Business-to-Business E-Commerce

4

Contents

Learning Objectives

Upon completion of this chapter, you will be able to:
1. Describe the B2B field.
2. Describe the major types of B2B models.
3. Discuss the models and characteristics of the sell-side marketplace, including auctions.
4. Describe sell-side intermediaries.
5. Describe the characteristics of the buy-side marketplace and e-procurement.
6. Explain how reverse auctions work in B2B.
7. Describe B2B aggregation and group purchasing models.
8. Define exchanges and describe their major types.
9. Describe B2B portals.
10. Describe third-party exchanges.
11. Describe how B2B can benefit from social networking and Web 2.0.
12. Provide an overview of the major B2B support services.

OPENING CASE: ALIBABA.COM: THE WORLD'S LARGEST B2B MARKETPLACE

Alibaba Group is a collection of Internet-based e-commerce companies, some of which are B2B (notably Alibaba.com); the others are B2C and EC services (e.g., payments). For a company overview, see **alibabagroup.com/en/about/overview**. The company started as a portal for connecting

Chinese manufacturers with buyers from other countries. By 2014, Alibaba Group became the world's largest e-commerce enterprise. Its B2B operation (Alibaba.com) is the world's largest marketplace. The fascinating story of the company is described by Charles (2014) and by Schepp and Schepp (2009).

The Opportunity

The Alibaba Group was started in 1999 by Jack Ma and his partners. Ma envisioned an opportunity to connect foreign buyers with Chinese manufacturers, especially the small ones. These companies wanted to go global but did not know how to do it. The initial business was Alibaba.com, a B2B portal, which later on developed into a comprehensive B2B marketplace. The Alibaba Group also added a consumer-to-consumer (C2C) marketplace called Taobao (**taobao.com**). In 2004, Alibaba added the "Alipay Cross-Border E-Payment Service" (**alipay.com**). In 2007, the Alibaba Group founded Internet-based business management software company Alisoft (**alisoft.com**), followed by Tmall.com (**tmall.com**), a giant B2C platform. The company established a cloud computing platform and restructured over time.

In 2014 Alibaba Group had an IPO in the USA to raising over $20 billion. This case concentrates on Alibaba.com, the B2B company (herein "Alibaba.com").

The Solution

In 2014, Alibaba.com was an online marketplace composed of a platform for buyers, a platform for sellers, a community, and B2B (business-to-business) services. The company's mission is to provide all the necessary support for buyers, suppliers and traders. The components and role of the company are illustrated in Figure 4.1.

- **Suppliers:** Post their catalogs, company information, special promotions, etc. on the suppliers' space. Alibaba.com helps to reach international buyers. Suppliers can get free online training.
- **Buyers:** Search for potential products and suppliers and also have the option to post what they need (requests) on the buyers' space and get quotes from suppliers. Buyers can verify the suppliers' worthiness. (See a video about suppliers' assessment at **sa.alibaba.com**). Alibaba.com provides inspection services with reliable experts. Buyers can compare prices and terms of service as well.
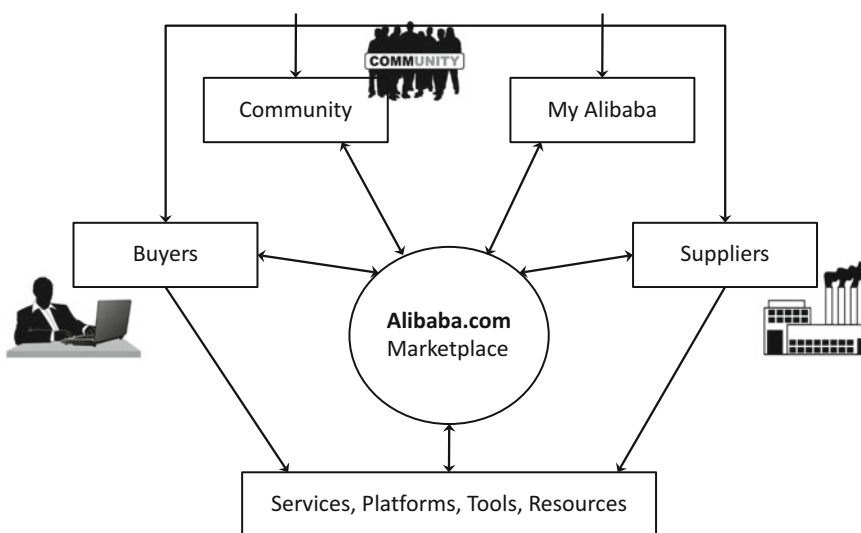

Figure 4.1 The role of Alibaba.com in B2B

- **Services for Buyers and Suppliers:** Alibaba.com helps to communicate, negotiate, and assist in reaching a deal. They also arrange the payment process, insurance, and delivery details. Alibaba.com provides all the technology necessary to support the activities on its site. It also provides services such as escrow and handling customer complaints.
- **My Alibaba:** A personal communication and trade management tool on Alibaba.com. It is now separated for buyers and suppliers.
- **Tools and Resources:** Alibaba.com provides information and tools for export and import. It also provides a tradeshow channel.
- **Alibaba Cloud Computing and Other Infrastructure:** The company is a developer of cloud computing services**.** The company is committed to supporting the growth of Alibaba Group companies and providing a comprehensive suite of Internet-based EC-oriented computing services, which include e-commerce data mining, high-speed massive e-commerce data processing capabilities, and data customization.
- **Alipay** (**alipay.com**) is a cross-border online payment platform, mainly used by buyers and sellers engaging in e-commerce transactions. It offers an easy, safe, and secure way for millions of individuals and businesses to make and receive payments on the Internet. By the end of 2013, Alipay had 300 million registered users who made over 12.5 billion payments; mobile users, through Mobile Alipay, made over 2.78 billion in payments. Mobile Alipay is now the largest mobile platform in the world (2014 data). See **chinainternetwatch.com/6183/alipay-the-largest-mobile-payments-platform-in-the-world**.
- Alibaba.com Secure Payment (an escrow service; **alibaba.com/escrow/buyer.html**) is a service that holds the payment to the seller until both parties have confirmed that the transaction is complete. Alibaba Escrow Service also has a Dispute and Refund process if the buyer does not receive the goods or is unhappy with the delivery. For more information about the Escrow Service and the Dispute and Refund process, see **alibaba.com/help/safety_security/products/escrow/faq.html**.

Alipay also offers an online global payment solution to help buyers or sellers outside China to do business in China. Alipay supports transactions in 12 major foreign currencies.

The Database
The center of Alibaba.com is its huge database, which is basically horizontal information organized into dozens of industry categories, including agriculture, apparel and fashion, automobiles, and toys. Each industry category is further divided into subcategories (over 800 in total). For example, the toy category includes items such as dolls, electronic pets, and wooden toys. Each subcategory includes classified postings organized into four groups: sellers, buyers, agents, and cooperation. Each group may include many companies and products. (Some categories have thousands of product postings.) A powerful search engine helps navigate the database.

Community Services
Alibaba.com provides the following major features all related to import and export: free e-mail, help center, 24-hour online intelligent robot to assist with answering questions, tutorials for traders, Trade Alert free updates to your inbox, news, tradeshow information, legal information, arbitration, forums and discussion groups, trade trends, and so on. In addition, a supplier can create a personalized company Web page as well as a "product showroom;" members also can post their own marketing leads (where to buy and sell). Alibaba.com also offers the TradeManager mobile app (**trademanager.alibaba.com**), which is their Instant Messaging tool. TradeManager can be used to chat with buyers in real time, get real-time translation, easily search for buyers and suppliers, and get the latest trade results. The TradeManager app is provided in multiple languages and at relatively low fees (the IM is free). For details, see Charles (2014) and **alibaba.com/help/features-trademanager.html**.

According to DYC Software Studio (**chat-translator.com**), DYC sells translation software called ChatTranslator for TradeManager, which is available in 20 languages. It can translate and

send messages in any foreign language and translate replies from one language into the user's language. (For information about features and to purchase and download the software, see **chat-translator.com/products/chat-translator-trademanager.html** and **download.cnet.com/Chat-Translator-for-TradeManager/3000-20424_4-75212643.html**). To see the new features of TradeManager, see **trademanager.alibaba.com/features/introduction.htm**. To see more about the tools and features Alibaba offers to help buyers and sellers, see **alibaba.com/help/alibaba-features.html**.

The Competition

Many companies are attempting to rival Alibaba. For example, JD.com (**jd.com**, which merged with Tencent) is China's second largest e-commerce company. (It is used for both B2B and B2C.) **Trade.gov.cn/product.html** is a comprehensive e-commerce platform, used mainly to promote domestic and overseas trade, and Made-in-China.com (**made-in-china.com**), another world leading B2B portal, is another competitor. In the international market, companies such as TradeBanq (**tradebanq.com**), EC21 (**ec21.com**), Hubwoo (**hubwoo.com**), and Allactiontrade.com (**allactiontrade.com**) are all competing.

The Results

By 2014, Alibaba.com covered over 5,000 product categories and had about 5 million registered users in its international marketplace (outside China), as well as around 25 million registered users in China. The company conducts business in over 240 countries and regions and its employs more than 25,000 people.

According to Chen and Gill (2014), the pre-issue valuation of the company was $168 billion.

Sources: Based on Chen and Gill (2014), Lai (2010), Schepp and Schepp (2009), **crunchbase.com/organization/alibaba**, **buyer.alibaba.com**, and **seller.alibaba.com** (all accessed April 2014).

Note: For seven things to know about Jack Ma, see **upstart.bizjournals.com/entrepreneurs/hot-shots/2013/09/25/meet-jack-ma-things-to-know-about.html**.

LESSONS LEARNED FROM THE CASE

B2B e-commerce, which constitutes over 85% of all EC volume, is composed of different types of marketplaces and trading methods. The opening case illustrates a marketplace for many buyers and sellers to make transactions. The case presents the technology support provided for the B2B marketplace. In addition, the case describes information about support services (e.g., escrow services). The case illustrates the services provided for sellers (which are discussed in more detail in Sections 4.2 through 4.3) and the services for buyers (described in Sections 4.4, 4.5, and 4.6). The case also demonstrates the role of marketplaces (Sections 4.7 and 4.8). All the major EC buying and selling B2B methods as well as types of B2B marketplaces and portals are described in this chapter. Finally, we relate B2B to social networking and other support services.

4.1   CONCEPTS, CHARACTERISTICS, AND MODELS OF B2B E-COMMERCE

B2B EC has some special characteristics as well as specific models, components, and concepts. The major ones are described next.

Basic B2B Concepts and Process

Business-to-business e-commerce (B2B EC), also known as *eB2B* (*electronic B2B*), or just B2B, refers to transactions between businesses conducted electronically over the Internet, extranets, intranets, or private networks. Such transactions may take place between a business and its supply chain partners, as well as between a business and a government, and with any other business. In this context, a *business* refers to any organiza-

tion, private, public, for profit, or nonprofit. In B2B, companies aim to computerize trading transactions and communication and collaboration processes in order to increase efficiency and effectiveness. B2B EC is very different and more complex than B2C. It is much more difficult to sell to a company than to individuals. For a comprehensive discussion, see Wirthwein and Bannon (2014).

Key business drivers for electronic B2B (some of which were shown in the opening case) are the need to reduce cost, the need to gain competitive advantage, the availability of a secure Internet platform (i.e., the extranet), and the private and public B2B e-marketplaces. In addition, there is the need for collaboration between business partners, the need to reduce transaction time and delays along the supply chain, and the emergence of effective technologies for interactions and systems integration. Several large companies have developed efficient B2B buying and selling systems. An example is 'Dell PremierConnect' that is illustrated in the video "Dell PremierConnect—The Efficiency of B2B (a Punchout Demo)" at **youtube.com/watch?v=OGgecp0uH9k**.

The Basic Types of B2B Transactions and Activities

The number of sellers and buyers and the form of participation used in B2B determine the five basic B2B transaction activity types:

1. **Sell-side.** One seller to many buyers.
2. **Buy-side.** One buyer from many sellers.
3. **Marketplaces or Exchanges.** Many sellers to many buyers.
4. **Supply chain improvements**.
5. **Collaborative commerce** (presented in Chapter 5).

The last two categories include activities other than buying or selling inside organizations and among business partners. They include, for example, removing obstacles from the supply chain, communicating, collaborating, sharing information for joint design and planning, and so forth.

Figure 4.2 illustrates these five B2B types. A brief explanation follows.

The Basic Types of B2B E-Marketplaces and Services

The following are the descriptions of the basic types of B2B e-marketplaces.

One-to-Many and Many-to-One: Private E-Marketplaces

In one-to-many and many-to-one markets, one company does either all the selling (*sell-side market*) or all the buying (*buy-side market*). Because EC is focused on a single company's buying or selling needs, this type of EC is also referred to as **company-centric EC**. Company-centric marketplaces—both sell-side and buy-side—are discussed in Sections 4.2, 4.3, 4.4, 4.5, and 4.6.

In company-centric marketplaces, the company has complete control over all transactions and supporting information systems. The owner of the market may restrict and control its trading parties. Thus, these marketplaces are essentially *private*. They may be on the sellers' or buyers' websites or hosted by a third party (intermediary).

Many-to-Many: Public Exchanges (or E-Marketplaces)

In many-to-many e-marketplaces, many buyers and many sellers meet electronically to trade with one another. There are different types of such *e-marketplaces*, which are also known as **exchanges** (**trading communities** or **trading exchanges)**. We will use the term *exchanges* in this book. Exchanges are usually marketplaces owned and run by a third party or by a consortium. They are described in more detail in Section 4.7. **Public e-marketplaces** are open to all interested parties (sellers and buyers). Alibaba.com is an example of an exchange.

Supply Chain Improvers and Collaborative Commerce

B2B transactions are conducted frequently along segments of the supply chain. Therefore, B2B initiatives need to be examined in light of other supply chain activities such as procurement of raw materials, fulfilling orders, shipments, and logistics (see Chapter 12). For example, Liz
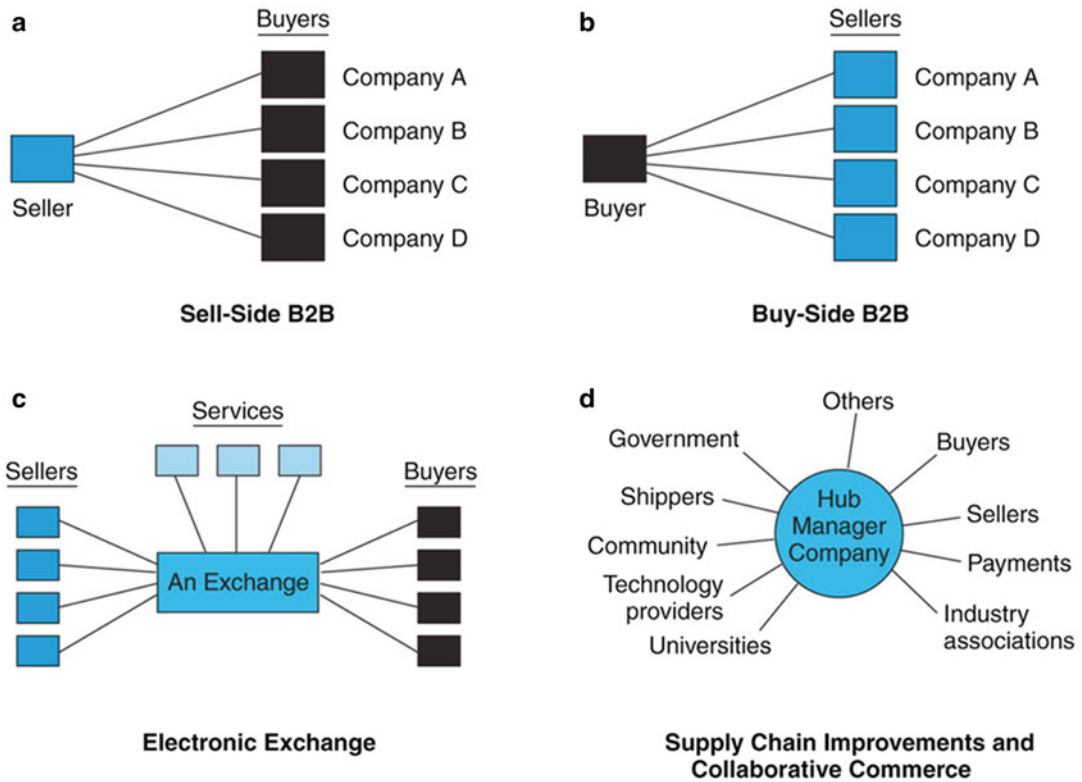
Figure 4.2 Five types of B2B e-commerce

Claiborne, Inc. (retail fashion company) digitized its entire supply chain, reaping substantial results (see case study at **gxs.com/assets/uploads/pdfs/caseStudies/CS_L_Claiborne_GXS.pdf**).

Collaboration

Businesses deal with other businesses for purposes beyond just selling or buying. One example is that of *collaborative commerce*, which includes communication, joint design, planning, and information sharing among business partners (see Chapters 5 and 12).

Market Size and Content of B2B

The U.S. Census Bureau estimates B2B online sales to be about 40% of the total B2B volume depending on the type (e.g., 49% in manufacturing). Chemicals, computer electronics, utilities, agriculture, shipping and warehousing, motor vehicles, petrochemicals, paper and office products, and food are the leading items in B2B. According to the authors' experience and several sources, the dollar value of B2B comprises at least 85% of the total transaction value of all e-commerce, and in some countries, it is over 90% for a total of about $20 trillion worldwide.

The B2B market, which went through a major consolidation in 2000–2002, is growing rapidly. Note that different B2B market forecasters use different definitions and measurement methodologies. Because of this, predictions frequently change and statistical data from different sources often differ. Therefore, we will not provide any more estimates here. Data sources that can be checked for the latest information in the B2B market are provided in Chapter 3 (Table 3.1).

