

Electronic Commerce

Lecture 10

IT392

B2B E-commerce

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Chapter 10

- What many businesses have learned in the last decade is that supply chains can strengthen or weaken a company, depending on a number of factors related to supply chain efficiency such as community engagement, labor relations, environmental protection, and sustainability.
- Many believe that all of these related factors are important to a firm's long-term profitability.
- Executives at firms large and small are coming to realize that they are competing not just with other firms but with those firms' supply chains as well.

Chapter 10

- Supply chain competition refers to the fact that in some industries, firms are able to differentiate their product or pricing, and achieve a competitive advantage, due to superior supply chain management.
- Arguably, firms with superior supply chains can produce better products, more quickly, and at a lower cost than those with simply adequate supply chains.

Chapter 10

- In this chapter, we examine some major B2B e-commerce themes: procurement and supply chain management.
- In first Section we provide an overview of B2B e-commerce.
- In second Section we look more closely at the procurement process and supply chains.
- In third Section we place B2B e-commerce in the context of trends in procurement and supply chain management, and describe changes in B2B marketing environment due to e-commerce.
- The final section of this chapter describe B2B e-commerce marketplaces.

Learning Objectives

- Discuss the evolution and growth of B2B e-commerce, as well as its potential benefits and challenges.
- Understand how procurement and supply chains relate to B2B e-commerce.
- Identify major trends in supply chain management.
- Understand the different characteristics and types of B2B e-commerce marketplaces.

