet. When you reach the seller web site, you must first pass through the seller's firewall before being able to shop. This is what is meant by shopping on a secure web site. Your personal information, including your credit card or debit card number, is protected in a B2C transaction.

Several characteristics are shared by most B2C transactions:

- A secure firewall is used to safely make purchases.
- A catalog is used to browse products before making a selection and purchase.
- Non-repetitive items are purchased each time you shop online.
- Items are purchased with a credit card or debit card.

If B2C involves business and consumers, you can logically deduce that B2B involves transactions between two (or more) businesses. B2B transactions are driving the industry changes in electronic transactions and are going to be the primary factor for businesses to make changes within their infrastructure.

## **B2B fundamentals**

### **B2B fundamentals**

Your way of doing things is just fine. You purchase all of your direct and indirect materials through a certain set of suppliers. Sure, maybe you are not getting the *best* prices that are available, but is all of this technology really going to equate to considerable savings and increased revenue?

By being able to manage your procurement processes online and integrate your processes with all of your buyers and suppliers, you will benefit by having:

- Lower costs
- Integrated information with all parts of your supply chain
- Reduced inventory costs, which will allow you to better plan for materials purchasing
- Streamlined internal processes
- Optimized resource use
- Real-time collaborative decisions

The following topics will explain more about B2B and the opportunities it can create in your business:

- **What B2B is**
- **How B2B differs from B2C**
- **Types of B2B applications available**
- **How B2B affects the economy, and the future predictions for B2B revenue opportunities**

### **What B2B is**

Business-to-business (B2B) is the use of web-based technologies to conduct business between two or more companies. *Business* can mean buying or selling, or it can mean exchanging information. B2B transactions can take place directly between companies or through a third party who helps match buyers and sellers.

B2B applications use electronic trade between you and your customers, suppliers, and business partners. There are many reasons to use B2B applications:

- To increase your supply chain efficiency at lower costs
- To help you improve customer service
- To give you total supply chain management (SCM), from the initial ordering process to the distribution of the final product

Now, instead of receiving sales calls from each of your suppliers or making a phone call to place your order after spending all afternoon leafing through the catalog and writing down the order item numbers, you go directly to your computer. You log on to your secure e-Marketplace site, select the items you wish to purchase, and the list of items available from your respective suppliers is immediately shown in the

browser. A few clicks of the mouse, and you have just completed your order—fast, secure, and efficient. Because the item was available from multiple suppliers at different prices, you were able to get the best price currently available.

## **How B2B differs from B2C**

### **How B2B differs from B2C**

The most obvious difference between B2B and B2C is the customer requirement. B2C focuses on individual customer transactions, whereas B2B focuses on other businesses as the consumer. This difference creates different needs for B2B applications.

One difference between B2B and B2C is the type of order. For example, when you order office supplies or parts, you usually order the same products as well as the same amounts at fairly regular intervals. Repeat and standing orders are a common B2B requirement.

Type of payment is also a different requirement for B2B transactions. When your company makes a purchase, you rarely use a credit card for payment. More likely, you will have varied forms of payment such as lines of credit and open orders. B2B applications are designed with these requirements in mind.

Another difference is the type of search function in B2B applications. A catalog to browse through is not necessarily a requirement, depending on the type of B2B purchase you want to make. When shopping for specific items, your company may benefit from a configurator and bid function rather than browsing and searching an online catalog.

Lastly, the type of connection between B2B and B2C differs. When you are connecting to a B2B application to make a purchase, you are normally connecting to one partner (a buy-side or sell side application) or several trusted partners (an e-marketplace or Trading partner agreement application). Because you are dealing with a relatively static list of trading partners, virtual private network (VPN) technology may be used to provide secure access to selected applications inside your firewall, thus avoiding the need to replicate data and applications outside your firewall.

In summary, B2B applications have these unique characteristics that set them apart from B2C applications:

- Different types of purchases and authorizations
- Unique contracts, terms, and conditions for different business customers
- Participation in customer's supply chain
- Variety of customer sizes, demands, and requirements

## **Types of B2B applications available**

### **Types of B2B applications available**

Your company has its EDI in place, which can be considered a form of B2B, but you can now see the benefits of using modern, Internet-based B2B in your procurement process. The first step in using B2B is determining the type of application that you need to implement based on your business needs. Ask yourself: Are you primarily a buyer, seller, or both? Your answer will determine the right type of B2B application for your business.