B2B EC is now in its sixth generation, as shown in Figure 4.3. This generation includes collaboration with suppliers, buyers, government, and other business partners via extensive use of mobile com-
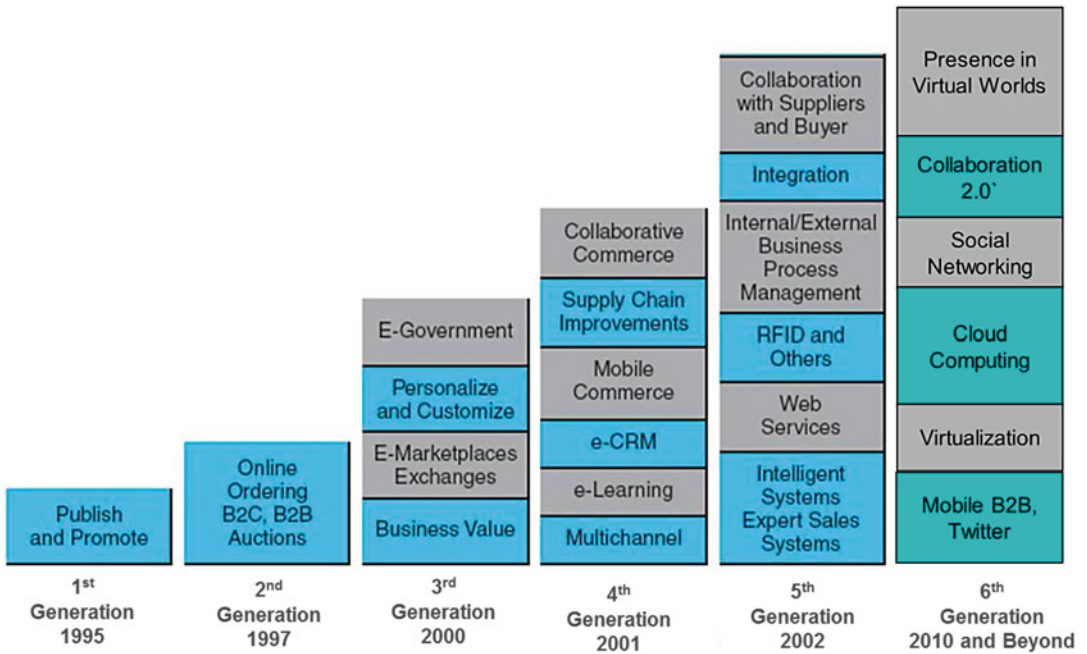
Figure 4.3   Generations of B2B e-commerce

puting; use of blogs, wikis, and other Web 2.0 tools; deployment of in-house social networks; use of public social networks such as LinkedIn and Facebook; and presence in virtual worlds. In addition, the sixth generation is capitalizing on mobile computing, especially tablets and smartphones. Note that the older generations coexist with the new ones. Furthermore, some companies are still using only EC from early generations. This chapter focuses on topics from the second and third generations. Topics from the fourth and fifth generations are presented in Chapter 8.

The B2B field is very diverse, depending on the industry, products and services transacted, volume, method used, and more. The diversity can be seen in Figure 4.4 where we distinguish five major components: Our company, which may be manufacturer, retailer, service provider, and so forth, is shown in the center. It has suppliers (on the left) and retailers (on the right). Our company operations are supported by different services (bottom), and we may work with several intermediaries (top of Figure 4.4). The solid lines show the flow of information.

B2B Components

Next, we present various components of B2B commerce.

Parties to the Transaction: Sellers, Buyers, and Intermediaries

B2B commerce can be conducted *directly* between a *customer* and a *manufacturer* or it can be conducted via an *online intermediary*. An **online intermediary** is a third-party entity that brokers the transactions between the buyer and seller; it can be either virtual or click-and-mortar. Some of the electronic intermediaries for individual consumers mentioned in Chapter 3 also can be used for B2B by replacing the individual consumers with business customers. Aggregations of buyers or sellers are typical B2B activities conducted by intermediaries.

Types of Materials Traded: What Do Firms Buy?

Two major types of materials and supplies are traded in B2B markets: *direct* and *indirect*. **Direct**
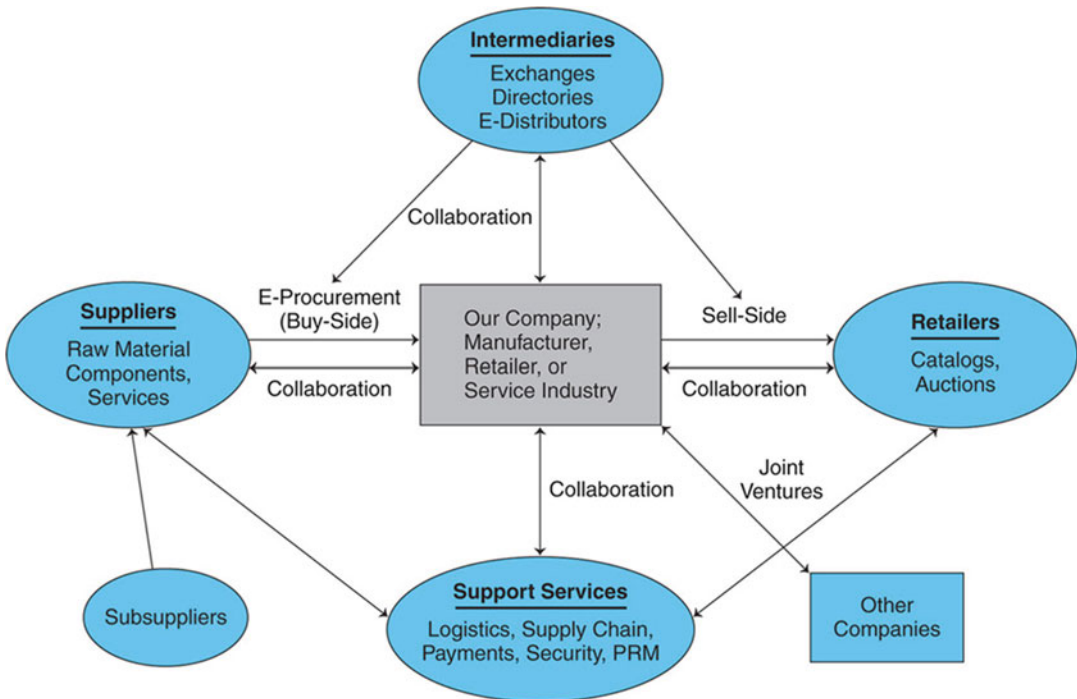
Figure 4.4   The components of B2B

materials are materials used in making products, such as steel in a car or paper in a book.

Indirect materials are items, such as office supplies or light bulbs, which support operation and production. They normally are used in **maintenance, repair, and operation (MRO)** activities. Collectively, they are also known as *nonproduction materials*.

B2B Marketplaces and Platforms

B2B transactions are frequently conducted in marketplaces such as Alibaba.com. B2B marketplaces can be classified as *vertical* or *horizontal*. **Vertical marketplaces** are those for one particular industry or industry segment. Examples include marketplaces specializing in electronics, cars, hospital supplies, steel, or chemicals. **Horizontal marketplaces** are those in which trading is in a service or a product that is used in many types of industries. Examples are office supplies, cleaning materials, or paint. Alibaba.com is an example of a horizontal marketplace.

The types of materials traded and the types of B2B transactions are used to define the B2B marketplaces. One way of classifying these markets is:

- *Strategic (systematic) sourcing* and indirect materials = MRO hubs (horizontal markets for MRO)
- Systematic sourcing and direct materials = Vertical markets for direct materials
- *Spot buying* and indirect materials = Horizontal markets for spot sourcing
- Spot sourcing and direct materials = Vertical markets

The various characteristics of B2B transactions are presented in summary form in Table 4.1.

Service Industries Online in B2B

In addition to trading products between businesses, services also can be provided electronically in B2B. Just as service industries such as travel, banking, insurance, real estate, and stock trading can be conducted electronically for

Table 4.1 Summary of B2B characteristics

Parties to transactions	Types of transactions
Direct, seller to buyer or buyer to seller	Spot buying
Via intermediaries	Strategic sourcing
B2B 2C: A business sells to a business, but delivers to individual consumers	
Types of materials sold	**Direction of trade**
Direct materials and supplies	Vertical
Indirect (MROs)	Horizontal
Number and form of participation	**Degree of openness**
One-to-many: sell-side (e-storefront)	Private exchanges, restricted
Many-to-one: buy-side	Private exchanges, restricted
Many-to-many: exchanges	Public exchanges, open to all
Many, connected: collaborative, supply chain	Private (usually), can be public

individuals (as discussed in Chapter 3), they also can be conducted electronically for businesses. The major B2B services are:

- **Travel and hospitality services.** Many large corporations arrange their travel electronically through corporate travel agents. For instance, American Express Global Business Travel offers several tools to help corporate travel managers plan and control their employees' travel. In addition to traditional scheduling and control tools, American Express offers the following EC-based tools (**amexglobalbusinesstravel.com/total-program-management**):
  - *TrackPoint* enables locating a traveler in real time.
  - *Travel Alert* provides travel advisories and updates, such as weather conditions and delays.
  - *Info Point* (**businesstravel.americanexpress.com/info-point**) is a website that includes detailed information about countries and cities around the world.
  - *Meetings and Events* (**amexglobalbusinesstravel.com/meetings-and-events**) assists in managing meetings, including searching for venues.
  - *American Express* has a presence on social networks (e.g., Facebook, Twitter, YouTube).

- *Egencia LLC* (**egencia.com/en**) (an Expedia company) partners with organizations to optimize the organizations' total travel activities by providing advice and travel management software. For details, see (**egencia.com/en/about-egencia**).
- Expedia (**expedia.com**), Travelocity (**travelocity.com**), Orbitz (**orbitz.com**), and other online travel services provide similar services for both B2C and B2B.
- **Real estate.** Commercial real estate transactions can be large and complex. Therefore, the Web might not be able to replace existing human agents completely. Instead, the Web can help businesses find the right properties, compare properties, and assist in negotiations. Some government-run foreclosed real estate auctions are open to dealers only and are conducted online.
- **Financial services.** Internet banking can be an efficient way of making business payments, transferring funds, or performing other financial transactions. For example, electronic funds transfer (EFT), which provides for electronic payments, is popular with businesses, as are electronic letters of credit. Transaction fees over the Internet are less costly than any other alternative method. To see how payments work in B2B, see Chapter 11. Businesses can

also purchase insurance online, from both pure online insurance companies and from click-and-mortar ones.

- **Banking and online financing.** Business loans can be solicited online from lenders. Because of the economic downturn, it is difficult for some business owners (even those with excellent credit scores) to obtain loans; therefore, they may turn to companies like Biz2Credit (**biz-2credit.com**), a company that helps small businesses grow. Biz2Credit is an online credit marketplace that matches loan applicants with over 1,200 lenders (see **biz2credit.com/about** and **cnbc.com/id/101009116**). Several sites, such as Garage Technology Ventures, LLC (**garage.com**), provide information about venture capital. Institutional investors use the Internet for certain trading activities.
- **Other online services.** Consulting services, law firms, medical services, and others sell enterprise knowledge and special services online. Many other online services, such as the purchase of electronic stamps (similar to metered postage, but generated on a computer), are available online (see **stamps.com**). Recruiting and staffing services can also be done online.

Partner and Supplier Relationship Management

Successful e-businesses need to coordinate and collaborate with business partners along the relevant supply chains. For benefits and methods, see Chopra and Meindl (2012). There are many tools to do just that electronically. The use of such tools supports customer relationship management (CRM) and partner relationship management (PRM).

Corporate customers may require more services than individual customers need. For example, corporate customers may need to have access to the supplier's inventory status report so they know what items a supplier can deliver quickly. Suppliers also may want to see their historical purchasing records of individual items by specific buyers, and they may need private online showrooms and online trade rooms to interact with buyers. Large numbers of vendors are available for designing and building appropriate B2B relationship solutions. The strategy of providing such comprehensive, quality e-services for business partners is sometimes called **partner relationship management (PRM)**.

Software for PRM is provided by companies such as **netsuite.com**, **channeltivity.com**, **relayware.com**, and **salesforce.com**.

The Benefits and Limitations of B2B

The benefits of B2B are for buyers, sellers, or for both, and they depend on which model is used. In general, though, the major benefits of B2B (the beneficiaries are marked after each benefit: S = seller, B = buyer, J = joint) are that it:

- Creates new sales opportunities (S)
- Eliminates paper and reduces administrative costs (J)
- Expedites processing and reduces trading cycle time (J)
- Lowers search costs and time for buyers to find products and vendors (B)
- Increases productivity of employees dealing with buying and/or selling (J)
- Reduces errors and improves quality of service (J)
- Makes product configuration easier (B)
- Reduces marketing and sales costs (S)
- Reduces inventory levels and costs (J)
- Reduces purchasing costs by cutting down on use of intermediaries (B)
- Enables customized e-catalogs with different prices for different customers (J)
- Increases production flexibility, permitting on demand delivery (S)

- Reduces procurement costs (B)
- Facilitates customization via self-configuration (J)
- Provides for efficient customer service (B)
- Increases opportunities for collaboration (J)
- Web-based EC is more affordable than traditional EDI (J)
- Allows more business partners to be reached than with EDI (J)
- Reaches a more geographically dispersed customer base (S)
- Provides a better means of communication with other media (J)
- Provides 24/7 coverage of the shop front (J)
- Helps equalize small enterprises (B)

B2B EC development has limitations as well, especially regarding channel conflict and the operation of public exchanges. Furthermore, personal face-to-face interactions may be needed but are unavailable.

Implementing e-B2B might eliminate the distributor or the retailer, which could be a benefit to the seller and the buyer (though not a benefit to the distributor or retailer). In previous chapters, such a phenomenon is referred to as *disintermediation* (Chapter 3). The benefits and limitations of B2B depend on such variables as who buys what items, and in what quantities; who are the suppliers; how often a company buys, and so forth.

SECTION 4.1 REVIEW QUESTIONS
1. Define B2B.
2. Discuss the following: spot buying versus strategic sourcing, direct materials versus indirect materials, and vertical markets versus horizontal markets.
3. What are company-centric marketplaces? Are they public or private?
4. Define B2B exchanges.
5. Relate the supply chain to B2B transactions.
6. List the benefits and limitations of B2B.

4.2   ONE-TO-MANY: SELL-SIDE E-MARKETPLACES

A major portion of B2B is selling in what is known as B2B marketing. A variety of methods exist.

Sell-Side Models

In the B2C model, a manufacturer or a retailer electronically sells directly to consumers from a *storefront (*or *webstore)*. In a B2B **sell-side e-marketplace**, a business sells products and services to business customers electronically, frequently over an extranet. The seller can be a raw material producer selling to manufacturers, or a manufacturer selling to an intermediary such as a wholesaler, a retailer, or an individual business. Intel (**intel.com**), Exxon (**exxon.com**), Cisco Systems, Inc. (**cisco.com**), and Dell (**dell.com**) are examples of such sellers. Alternatively, the seller can be a distributor selling to retailers or businesses (e.g., W.W. Grainger, Inc. (**grainger.com**), discussed in Section 4.2). In either case, sell-side e-marketplaces involve one seller and many potential buyers. In this model, both individual consumers and business buyers might use either the same private sell-side marketplace (e.g., **dell.com**), or a public marketplace.

The one-to-many model has three major marketing methods: (1) selling from *electronic catalogs* with fixed prices; (2) selling via *forward auctions*; and (3) one-to-one selling, usually under a *negotiated* long-term contract. Such one-to-one negotiation is familiar: The buying company negotiates the price, quantity, payments, delivery, and quality terms with the selling company. We describe the first method in this section and the second method in Section 4.3.

B2B Sellers
Sellers in the sell-side marketplace may be click-and-mortar manufacturers or intermediaries (e.g., distributors or wholesalers). The intermediaries may even be pure online companies (e.g., Alibaba.com.com).

Customer Service

Online sellers can provide sophisticated customer service. For example, General Electric (**ge.com**) receives over 20 million calls a year regarding appliances. Although most of these calls come from individuals, many come from businesses. By using the Internet and automatic-response software programs (autoresponders), GE has reduced the cost of handling such calls from $5 per call when done by phone to 20¢ per electronically answered call. Today, autoresponders can provide real-time responses in live chat with avatars. In this case, the cost can be even lower.

We now turn our attention to the most common sell-side method—selling online from a company's e-catalog.

Sales from Catalogs: Webstores

Companies can use the Internet to sell directly from their online catalog. A company might offer one catalog for all customers or a *customized catalog* for each large customer (possibly both). For example, Staples (**staples.com**), an office-supply vendor, offers its business customers a personalized software catalog of about 100,000 products at different pricing schemes (see their ordering site at **order.staplesadvantage.com**).

Many companies use a multichannel marketing strategy where one channel is e-commerce.

In selling online to business buyers, manufacturers might encounter a similar problem to that of B2C sellers, namely conflict with the regular distribution channels, including corporate dealers (channel conflict). To avoid conflicts, some companies advertise online, but sell only in physical stores. An example is Gregg's Cycle (**greggscycles.com**). The company sells only peripheral products, such as parts and accessories, to individual consumers online. In addition, Gregg's Cycles provides a locator where customers can buy its core product—bicycles—at brick-and-mortar stores.

Distributors' Catalogs

Webstores are used by manufacturers (e.g., Gregg's Cycles) or by *distributors*. Distributors in B2B are similar to retailers in B2C. They can be general (like W.W. Grainger, see Section 4.2) or they can concentrate on one area, much like Toys "R" Us (**toysrus.com**) in B2C.

Example

Stone Wheel (**stonewheel.com**) distributes over 100,000 different auto parts from 15 warehouses serving over 3,500 independent repair shops in the Midwest region of the U.S. They deliver within 30 minutes, using their own vehicles. Using the e-catalog, customers can order the exact part, saving time and minimizing misunderstandings and errors.

Self Service Portals

Portals are used for several purposes, one of which is to enable business partners to conduct self-service, as is shown in the following example.

Example: Whirlpool B2B Trading Portal

Whirlpool (**whirlpool.com**) is a large global manufacturer of home appliances (about 69,000 employees in 2013 and annual sales of $19 billion). The company needs to operate efficiently to survive in an extremely competitive market. It must collaborate with its business partners along the selling segments of the supply chain and provide them with outstanding customer support.

The company sells its products via all types of retailers and distributors (25% of which are small), located in over 170 countries. Until 2000, the small retailers had entered their orders from Whirlpool manually. This process was slow, costly, and error prone.

Therefore, Whirlpool developed a B2B trading partner portal (for the small retailers), which enabled self-ordering, therefore reducing the transaction cost considerably.

The system was tested with low-volume items and then extended to larger volume items. In addition, more features were added. Adding the portal has increased Whirlpool's competitive advantage.