**Chapter 10:
B2B
E-commerce**

An Overview of B2B E-commerce

**The Procurement Process and
Supply Chains**

**Trends in Supply Chain
Management**

**B2B E-commerce Marketplaces:
The Selling Side of B2B**

Basic Definitions

Major Trends in B2B E-commerce 2022–2023

Potential Benefits and Challenges of B2B E-commerce

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Types of Procurement

Supply Chain Simplification and Just-in-Time and Lean Production

Supply Chain Black Swans: Adaptive Supply Chains

Accountable Supply Chains: Labor Standards

Sustainable Supply Chains

B2B in the Cloud

Blockchain, the Internet of Things, and Supply Chain Management

B2B Marketing

Characteristics of B2B E-commerce Marketplaces

Types of B2B E-commerce Marketplaces

- E-distributors
- E-procurement
- Exchanges
- Industry Consortia

An Overview of B2B E-commerce

Basic Definitions

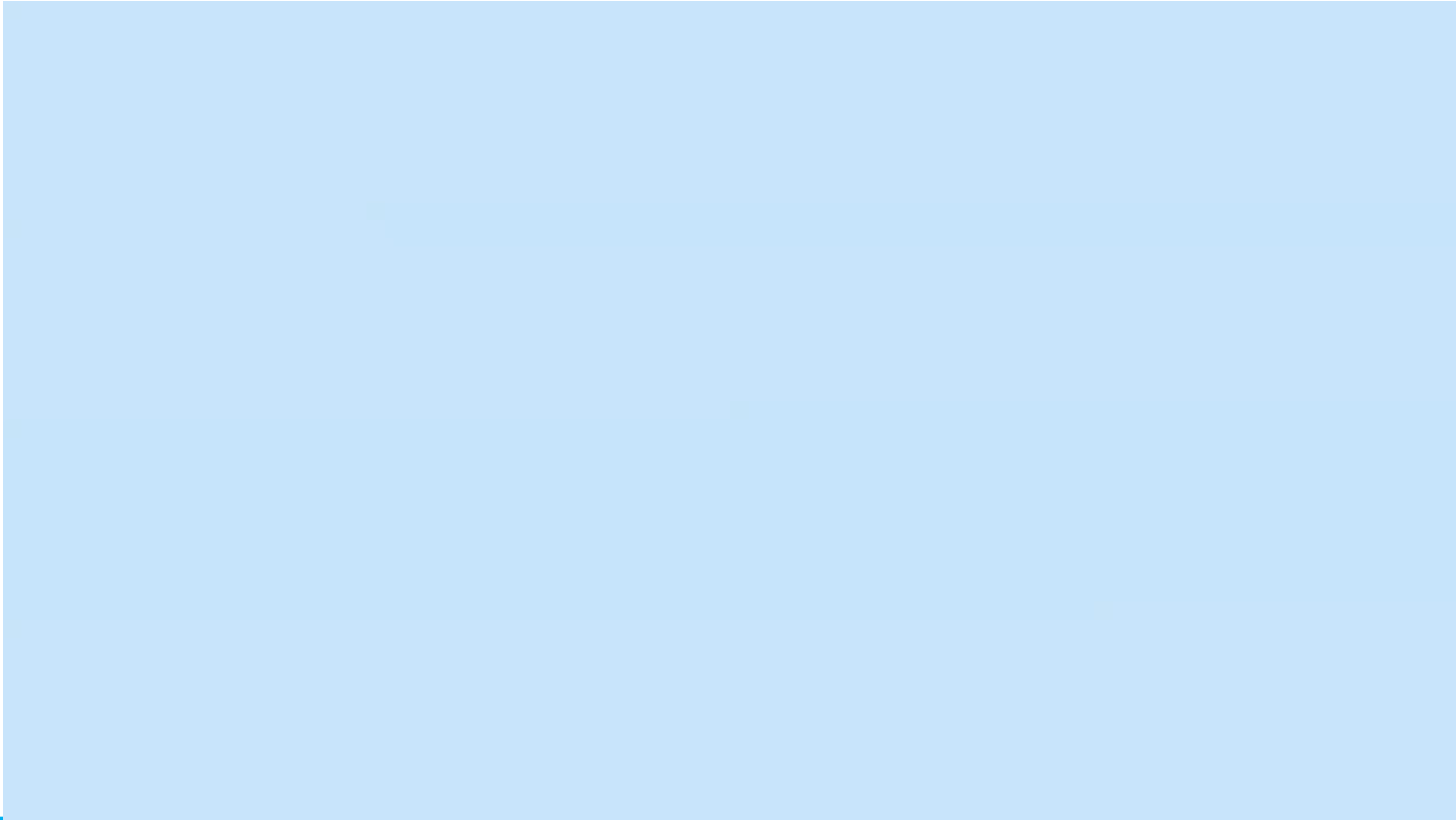
- **B2B commerce** includes the following business processes: customer relationship management, demand management, order fulfillment, manufacturing management, procurement, product development, returns, logistics/transportation, and inventory management.
- **Supply chain:** The links that connect business firms in the production of goods and services.
- *For example, the Apple iPhone has hundreds of different parts, which Apple purchases from various suppliers in 43 different countries around the world. It then sends the parts to factories in China, India, South Korea, the Philippines, or the Czech Republic to be assembled, and then ships the finished iPhones to warehouses and retailers around the world*



What is Customer Relationship Management (CRM)



What is Order Fulfillment



What is Logistics The Basics



What is Inventory

INVENTORY

What is Inventory Management



An Overview of B2B E-commerce

Major Trends in B2B E-commerce

Business