Here are the general types of B2B applications:

- **Buy-side applications**
- **Sell-side applications**
- **Trading partner agreements**
- **E-marketplaces**

## Buy-side applications

In B2B, a buy-side application refers to a type of application where the business logic resides on the side of the purchasing company. Another name for a buy-side application is an *e-procurement* application. You would use a buy-side B2B application to purchase supplies, parts, and materials from another business (supplier).

Buy-side applications do the following:

- They have workflow for the procurement approval process.
- They allow connections to company approved e-catalogs only.
- They provide prenegotiated pricing for your company.

*Did you know?* One goal of buy-side applications is to prevent maverick buying. **Maverick buying** is buying from suppliers other than the pre-approved list of suppliers for your company. Maverick buying can be costly to your company because it may result in paying higher prices for supplies, just to avoid the procurement process procedures.

The next type of B2B application is a **sell-side application**.

## Sell-side applications

Sell-side applications are often where small and medium-sized businesses begin their B2B implementation. Sell-side solutions allow your business customers and distributors to purchase goods and services through electronic technology. You can either sell on your own private B2B site or you can connect your catalog to a larger marketplace (see e-marketplaces for more information).

This type of application has varying degrees of implementation. You can begin by building a catalog or an order entry system which does not require a catalog (such as an order for a custom-built part for a piece of machinery). To make the order entry system more effective, the new order entry system can be integrated with an existing order entry system (such as your ERP) through technology called Connectors. In this way, the new catalog and the new order entry stay in synchronization with the existing product catalog and order entry systems.

If these ERP connectors do not exist, you will likely need to print out a report of the orders and rekey the orders into your legacy system. Due to the magnitude and volume often associated with B2B orders, manually rekeying orders could completely reverse the efficiencies of implementing a catalog in the first place.

For some companies, integration between the new order entry system and legacy order systems is not enough. These companies require integration all the way from the ordering of the product to shipping and logistics.

A B2B application that helps solve this integration problem is a **trading partner agreement**.

## Trading partner agreement applications

A trading partner agreement is much like a traditional value added network (VAN). A trading partner agreement automates transaction processes between trading partners and can deal with inventory, reservation status, shipping logistics, and purchase orders, for example.

Currently, trading partner agreement technology is largely implemented as web-based EDI. What many customers are doing is migrating their existing, private EDI systems to Internet technology. This move to web-based EDI offers you a substantial savings compared to the charges associated with connecting to a value added network.

Trading partner agreements have the potential to automate the process for negotiating and enforcing contracts between businesses. As XML and XML-based schema become more standardized and prevalent, the ability to fully automate negotiation and enforcement of contracts will become more of a reality.

The last type of B2B application is an **e-marketplace**.

## E-marketplace applications

An e-marketplace is a type of B2B application that supports many buyers and many suppliers at the same place. Generally, e-marketplaces are thought of as marketplaces or communities, and are accessible through Internet browsers. E-marketplaces bring together buyers and sellers through an intermediary.

An example of an e-marketplace would be a network shared by several florists that connected all the member florists with their suppliers. In this example, the florists would have buy-side logic directing them to the e-marketplace for procurements. The e-marketplace would route product inquiries and purchase requests only to the preapproved suppliers' sell-side application.

Some of the functions that may take place in e-marketplaces are auctions, reverse auctions, and exchanges. An **auction** is where there is one seller and many buyers. For example, if you had excess inventory, you could list the inventory on an e-marketplace and sell it rather than write it off. A **reverse auction** is where there is one buyer and many sellers. If you needed 400,000 circuit boards, you could list your desire to purchase the circuit boards and then choose from the many sellers who respond to your request. An **exchange** is where there are many buyers and many sellers and the price is allowed to float based on supply and demand. The New York Stock Exchange is an example of an exchange.

The physical topology of an e-marketplace has the appearance of a hub (the intermediary) and spokes (the buyers and sellers). Therefore, the terms **hub** and **spoke** are sometimes used to refer to entities participating in an e-marketplace. Another term sometimes used to describe a spoke, especially a sell-side spoke, is a **B2B on ramp**. This phrase is a metaphor for getting a supplier access to an e-marketplace.