For additional information, see IBM (2000) and **whirlpoolcorp.com**.

For a comprehensive case, see Course Hero (2013).

Benefits and Limitations of Online Sales from Catalogs

Successful examples of the B2B online direct sales model include manufacturers, such as Dell, Intel, IBM, and Cisco, and distributors, such as Ingram Micro (**ingrammicro.com**) that sells to value-added retailers; the retailer adds some service along with the product. Sellers that use this model can be successful as long as they have a solid reputation in the market and a large enough group of loyal customers.

While the benefits of direct online sales are similar to that of B2C, there are limitations also. One of the major issues facing direct sellers is finding buyers. Many companies know how to advertise using traditional channels, but are still learning how to contact would-be business buyers online. In addition, B2B sellers may experience channel conflicts with their existing distribution systems. Another limitation is that if traditional electronic data interchange (EDI)—the computer-to-computer direct transfer of business documents—is used, the cost might be passed on to the customers, and they could become reluctant to go online. The solution to this problem is transferring documents over extranets and using an Internet-based EDI (see Online Tutorial T2). Finally, the number of business partners online must be large enough to justify the system infrastructure and operation and maintenance expenses.

Comprehensive Sell-Side Systems

Sell-side systems must provide several essential functionalities that enable B2B vendors to execute sales efficiently, provide outstanding customer service, allow integration with existing IT systems, and provide integration with non-Internet sales systems. For an example of such a system provided by Sterling Commerce (an IBM Company), see **ibm.com/software/info/sterling-commerce**.

Selling via Distributors and Other Intermediaries

Manufacturers can sell directly to other businesses, and they do so if the customers are large buyers. However, manufacturers frequently use intermediaries to distribute their products to a large number of smaller buyers. The intermediaries buy products from many other manufacturers and aggregate those products into one catalog from which they sell to customers or to retailers. Many of these distributors also are selling online via webstores.

Some well-known online distributors for businesses are Sam's Club (**samsclub.com**), Avnet (**avnet.com**), and W.W. Grainger (**grainger.com**). Many e-distributors sell in horizontal markets, meaning that they sell to businesses in a variety of industries. However, some distributors sell to businesses that specialize in one industry (vertical market), such as Boeing PART Page (see **boeing.com/assets/pdf/commercial/aviationservices/brochures/MaterialsOptimization.pdf**). Most intermediaries sell at fixed prices; however, some offer quantity discounts, negotiated prices, or conduct auctions.

SECTION 4.2 REVIEW QUESTIONS

1. What are buy-side and sell-side transactions? How do they differ?
2. List the types of sell-side B2B transaction models.
3. Describe customer service in B2B systems.
4. Describe the direct online B2B sales process from catalogs.
5. Discuss the benefits and limitations of direct online B2B sales from catalogs.
6. What are the advantages of using intermediaries in B2B sales?
7. Compare an e-distributor in B2B to Amazon.com. What are the similarities? What are the differences?

4.3   SELLING VIA E-AUCTIONS

Auctions are gaining popularity both as B2B buying and as sales channels. Some major B2B auction issues are discussed in this section.

The Benefits of Auctions on the Sell Side

Many companies use *forward auctions* to liquidate their surplus products or capital assets. In such a situation, items are usually displayed on an auction site (private or public) for quick clearance. Forward auctions offer the following benefits to B2B sellers:

- **Revenue generation.** Forward auctions support and expand online and overall sales. Forward auctions also offer businesses a new venue to quickly and easily dispose of excess, obsolete, and returned products (e.g., see **liquidation. com**).
- **Cost savings.** In addition to generating new revenue, conducting e-auctions reduces the costs of selling the auctioned items, which helps increase the seller's profits.
- **Increased "stickiness."** Forward auctions give websites increased "stickiness," namely, potential buyers stay there longer. *Stickiness* is a characteristic that measures customer loyalty to a site that eventually results in higher revenue.
- **Member acquisition and retention.** Registered members of auctions can invite their business contacts. In addition, auction software aids enable sellers to search and report on virtually every relevant auction activity. Such information can be analyzed and used for business strategy.

Forward auctions can be conducted in two ways. A company can conduct its forward auctions from its own website or it can sell from an intermediary auction site, such as **liquidation. com** or **ebay.com**. Let us examine these options.

Auctioning from the Company's Own Site

For large and well-known companies that frequently conduct auctions, it makes sense to build an auction mechanism on the company's own website. Why should a company pay a commission to an intermediary if the intermediary cannot provide the company with added value? Of course, if a company decides to auction from its own site, it will have to pay for infrastructure, and operate and maintain the auction site. Note that, if the company already has an electronic marketplace for selling from e-catalogs, the additional cost for conducting auctions might not be too high.

Using Intermediaries in Auctions

Several intermediaries offer B2B auction sites (e.g., see **assetnation.com** and **liquidation. com**). Some companies specialize in government auctions while others focus on surplus stock auctions (e.g. **govliquidation.com**). An intermediary can conduct private auctions either from the intermediary's or the seller's sites. Alternatively, a company can conduct auctions in a public marketplace, using an intermediary (e.g., eBay, which has a special "business exchange" for small companies).

Using an intermediary to conduct auctions has many benefits. The first is that no additional resources (e.g., hardware, bandwidth, engineering resources, or IT personnel) are required. There are no hiring costs for using corporate resources. B2B auction intermediary sites also offer fast time-to-market as they are capable of running the auction immediately. Without the intermediary, it can take weeks for a company to prepare an auction site in-house.

Another benefit of using intermediaries relates to payments, which are handled by the intermediary.

For an example of using an intermediary in B2B auction services, see Liquidity Services Inc. (**liquidityservicesinc.com**). For an example of a

company that helped liquidate old equipment in the Commonwealth of Pennsylvania, see Case 4.1.

For more about B2B online auctions, see **vasthouse.com/b2b-online-auctions.php** and **liz.petree.tripod.com/test_2/auctions.html**.

For more about B2B online auctions, see Parente (2007).

CASE 4.1: EC APPLICATION: HOW THE COMMONWEALTH OF PENNSYLVANIA SELLS SURPLUS EQUIPMENT

For many years, the Pennsylvania Department of Transportation (DOT) (**dot.state.pa.us**) used a traditional offline auction process. Beginning in October 2003, the state held online auctions to sell its surplus heavy equipment. At his fifth monthly radio address, Pennsylvania then-Governor Ed Rendell stated, "The old, live-in-person auction system generated about $5 million a year. Using the Internet, we're on pace for a 20% revenue increase."

The initial online sale of surplus DOT items consisted of 77 items (including 37 dump trucks). On-site inspection was available twice during the 2-week bidding period. The online sale allowed the Commonwealth of Pennsylvania to obtain an average price increase of 20%, while reducing labor costs related to holding a traditional on-site sale. On high-value specialty items (i.e., a bridge inspection crane and a satellite van), results exceeded the estimated sale prices by over 200%.

The auction was conducted by AssetAuctions (**assetnation.com**). The results of the auction were as follow:
- Total sales: $635,416.03.
- Half of the bidding activity occurred in the final 2 days.
- Every lot received multiple bids.
- Overtime bidding occurred in 39 lots.
- 174 bidders from 19 states and Mexico made about 1,500 bids in 5 days.
- 47 different buyers participated.

The Commonwealth of Pennsylvania now sells surplus equipment and properties using both Auctions by Gov and eBay. Many other states and city governments use auctions to sell their surplus equipment.

Sources: Based on **assetnation.com** (accessed November 2014), the Commonwealth of Pennsylvania (2006), and *PR Newswire* (2003).

Questions
1. Why is heavy equipment amenable to such auctions?
2. Why did the Commonwealth generate 20% more in revenue with the online auction?
3. Why do you need an intermediary to conduct such an auction?

In 2006, Governor Rendell went a step further and signed into law legislation that would permit the use of electronic and reverse auction bidding in the local governments (e.g., municipalities, school districts) of Pennsylvania (see **americancityandcounty.com/resource-center/legislation-permits-use-electronic-bidding-and-reverse-auctions-local**).

Examples of B2B Forward Auctions

The following are examples of B2B auctions:
- Whirlpool Corp. sold $20 million in scrap metal in a single auction via **asset-auctions.assetnation.com;** the sale price received was 15% higher than prior e-auctions.
- Sam's Club (**samsclub.com**) auctions thousands of items (especially electronics) at Sam's Club Auctions (**auctions.samsclub.com**). Featured auctions include the current bid, the number of bids, and the open and close date. They liquidate overstock items, returns, and out of style goods.
- Yahoo! conducts both B2C and B2B auctions in Hong Kong, Taiwan, and Japan.

To learn more about B2B auctions, see **vasthouse.com**.

SECTION 4.3 REVIEW QUESTIONS
1. List the benefits of using B2B auctions for selling.
2. List the benefits of using auction intermediaries.
3. What are the major purposes of forward auctions, and how are they conducted?
4. Comment on the number of bidders and bids using an online auction as compared to using an offline auction.

4.4   ONE-FROM-MANY: E-PROCUREMENT AT BUY-SIDE E-MARKETPLACES

The term *procurement* refers to the purchase of goods and services by organizations. Procurement is usually done by *purchasing agents*, also known as *corporate buyers*.

The buyer's purchasing department sometimes has to enter the order information manually into its own corporate information system. Furthermore, manually searching webstores and e-malls to find and compare suppliers and products can be slow and costly. As a solution, large buyers can open their own marketplaces called **buy-side e-marketplaces**, and invite sellers to browse and offer to fulfill demand.

Inefficiencies in Traditional Procurement Management

Procurement management refers to the process of planning, organizing, and coordinating of all the activities pertaining to the purchasing of the goods and services needed by an organization. It involves the B2B purchase and sale of supplies and services, as well as the flow of required information. Approximately 80% of an organization's purchased items, mostly MROs, constitute 20–25% of the total purchase value. In this case, much of the buyers' time is spent on clerical activities, such as entering data and correcting errors in paperwork.

The procurement process may be lengthy and complex due to the many activities performed. The following are the major activities that may be included in a single purchase:

- *Search for items* using search engines, catalogs, virtual fairs and showrooms, and sellers' sales presentations.
- *Learn details of items and buying terms* using comparison engines and quality reports, and research industry report and vendors' information.
- *Negotiate or join group purchasing* using software support (if available).
- *Determine when and how much to order each time*. Authorize corporate buyers.
- *Join business-oriented social networks* such as **linkedin.com**.
- *Sign agreements or contracts* using e-contract management (e.g., from Ariba, Inc. **ariba.com**; a SAP company); arrange financing, escrow insurance, etc.
- *Create specific purchasing order(s)* using a computerized system.
- *Arrange packing, shipments, and deliveries* using electronic tracking, RFID, etc.
- *Arrange invoicing, payments, expense management, and purchasing budgetary control* using software packages (e.g., from **ariba.com**).

An example of the traditional procurement process that is often inefficient is shown in Figure 4.5. For high-value items, purchasing personnel need to spend considerable time and effort on procurement activities. However, the purchasers may not have time to do a quality job since they are busy with the many items of small value such as MROs.

Other inefficiencies, ranging from delays in deliveries to the high cost of rush orders, also may occur in conventional procurement. This situation is called **maverick buying**, which occurs when a buyer makes unplanned purchases of items needed quickly, resulting in buying at non-pre-negotiated, and usually higher, prices.

To correct the situation(s) that may result from traditional procurement, companies must reengineer their procurement systems, implement new purchasing models, and, in particular, introduce e-procurement. Let us elaborate on the generic procurement methods first.
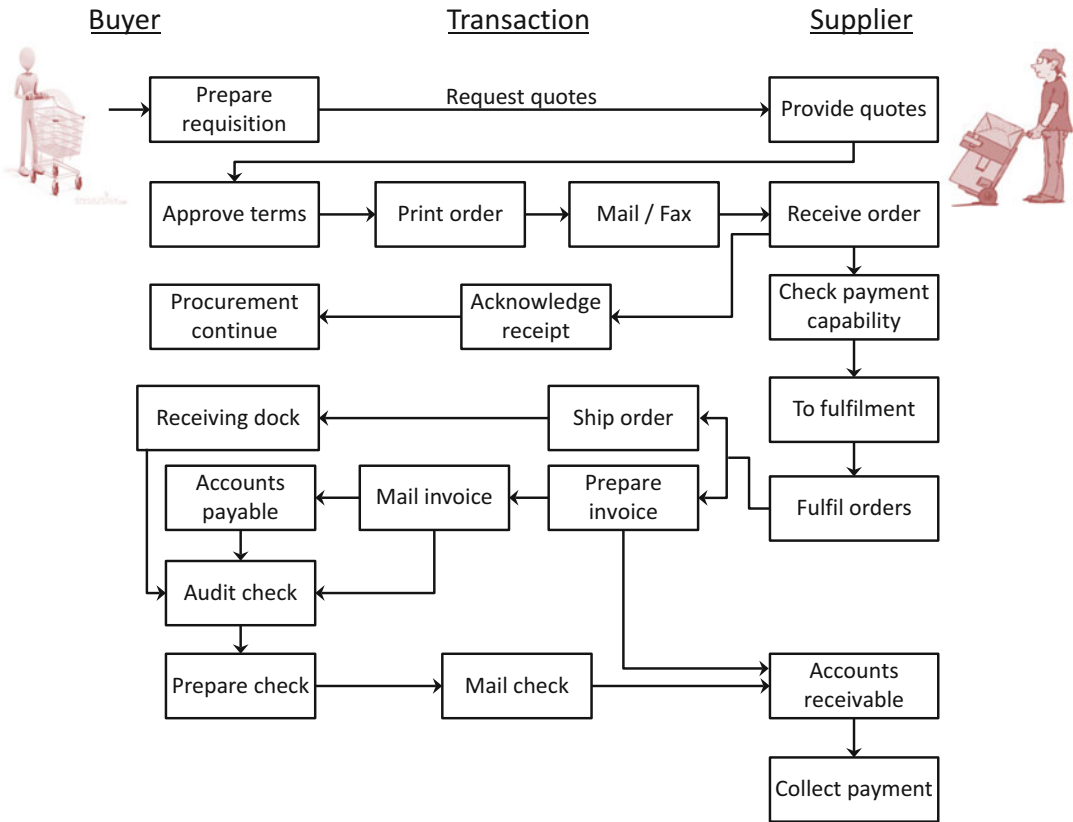
Figure 4.5 Traditional (manual) procurement process

Procurement Methods

Companies use different methods to procure goods and services depending on factors such as what and where they buy, the quantities needed, and how much money is involved. Each method has its own process benefits and limitations. To minimize the inefficiencies described earlier, companies automate activities in the process. This is the major objective of e-procurement. Examples of companies utilizing efficient methods are Walmart (**walmart.com**), Dell (**dell.com**), and Starbucks (**starbucks.com**) to name a few. The major procurement methods include the following:

- Buy directly from the catalogs of manufacturers, wholesalers, or retailers, and possibly by negotiation (Sections 4.2 and 4.3).

- Buy at private or public auction sites in which the buying organization is one of many (Section 4.5).
- Conduct bidding in a reverse auction system where suppliers compete against each other. This method is used for high value items or when large quantities are involved (Section 4.5).
- Buy from the catalog of an intermediary (e-distributor) that aggregates sellers' catalogs (Section 4.6).
- Buy from the company's own internal buyer catalog. Such catalogs usually include agreed-upon prices of items from many suppliers. This is part of *desktop purchasing*, which allows the users to bypass the procurement department (Section 4.6).

- Join a group-purchasing system that aggregates participants' demands, creating a large volume. Then the group may negotiate prices or initiate a tendering process (Section 4.6).
- Buy at an exchange or industrial mall (Section 4.7).

E-Procurement Concepts

E-procurement (electronic procurement) is the online purchase of supplies, materials, energy, work, and services. It can be done via the Internet or via a private network such as an electronic data exchange (EDI). For the different types of EDI and the trading community, see **edibasics.com/types-of-edi**.

Some activities done by e-procurement include enabling buyers to search for suppliers, facilitating reverse auctions for buyers, and automating paperwork and documentation.

Some of these activities are done in private marketplaces, others in public exchanges.

The Goals and Process of E-Procurement

As stated earlier, e-procurement frequently automates activities in the purchasing process from multiple suppliers via the Web for better execution and control.

Improvements to procurement have been attempted for decades, usually by using information technologies. Using e-procurement results in a major improvement. For comprehensive coverage and case studies, see **zdnet.com**.

Essentially, e-procurement automates the process of auctions, contract management, vendor selection, and management, etc.

For an overview of e-procurement goals and processes, see **plenitude-solutions.com/index.php?option=com_content&view=article&id=54&Itemid=62**.

The general e-procurement process (with the exception of tendering) is shown in Online File W4.1. For a free e-book on e-procurement, see Basware (2011).

Example: Volvo's E-Procurement

Volvo is a premium Swedish car manufacturer (now owned by a Chinese company). The company operates in dozens of countries worldwide. The company has more than 30 purchasing centers on six continents. In the past, this has resulted in inconsistent purchasing practices, lack of collaboration among the centers, and inefficient and inconsistent procurement processes. To overcome the problems, management decided to use a unified e-procurement system. They selected Ariba's Sourcing and Ariba's Contract Management solutions (Ariba is a B2B SAP company). The system assures standardization of the purchasing processes, sharing of best practices activities, and streamlining of the contracting process and its management. All these systems are digital. The e-procurement resulted in a greater cohesion among the sourcing centers, better use of best practices, and reduced cost of procurement while its effectiveness increases.

Types of E-Procurement

Four major methods of e-procurement are available: (1) Buy at own website, (2) buy at sellers' store, (3) buy at exchanges, and (4) buy at others' e-market sites. Each method includes several activities, as illustrated in Figure 4.6. Some of these will be described in Sections 4.7 through 4.8.

The seven main types of e-procurement are as follows: (1) e-sourcing, (2) e-tendering, (3) e-reverse auctioning, (4) e-informing, (5) Web-based ERP (enterprise resource planning), (6) e-market sites, and (7) E-MRO (maintenance, repair, and operating).

The Benefits and Limitations of E-Procurement

E-procurement has the ability of improving supply chain management, and providing real-time information on what is going on in the supply chain (known as *visibility* of the supply chain), starting with the customers' needs.