The Covid-19 pandemic creates ongoing disruptions in supply chains and potentially long-range impacts on the way companies handle their supply chain.

- **Risk management:** companies heighten their focus on risks in supply chains after being caught off guard in recent years by a number of natural and man-made disasters.
- **Regional manufacturing:** risks of far-flung global networks lead to an increase in regional manufacturing and supply chains, moving production closer to market demand.



An Overview of B2B E-commerce

Major Trends in B2B E-commerce

Business

- **Flexibility:** growing emphasis on rapid-response and adaptive supply chains rather than lowest cost supply chains, which typically carry great risks.
- **Supply chain visibility:** growing use of real-time data that allows managers to see not only across their production but also into the production and financial condition of key suppliers.

An Overview of B2B E-commerce

Major Trends in B2B E-commerce

Technology

- **Big data:** global trade and logistics systems are generating huge repositories of B2B data, swamping management understanding and controls.
- **Business analytics:** growing emphasis on use of business analytics software (business intelligence) to understand very large data sets and predictive analytics tools to identify the most profitable customers.



An Overview of B2B E-commerce

Major Trends in B2B E-commerce



Technology

- **Cloud:** migration of B2B hardware and software to cloud computing and cloud apps, away from individual corporate data centers, as a means of slowing rising technology costs. B2B systems move to cloud computing providers like Amazon, Microsoft, Google, IBM, and Oracle as their core technology.
- **Social networks:** increasing use of social networks for feedback from customers, strengthening customer and supplier relationships, adjusting prices and orders, and enhancing decision-making.