## How B2B affects the economy, and the future predictions for B2B revenue opportunities

### How B2B affects the economy

From a business perspective, B2B is still in its infancy. However, it is the fastest growth area in the Internet economy, and it is carrying with it tremendous potential revenue opportunities. A Boston Consulting Group report estimates that B2B will account for US \$2.8 trillion in sales by 2003. Gartner Group estimates an even higher figure—US \$7.2 trillion.

AMR Research estimated that B2B revenues were US \$215 billion in 1999, and only 1.4% of B2B transactions were Internet based. What the estimated figures for the future mean is that B2B is growing and expanding exponentially. B2B has an incredible momentum and is being adopted faster than you may realize. You may be getting forced into B2B, either from your buyers or your suppliers.

As the technology and tools that make B2B possible advance, you may find yourself and your business left behind. The time to start thinking of B2B web strategies and implementations is now. Do not wait. Enjoy the benefits of becoming an early adopter.

IBM has a software product called Connect for iSeries that allows suppliers running iSeries servers to do the following:

- Integrate their back-end business applications that are running on an iSeries with e-business applications using MQSeries
- Publish content, manage transactions, and reconcile orders to Ariba and Metiom (formerly Intelysis Electronic Commerce) e-marketplaces in real-time
- Extract catalog content from relational databases and file systems

- Organize, manage, and translate catalog content for a variety of standard formats
- Plug in to the WebSphere Commerce Suite LP, the Lotus Domino for iSeries LP, and MQSeries Adapter.

For information on how to connect your business to Connect for iSeries, see the IBM Connect for iSeries documentation.

The next scenario describes **how to develop a B2B web strategy**.

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## Scenario two: Developing a B2B web strategy

You are a small parts supplier for the automotive industry. In the past, your company has used extensive time and money resources to build an Electronic Data Interchange (EDI) that helps you supply your parts to a large automaker. Your EDI system runs on three iSeries model 820 servers, which host your back-office purchase ordering and invoicing transactions. Until recently, EDI has been your primary form of communication between you and the automaker. However, your automaker has just decided to integrate its legacy EDI system into a web-based e-marketplace. Though resources are not a problem for the large automaker, you find yourself being forced into this new business-to-business (B2B) paradigm in order to keep up with the competition. You know that you have to come up with a web strategy in order for your business to stay competitive, but you are very leery about getting rid of the EDI and starting over.

Guess what? You do not have to get rid of your EDI and start over. It is a little more complex than just placing your catalogs online, but armed with the right kinds of information, you can have B2B application solutions in no time. The emergence of B2B is revolutionizing the way we conduct business transactions. Learn about the importance of B2B, the reasons behind having a good B2B web strategy, and the best ways to go about implementing both.

- **Why B2B is important**
- **Why develop a B2B web strategy**
- **What to include in my B2B web strategy**
- **What kind of questions B2B provides the answers for**
- **How to avoid getting rid of my EDI and starting over from scratch**

Basic B2B concepts are explained in **Scenario one: B2B basics**. Refer to this scenario if you are still unsure of the e-business and B2B concepts and types of applications you can implement in your business.

### Why B2B is important

By being able to manage your procurement processes online and to integrate your processes with all of your buyers and suppliers, you will benefit by having the following:

- Lower costs
- Integrated information with all parts of your supply chain
- Reduced inventory costs, which will allow you to better plan for materials purchasing
- Streamlined internal processes
- Optimized resource use
- Real-time collaborative decisions

B2B is gaining incredible momentum in the marketplace among business customers (for details, see How B2B affects the economy). In many cases, B2B is a natural extension of B2C. You are already set up on the Internet for e-commerce transactions, so implementing B2B involves integrating your back-end processes with your automaker's procurement processes. Once your automaker or distributor orders your automotive parts in a B2B transaction, you are using B2B web-based applications to connect to your buyers (business customers) to complete the transaction.

Consider this example of an initial B2C transaction that sets off a number of complementary B2B transactions:

1. A customer orders a car from the automaker who has begun to sell on the Internet (B2C).
2. The automaker receives the order and, as part of the transaction, contacts the distributor of the engine to obtain that product (B2B).
3. The distributor is out of stock and contacts the manufacturer to provide the engine (B2B).
4. Multiple suppliers, including your company, provide parts to the manufacturer so the manufacturer can make and ship the engine to the distributor, who will ship it to the automaker, who will ship it inside the car that was purchased by the customer (B2B).