The Benefits of E-Procurement

By automating and streamlining the procurement process, corporate purchasing buyers can focus on more strategic activities that result in:

- Increasing the productivity of purchasing agents, providing them with more non-routine time and reducing job pressures, possibly reducing purchasing departments' overhead.
- Lowering purchase per item prices through activities such as product standardization, reverse auctions, volume discounts, and consolidation of purchases from fewer suppliers.
- Improving information flow and its control (e.g., price comparisons).
- Reducing the frequency and cost of maverick buying.
- Improving the payment process, and sellers' savings due to expedited payment cycle.
- Establishing more efficient and collaborative partner relations due to information sharing.
- Improving the manufacturing process for the suppliers.

- Ensuring delivery on time and fewer stock outs.
- Reducing the skill requirements and training needs of purchasing agents.
- Reducing the number of suppliers.
- Streamlining and expediting the purchasing process.
- Controlling inventories more effectively at the buyers' end.
- Streamlining invoice reconciliation and dispute resolution.
- Reducing the administrative processing cost per order by as much as 90% by reducing purchasing overheads and intermediary fees.
- Finding new suppliers that can provide goods and services faster and/or less expensively (e.g., by going global and use online price comparisons).
- Integrating budgetary controls into the procurement process (e.g., **ariba.com**).
- Minimizing human errors in the buying or shipping processes.
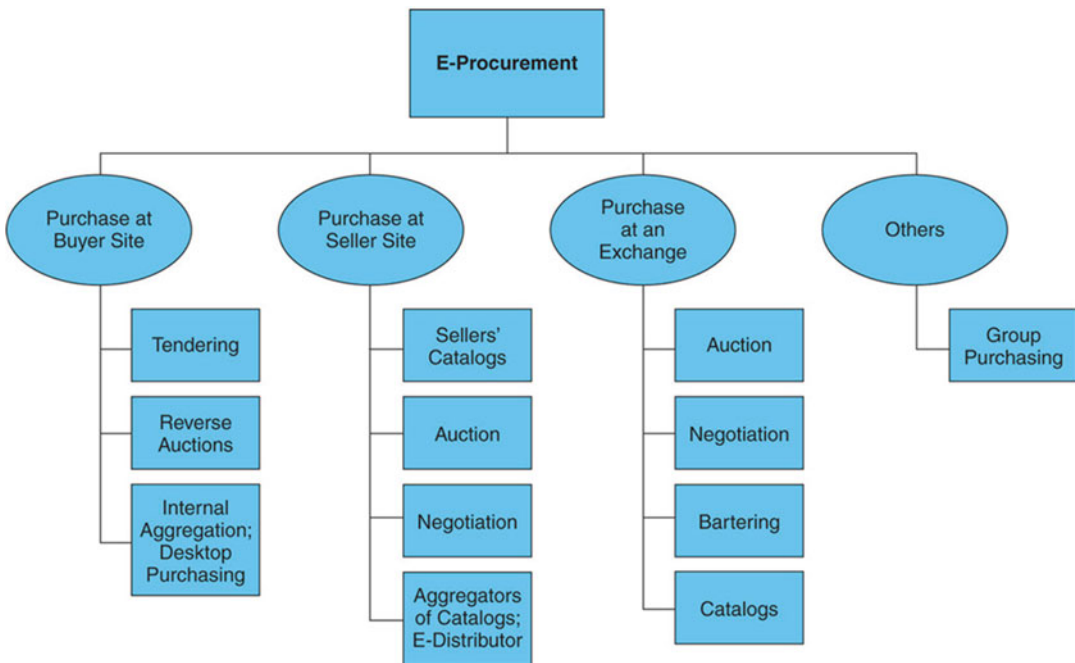

Figure 4.6 E-procurement methods

For more on the benefits of e-procurement and on implementation issues, see the video titled "eProcurement Case Study: Oldcastle Materials" (3:16 minutes) at **youtube.com/watch?v=PPVC_CaG1S4**.

The Limitations and Challenges of E-Procurement

Unfortunately, e-procurement practices have some limitations and risks such as:

- The total cost (TCO) may be too high.
- It may be subject to hacker attacks.
- It may be difficult to get suppliers to cooperate electronically.
- The system may be too complex (e.g., when it uses a traditional EDI; see Online Tutorial T2).
- It may be difficult to have internal and external integration (sometimes it involves different standards).
- The technology may change frequently.

For software issues, see **eprocurement software.org**. For an example of how procurement is used in government, see NC E-Procurement (**eprocurement.nc.gov**). Governments frequently use reverse auctions for procurement, which we present next.

Procurement is an extremely important success factor for many companies. Therefore, it is important to learn about the future of e-procurement as well. For ideas about procurement in 2020, see Oka et al. (2011). To learn about Shoplet's platform for e-procurement, see Regal (2014) and **shoplet.com/about**.

E-Procurement and Strategic Sourcing

E-procurement is frequently used as a component in *strategic sourcing* which is a comprehensive procurement process that continuously improves and re-evaluates all the purchasing activities of an organization. The objective is to smooth the process and increase efficiency and profitability. For a comparison of strategic sourcing and traditional procurement, see the 17 minute video at **youtube.com/watch?v=AdMXNK7yLH4**.

SECTION 4.4 REVIEW QUESTIONS

1. Define the procurement process.
2. Describe the inefficiencies of traditional procurement.
3. List the major procurement methods.
4. Define e-procurement and list its goals.
5. List the major e-procurement methods and list some activities in each.
6. List the major benefits of e-procurement.

4.5 REVERSE AUCTIONS AT BUY-SIDE E-MARKETPLACES (E-TENDERING)

A major method of e-procurement is using reverse auctions. A **reverse auction** is a process in which many sellers (suppliers) compete to fulfill orders requested by one buyer. Recall from our earlier discussion, that a *reverse auction* is a tendering system where suppliers are invited to bid on the fulfillment of an order, and the lowest bid wins. In B2B usage of a reverse auction, a buyer may open an e-market on its own server (or use an independent auctioneer such as eBay) and invite potential suppliers to bid on the items. This "invitation" to such reverse auctions is a form or document called a **request for quote (RFQ)**. Traditional tendering usually implies one-time sealed bidding, whereas an e-reverse auction opens the process to competing *sequential bidding*. For a comprehensive overview of reverse auctions, see **reverseauctions.com**, **epiqtech.com/reverse_auctions-Overview.htm**, and **reverseauctions.gsa.gov**.

Governments and large corporations frequently mandate reverse auctions, which may provide considerable savings because more suppliers are participating in a more competitive process. The electronic process is faster and administratively much less expensive. It also can benefit suppliers in finding RFQs. Reverse auctions are very important B2B mechanisms in e-procurement. The opening case to this chapter describes a supplier's point of view, while the closing case of this chapter describes a buyer's point of view.
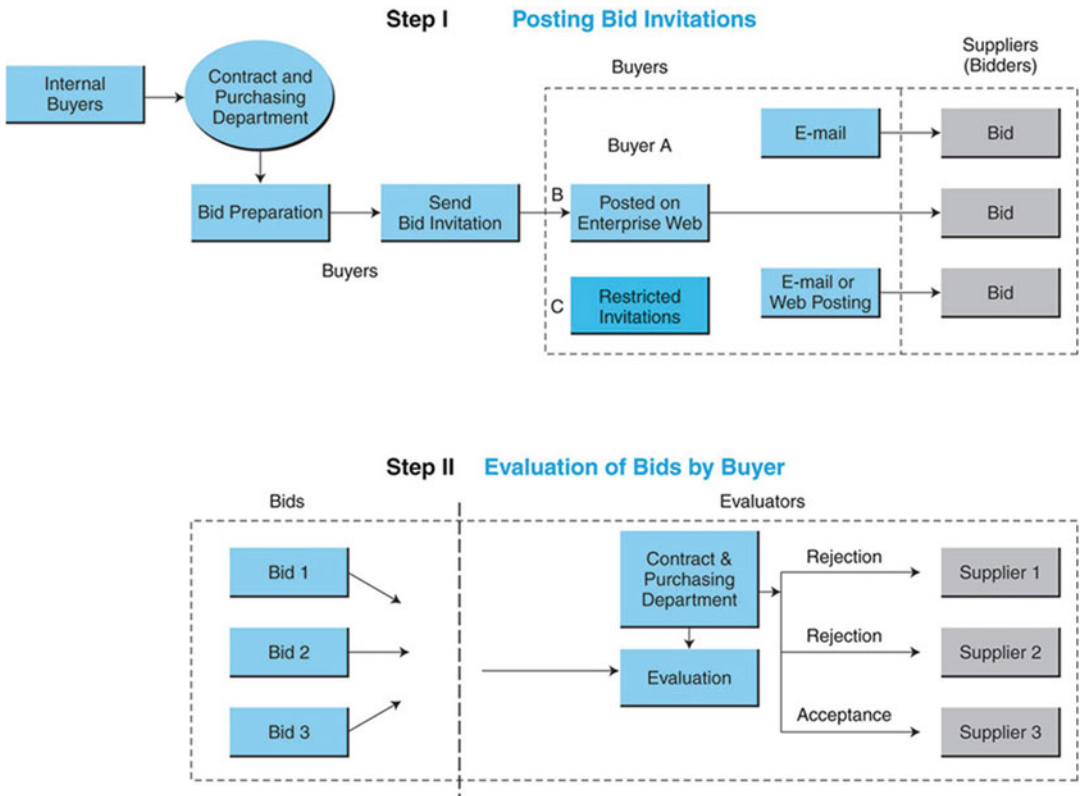
Figure 4.7   The reverse auction process

The Major Benefits of Reverse Auctions

The major benefits of the technology to a buyer are: (a) lower cost of items purchased, (b) reduction of administrative costs of procurement, (c) reduction of corruption and bribes, and (d) decrease in time to receive the goods, which may result from the suppliers' ability to produce their products and services faster (see closing case).

For suppliers, as seen in the opening case, savings comes from a reduction in: (a) time required to find customers, (b) administrative costs, and (c) time needed by managers to conduct manual bids.

Note that some question the value of reverse auctions (e.g., see Rockwell 2013).

Conducting Reverse Auctions

As the number of reverse auction sites increases, suppliers may not be able to monitor all relevant open RFQs manually. This problem has been addressed with the introduction of online directories that list open RFQs. Another way to solve this problem is through the use of monitoring software agents. Software agents also can aid in the bidding process itself. Examples of agents that monitor and support the bidding process are **auctionsniper.com** and **auctionflex.com**.

Alternatively, third-party intermediaries may run the electronic bidding, as they do in forward auctions (e.g., see Opentext Corporation [**opentext.com**]). Auction sites such as **ebay.com**, and **liquidation.com** also belong to this category. Conducting reverse auctions in B2B can be a fairly complex process. This is why using an intermediary may be beneficial.

The reverse auction process is demonstrated in Figure 4.7. As shown in the figure, the first step for the would-be buyer is to post bid invitations. When bids arrive, contract and purchasing personnel for the buyer evaluate the bids and decide which one(s) to accept.

An example of e-tendering is provided in Case 4.1.

CASE 4.2: EC APPLICATION: BRANAS ISAF COMPETES BY USING E-TENDERING

Branas Isaf is a small UK company that provides therapeutic care for children who exhibit harmful behavior. A central part of the company is its education department, which provides several types of training.

The Problem

The company has grown rapidly since 2005 and has doubled in size to 25 employees. The company serves both the private and the public sectors in the UK.

Branas Isaf's major competitive advantages are: (1) competitive fees, (2) provision of customized training, and (3) provision of on-site training. These advantages enable the company to compete with large training institutions such as colleges.

Branas Isaf frequently bids on jobs, especially in the public sector where tendering is mandatory. Many of its 1,000 customers began using electronic tendering over the Internet. Thus, to maintain its competitive advantage, Branas Isaf decided to participate in e-tendering also. This case describes Branas's experience with its first electronic bid.

The Solution

The UK government mandated that all bids for government-related jobs must be done via the eTendering (also called e-tendering) system, including the Government Work Based Learning Programme, on which Branas bids on as a supplier. Branas followed these steps on the eTendering portal, where requests for bids are posted:

1. Electronically submitted a pre-qualification questionnaire.
2. Accepted the terms and conditions of BravoSolution eTraining System.
3. Downloaded online supplier guidance material.
4. Created a user name; received a password.
5. Found the specific invitation to tender (ITT) on which it wanted to bid online.
6. Pressed the "Express Interest" button—moved automatically to "My ITTs."
7. Downloaded all the necessary documents for the specific bid.
8. Made a decision to bid and pressed the "Reply" button.
9. Accessed the project's details; found and filled out a questionnaire.
10. Submitted the tender electronically and uploaded all necessary attachments. (It is possible to update or change the documents until the deadline is reached.)

Sending and receiving messages are embedded in the portal with e-mail alerts. Acceptance notification is done in the same manner. Once the bid is accepted by the system, a "winner" icon is displayed.

The Results

Since its inception in late 2006, the practice of e-tendering at Branas has grown rapidly. Branas employees have become experts in using the computerized system. While the cost to Branas declined only slightly, the opportunity for such a small company to compete with very large competitors increased significantly.

Furthermore, since most nonprofit organizations and many for-profit ones mandate e-tendering, bidders have no choice but to use the system. In addition, Branas understands that e-tendering is clearly more beneficial for its customers as well as being a more sustainable way of doing business. Overall, Branas has been able to maintain its competitive advantage and continue to grow rapidly.

Sources: Based on eProc.org (2010), **branas.co.uk**, and **etenderwales.bravosolution.co.uk** (both accessed March 2014).

Questions

1. Discuss the drivers of e-tendering for Branas.
2. Given the small size of the company, was it an advantage or disadvantage to participate?
3. Is the process of e-tendering simple or complex? Explain.
4. Why do buyers choose e-tendering instead of regular tendering?
5. What are the benefits of e-tendering for a small company such as Branas?

E-Tendering by Governments

Most governments must conduct tendering when they buy or sell goods and services. Doing this manually is slow and expensive. Therefore, many governments are moving to e-reverse auctions for their purchasing. The opening case demonstrates e-tendering from a seller's point of view; the closing case demonstrates e-tendering from a buyer's perspective.

Group Reverse Auctions

To increase their bargaining power and get price discounts, companies, like individuals, can buy in a group, and the group can use a reverse auction to get an even better deal than a quantity discount.

B2B reverse auctions can be done in a private exchange or at an aggregator's site for a group of buying companies. Such *group reverse auctions* are popular in South Korea and usually involve large conglomerates. For example, the LG Group operates the LG MRO Auction for its member companies, and Samsung Group operates the Samsung iMarketKorea (**imarketkorea.com**), which provides procurement services and MRO goods. Samsung's iMarketKorea's revenue comes primarily from B2B transactions (see Online File W4.2). This practice is popular in the healthcare industry in the United Kingdom, the United States, and other countries where hospitals are banding together to buy their supplies at a quantity discounted low prices.

SECTION 4.5 REVIEW QUESTIONS

1. Describe the manual tendering system and its deficiencies.
2. How do online reverse auctions work?
3. List the benefits of Web-based reverse auctions.
4. Describe group reverse auctions.

4.6   OTHER E-PROCUREMENT METHODS

Other innovative e-procurement methods have been implemented by companies. Some common ones are described in this section.

Desktop Purchasing

Desktop purchasing refers to purchasing by employees without the approval of supervisors and without the involvement of a procurement department. This usually is done by using a *purchasing card (P-card)* (see Chapter 11). Desktop purchasing reduces the administrative cost and the cycle time involved in purchasing urgently needed or frequently purchased items of small dollar value. This approach is especially effective for MRO purchases.

The desktop purchasing approach can be implemented by collaborating with external private exchanges. For instance, Samsung Electronics of South Korea, a huge global manufacturer, and its subsidiaries, have integrated its iMarketKorea (**imarketkorea.com**) exchange (see Online File W4.2) with the e-procurement systems of its buying agents. This platform can also be linked easily with *group purchasing*, which is described next.

Group Purchasing

Many companies, especially small ones, are moving to *group purchasing*. With **group purchasing**, orders from several buyers are aggregated so that better prices due to larger quantities purchased can be negotiated. This model is similar to the one we described for B2C. Two sub-models are in use: internal aggregation and external (third-party) aggregation.
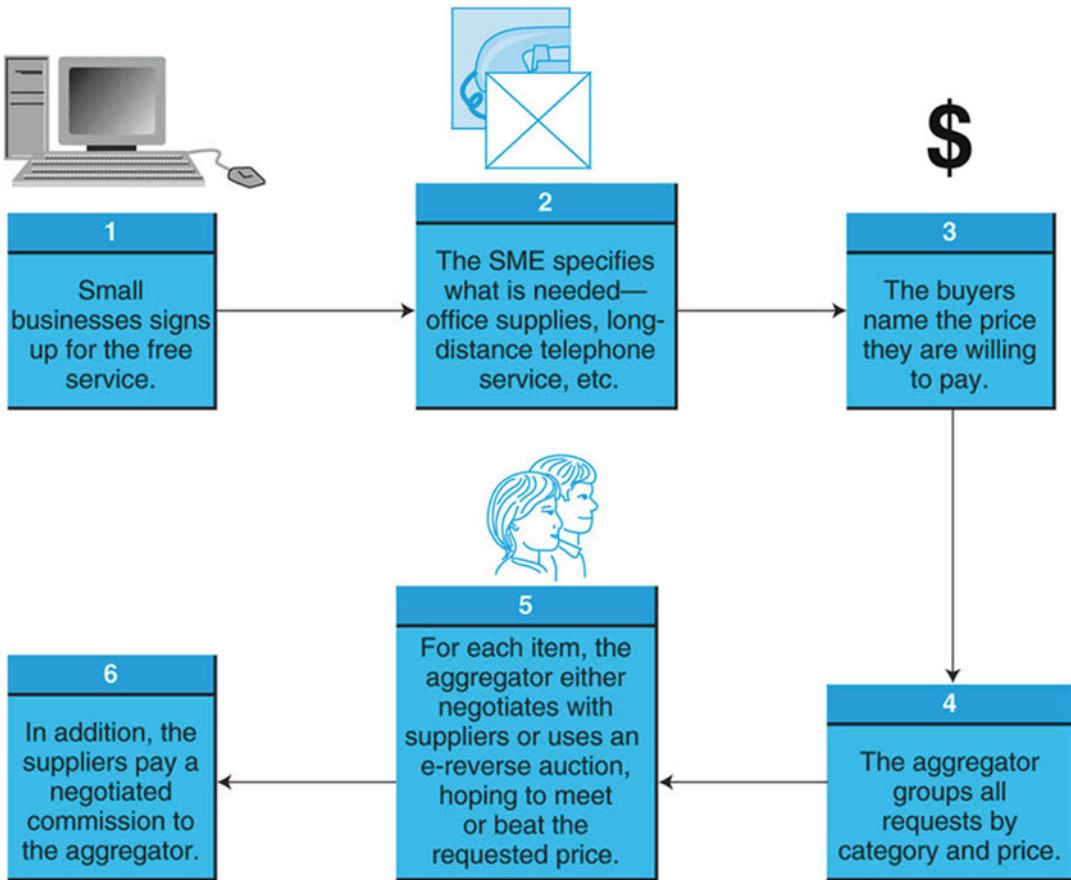
Figure 4.8 The group purchasing process

Internal Aggregation of Purchasing Orders

Large companies, such as GE, spend many millions of dollars on MROs every year. These companies aggregate the orders from their subsidiaries and various departments (sometimes there are hundreds of them) for quantity discounts. They can cut administrative and item costs by 90%.