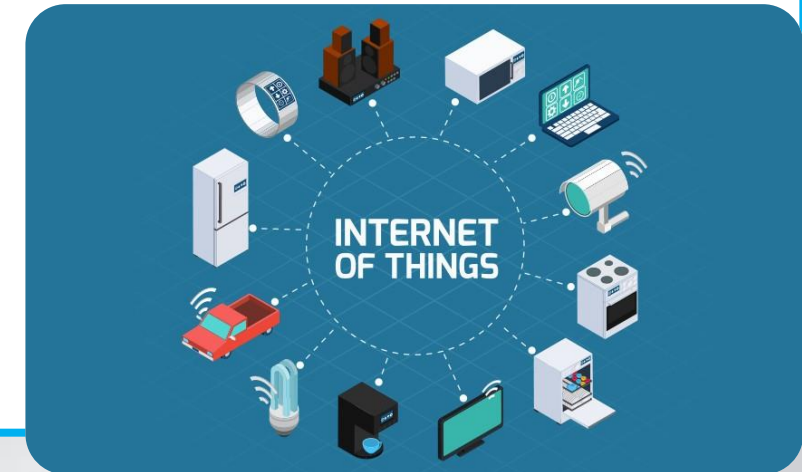


An Overview of B2B E-commerce

Major Trends in B2B E-commerce

Technology

- **Artificial intelligence (AI):** Companies are increasingly turning to AI technologies and tools to deal with supply chain visibility, risk, and disruption.
- **Internet of Things (IoT):** The number of IoT devices that measure and monitor data continues to grow exponentially and begins to impact how supply chains operate.



An Overview of B2B E-commerce

Potential Benefits and Challenges of B2B E-commerce

- **B2B e-commerce can:**

- ❖ **Lower transaction costs** by eliminating paperwork and automating parts of the procurement process
- ❖ **Increase production flexibility** by ensuring delivery of parts at just the right time (known as just-in-time production)
- ❖ **Improve quality of products** by increasing cooperation among buyers and sellers and reducing quality issues
- ❖ **Create greater price transparency**—the ability to see the actual buy and sell prices in a market



An Overview of B2B E-commerce

Potential Benefits and Challenges of B2B E-commerce

- Often real-world supply chains **fail** to provide **visibility** into the supply chain because they lack **real-time demand**, production, and logistics data, and have inadequate financial data on suppliers.
- Builders of B2B supply chains have had little concern for the **environmental impacts** of supply chains, the sensitivity of supply chains to natural events, fluctuating fuel and labor costs, or the impact of public values involving labor and environmental policies.



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Characteristics of B2B E-commerce Marketplaces

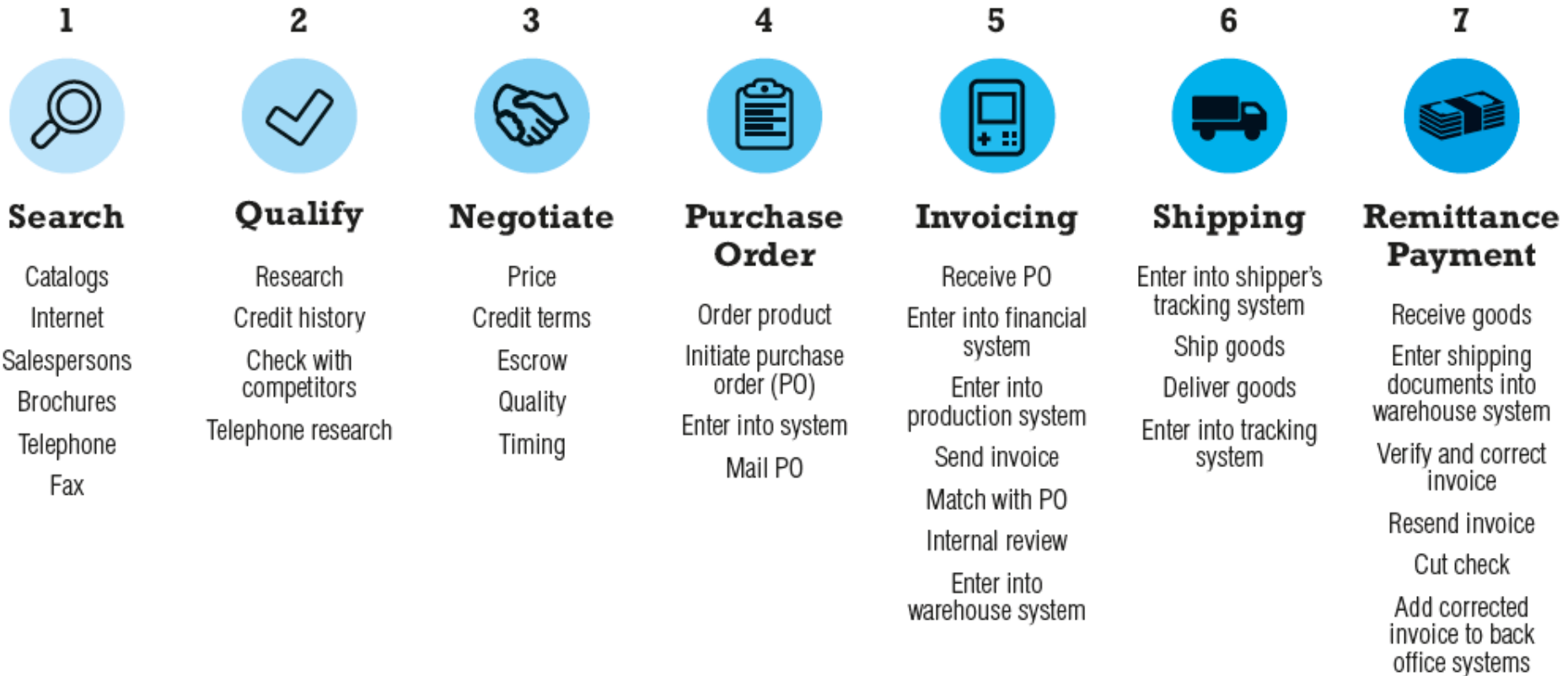
Types of B2B E-commerce Marketplaces	E-distributors
	E-procurement
	Exchanges
	Industry Consortia