As B2B evolves and advances technologically, it will become an extension of your IT infrastructure, not just an added feature. Beyond merely taking an order from a customer, you will be able to offer information on inventory, shipping terms, perhaps even a variety of sales conditions. And, eventually, you will want the same capabilities from your suppliers as well, creating total supply chain management (SCM) with B2B solutions.

### **Why develop a B2B web strategy**

## **Why develop a web strategy**

The focus of e-business is shifting from building web sites to building virtual enterprises. You must extend your business networks to get to the market first and gain competitive advantage, while delivering high customer value. Technology is no longer just an enabler, it is a key differentiator between you and your competitors. No matter where you are in e-business, you need a new model, a B2B web strategy, for designing the IT infrastructure that will take your business to new competitive levels and give you more customer opportunities.

To succeed in the new Internet economy, you must fully commit to using the Internet as a business tool, understand the digital infrastructure of e-business, and develop and carry out a coherent plan of action. Your web strategy should be appropriate to your size and scope, and should be adapted to your competitive situation, industry focus, and available resources. You should also ensure that your B2B e-commerce strategy works both shortterm and longterm. It should allow for rapid time-to-market while also incorporating defined plans for future initiatives.

Your company's EDI helps you keep track of purchase orders and inventory. Because you are a supplier in the automotive industry, establishing a B2B web presence is critical for your company's survival. If you act quickly and focus on your core objectives, you can begin experiencing the benefits of B2B and securing your competitive future.

### **What to include in my B2B web strategy**

## **What to include in my B2B web strategy**

Your company has decided to invest time and resources to develop a B2B web strategy. But what kinds of information should you include? What aspects of your business should you focus on? Implementing a B2B solution is an opportunity to transform your business, transform your industry, but only if you do it properly.

There is no *one right answer*. You will arrive at a different design point based on the unique aspects of your company, your competitors, and the market conditions driving your industry. You must balance the need to move quickly with the need to define a solution that protects your existing customer relationships, operating margins and, current investments that also preserves your future flexibility.

Several key questions you should consider as a part of your B2B web strategy plan are:

- What is your relative position in the market, and what is your market share percentage?
- Are you primarily a buyer, seller, or both?

- How fast of a time-to-market solution do you need to stay competitive or to gain a first-mover advantage?
- Will you use e-collaboration to gain a competitive advantage?
- How will your B2B application affect your bottom-line business results, such as increased revenue, lowered transaction costs, and lowered support costs?
- How will you differentiate your product from other online sellers?
- How will you create electronic branding opportunities?

After you consider the answers to these questions, you are ready to review **the basis of your implementation plan**.

## The basis of your implementation plan

The following steps should be the basis of your implementation plan:

1. Determine whether you are a buyer, seller, or both, and whether you will establish an online exchange (alone or in partnership) or join existing public or private e-marketplaces.
2. Develop a strategy that enables you to streamline your business processes to eliminate the need for manual intervention, and to protect your existing investments in enterprise resource planning (ERP), supply chain management (SCM), and customer relationship management (CRM) solutions.
3. Select a technology and a service provider that have the capabilities to implement and, if necessary, operate an open and scalable solution across all geographies. Ensure that the provider is committed to open industry standards, such as Linux and XML, to enable you to link with your suppliers, customers, and other B2B applications (such as e-marketplaces) today and in the future.
4. Aggressively implement your strategy to enable your company to improve business performance and to establish an early adopter advantage in your industry.

### What kind of questions B2B provides the answers for

## What kind of questions B2B provides the answers for

Traditionally, trading networks have focused on reducing purchasing costs and have been formed by one or more buyers who establish online trading capabilities. They are typically developed in a single industry. However, B2B applications go beyond merely lowering supplier's prices to reduce costs and assets throughout a supply chain.