External Aggregation for Group Purchasing

Many SMEs would like to enjoy quantity discounts but have difficulty finding others to join a group purchasing organization to increase the procurement volume. Finding partners can be accomplished by an external third party such as BuyerZone (**buyerzone.com**), the Healthcare Supply Chain Association (**supplychainassociation.org**), or the United Sourcing Alliance

(**usa-llc.com**). The idea is to provide SMEs with better prices, larger selections, and improved services by aggregating demand online and then either negotiating with suppliers or conducting reverse auctions. The external aggregation/group purchasing process is shown in Figure 4.8.

Several large companies, including large CPA firms and software companies such as EDS Technologies (**edstechnologies.com**) and Ariba, Inc. (**ariba.com**), provide external aggregation services, mainly to their regular customers. Yahoo! and AOL also offer such services. A key to the success of these companies is a critical mass of buyers. An interesting strategy is for a company to outsource aggregation to a third party. For example, ECNG Energy (**ecng.com**) provides group buying in the energy industry. Web 2.0 companies serve businesses as well.

Buying from Other Sources

Section 4.2 described how companies use e-distributors as sales channels. When buying small quantities, purchasers often buy from an e-distributor. Another option for e-procurement is to buy at a B2B exchange using one of several available methods. In all of these options, one may automate some actions in the process, such as the generation of a purchasing order (e.g., see **esker.com** and **ariba.com**), which is a major provider of e-procurement software and services.

Acquisition Via Electronic Bartering

Bartering is the exchange of goods or services without the use of money. The basic idea is for a company to exchange its surplus for something that it needs. Companies can advertise their surpluses in classified ads and may find a partner to make an exchange, but in many cases, a company will have little success in finding an exact match on its own. Therefore, companies usually ask an intermediary to help.

A bartering intermediary can use a manual search-and-match approach or it can create an electronic bartering exchange. With a **bartering exchange**, a company submits its surplus to the exchange and receives points of credit, which the company can then use to buy items that it needs. Popular bartering items are office spaces, idle facilities and labor, products, and even banner ads. For examples of bartering companies, see U-Exchange (**u-exchange.com**) and Itex (**itex.com**).

Selecting an Appropriate E-Procurement Solution

Having many procurement methods, consultants, and software makes the selection of the right method(s) difficult. Ariba, Inc. (**ariba.com**) provides an innovative score sheet that companies use to evaluate vendors based on the described success factors. The success factors are grouped by cost reduction, increased agility, managing complete commerce, and fulfilling tactical requirements.

When organizations make such decisions, these decisions may be influenced by factors such as: Who is buying? What are you buying? How much information do you need to make the decisions? What is the reputation of the vendor(s)? What testimonials are available?

SECTION 4.6 REVIEW QUESTIONS
1. Describe a buyer-operated procurement marketplace and list its benefits.
2. Describe the benefits of desktop purchasing.
3. Discuss the relationship of desktop purchasing with group purchasing.
4. Explain the logic of group purchasing and how it is organized.
5. How does B2B bartering work?
6. What are the major considerations for selecting an e-procurement vendor and solution?

4.7   B2B EXCHANGES (E-MARKETPLACES): DEFINITIONS AND CONCEPTS

The term *B2B exchange*, or simply *exchange*, implies the existence of many potential buyers and many potential sellers in B2B e-marketplaces. In addition to being online trading venues, many exchanges provide support services such as payments and logistics software and consulting services. They also act as industry portals.

Exchanges are known by a variety of names: *e-marketplaces, trading exchanges*, *trading communities, exchange hubs, Internet exchanges, Net marketplaces*, and *B2B portals*. We will use the term *exchange* in this book to describe the general many-to-many e-marketplaces, but we will use some of the other terms in more specific contexts (e.g., see **epiqtech.com/others-B2B-Exchanges.htm**.

Despite their variety, all exchanges share one major characteristic: Exchanges are electronic trading-community meeting places for many sellers and many buyers, and possibly for other business partners, as shown in Figure 4.9. At the
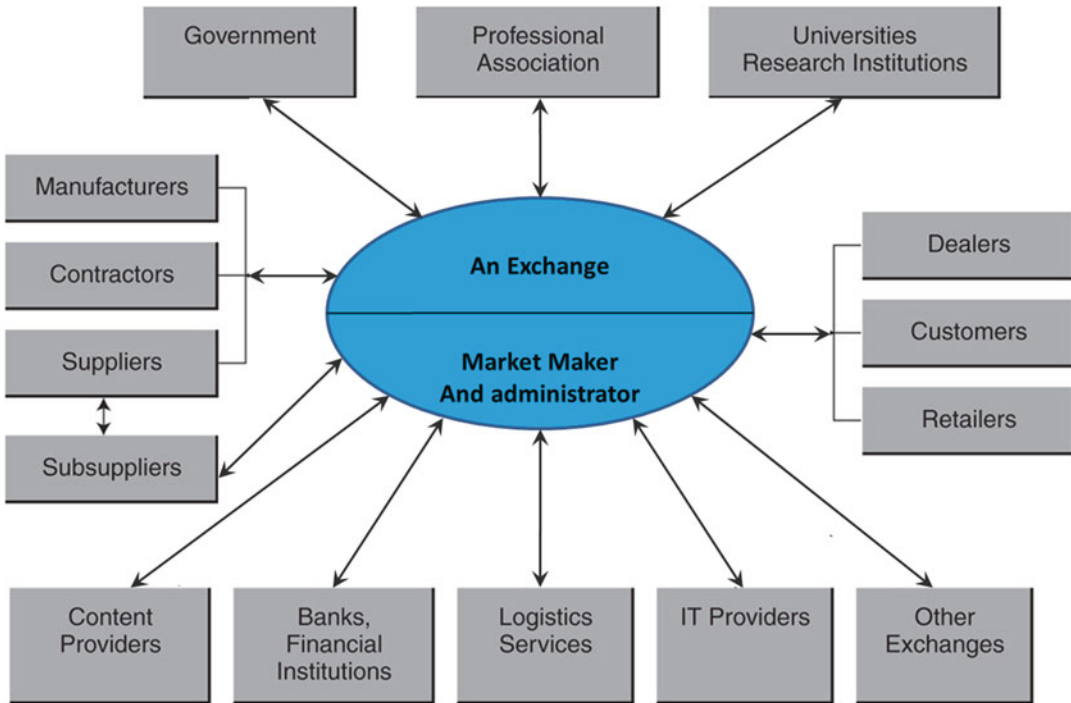
Figure 4.9   The community of an exchange: flow and access to information

center of every exchange, there is a market maker that operates the exchange and, in some cases, may also own it.

Exchanges can be horizontal, serving many industries (e.g., **ariba.com** or **alibaba.com**), or vertical, serving one or a few connected industries (e.g., see **supplyon.com** for automotive; and **oceanconnect.com** for refineries and shipping services). In an exchange, just as in a traditional open-air marketplace, buyers and sellers can interact and negotiate prices and quantities.

Functions of and Services Provided by Exchanges

Exchanges have the following four major sets of functions: (1) Matching and connecting buyers and sellers, (2) facilitating transactions, (3) developing and maintaining exchange policies and infrastructure, and (4) providing services to buyers and sellers. Details of these functions are provided next.

Functions and Services of B2B Exchanges

The following are the major functions of B2B exchanges (compiled from Tumolo (2001), E-Commerce Wiki (2013), and the authors' experiences):

1. Matching buyers and sellers. The matching of buyers and sellers includes such activities as:
   • Presentation of product offering (e.g., the company's catalogs)
   • Aggregating and posting different products for sale – to meet buyers' need
   • Providing price comparisons
   • Organizing bids (bartering) and (auctions)
   • Providing sellers' profiles and product information
   • Matching suppliers' offerings with buyers' requests
   • Supporting negotiations between buyers and sellers
   • Providing directories of sellers
   • Maintaining security, privacy, and anonymity

2. Facilitating transactions. Facilitating transactions by optimizing the purchasing and sales processes, including the following activities:
   - Allowing for efficient trading between participants
   - Providing for B2B auctions
   - Providing the trading platform with mechanisms such as arranging payment, insurance, order fulfillment and security
   - Providing escrow services
   - Arranging for group (volume) purchasing and other discounts
   - Defining terms and other transaction values, including negotiation
   - Inputting searchable information, including industry news
   - "Grant[ing] exchange access to users and identify[ing] company users eligible to use exchange" (Tumolo 2001)
   - Collecting transaction fees and providing the necessary software and its integration with buyers and/or sellers systems, including EDI, XML, etc.
   - Providing analysis and statistics of products' transactions
   - "[R]egistering and qualifying buyers and suppliers" (Tumolo 2001)
3. Maintaining exchange policies and infrastructure. Per Tumolo (2001), maintaining institutional infrastructure involves the following activities:
   - "Ascertaining compliance with commercial code, contract law, export and import laws, [and] intellectual property law [law for transactions made within the exchange]
   - Maintaining technological infrastructure to support volume and complexity of transactions [providing auction management]
   - Providing interface capability to standard systems of buyers and suppliers
   - Obtaining appropriate site advertisers and collecting advertising and other fees"
4. Services provided by an exchange. Exchanges provide many services to buyers and sellers including:
   - Sourcing – RFQ bid coordination (product configuration, negotiation)
   - Security, anonymity
   - Software: groupware, workflow
   - Integration with members' back-office systems
   - Support services (financing, order tracking)

The types of services provided by an exchange depend on the nature of the exchange. For example, the services provided by a stock exchange are completely different from those provided by a steel or food exchange or by an intellectual property or patent exchange. However, most exchanges provide the services illustrated above. Note that, some B2B exchanges may have individuals as either sellers or buyers, in addition to corporations. An example is **localdirt.com**, an online marketplace that connects thousands of farmers with many buyers, promoting efficient trading of local produce.

Ownership of B2B Exchanges

Exchanges, portals, and directories are usually owned by a third-party operator. Both sellers and buyers prefer such an arrangement. Alternatively, exchanges may be owned by a few very large sellers or buyers. This kind of arrangement is referred to as a *consortium*.

Third-Party Independent Exchanges

Third-party exchanges are electronic intermediaries. The intermediary not only presents catalogs, but also tries to *match* buyers and sellers and encourages them to make transactions by providing electronic trading tools and rooms.

Third-party exchanges are characterized by two contradicting properties. On the one hand, they are *neutral* (they do not favor either sellers or buyers). On the other hand, they sometimes have difficulty attracting enough buyers and/or sellers to be profitable. Therefore, to increase their financial viability, these exchanges try to team up with partners, such as large sellers or buyers, financial institutions that provide payment schemes or logistics companies that fulfill orders.

Example 1: Intercontinental Exchange Group (ICE)

Intercontinental Exchange (**theice.com**) is an Internet-based global network of B2B exchanges (17 regulated exchanges and 6 central clearing houses (2014 data)) that operates marketplaces that trade commodities contracts and over-the-counter (OTC) energy and commodity features as well as related financial products. While the company's original focus was energy products, recent acquisitions have expanded its activity into "soft" commodities (grains, sugar, cotton, and coffee), foreign exchange, and equity index features. For details, see **intercontinentalexchange.com/about**.

ICE is linked electronically to all its customers (members). Trading is global and is done 24/7. Currently, ICE is organized into three business lines:

- **ICE Markets.** Futures, options, and OTC markets. Energy futures are traded via ICE Futures Europe; soft commodity futures/options are handled by ICE Futures U.S.
- **ICE Services.** Electronic trade confirmations and education.
- **ICE Data.** Electronic delivery of market data, including real-time trades, historical prices, and daily indices.

ICE offers market participants a range of trading and risk management services globally:

1. Benchmark futures contracts
2. Risk management via a global central counterparty clearinghouse
3. Integrated access to global derivatives markets
4. Leading electronic trading platform
5. Transparency and regulation
6. Independence governance

Intercontinental Exchange owns several pioneering exchanges such as ChemConnect.

Example 2: The Receivables Exchange.

The *Receivables Exchange* is a website where businesses seeking financing can sell their receivables to those who are willing to loan them money. (The receivables are used as collateral for the loans.) The process involves auctions and is managed by The Receivables Exchange, LLC. (**recx.com**). A demo is available on the site.

For a list of exchanges all over the world, see **internetworldstats.com/links2.htm**.

Example 3: SolarExchange.com

SolarExchange.com is a global *solar marketplace* facilitating B2B online *auctions* for solar-related materials and finished goods. This exchange is a global community where suppliers collaborate with buyers from anywhere in the world.

According to the company, their service portfolio "spans the solar supply chain, delivering procurement management, risk management, online auctions, price indexes, human resource sourcing and a knowledge base serving the solar industry."

The major benefits, according to the company, are:

- "Connect with the global solar trading community
- Reduce costs by automating solar procurement and sale activities
- React rapidly to changing market conditions for greater competitive advantage
- Extend your market reach through access to new trading partners and suppliers
- Accelerate sales cycles and minimize inventory risk
- Lower operating costs and improve margins
- Promote your brand to increase awareness and drive commerce activities
- Source global talent"
  (see **solarexchange.com/solarxpages/StaticAboutUs.aspx**).

For how this exchange works and the bidding process, see **solarexchange.com/solarxpages/StaticGetStarted.aspx** and **solarexchange.com/solarxpages/StaticBiddingProcess.aspx**.

Consortium Trading Exchanges (CTE)

A **consortium trading exchange (CTE)** is an exchange formed and operated by a group of major companies in one industry. They can be suppliers, buyers, or both. The major declared goal of CTEs (also called consortia) is to provide services that support trading activities. These services include links to the participants' back-end processing systems as well as collaborative planning and design services. Examples of consortia exchanges are **avendra.com** in the hospitality industry and OceanConnect **oceanconnect.com** in the shipping industry.

Note that some consortia have hundreds of members in the same industry.

Dynamic Pricing in B2B Exchanges

The market makers in both vertical and horizontal exchanges match supply and demand in their exchanges, and this matching determines prices, which are usually *dynamic* and are based on changes in supply and demand. **Dynamic pricing** refers to the rapid movement of prices over time and possibly across customers. Stock exchanges are a prime example of dynamic pricing. Another good example of dynamic pricing occurs in auctions, where prices vary all the time.

The typical process that results in dynamic pricing in most exchanges includes the following steps:

1. A company posts a bid to buy a product or an offer to sell one.
2. An auction (forward or reverse) is activated.
3. Buyers and sellers can see the consecutive bids and offers but usually do not see who is making them. Anonymity often is a key ingredient of dynamic pricing (e.g., in stock markets).
4. Buyers and sellers interact with bids and offers in real time.

5. Sometimes buyers join together to obtain a volume discount price (group purchasing).
6. A deal is struck when there is an exact match between a buyer and a seller on price, volume, delivery date, and other variables, such as location or quality.
7. The deal is finalized, and payment and delivery are arranged.

Advantages, Limitations, and the Revenue Model of Exchanges

Exchanges have several benefits, for buyers and sellers, including making markets more efficient, providing opportunities for sellers and buyers to find new business partners, reducing the administrative costs of ordering MROs, and expediting trading processes. They also facilitate global trade and create communities of informed buyers and sellers.

Despite these benefits, beginning in 2000, exchanges started to collapse, and both buyers and sellers realized that they faced the risks of exchange failure or deterioration. The potential benefits and risks of B2B exchanges for buyers and for sellers are summarized in Table 4.2. As the table shows, the benefits outnumber the risks.

Table 4.2 Potential gains and risks in B2B exchanges

	For buyers	**For sellers**
Potential gains	One-stop shopping, huge	New sales channel
	Search and comparison shopping	No physical store is needed
	Volume discounts	Reduced ordering errors
	24/7 ordering from any location	Sell 24/7
	Make one order from several suppliers	Community participation
	Huge, detailed information	Reach new customers spending only little cost
	Access to new suppliers	Promote the business via the exchange
	Status review and easy reordering	An outlet for surplus inventory
	Community participation	Can go global more easily
	Fast delivery	Efficient inventory management
	Less maverick buying	Better partner relationship management
	Better partner relationship management	Loss of direct CRM and PRM
Potential risks	Unknown vendors; may not be reliable	More price wars
	Loss of customer service quality (inability to compare all services)	Competition for value-added services
		Must pay transaction fees; possible loss of customers to competitors

Revenue Models

Exchanges, like all organizations, require revenue to survive. Therefore, an exchange's owners, whoever they are, must decide how they will earn revenue. The potential sources of revenue for exchanges are similar to those discussed in Chapter 1. They include transaction fees, membership fees, service fees, advertising fees, and auction fees (paid by the sellers and/or buyers). In addition, for a fee, exchanges offer software, computer services, management consultation, and so forth.

SECTION 4.7 REVIEW QUESTIONS

1. Define B2B exchanges and list the various types of exchanges.
2. List the major functions of exchanges and the services they provide.
3. What is dynamic pricing? How does it work?
4. List the potential advantages, gains, limitations, and risks of exchanges to buyers.
5. List the major advantages and limitations to sellers.
6. List the major ownership types in B2B exchanges.
7. Define consortium trading exchanges.

4.8   B2B PORTALS AND DIRECTORIES

B2B marketplaces tend to have two complementary facilities: portals and directories.

B2B Portals: An Overview

Portals, as defined in Chapter 2, are gateways to information.