The Procurement Process and Supply Chains

Steps in The Procurement Process

- **Searching** for suppliers of specific products; **qualifying** both sellers and the products they sell; and **negotiating** prices, credit terms, escrow requirements, quality, and scheduling of delivery.
- Once a supplier is identified, **purchase** orders are issued, the buyer is sent an **invoice**, the goods are **shipped**, and the buyer sends a **payment**.

The Procurement Process and Supply Chains



The Procurement Process and Supply Chains

Types of Procurement

- **Direct goods:** goods integrally involved in the production process—for instance, when an automobile manufacturer purchases sheet steel for auto body production.
- **Indirect goods:** all other goods not directly involved in the production process, such as office supplies and maintenance products. Often these goods are called MRO goods—products for maintenance, repair, and operations.



The Procurement Process and Supply Chains

Types of Procurement

- **Contract purchasing:** long-term written agreements to purchase specified products, with agreed-upon terms and quality, for an extended period of time. Firms purchase **direct goods** using **long-term contracts**.
- **Spot purchasing:** the purchase of goods based on immediate needs in larger marketplaces that involve many suppliers. firms use **spot purchasing** for **indirect goods**.



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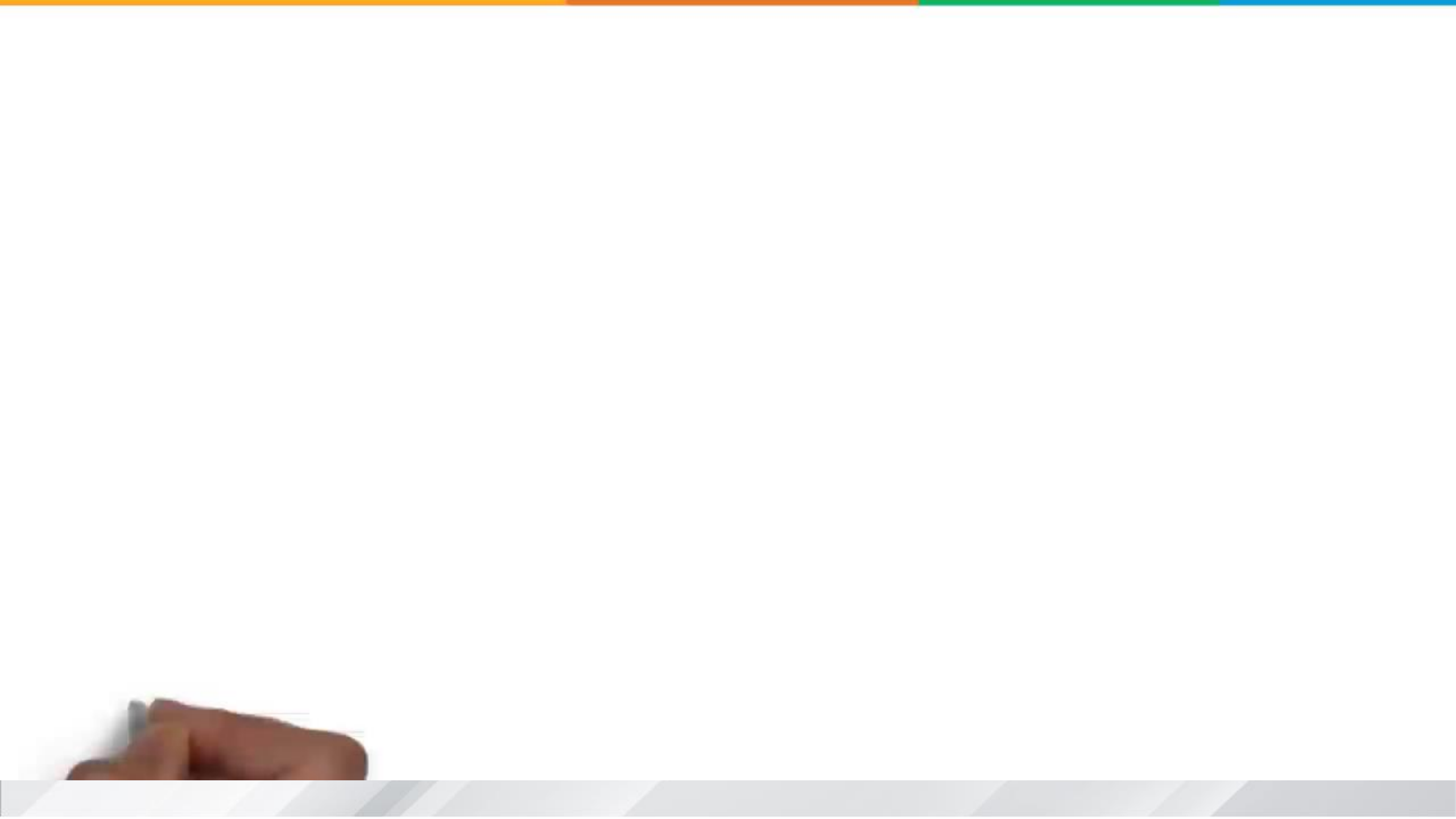
Characteristics of B2B E-commerce Marketplaces

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Trends in Supply Chain Management

- **Supply chain management (SCM)** refers to a wide variety of activities that firms and industries use to coordinate the key players in their procurement process.
- There have been a number of major developments in supply chain management over the last two decades. These developments include **supply chain simplification, just-in-time and lean production, adaptive supply chains, sustainable supply chains, cloud-based B2B, supply chain management systems, the use of blockchain in supply chains, and B2B Marketing**





Trends in Supply Chain Management

Supply Chain Simplification and Just-in-Time and Lean Production

- **Supply chain simplification** is reducing the size of their supply chains and working more closely with a smaller group of strategic supplier firms to reduce both product costs and administrative costs, while improving quality.
- Japanese automobile industry has reduced the number of its suppliers by more than 50%. Instead of open bidding for orders, large manufacturers have chosen to work with strategic partner supply firms under long-term contracts that guarantee the supplier business and also establish quality, cost, and timing goals.