Some common questions that B2B applications help answer are:

<b>Question:</b>	Why should I be concerned with B2B if I already have an EDI in place?
<b>B2B answer:</b>	Gartner Group predicts that worldwide online trade will reach \$7 trillion by 2004, with approximately 40% of transactions flowing through e-marketplaces.
<b>Question:</b>	How do I establish more efficient supply chain management (SCM)?
<b>B2B answer:</b>	E-marketplaces, a type of B2B application, allow you and your trading partners to integrate, synchronize, and optimize the flow of materials, finished goods, and services.
<b>Question:</b>	How can I provide multiple prices to multiple buyers with one online catalog?
<b>B2B answer:</b>	B2B applications allow you to create multiple views of the same catalog as part of an e-marketplace.
<b>Question:</b>	I'm a small company. How can I reach new customer opportunities while maintaining my existing relationships?
<b>B2B answer:</b>	B2B applications allow you to educate new buyers on your existing products or services by providing a central hub that acts as an information source to potential customers. There, they can learn about your product or service and, ultimately, make a purchase.

### How to avoid getting rid of my EDI and starting over from scratch



## How to avoid getting rid of my EDI and starting over from scratch

Guess what? You do not have to get rid of your EDI and start over from scratch.

Many large companies have developed EDI with their key trading partners. Your company's supply chain is no exception. In the market, there is a natural tendency to want to extend your closed networks into a private B2B application. While this significantly reduces costs and improves communications throughout your procurement process, these types of private networks tend to be expensive, closed, and provide limited flexibility and functionality.

As a supplier, you need a product that integrates your back-office purchase ordering and invoicing applications with these new B2B protocols. With products such as IBM Connect for iSeries, you can continue to take orders the old EDI way, but, at the same time, receive orders from those buyers (such as your large automaker) that have moved to the new B2B paradigm.

Connect for iSeries allows suppliers running iSeries servers to do the following:

- Integrate their back-end business applications that are running on an iSeries with the applications of your trading partners
- Publish content, manage transactions, and reconcile orders to Ariba and Metiom (formerly Intelysis Electronic Commerce) e-marketplaces in real-time
- Extract catalog content from relational databases and file systems
- Organize, manage, and translate catalog content for a variety of standard formats
- Plug in to the WebSphere Commerce Suite LP, the Lotus Domino for iSeries LP, and MQ Series Adapter

For information on how to connect your business to Connect for iSeries, see the IBM Connect for iSeries documentation.

The last scenario describes how to use iSeries Connect as your **B2B e-marketplace solution**.

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## Scenario three: iSeries Connect — your B2B e-marketplace solution

You finally have the business you always dreamed about. Manufacturing your new widgets for the aerospace industry has the potential to be an extremely successful (and profitable) business, but you are unsure of the best way to go about selling your product. The industry is competitive, and it is nearly impossible for a large airplane manufacturer with established supply chain partners to notice your tiny, startup company. You only have a certain amount of capital to spend on technology, but you realize how vital a good IT infrastructure is now but, more importantly, in the future.

B2B may have a dramatic effect on your business, and it can be difficult to identify your company's best course of action. Make no mistake, action is absolutely essential. But while action is required, acting wisely is even more important. Do not rush in without a realistic expectation of benefits, a sound game plan, a clear understanding of your organization's core competencies, the support and unity of your management team, and a reliable partner who can support you in harnessing the power of these new channels to benefit your business, your suppliers, and your customers.

We not only help you get connected to B2B e-marketplaces, but also help your business make the right choices before entering the B2B world:

- **What an e-marketplace is**
- **The value of an e-marketplace**
- **E-marketplace pitfalls you should avoid**
- **How iSeries Connect works as a B2B supplier enablement solution**
- **How the IBM/i2/Ariba alliance affects my e-marketplace solution**

Basic B2B concepts are explained in **Scenario one: B2B basics**. Refer to this scenario if you are still unsure of the e-business and B2B concepts and types of applications you can implement in your business.

Developing a B2B web strategy is explained in **Scenario two: Developing a B2B web strategy**. Refer to this scenario for information and advice on how to develop a strategy that will best suit your company for the B2B business revolution.

## E-marketplace applications

An e-marketplace is a type of B2B application that supports many buyers and many suppliers at the same place. Generally, e-marketplaces are thought of as marketplaces or communities, and are accessible through Internet browsers. E-marketplaces bring together buyers and sellers through an intermediary.