B2B portals are information portals for businesses. They usually include lists of products offered by each seller, lists of potential buyers and what they want to buy, and other industry or general information. Buyers then visit sellers' sites to conduct their transactions. The portal may receive a commission for referrals, or derive revenue from advertisements. Thus, information portals sometimes have a difficult time generating sufficient revenues. Because of this, many information portals are beginning to offer additional services that support trading, such as escrow and shipments for a fee. An example of a B2B portal is **myboeingfleet.com**, which is a Web portal for Boeing's airplane owners, operators, and MRO suppliers.

Like exchanges, information portals may be horizontal (e.g., Alibaba.com, described in the opening case), offering a wide range of information about different industries. Alternatively, they may be vertical, focusing on a single industry or industry segment. Vertical portals often are referred to as **vortals**. Portals can be limited to directory services, as will be described later in this chapter. Let us look at the various types of corporate portals first.

Corporate (Enterprise) Portals

Corporate portals facilitate collaboration with suppliers, customers, employees, and others. This section provides in-depth coverage of corporate portals, including their support of collaboration and business process management.

Corporate Portals: An Overview

A **corporate (enterprise) portal** is a gateway to a corporate website and other information sources that enables communication, collaboration, and access to company information. In contrast with public commercial portals such as Yahoo! and MSN, which are gateways to general information on the Internet, corporate portals provide a single point of access to information and applications available on the intranets and extranets of a specific organization. Companies may have separate portals for outsiders and for insiders. Through the portal, viewers can have structured and personalized access to information across large, multiple, and disparate enterprise information systems, including the Internet. For the top 10 B2B websites and trading portals in 2013, see **directory.tradeford.com/b2b**.

Types of Corporate Portals

The following five generic types of business portals can be found in organizations.

Portals for Suppliers and Other Partners

These portals facilitate relationships with business partners. For example, suppliers can manage the current inventories of the products that they sell to each specific customer online. Suppliers can see the inventory levels of their customers and reorder material and supplies when they note that an inventory level of any specific item is low, using a *vendor-managed inventory* system (see Chapter 5); they can also collaborate with corporate buyers and other staff members.

Customer Portals

Portals for customers serve businesses' customers. Customers can use these customer-facing portals to view products and services and to place orders, which they can later track. They can view their own accounts and see what is going on almost in real time. They can pay for products and services, arrange for warranties and deliveries, and much more. These portals include a personalized section (e.g., under "My account").

Employee Portals

Such portals are used for training, dissemination of company news and information, discussion groups, and more. Employee portals also are used for self-service activities, mainly in the human resources area (e.g., reporting address changes, filing expense reports, registering for classes, and requesting tuition reimbursement). Employee portals are sometimes bundled with supervisor portals in what are known as *workforce portals.*

Executive and Supervisor Portals

These portals enable managers and supervisors to control the entire workforce management process—from budgeting to workforce scheduling. For example, Pharmacia (a Pfizer company) built a portal for its executives and managers worldwide, called the Global Field Force Action Planner, which provides a single, worldwide view of the company's finances and performance.

Mobile Portals

Mobile portals are portals accessible via mobile devices, especially cell phones, smartphones, tablets, and so forth. Many mobile portals contain no corporate information, such as in NTT DOCOMO's i-Mode. Large corporations have mobile corporate portals or they offer access to their regular portals from wireless devices.

The Functionalities of Portals

Whoever their audience, the functionalities of portals range from simple **information portals** that store data and enable users to navigate and query those data, to sophisticated **collaborative portals** that enable and facilitate collaboration.

Corporate Portal Applications and Issues

Typical portal applications include knowledge bases and learning tools; business process support; customer-facing (frontline) sales, marketing, and services; collaboration and project support; access to data from disparate corporate systems; personalized pages for various users; effective search and indexing tools; security applications; best practices and lessons learned; directories and bulletin boards; identification of industry experts; news; and Internet access.

Directory Services and Search Engines

One of the most useful features of B2B is the directory that is displayed in the corporate portal or is offered by an independent, third-party company. For a comprehensive list of directories, see **internetworldstats.com/links2.htm**. A list of about 500 B2B global websites is provided at **b2bbyte.com/b2b/b2btrade.html**.

The B2B landscape is huge, with hundreds of thousands of companies online. Therefore, specialized search engines are becoming a necessity. The most useful search engines are those concentrating on vertical searches. Examples of vertical search engines and their services can be found on GlobalSpec (**globalspec.com**). In contrast to vertical searches, products such as Google Search provide search capabilities on many topics within one enterprise or on the Web in general. However, search engines by themselves may not be sufficient. Directories contain vast

amounts of information that can be searched manually or by using the directory search engine. For example, **local.com** is a local-search engine for finding companies in any designated area--it contains over 16 million listings. See **local.com/faq.aspx**.

Directory services are available on many B2B sites (e.g., see GlobalSpec's Directory of Suppliers at **globalspec.com/SpecSearch/SuppliersByName/Suppliers_A.html**). Also, download the free e-market services handbook titled 'E-Markets and Online Directories: A Handbook for Small Businesses' at **emarketservices.com/clubs/ems/artic/HandbookEnglish.pdf**. Directory services help find products, vendors, services, and potential partners. In addition, the Daily Deal Media sells an *Ecommerce & Internet Business Directory*, which contains about 75,000 company records. For details, see **dailydealmedia.com/report/?ecommerce-internet-businesses-directory**.

Finally, TradeB2B **tradeb2b.net** provides information in dozens of B2B categories, including 'B2B Auctions and commodities.'

International Trade Directories
E-commerce provides an extraordinary opportunity to engage in global trade, mostly in import and export. Companies are buying, selling, working jointly, advising, opening branches, and much more on a global basis. The opportunities are much larger and diverse than one can find in just one country alone. The important topic of global trading is described in Chapter 13. Here we touch on one topic: how to find business opportunities and partners globally.

Millions of businesses, and even more products and services, exist globally. Several of the directories described earlier cover, in part, international business as well as some of the search engines. In 2014, the largest company in this field was Alibaba.com (see opening case).

SECTION 4.8 REVIEW QUESTIONS
1. Define B2B portals.
2. Distinguish a vortal from a horizontal portal.
3. List the major types of corporate portals.
4. Describe some directory services in B2B.

4.9   B2B IN WEB 2.0 AND SOCIAL NETWORKING

Although a large number of companies conduct social networking activities that target individual consumers (B2C), there also is increasing activity in the B2B arena. However, the potential in B2B is large, and new applications are added daily. The opportunities of B2B social networking depends on the companies' goals and the perceived benefits and risks involved (for more information see **adage.com/article/btob/social-media-increasingly-important-b-b-marketers/291033**).

E-Communities in B2B

B2B applications may involve many participants: buyers and sellers, service providers, industry associations, and others. In such cases, the B2B market maker needs to provide community services, such as chat rooms, bulletin boards, and possibly personalized Web pages.

E-communities connect employees, partners, customers, and any combination of the three. E-communities offer a powerful resource for e-businesses to leverage online discussions and interactions in order to maximize innovation and responsiveness. It is therefore beneficial to study the tools, methods, and best practices of building and managing B2B e-communities. Although the technological support of B2B e-communities is basically the same as for any other online community (see Chapter 2), the nature of the community itself and the information provided by the community are different.

B2B e-communities are mostly communities of transactions and, as such, members' major interests are trading and business-related information gathering. Many of the communities are associated with vertical exchanges; therefore, their needs may be specific. Communities also support partner-to-partner collaboration and networking. For example, see **partners.salesforce.com** for partnership software. However, it is common to find generic services such as classified ads, job vacancies, announcements, industry news, and so on. For B2B social communities, see Brooks et al. (2013).

Communities promote collaboration. The newest variation of these communities is the business-oriented or professional social network such as **linkedin.com**, presented in Chapter 8.

The Opportunities of Social Commerce in B2B

Companies that use B2B social networking may experience the following advantages:

- Use the network to advertise to large audiences and create brand awareness.
- Discover new business partners and sales prospects.
- Enhance their ability to learn about new technologies, competitors, customers and the business environment.
- Generate sales leads via 'contacts,' especially on **linkedin.com** and by tweeting (**twitter.com**), or engaging on **facebook.com**.
- Post questions and facilitate discussions on **linkedin.com** by searching the "Help Center," asking the community a question through the "Help Forum," or by using the posting module on your homepage to ask your network a question. Post questions on the question and answer forums on other social networks.
- Improve participation in industry association activities (including lobbying).
- Create buzz about upcoming product releases.
- Drive traffic to their Facebook page and other social sites and engage visitors there (e.g., provide games, prizes, competitions, etc.). Word of mouth also may increase traffic.
- Create social communities to encourage discussions among business partners (e.g., customers and suppliers) about their products.
- Use social networks, such as **facebook.com** and **linkedin.com** to recruit new talent.

For more opportunities using **linkedin.com**, see Prodromou (2012).

More uses of B2B social networking are seen in *enterprise social networking,* which are private social networks within enterprises (see Chapter 8).

The Use of Web 2.0 Tools in B2B

More companies are using blogs, microblogs, wikis, RSS feeds, video ads, podcasts, and other tools in B2B EC. For example, Eastern Mountain Sports (**ems.com**) uses blogs (**blog.emsoutdoors.com**), RSS feeds, and wikis to communicate and collaborate with their suppliers and distributors. Thousands of other companies are using (or experimenting with) these tools. For a study on using YouTube for B2B, see **scgpr.com/41-stories/youtube-for-b2b-marketers**; and on using Twitter, see Maddox (2010). For comprehensive coverage, see Bodnar and Cohen (2012).

Example

Orabrush Inc. (**orabrush.com**) is a startup company that makes tongue cleaners that reduce bad breath. The company created funny YouTube videos targeting Walmart employees. In a short time, the company had over 160,000 subscribers on YouTube, and more than 39 million views. In addition, the company advertised on Facebook at a cost of $28, resulting in 300,000 fans. This publicity convinced some Walmart buyers to try the product, and Orabrush landed a huge contract with Walmart. For details, see Neff (2011).

B2B Games (Gamification)

Virtual games, or **gamification**, refer to virtual games designed to support B2B training and decision making. Players compete against each other and make market predictions. For details, see DiMauro (2012).

Virtual Trade Shows and Trade Fairs

Virtual trade shows and fairs are gaining popularity. They are primarily B2B in nature.

Virtual trade shows are an application of virtual worlds. A **virtual trade show**, also known as a *virtual trade fair*, is the online analogy of a physical trade show. These are temporary or permanent showplaces where exhibitors present their new products to potential customers. For a detailed description of virtual trade shows, see Online File W4.3 and Lindner (2009).

For a large number of screen shots of virtual trade show conduct a Google search for 'Virtual Trade Show.'

Example: MarketPlace365

MarketPlace365 (**marketplace365.com**) is a vendor that gives companies tools to build virtual trade shows and attract traffic to the shows. For details, see **marketplace365.com** and **marketplace365.com/Marketing/features.aspx**.

Note: Social media can be used to support exhibits even in physical trade shows. For more on using social media at trade shows, see Patterson (2012) and download his free 'Social Media Tradeshow Marketing Checklist' at **tradeshowguyblog.com/downloads/Social-Media-Tradeshow-Marketing-Checklist.pdf**.

Social Networking in B2B

Businesses can use B2B social networking to improve knowledge sharing, collaboration, and feedback. Furthermore, social networking sites may also prove beneficial in aiding troubleshooting and problem-solving efforts. Companies (especially small ones) are using social networks and Yahoo! Answers (**answers.yahoo.com**) and specialized groups within LinkedIn; for example, for problem solving. B2B participants need to look into social networking as part of their overall EC strategy, otherwise they may miss an opportunity to reach the B2B audience and differentiate themselves from the competition.

By the end of 2013, social networking was playing a much more important role in B2B. According to a 2010 study by Regus (reported by Leggatt 2010), both small and large businesses are using social networks quite successfully to find and retain new business. A few highlights of the study include:

- 50–75% of companies globally use social networks for various networking functions.
- "40% of businesses globally have found new customers via social networks" (Leggatt 2010).
- 27% of companies include social networking activity to both acquire and retain customers in the marketing budget.

The main uses of social networks are keeping in contact with business contacts; meeting with special interest groups; learning useful business intelligence; and organizing, managing, and connecting with customer groups.

For some interesting statistical data see Karr (2013).

According to a survey by Pardot (2011; a Salesforce company), social media use among B2B marketers is already very high. However, 30% are not calculating the return on investment for social media. The survey also ranked Twitter as the most popular social media channel. In 2013, Twitter and LinkedIn were the most-used social networks in B2B (see **spiral16.com/blog/2013/10/how-b2b-companies-are-using-social-media-infographic/**).

Using Twitter in B2B

Twitter is used extensively in B2C mainly as a communication tool for customer service advertising campaigns, customer engagement platforms, CRM, and market research. Similar uses are evidenced in B2B. Schaffer (2009) provides four examples of companies that use Twitter in B2B. The applications include the monitoring of conversations for identifying business opportunities, enabling small businesses to engage with potential customers, making contacts with potential customers and customers discovering potential suppliers.

Examples of Other Activities of B2B Social Networks

The following are examples of some social network–oriented B2B activities:

- **Location-based services.** These are getting popular in B2C (see Chapter 6) and they

may provide opportunities for B2B (see Zwilling 2011).

- **Corporate profiles on social networks.** LinkedIn and Facebook include substantial information on companies and their individual employees. In fact, employee profiles can be part of a company's brand. For example, in early 2012, IBM had approximately 280,000 employees registered on LinkedIn; Microsoft had approximately 134,000 as of early 2014. In addition, some sites feature company profiles, with comments by employees and customers.

Success Stories

BtoB's Interactive Marketing Guide (available periodically at **btobonline.com**) provides examples of successful B2B implementation (e.g., look for Cisco systems, Arketi Group and Hewlett Packard Co.). Note: Now part of Adage.

For case studies, read Simply Zesty's eBook titled '50 Brilliant Social Media B2B Case Studies' (available for purchase at **simplyzesty. com/Blog/Article/June-2011/50-Brilliant-Social-Media-B2B-Case-Studies**).

Wiebesick (2011) provides a slide show of these four examples of success stories:

- Kinaxis (**kinaxis.com**): Increased traffic and leads by creating funny and entertaining videos and using a blog.
- Archer Technologies: Created an enterprise social network for customers for interactions and idea generation
- Indium Corp. (**indium.com**): Engineers shared blogs among themselves and with the industry.
- Cree, Inc. (**cree.com**): Created an enterprise social network site for engagement, including blogging, YouTube videos, and photo contests.

Strategy for B2B Social Networking

Bhutani (2008) made several strategy implementation suggestions, organized into three categories: participate, monitor, and use existing applications.

Eventually, companies will be able to use social networking more efficiently. Success stories of five companies—SAP, United Linen (a small laundry service), Forrester Research, Kinaxis, and Expert Laser Services—are discussed by Pergolino (2010).

The Future of B2B Social Networking

Marketing users are developing social media and search tools. Products such as Google's OpenSocial may increase interest in social networking.

Businesses must embrace social networking in order to better understand their customers and business partners.

B2B marketing, which is discussed in Online File W4.4, refers to marketing by manufacturers and wholesalers along the sell-side of the supply chain.

SECTION 4.9 REVIEW QUESTIONS

1. List some of the opportunities for corporations to use social networking in B2B EC.
2. What are some of the benefits of social networking for B2B EC?
3. List some Web 2.0 social software for B2B applications.
4. Describe some of the applications of B2B in social networks.
5. Discuss the strategies for B2B social networking.
6. Define e-communities in B2B.

4.10   SOME B2B SUPPORT MECHANISMS

Implementing B2B can be difficult due to the large number and volume of transactions and products, the potential large numbers of buyers and suppliers, and the need for transporting large quantities of goods. In this section, we cover several representative topics.

Major differences exist between B2B and B2C EC with respect to the nature of demand and supply and the trading process. Here we discuss the corporate purchaser's buying behavior and some of the marketing and advertising methods used in B2B EC. There is more discussion about this topic in **blog.marketo.com**, which provides tutorials
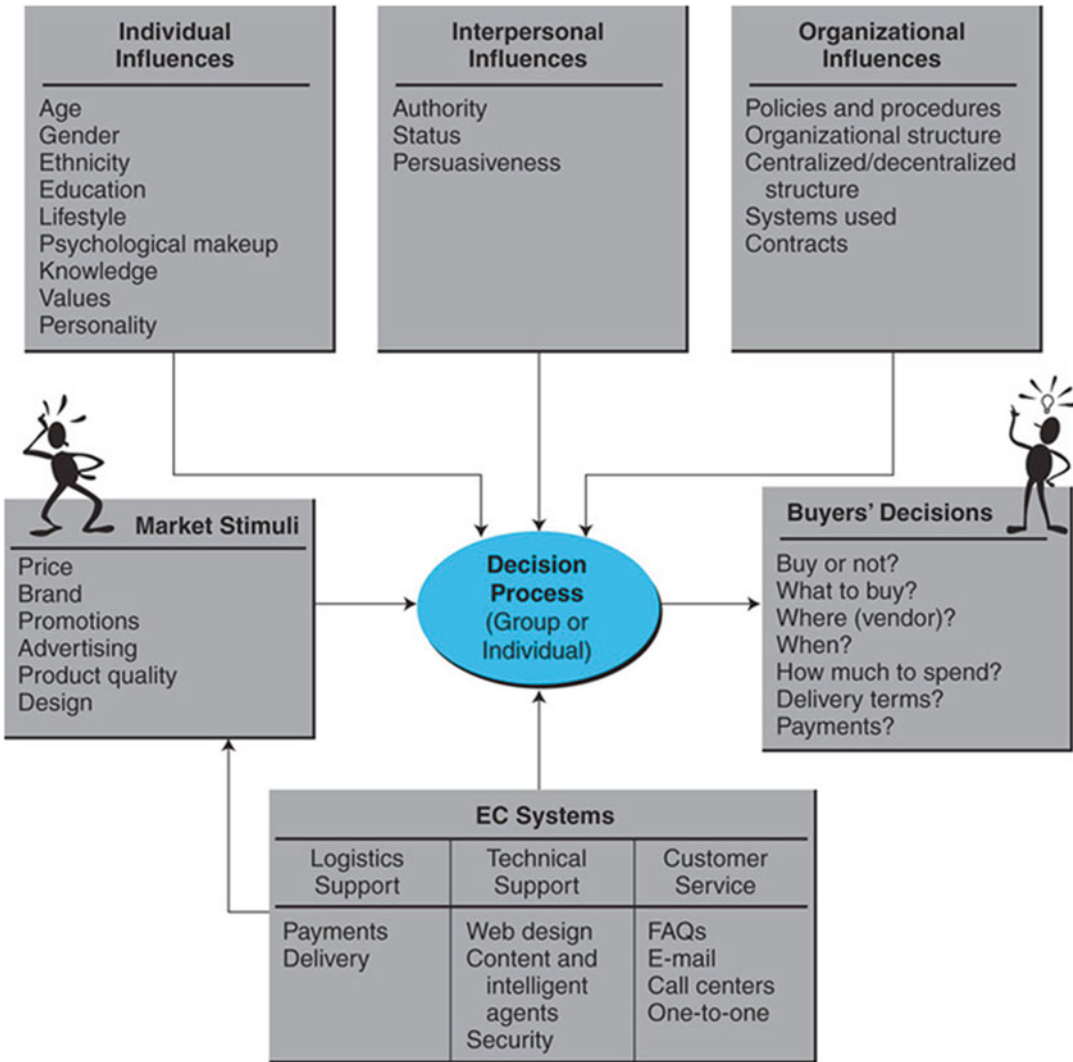
Figure 4.10   A model of organizational buyer behavior

and tips as a guide to both successful B2B social marketing and B2B marketing optimization.