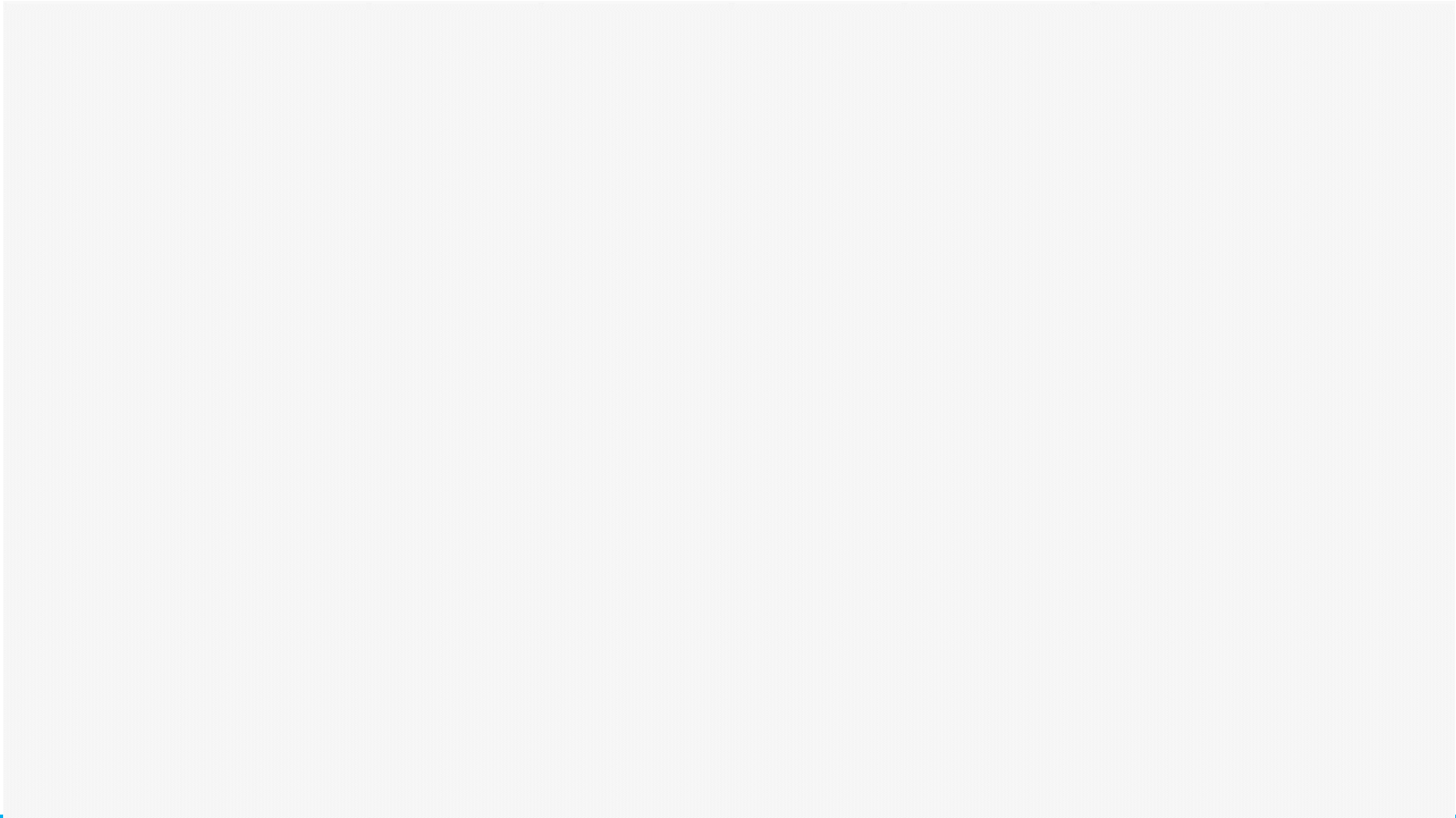
Trends in Supply Chain Management

Supply Chain Simplification and Just-in-Time and Lean Production

- **Just-in-time production** is a method of inventory cost management that seeks to reduce excess inventory to a bare minimum.
- The parts needed for an automobile, arrive at the assembly factory a few hours or even minutes before they are attached to a car.
- **Lean production** is a set of production methods and tools that focuses on the elimination of waste throughout the customer value chain. It is an extension of just-in-time production beyond inventory management to the full range of activities that create customer value.







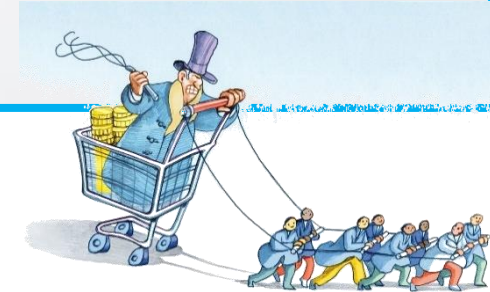
Supply Chain Black Swans: Adaptive Supply Chains

- Firms are taking steps to create **adaptive supply chains** that allow them to react to disruptions in the supply chain in a particular region by moving production to a different region.
- Many companies are breaking up single global supply chain systems into regional or product-based supply chains and reducing the level of centralization.