An example of an e-marketplace would be a network shared by several florists that connected all the member florists with their suppliers. In this example, the florists would have buy-side logic directing them to the e-marketplace for procurements. The e-marketplace would route product inquiries and purchase requests only to the preapproved suppliers' sell-side application.

Some of the functions that may take place in e-marketplaces are auctions, reverse auctions, and exchanges. An **auction** is where there is one seller and many buyers. For example, if you had excess inventory, you could list the inventory on an e-marketplace and sell it rather than write it off. A **reverse auction** is where there is one buyer and many sellers. If you needed 400,000 circuit boards, you could list your desire to purchase the circuit boards and then choose from the many sellers who respond to your request. An **exchange** is where there are many buyers and many sellers and the price is allowed to float based on supply and demand. The New York Stock Exchange is an example of an exchange.

The physical topology of an e-marketplace has the appearance of a hub (the intermediary) and spokes (the buyers and sellers). Therefore, the terms **hub** and **spoke** are sometimes used to refer to entities participating in an e-marketplace. Another term sometimes used to describe a spoke, especially a sell-side spoke, is a **B2B on ramp**. This phrase is a metaphor for getting a supplier access to an e-marketplace.

### The value of an e-marketplace

## The value of an e-marketplace

The value of participation in an e-marketplace is dependent on a number of factors including your company's role, how the exchange is structured, and your company's ability to attract and retain trading partners. Your strategy should address whether your company will participate as a buyer, seller, or a combination of both. Benefits should be balanced so that all parties are motivated to help the exchange succeed and grow.

Typical buyer benefits include:

- **Reduced transaction costs.** Using an e-marketplace to facilitate the transaction process have allowed organizations to cut transaction costs in excess of 10%.
- **Identification of new suppliers.** Buyers find it much easier to identify, qualify, and measure the performance of new suppliers.
- **Faster time-to-market.** Increased collaboration between suppliers, buyers, and customers reduces the time to develop, produce, and distribute new products. The improved communications enable stronger and more beneficial relationships between parties.
- **Improved market transparency.** Improved insight into changing trends within the industry helps smooth supply-and-demand shocks that are the result of unpredictable factors.

Typical supplier benefits include:

- **Increased exposure to new buyers and sales opportunities.** Sellers can showcase their products to the global marketplace 24 hours a day, 7 days a week. E-marketplaces enable you to present buyers with a personalized purchasing experience complete with cross-selling, contextual advertising, and promotional opportunities.
- **Reduced transaction costs.** Through aggregation, improving the accuracy of orders, collaboratively viewing product design and movement data, streamlining internal administrative processes and reducing sales expenditures, suppliers can reduce costs and improve overall financial performance.
- **Market intelligence.** Suppliers gain a much better insight into the trends in the industry and buying patterns of key customers.
- **Anonymous posting of excess inventory.** E-marketplaces provide a supplier with anonymity to liquidate excess inventory without jeopardizing their ability to maintain established prices and terms.
- **Leveled playing field for small organizations.** E-marketplaces do not discriminate by size, and therefore enable small buyers and sellers to compete more effectively. Furthermore, smaller organizations can benefit from the efficiencies of e-commerce without the extensive IT infrastructures that are required by Electronic Data Interchange (EDI) systems or extranets.

### **E-marketplace pitfalls you should avoid**

## **E-marketplace pitfalls you should avoid**

While there are numerous benefits associated with the implementation of e-marketplaces, several pitfalls and you and your management team should avoid:

- E-marketplaces that fail to deliver a balance of benefits to both buyers and suppliers find it difficult to attract sufficient participants to enable effective collaboration and efficiency. Successful e-marketplaces are those that enhance the valued relationships between trading partners through improved collaboration and reduced overhead.
- Implementations that are based on closed proprietary architectures limit a company's ability to link with other e-marketplaces and external trading partners and may substantially reduce the overall value to your company.
- An undue focus on the potential equity value of an e-marketplace initial public offering (IPO) can lead to the choice of suboptimized business structures, which limit the long-term effectiveness of the e-marketplace.

### **How iSeries Connect works as a B2B supplier enablement solution**

## **How iSeries Connect works as a B2B supplier enablement solution**

You may find yourself being rushed to enter the world of B2B. You might have a tendency to start implementing your solution before making sure that your business processes are properly set up to handle this new way of doing business. This could be a costly mistake.