Organizational Buyer Behavior

Although the number of organizational buyers is much smaller than the number of individual consumers, their transaction volumes are by far larger, and the terms of negotiations and purchasing are more complex. In addition, the purchasing process itself usually is more complex than the purchasing

process of an individual customer. Likewise, the organization's buyer may be a group. In fact, decisions to purchase expensive items are usually made by a group. Therefore, factors that affect individual consumer behavior and organizational buying behavior are quite different.

A Behavioral Model of Organizational Buyers

The behavior of an organizational buyer is illustrated by the model shown in Figure 4.10. A B2B module includes the organization's purchasing

guidelines and constraints (e.g., contracts with certain suppliers) and the purchasing system used. Interpersonal influences, such as authority, and the possibility of group decision making must be considered.

The Marketing and Advertising Processes in B2B

B2B marketing refers to marketing and sales made by manufacturers and wholesalers along the sell-side of the supply chain.

The marketing and advertising processes for businesses differ considerably from those used for selling to individual consumers. For example, traditional (offline) B2B marketers use methods such as physical trade shows, advertisements in industry magazines, utilization of paper catalogs, and salespeople who visit existing customers and potential buyers.

In the digital world, these approaches may not be effective, feasible, or economical. Therefore, organizations use a variety of online methods to reach business customers. Popular methods include online directory services, matching services, the marketing and advertising services of exchanges, co-branding or alliances, affiliate programs, online virtual trade shows, online marketing services, or social networks. Several of these methods are discussed next.

Methods for B2B Online Advertising and Marketing

When a B2C niche e-tailer seeks to attract for example, its audience of cat or dog lovers, or travelers, the e-tailer may advertise in traditional media targeted to those audiences, such as magazines, newspapers, or television shows, or use Google's or Facebook's Internet ads. The same is true in B2B, where marketers use trade magazines and directories, which can be digital. In addition, as in B2C, B2B advertisers try to target their customers.

Targeting Customers

A B2B company, whether a provider of goods or services, an operator of a trading exchange, or a provider of digital real-time services, can contact all of its targeted customers individually when they are part of a well-defined group. For example, to attract companies to an exchange for auto supplies, one might use information from industry trade association records or industry magazines to identify potential customers.

Several of the advertising methods that will be presented in Chapter 9 are applicable both to B2C and B2B. For example, video ads can be used to target customers in B2B.

Affiliate Programs

Here we briefly examine one popular method: affiliate programs.

B2C affiliate services were introduced in Chapter 1 and will be described in Chapter 9. There are several types of affiliate programs. The simplest type, which is used extensively in B2C EC, is where an affiliate posts a banner display ad of a selling vendor, such as Amazon.com, on its own website. When a consumer clicks on the banner, the consumer is directed to that vendor's website, and a commission is paid to the affiliate if the customer makes a purchase (or sometimes just for clicking on the vendor's banner). The same method works in B2B.

For more on B2B affiliate programs, see Peters (2014) and **quicksprout.com/the-beginners-guide-to-online-marketing-chapter-9**.

B2B Market Research

One of the major objectives of market research is to provide tactics and strategies for EC advertising, as described in Chapter 9. The data collected in market research can be voluminous. To analyze it, one can use data and text mining. For the use of data mining in B2B market research, see Chapter 9.

A final note: In marketing, we use the classical 4Ps (product, price, place, and promotion). Dunay (2010) argues that the 4Ps are good mostly for B2C. For B2B, he proposes 4Cs: content, connection, communication, and conversion.

Other B2B Support Mechanisms

Similar to B2C, there are several support services in B2B. Representative examples follow.

Collaboration Networks and Supply Chain Facilities

The collaboration process is critical for the success of B2B and supply chain management. Despite the importance of collaboration, only 14% of respondents to the Aberdeen Group survey published in June 2011 indicated they had the ability to collaborate with trading partners online (Aberdeen Group 2011). The survey shows the needs and the potential benefits and concludes that collaboration is a necessity. Collaboration is about the relationships among organizations. Many companies provide tools that facilitate collaboration.

Example: IBM Sterling Commerce

This is a cloud-based value added network that helps to reduce costs and increase productivity, quality, and customer satisfaction. For a description and more benefits, see **ibm. com/software/info/sterling-commerce**.

Example: NTE B2B Collaboration

This solution provides: easy connections with trading partners, EDI translation (see Online Tutorial T2), unrestricted protocols used for communication, and collaboration modules. For details, see **nte.com/technology/b2b-collaboration**.

Example: Ariba Network

Ariba, Inc. (**ariba.com**) is a global supplier network that finds, connects, and collaborates with a huge community of trading partners. For details, see **ariba.com/community/the-ariba-network**.

Supply Chain Facilitators

Several companies concentrate on improving B2B supply chains. For example, SupplyON (**supplyon.com**) monitors logistics in several industries (e.g., automotive, aerospace, railways). NeoGrid (**neogrid.com**) is another company that facilitates improvements along the supply chains of several industries. **Alibaba. com**, **ec21.com**, and **ziliot.com** are examples

of marketplaces that facilitate supply chain management for global trading. Finally, AmazonSupply (**amazonsupply.com**) is an emerging service in this area.

Payments

Payments for B2B transactions differ from those of B2C. While credit cards are used for smaller purchases, larger purchases are paid for by other methods (e.g., letters of credit). For details, see Chapter 11. For a video titled "How to Use PayPal for Your Business" (9:38 minutes), see **youtube.com/watch?v=Z-Qd_nWuugM**.

Standards and RosettaNet

It is necessary to establish standards for processing and sharing B2B information, especially in global trade. The most common standard for this purpose in the U.S. is that of RosettaNet. For an overview on using RosettaNet, see **public.dhe.ibm.com/ software/commerce/doc/sb2bi/si51/stds70/ Stds70_Using_RosettaNet.pdf**. A similar standard is UN/EDIFACT (The United Nations Rules for Electronic Data Interchange for Administration, Commerce and Transport), which is popular in Europe. Many of the large technology companies are members of RosettaNet (e.g., IBM, Microsoft, Intel). This organization defines about 100 B2B transaction processes, and standardizes them.

The Future of B2B

In B2B, as in B2C, there is a trend to add socially-oriented activities and strategies. IBM calls this trend *community marketing*. The major advantage is to foster collaboration with and among customers by using social networks (e.g., for discussion and feedback). This enables marketers to use the best practices borrowed from B2C. B2B suppliers will need to provide B2B buyers with many of the features that B2B sellers provide to their customers. IBM provides Elite Starter Store software to facilitate interactions in its WebSphere Commerce suite (**ibm. com/software/products/en/websphere-com- merce**). Overall, B2B is expected to grow even faster as smaller companies are joining the B2B movement. For the future of B2B marketplaces, see Wertz (2013).

SECTION 4.10 REVIEW QUESTIONS

1. Distinguish between organizational buyers and individual consumers.
2. Describe B2B EC marketing and advertising methods.
3. Explain how affiliate programs work in B2B EC.
4. What can market research do to help in B2B?
5. Why is collaboration important in B2B?

MANAGERIAL ISSUES

Some managerial issues related to this chapter are as follows.

1. **Which B2B model(s) should we use for e-procurement?** When evaluating the various upstream B2B models, we need to match the suitable e-procurement goals with solution strategies depending upon whether the purchases are direct material or indirect material. Four typical goals that should be distinguished are organizational operational efficiency, minimum price, minimum inventory and stock-outs, and low administrative costs. For each of these goals, the appropriate solution and system should be designed accordingly. Managing many small and medium suppliers that do not have sophisticated systems is a challenging goal.

2. **Which B2B model(s) should we use for online B2B sales?** A key issue for B2B sales is how to reconcile with the multiple buyers who adopt different EDI and ERP systems. The Enterprise Application Integration (EAI) solution transforms the internal data of multiple EDI formats used by different buyers. The integration of various types of EDI standards with ERP solutions is another challenge to overcome. In addition to contract management, B2B marketers use auctions, liquidations, and social networks to increase sales.

3. **Which solutions and vendor(s) should we select?** Vendors normally develop and deploy B2B applications, even for large organizations. Two basic approaches to vendor selection exist: (1) Select a primary vendor such as IBM (**ibm.com**), Microsoft (**microsoft.com**), or Oracle (**oracle.com**). This vendor will use its software and procedures and add partners as needed. (2) Use an integrator that will mix and match existing products and vendors to create "the best of breed" for your needs.

4. **What is the organizational impact of B2B?** The B2B system will change the role of the procurement department by redefining the role and procedures of that department. The function of the procurement department may be completely outsourced. A procurement policy portfolio is necessary to balance strategic sourcing items, spot purchasing items, and design a supply relationship management system.

5. **What are some ethical issues in B2B?** Because B2B EC requires the sharing of proprietary information, business ethics are necessary. Employees should not be able to access unauthorized areas in the trading system, and the privacy of trading partners should be protected.

6. **Which type of social network should we use—private (proprietary) or public?** There are successes and failures in both types. Some large companies have both types (e.g., **northwesternmutual.com**). In most cases, it is better to use public networks such as **linkedin.com** and **facebook.com**.

7. **Which business processes to automate?** It depends on the company, industry and value chain. However, as illustrated in this chapter, selling and purchasing and other activities along the supply chains are the prime targets. These include payments (financial supply chains). Also important are logistics, shipments, and inventory management.

SUMMARY

In this chapter, you learned about the following EC issues as they relate to the chapter's learning objectives.

1. **The B2B field.** The B2B field comprises e-commerce activities between businesses. B2B activities account for 77 to 95% of all EC. B2B e-commerce can be done by using different models.

2. **The major B2B models.** The B2B field is quite diversified. It can be divided into the following segments: sell-side marketplaces (one seller to many buyers), buy-side marketplaces (one buyer from many sellers), and trading exchanges (many sellers to many buyers). Each segment includes several business models. Intermediaries play an important role in some B2B models.

3. **The characteristics and models of sell-side marketplaces.** Sell-side B2B EC is the online direct sale by one seller (a manufacturer or an intermediary) to many buyers. The major technology used is electronic catalogs, which also allow for efficient customization, configuration, and purchase by customers. In addition, forward auctions are becoming popular, especially for liquidating surplus inventory. Sell-side auctions can be conducted from the seller's own site or from an intermediary's auction site. Sell-side activities can be accompanied by extensive customer service. E-commerce allows customization of products and services in personalized catalogs.

4. **Sell-side intermediaries.** The primary role of intermediaries in B2B is to provide value-added services for manufacturers and business customers. Intermediaries can also support group buyers, conduct auctions, and aggregate catalogs of many sellers.

5. **The characteristics of buy-side marketplaces and e-procurement.** Today, companies are moving to e-procurement to expedite purchasing, save on item and administrative costs, and gain better control over the purchasing process. Major procurement methods are reverse auctions (bidding systems), buying from webstores and catalogs, negotiation, buying from an intermediary that aggregates sellers' catalogs, internal marketplaces and group purchasing, desktop purchasing, buying in exchanges or industrial malls, and e-bartering. E-procurement offers the opportunity to achieve significant cost and time savings.

6. **B2B reverse auctions.** A reverse auction is a tendering system used by buyers to get better prices from suppliers competing to fulfill the buyers' needs. Auctions can be done on a company's website or on a third-party auction site. Reverse auctions can lower buyers' costs dramatically, both in product costs and in the time and cost of the tendering process.

7. **B2B aggregation and group purchasing.** Increasing the bargaining power and efficiency of companies can be done by aggregating either the buyers or the sellers. Aggregating suppliers' catalogs into a buyer's catalog, for example, gives buying companies better control of purchasing costs. In desktop purchasing, employees are empowered to buy up to a certain limit without the need for additional approval. Employees view internal catalogs with pre-agreed-upon prices with the approved suppliers and then buy within their budget. Industrial malls or large distributors specialize in one industry (e.g., computers) or in industrial MROs. They aggregate the catalogs of thousands of suppliers. A purchasing agent can place an order for parts or materials and shipping is arranged by the supplier or the mall owner. Buyer aggregation through group purchasing is very popular because it enables even SMEs to get better prices on their purchases. In addition to direct purchasing, items can be acquired via bartering.

8. **Exchanges defined and the major types of exchanges.** Exchanges are e-marketplaces that provide a trading platform for conducting business among many buyers, many sellers, and other business partners. Types of public e-marketplaces include B2B third-party trading exchanges and consortium trading exchanges. Exchanges may be vertical (industry oriented) or horizontal.

9. **B2B portals.** B2B portals are gateways to B2B community-related information. They are usually of a vertical structure, in which case they are referred to as *vortals*. Some B2B portals offer product and vendor information and even tools for conducting trades, sometimes making it difficult to distinguish between B2B portals and trading exchanges.

10. **Third-party exchanges.** Third-party exchanges are owned by an independent company and usually are operated in highly

fragmented markets. They are open to anyone and, therefore, are considered public exchanges. They try to maintain neutral relations with both buyers and sellers.

11. **B2B in Web 2.0 and social networks.** Although considerable B2C social networking activities exist, B2B activities are just beginning. A major success has been seen in the use of blogs and wikis to collaborate with suppliers and customers. Large companies use social networking to create and foster business relationships. Smaller companies use social networking for soliciting expert opinions. Other companies use it for finding business partners, cultivating business opportunities, recruiting employees, and finding sales leads.

12. **B2B Internet marketing and other support services.** Marketing methods and marketing research in B2B differ from those of B2C. A major reason for this is that the buyers must observe organizational buying policies and frequently conduct buying activities as a group (committee). Organizations use modified B2C methods such as affiliate marketing. The purchasing is controlled by rules and constraints as well as by the purchasing agent's behavior.

KEY TERMS

B2B marketing
B2B portals
Bartering exchange
Business-to-business e-commerce
(B2B EC)
Buy-side e-marketplace
Collaborative portals
Company-centric EC
Consortium trading exchange (CTE)
Corporate (enterprise) portal
Desktop purchasing
Direct materials
Dynamic pricing
E-procurement (electronic procurement)
Exchanges (trading communities
or trading exchanges)
Gamification
Group purchasing
Horizontal marketplaces
Indirect materials
Information portals
Maintenance, repair, and operation (MRO)
Maverick buying
Mobile portals
Online intermediary
Partner relationship management (PRM)
Procurement management
Public e-marketplaces
Request for quote (RFQ)
Reverse auction
Sell-side e-marketplace
Vertical marketplaces
Virtual trade shows
Vortals

DISCUSSION QUESTIONS

1. Explain how a catalog-based sell-side e-marketplace works and describe its benefits.
2. Discuss the advantages of selling through online auctions over selling from catalogs. What are the disadvantages?
3. Discuss and compare all of the mechanisms that group-purchasing aggregators can use.
4. Should desktop purchasing only be implemented through an internal marketplace?
5. Compare and contrast a privately owned exchange with a private e-marketplace.
6. Compare external and internal aggregation of catalogs.
7. Relate social commerce to B2B group buying.
8. Compare an organizational buyer to an individual consumer.

TOPICS FOR CLASS DISCUSSION AND DEBATES

1. Discuss B2B opportunities in social networking.
2. Discuss the risks in B2B social networking.
3. Discuss how globalization is related to B2B.
4. Relate B2B to the four Ps of marketing (product, pricing, placement, and promotion) and the four Cs (content, connection, communication, and conversion).

5. Discuss potential channel conflicts in B2B.
6. What is the contribution of B2B directories such as Alibaba.com to global trade? What are the potential limitations?
7. Debate: Some say that exchanges must be owned by a third-party intermediary and that consortiums should not be allowed.
8. Discuss why **facebook.com** is not as good as **linkedin.com** in generating sales leads.
9. In class, watch the video "B2B Marketing in a Digital World" (4:11 minutes) at **youtube.com/watch?v=−nTkBhsUIRQ**. Discuss the implications for a progressive marketing manager.
10. Research companies that conduct liquidations. Concentrate on: **liquidation.com**, **govliquidation.com**, and **govdeals.com**. Examine the similarities and uniquenesses in the services provided. Discuss the value added to the companies that use these services.

ducting various types of e-procurement. List and analyze each tool.
8. Enter **navigatorhms.com/gpo**, and two other group purchasing sites. Report on B2B group buying activities available at each site.
9. Enter **blog.marketo.com** and find eight recent successful applications of social B2B. Prepare a list of topics covered at the site. Write a brief summary about the content, including tips and guides, and lessons learned.
10. Enter **business.yahoo.com/category/business_to_business**. Prepare a list of resources about exchanges and B2B directories.
11. Enter **smallbusiness.yahoo.com/ecommerce** and summarize one of the 'Success Stories.'
12. Enter **eprocurement.nc.gov**. What e-procurement methods does it provide? What are the benefits of each method?
13. Enter **equinix.com** and identify the B2B services they provide.