B2B integration products, such as iSeries Connect, provide the connectivity that is needed to accept requests from external trading partners and pass them on to your business processes. It is ultimately the responsibility of your existing business applications, such as your order processing application, to process these requests. iSeries Connect does not process these requests directly. It passes these requests on to your existing back-end applications for processing. iSeries Connect can then format the requests into a form that your applications can understand.

iSeries Connect is a software integration framework for B2B that provides the following:

- A secure integration of your existing core business applications with the business applications of your trading partners.
- A high-function, low-cost, easy-to-deploy solution that is built on industry standards such as Java, Extensive Markup Language (XML), and MQSeries.

- A set of functions that enables a trained service provider to easily connect your business to a trading service, such as Ariba or Metiom. The cost savings can be substantial when compared to expensive Electronic Data Interchange (EDI) or other custom-built B2B solutions.

The following considerations help you prepare for doing B2B with iSeries Connect:

- **Application accessibility considerations**
- **Message differentiations**
- **DUNS number**
- **E-catalog implementation**
- **B2B terminology and protocol education**

## **Application accessibility considerations**

If you can access your order processing application as an externally callable program or if it can accept requests through an MQSeries queue or OS/400 data queue, then iSeries Connect has the ability to communicate with them.

If you cannot access your application as an externally callable program or if there is no application that can be called, such as when a database table needs to be updated, you will most likely have to create a proxy application that can be accessed through one of these methods. This proxy application (often written in Java) then accesses the business application by directly updating a database table or file or through whatever means necessary.

Making it easy to access your back-end applications is what iSeries Connect is all about. Tools and instructions are provided that help you describe the interface to your applications and then help you map the field of an incoming request to the fields, parameters, and structures expected by your application. Once this information is captured, iSeries Connect handles the run-time duties of communicating with the trading partners, mapping the data, calling your applications, and returning an appropriate response.

**Next consideration: Message differentiations**

## **Message differentiations**

Another important concept to understand is that iSeries Connect deals with real-time requests that originate from buyer organizations or marketplaces. For example, iSeries Connect handles an electronic purchase order message that is sent from an Ariba marketplace. It does not handle asynchronous messages that the supplier business applications generate, such as advanced shipping notices or invoices that need to be sent to the buyer organization yet. The buyer organization would have to request these objects in a separate request message. Unfortunately, few B2B protocols generate these types of requests at this time. Therefore, it may be necessary for you to make this information available to your buyer organizations by using other means, such as e-mail notifications or Web pages.

**Next consideration: DUNS number**

## **DUNS number**

Make sure your company has a Data Universal Numbering System (DUNS) number. Most B2B marketplaces require that each company has a unique DUNS number. A DUNS number is a nine-digit number that Dun & Bradstreet issues to identify each corporate location of a business.

**Next consideration: E-catalog implementation**

## E-catalog implementation

You must determine how to make your available products and services known to your buyer organizations. This helps you decide the best way to configure and use iSeries Connect. iSeries Connect can build and maintain electronic catalogs for you and distribute them to your buyer organizations or to your supplier system to host.

Catalogs are built from your existing database tables, from flat files, or from scratch. The catalogs can then be sent to the buyers in a variety of different formats. Each buyer will most likely indicate to you how they would like their catalog formatted. They may even request that you host the catalog for them on your machine. iSeries Connect can help you do this. Knowing how you are going to handle catalog information ahead of time helps with your planning.

### Next consideration: B2B terminology and protocol education

## B2B terminology and protocol education

The final step in B2B preparation is to educate yourself on B2B terminology and B2B protocols. Understand what constitutes an Extensible Markup Language (XML) purchase order message and how this information maps to your existing database tables and programs. Most of this information is publicly available on the Internet. There are numerous trained service providers on iSeries Connect that can deal with the mechanics of installing, configuring, and deploying iSeries Connect for you.

For basic B2B terminology and protocol concepts, refer to **Scenario one: B2B basics** in this primer.

### How the IBM/i2/Ariba alliance affects my e-marketplace solution

## How the IBM/i2/Ariba alliance affects my e-marketplace solution

IBM has formed a B2B alliance with i2 and Ariba to provide you a more complete B2B e-marketplace solution. IBM and its alliance partners i2 and Ariba have implemented more than 100 B2B e-marketplaces across multiple industries.