INTERNET EXERCISES

1. **Tripadvisor.com** launched a B2B division in 2010. Find information about the benefits to a company using it and to its business customers.
2. Examine the following sites: **ariba.com**, **ibm.com**, and **ibxplatform.com**. Review their products and services. How do they support mobile marketing and social commerce?
3. Match a B2B business model with the services on each site listed in the previous question.
4. Visit **ebay.com** and identify all of the activities related to its small business auctions. What services are provided by eBay? Then, enter eBay Business & Industrial area at **ebay.com/rpp/business-industrial**. What kind of e-marketplace is this? What are its major capabilities?
5. Enter **ondemandsourcing.com** and use the free registration to view the product demo. Prepare a list of benefits to small and medium-sized organizations.
6. Enter **bitpipe.com** and find recent B2B vendor reports related to e-procurement. Identify topics not covered in this chapter.
7. Visit **iasta.com** and **cognizant.com**. Examine the major tools they sell for con-

TEAM ASSIGNMENTS AND PROJECTS

1. **Assignment for the Opening Case**
   Read the opening case and answer the following questions.
   (a) What directory services are provided by Alibaba.com?
   (b) Identify the revenue sources of Alibaba.com.
   (c) Find information about the 2014 IPO. Do you think that the company valuation is realistic?
   (d) Enter **slideshare.net/yanhufei/case-study-alibaba-final-v-11** and review the Alibaba.com case study. Expand on the answers to questions which are designated by your teacher.
   (e) Describe Alibaba's business model.
   (f) Enter **sa.alibaba.com** and watch the video about supplier assessment at Alibaba.com (3:31 minutes); summarize its content.
   (g) Watch the video titled 'e-Riches 2.0: − The Best Online Marketing Book by Scott Fox' (6:18 minutes) at **youtube.com/watch?v=6O747UHN9Mw**.
   What did you learned from this video?

2. Each team should explore a different social networking B2B activity and prepare a summary paper for a class presentation. The paper should include the following about the activity or method:
   (a) The mechanisms and technologies used
   (b) The benefits to buyers, suppliers, and others (if applicable)
   (c) The limitations to buyers, suppliers, and others (if applicable)
   (d) The situations for which each method is recommended
   Hint: Look at Leake et al. (2012), and vendors' products.
3. Each team finds a global B2B intermediary that competes with **alibaba.com** (e.g., **globalsources.com**). Prepare a list of services available to sellers and to buyers from both Alibaba.com and your chosen competitor.
4. Do a Google search and find the "10 Great B-to-B Sites" for the last 3 years. Read the comments and visit these sites. Each team prepares a statement of why they think five of these sites are superior.
5. Enter **ariba.com** and find out what its software solutions such as Ariba Commerce Cloud can do to facilitate inter-enterprise commerce. Also examine the company's solution for sourcing, procurement, and contract management. Present your findings to the class.
6. View the slide presentation "Vision 2020: Ideas for Procurement in 2020 by Industry-Leading Procurement Executives" by Oka and 13 other procurement executives (2011) available at **slideshare.net/Ariba/vision2020-the-futureofprocurement**. Each team analyzes the ideas of several contributors and presents the highlights to the class.
7. Watch the video titled "eProcurement Case Study: HOYER Group" (3:44 minutes) at **youtube.com/watch?v=BFaJPeDQyIs&noredirect=1**. Answer the following questions.
   (a) What problems did the Hoyer Group face?
   (b) What were some of the software requirements?
   (c) How did they evaluate the software? What criteria did they use?
   (d) What have you learned from the video?
8. The class researches Ariba's supplier network and compares it to several similar networks (e.g., to IBM Sterling B2B Collaboration Network). Each team examines one comparison and makes a presentation to the class.

CLOSING CASE: THE UNIVERSITY OF SHEFFIELD'S E-TENDERING SYSTEM

The University of Sheffield in Sheffield, England **sheffield.ac.uk** is a leading large public teaching and research institute with over 25,000 registered students and over 5,300 staff (see **sheffield.ac.uk/about/facts**).

The University's research output is recognized all over the world. Despite its excellent reputation, it operates on a tight budget. One area where the university saved a considerable amount of money in procurement.

Due to its research activities, the university purchases over £110 million of supplies a year from about 12,000 suppliers, of which 4,500 are regular. The university needed an electronic system in order to minimize procurement delays, standardize processes across all departments, and reduce potential errors. In addition, the administrative expenditures (e.g., postal cost, employees' time, photocopying) were very high. As of 2005, the university has enhanced an e-tendering system as part of its government mandated e-procurement system.

The E-Tendering Initiative

The objective of the procurement department, which initiated the e-tendering initiative, was and still is, to support the university in attaining its mission. The initiative must also comply with public procurement regulations. The system was built with software called *in-Tend* (a standard European Union tendering tool) in collaboration with users, suppliers, the staff of the procurement department, and the IT development team.

The E-Tendering Process

The procurement department communicates with the participants via the portal In-Tend Ltd.

(**in-tend.co.uk**). In-Tend Ltd. provides policy and open tendering information, including historical bidding data, contracts, and the tendering process to registered suppliers. This portal is very user friendly, allowing small suppliers to participate in biddings. The system is highly secured. (For features of the portal, see **tendernotification.co.uk/features.aspx**.)

The Process

The university has dozens of departments that need to purchase materials and supplies. The requirements are submitted to the central Procurement Office (PO) that arranges the reverse auctions. The PO started the project by standardizing the ordering process and examining all related existing information systems. After extensively testing and training the staff, a small scale tendering job was tested with the local suppliers. Once satisfied, the PO deployed the system, which is used for about 200 tenders each year. The tenders are both for goods and for services.

Bidders can download all the needed documents and upload their bids electronically. The electronic processes resulted in financial savings as well, with an improved level of support to potential bidders.

The PO facilitated connections with the local business community, in order to induce the local businesses to submit bids (e.g., promoting pre-qualification and facilitating the finding of current opportunities).

Sources: Based on CIPS Knowledge Works (2006); **sheffield.ac.uk/procurement**, **www.sheffield.ac.uk/finance/regulations/p_flowchart**, and **in-tendhost.co.uk/sheffield/aspx/Home** (all accessed March 2014).

Questions

1. Why does a public university need to comply with government regulations that may reduce its efficiency?
2. Find information on the software In-Tend at **in-tend.co.uk**. Why is it so popular?
3. Examine the information available to suppliers on the portal. How does the tendering provide a fair chance for bidders?
4. Trace the flow of information in an e-tender at the university. Write a report.

5. What procurement services are provided to the internal staff? What services are provided to suppliers and other external companies or individuals (e.g., stockholders)?

ONLINE FILES
available at **affordable-ecommerce-textbook.com/turban**

W4.1 The E-Procurement Process: The Buyers View
W4.2 Application Case: iMarketKorea
W4.3 Virtual Trade Shows and Trade Fairs
W4.4 B2B Internet Marketing

COMPREHENSIVE EDUCATIONAL WEBSITES

optimizeandprophesize.com: Jonathan Mendez's blog covering many topics including analytics, applications, landing page optimization, and social media.
techrepublic.com: Case studies, publications.
business.com: Resources including guides, blogs, and newsletters on B2B, procurement, and more.
internet.com: Technology news, product reviews, technical advice.
blog.marketo.com: A comprehensive blog site on B2B marketing.
b2bmarketing.net: A dedicated B2B marketing resource, including industry news, training events, and blogs.
b2b-today.com: "World's largest B2B website." Comprehensive information and resources for online trade and promotion services to businesses in China and abroad.
btobonlinedirectory.com: A list of companies and services for your business.

GLOSSARY

B2B marketing   Marketing and sales made by manufacturers and wholesalers along the sell-side of the supply chain.
B2B portals   Information portals for businesses.
Bartering exchange   A company submits its surplus to the exchange and receives points of

credit, which the company can then use to buy items that it needs.

Business-to-business e-commerce (B2B EC) Transactions between businesses conducted electronically over the Internet, extranets, intranets, or private networks.

Buy-side e-marketplace An e-marketplace owned by large buyers that invites sellers to browse and offers to fulfill orders.

Collaborative portals Portals that enable and facilitate collaboration.

Company-centric EC One-to-many and many-to-one markets where one company does either all the selling (*sell-side market*) or all the buying (*buy-side market*).

Consortium trading exchange (CTE) An exchange formed and operated by a group of major companies in one industry. They can be suppliers, buyers, or both.

Corporate (enterprise) portal A gateway to a corporate website and other information sources that enables communication, collaboration, and access to company information.

Desktop purchasing Purchasing done by employees without the approval of supervisors and without the involvement of a procurement department.

Direct materials Materials used in making products, such as steel in a car or paper in a book.

Dynamic pricing The rapid movement of prices over time and possibly across customers.

E-procurement (electronic procurement) The online purchase of supplies, materials, energy, work, and services. It can be done via the Internet or via a private network such as EDI.

Exchanges (trading communities or trading exchanges) Many-to-many e-marketplaces where many buyers and many sellers meet electronically to trade with one another.

Gamification Virtual games designed to support B2B training and decision making.

Group purchasing Orders from several buyers are aggregated so that better prices due to larger quantities purchased can be negotiated.

Horizontal marketplaces Markets in which trading is in a service or a product that is used in many types of industries. Examples are office supplies, PCs, or travel services.

Indirect materials Items, such as office supplies or light bulbs, which support operation and production.

Information portals Portals that store data and enable users to navigate and query those data.

Maintenance, repair, and operation (MRO) Indirect materials used in activities that support production.

Maverick buying A buying situation that occurs when a buyer makes unplanned purchases of items needed quickly, resulting in buying at non-pre-negotiated, and usually higher, prices.

Mobile portals Portals accessible via mobile devices, especially cell phones, smartphones, tablets, and other handheld devices.

Online intermediary A third-party entity that brokers the transactions between the buyer and seller and can be either a virtual or a click-and-mortar intermediary.

Partner relationship management (PRM) The strategy of providing comprehensive, quality e-services for business partners.

Procurement management The process of planning, organizing, and coordinating of all the activities pertaining to the purchasing of the goods and services needed by an organization.

Public e-marketplaces Third-party exchanges open to all interested parties (sellers and buyers).

Request for quote (RFQ) A form or document used as an "invitation" to take part in a reverse auction.

Reverse auction The auction process in which many sellers (suppliers) compute to fulfill orders requested by one buyer.

Sell-side e-marketplace The model in which a business sells products and services to business customers electronically, frequently over an extranet.

Vertical marketplaces Markets for one industry or one industry segment. Examples include marketplaces specializing in electronics, cars, hospital supplies, steel, or chemicals.

Virtual trade show Temporary or permanent showplaces where exhibitors present their new products to potential customers.

Vortals Vertical portals focusing on a single industry or industry segment.

REFERENCES

Aberdeen Group. "B2B Integration and Collaboration: Strategies for Building a ROI Business Case." Research Brief, June 27, 2011. **aberdeen.com/Aberdeen-Library/7260/RB-business-integration-collaboration.aspx** (must register (free) to download) (accessed March 2014).

Basware. "7 Golden Rules for e-Procurement Success." *Basware eBook*, December 16, 2011. **basware.com/knowledge-center/basware-ebook-7-golden-rules-for-e-procurement-success** (accessed March 2014; free registration to access free download).

Bhutani, N. "Social Media Stepping Up as Source for Connecting B2B Networks." June 8, 2008. **demand-genreport.com/industry-topics/archives/feature-articles/89-social-media-stepping-up-as-source-for-connecting-b2b-networks.html#.UxrSP_mtmSo** (accessed November March 2014).

Bodnar, K., and J. L. Cohen. *The B2B Social Media Book: Become a Marketing Superstar by Generating Leads with Blogging, LinkedIn, Twitter, Facebook, Email and More.* Hoboken, NJ: Wiley, 2012.

Brooks, M., J.J. Lovett, and S. Creek, *Developing B2B Social Communities: Keys to Growth, Innovation, and Customer Loyalty*, New York: Apress, 2013.

Charles, M. *China Wholesale Trader Secrets- The Rise of Alibaba.com and New Entrepreneurs [Kindle Edition]*, Seattle, WA: Amazon Digital Services, 2014.

Chen, L.Y., and S. Gill. "Alibaba Valuation Rises to $168 Billion After Earnings." April 17, 2014. **bloomberg.com/news/2014-04-17/alibaba-valuation-rises-to-168-billion-after-eearnings.html** (accessed April 2014).

Chopra, S., and P. Meindl. *Supply Chain Management: Strategy, Planning, and Operation,* 5th ed. Upper Saddle River, NJ: Pearson/Prentice-Hall, 2012.

CIPS Knowledge Works. "The University of Sheffield e-Tendering Case Study." January 2006. **globalpublicprocurement.org/Documents/Resources/White-Papers/Successful-e-tendering.pdf** (accessed April 2014).

Commonwealth of Pennsylvania. "Department of General Services: Supplies and Surplus Operations." 2006. Search at **portal.state.pa.us/portal/server.pt/community/state_surplus_property_program** (accessed April 2014).

Course Hero, "Whirlpool B2B Trading Portal." **coursehero.com** (accessed March 2014; must request free access).

DiMauro, V. "Let the B2B Games Begin!" June 27, 2012. **socialmediatoday.com/vanessa-dimauro/567122/let-b2b-games-begin** (accessed March 2014).

Dunay, P. "The 4 C's of B2B Marketing." *Marketing Darwinism*, January 19, 2010. **pauldunay.com/4-cs-of-b2-marketing** (accessed March 2014).

E-Commerce Wiki. "B2B Exchanges." (Last modified by R. Pfont: June 2, 2013). **en.ecommercewiki.info/fundamentals/market_places/exchanges** (accessed March 2014).

eProc.org. "Sustainable Electronic Procurement Case Study: Branas Isaf Training." 2010. **eproc.org** (no longer available online).

IBM. "Whirlpool's B2B Trading Portal Cuts Per Order Costs Significantly." G325-6693-00, 2000. White Plains, NY: IBM Corporation Software Group, Pub. 2000.

Lai, L. S.-L. "Chinese Entrepreneurship in the Internet Age: Lessons from Alibaba.com." *World Academy of Science, Engineering and Technology*, Volume 48, 2010.

Leake, W., et al. *Complete B2B Online Marketing.* San Francisco, CA: Sybex, 2012.

Leggatt, H. "Survey: Small Businesses Find Success with Social Networking." July 9, 2010. **bizreport.com/2010/07/survey-small-businesses-find-success-with-social-networking.html** (accessed March 2014).

Karr, D. "B2B Marketing Strategies for 2013 and Beyond: An Infographic." August 12, 2013. **socialmediatoday.com/douglaskarr/1661106/b2b-marketing-strategies-2013-and-beyond-infographic** (accessed May 2014).

Lindner, M. "How to Tackle A Virtual Trade Show." July 28, 2009. **forbes.com/2009/07/28/virtual-trade-show-steps-entrepreneurs-technology-tradeshow.html** (accessed March 2014).

Maddox, K. "Twitter Debuts New Ad Platform." May 3, 2010. **adage.com/article/btob/twitter-debuts-ad-platform/280747/?btob=1** (accessed March 2014).

Neff, J. "How Orabrush Got National Walmart Deal with YouTube Videos, $28 in Facebook Ads: Telling Walmart Employees They Have Bad Breath Leads to Distribution in 3,500 Stores." September 20, 2011. **adage.com/article/news/orabrush-national-walmart-deal-youtube-videos/229914** (accessed March 2014).

Oka, A., et al. "Vision 2020: Ideas for Procurement in 2020 by Industry-Leading Procurement Executives." 2011. **ariba.com/resources/library/vision-2020-the-future-of-procurement** (accessed March 2014).

Pardot. "Many Marketers Don't Measure Social Media Impact." November 3, 2011. **pardot.com/press/many-marketers-dont-measure-social-media-impact/** (accessed March 2014).

Parente, D. H. *Best Practices for Online Procurement Auctions (Premier Reference Source).* Hershey PA: IGI Global, 2007.

Patterson, T. "Top Eleven Reasons to Use Social Media at your Next Tradeshow Appearance." June 27, 2012. **socialmediatoday.com/timpatterson/566327/top-eleven-reasons-use-social-media-your-next-trade-show-appearance** (accessed March 2014).

Pergolino, M. "5 B2B Social Media Success Stories." May 16, 2010. **blog.marketo.com/2010/05/b2b-social-media-success.html** (accessed March 2014).

Peters, J. *Affiliate Marketing for Beginners- A No-Nonsense Guide on How to Make Money Online*, [Kindle Edition], Seattle, WA: Amazon Digital Services, 2014.

Prodromou, T. *Ultimate Guide to LinkedIn for Business: How to Get Connected With 150 Million+ Customers in 10 Minutes*, Irvine, CA: Entrepreneur Press, 2012.

PR Newswire. "Pennsylvania Governor Rendell Delivers December Radio Address." News release, December 6, 2003. **prnewswire.com/news-releases/pennsylvania-governor-rendell-delivers-december-radio-address-73229672.html** (accessed March 2014).

Regal, D. *Revolutionizing the Checkout Process: Shoplet's E-Procurement [Kindle Edition].* Amazon Digital Services, Seattle, WA: 2014.

Rockwell, M. "Experts Debate Value of Reverse Auctions." December 11, 2013. **fcw.com/articles/2013/12/11/experts-debate-value-of-reverse-auctions.aspx** (accessed May 2014).

Schaffer, N. *The Windmill Networking Approach to Networking: Understanding, Leveraging, and Maximizing LinkedIn.* Scotts Valley, CA: BookSurge Publishing, 2009.

Schepp, B., and D. Schepp. *The Official Alibaba.com Success Guide: Insider Tips and Strategies for Sourcing Products from the World's Largest B2B Marketplace.* Hoboken, NJ: Wiley, 2009.

Tumolo, M. "Business-to-Business Exchanges." *Information Systems Management*, Volume 18, Issue 2, Spring 2001.

Wertz, B. "Alibaba Is Just the Beginning: How B2B Marketplaces Will Thrive (For Real, This Time)." June 30, 2013. **gigaom.com/2013/06/30/alibaba-is-just-the-beginning-how-b2b-marketplaces** (accessed March 2014).

Wiebesick, C. "Four B2B Social Media Success Stories: How B2B Companies Can (and Should) Use Social Media." May 24, 2011. **slideshare.net/cwiebesick/four-b2b-social-media-success-stories-how-b2b-companies-can-and-should-use-social-media** (accessed March 2014).

Wirthwein, C., and J. Bannon. *The People Powered Brand: A Blueprint for B2B Brand and Culture Transformation.* Ithaca, NY: Paramount Market Publishing, Inc., 2014.

Zwilling, M. "Smartphone Location Tracking Apps Next Wave is B2B." September 3, 2013. **blog.startupprofessionals.com/2013/09/smartphone-location-tracking-apps-next.html** (accessed March 2014).