IBM provides comprehensive e-marketplace global solutions to its customers and business partners. Our strategy is built around an open B2B platform that will allow you to connect and interact with unlimited trading partners on the Internet. IBM can assist in the development of your e-marketplace blueprint through the alignment of internal processes, design of the technical architecture, and development of your implementation strategy. IBM can also provide the technology and services to build your e-marketplace solution, host your e-marketplace system, and in appropriate cases, establish an exchange in partnership with your company and its trading partners.

The IBM/i2/Ariba team possesses the following strengths:

- End-to-end solutions
- Open architecture
- Global hosting
- World-class service capabilities
- Seamless integration
- Thought leadership
- e-business practitioner

For information on how to connect your business to Connect for iSeries, see IBM Connect for iSeries.

## Electronic Data Interchange (EDI)

Electronic Data Interchange (EDI) is a system that allows you to electronically exchange structured data, such as business documents, between you and any business partner, even if you use different hardware, software and communication services.

## E-commerce

E-commerce is sometimes used synonymously with the term e-business. But really, e-commerce is a large subset of e-business that encompasses transactions of all sorts. If you think of the definition of commerce (the buying and selling of items between two people, two businesses, or a person and a business), then e-commerce can simply be thought of as the electronic buying and selling of items between parties.

## E-business

An e-business is any business that is designed to connect customers, partners, suppliers, and employees through Web technologies. It includes communication, collaboration, and integration in transforming your key business processes with Internet technologies.

## Supply chain management (SCM)

Supply chain management (SCM) is the integrated management of materials and information from raw material suppliers to the delivery of the finished product to the customer. The integrated management includes product design, production, distribution, and transportation functions. The supply chain is now a supply community. Different links in the supply chain—such as manufacturers, materials, vendors, and retailers—are collaborating using web-based technologies.

To succeed in an e-marketplace, you need SCM solutions that deliver real-time communication solutions and have the flexibility to manage rapid change. Moreover, your SCM solution must add value as part of an integrated enterprise. It should communicate seamlessly with enterprise resource planning (ERP), customer relationship management (CRM), and e-business system solutions.

The supply chain comprises a wide variety of processes, which include procurement, inventory management, forecasting, warehousing, logistics, transportation, supply chain network design, and distribution planning.

A tightly integrated supply chain combined with collaborative technologies becomes a shared value chain that delivers increased efficiency, reduced costs, and greater customer satisfaction.

## Business-to-business (B2B)

Business-to-business (B2B) is the use of web-based technologies to conduct business between two or more companies. *Business* can mean buying or selling, or it can mean exchanging information. B2B transactions can take place directly between companies or through a third party who helps match buyers and sellers.

## Business-to-consumer (B2C)

Business-to-consumer (B2C) includes all e-business between businesses and individuals, from retailing over the Internet to Web-enabled services such as banking. Most likely, you have used B2C applications without realizing it. If you have purchased anything over the Internet, you have used a form of B2C.

## E-collaboration

E-collaboration leverages the connective powers of the Internet to coordinate the efforts of two or more companies. Together, these partners operate as a single business entity, jointly making decisions with a focus on adding value for the end consumer. The rewards for all participants are simple: higher revenues and reduced costs. With its emphasis on mutual cooperation and processes between organizations,

e-collaboration dramatically changes the way manufacturers and their partners do business. Instead of the traditional vertical supply and demand chains, trading partners are forming value networks with horizontal connections.

The basic principle of e-collaboration is simple. Your company's suppliers and customers constantly make decisions about the quantity and content of orders, delivery dates, promotions, and designs for new products. If you start making these decisions collaboratively as if you were one company, everyone can benefit. When a manufacturer and retailer collaborate on a product promotion, the following happen:

- The manufacturer benefits from increased sales.
- The retailer benefits from having an adequate stock of the product, offering it to consumers at a lower cost and thereby increasing sales volume.
- The consumer benefits from the lower retail price.

E-collaboration starts with defining common goals, using existing lines of communication, and leveraging the right technology for additional support. For example, companies using Electronic Data Interchange (EDI) to communicate with partners on orders have already established a foundation for e-collaboration.









Printed in U.S.A.