Supply Chain Black Swans: Adaptive Supply Chains

- Using adaptive supply chains, firms can decide to locate some production in Latin America, for instance, rather than having all their production or suppliers in a single country such as Japan or China.
- They will thus be able to move production around the world to temporary, safe harbors. This may result in higher short-term costs, but provide substantial, longer-term risk protection in the event any single region is disrupted.

Trends in Supply Chain Management



Accountable Supply Chains: Labor Standards

- **Accountable supply chains** are those where the labor conditions in low-wage, less developed producer countries are visible and morally acceptable to the ultimate consumers in more developed, industrial societies.
- For **global firms** with **long** supply chains their consumers could not understand how their products were made.
- Because of the growing power of the **Internet** to empower reporters around the world, the realities of global supply chains have slowly become more transparent to the public and contributed to efforts to make global supply chains more transparent and to develop minimal standards of **accountability**.

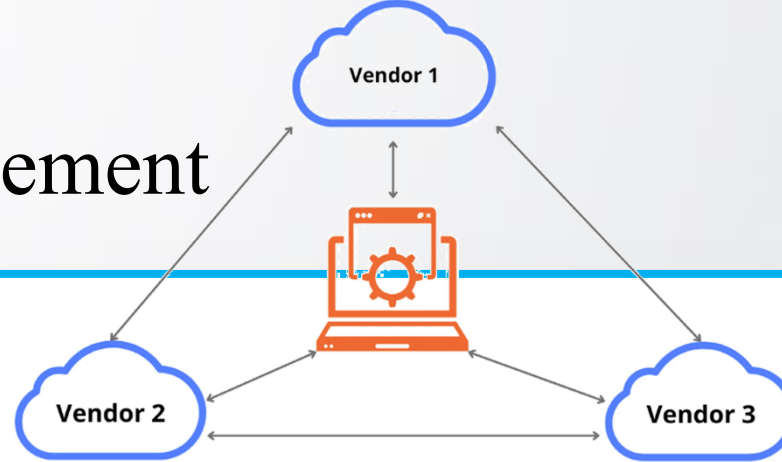
Trends in Supply Chain Management



Sustainable Supply Chains

- **Sustainable business** is a call for business to take social and ecological interests, and not just corporate profits, into account
- It means using the most efficient environment-regarding means of production, distribution, and logistics.
- A circular economy is based on three primary principles: the **elimination of waste and pollution** in the production process, the circulation (**recycling**) of products and materials, and the **regeneration of nature**.

Trends in Supply Chain Management



B2B in the Cloud

- The **cloud platform** owner provides the computing and telecommunications capability; establishes connections with the firm's partners; provides software on-demand (software as a service or SaaS) to connect the firm's systems to its partners' systems; performs data coordination and cleaning; and manages data quality for all members.
- The cost of these tasks and capabilities is spread over all members, reducing costs for all.

Trends in Supply Chain Management

Blockchain, the Internet of Things, and Supply Chain Management

- **Blockchain** is a transaction database that operates on a distributed P2P network that connects all the participant members in a single database that is highly secure, reliable, resilient, and inexpensive.
- A blockchain ledger enables all parties to a transaction to add blocks of information to the shared ledger after a validation algorithm approves the transaction.
- If the parties to a transaction agree it is valid, then it is added to the chain of blocks pertaining to the transaction.
- The identities of the originators of the transaction are digitally encrypted, and the transaction itself is encrypted, cannot be changed, and is always up-to-date and available to all parties in near real time.

Trends in Supply Chain Management

Blockchain, the Internet of Things, and Supply Chain Management

- The **Internet of Things** (IoT) enables organizations to track individual units of components and finished inventory, as well as collect new types of data from different stages of their supply chain.
- Blockchain and IoT streamline supply chain management by replacing **fragmented, unsynchronized transaction** systems with a unified, transparent ledger.



Trends in Supply Chain Management

B2B MARKETING



- In B2C marketing, firms aim at a large mass audience in the millions (one-to-many) with comparatively simple products with relatively low value, whereas many B2B firms sell low volumes of very valuable and complex products to a much small number of purchasers (one-to-one, or one to a few).
- In these B2B markets, face-to-face, traditional salesforce marketing continues to play a large role.

Trends in Supply Chain Management



B2B MARKETING

- The sellers and buyers may have known about each other for years, even decades; the capabilities and financial situations of the firms are known. Both parties share an understanding of the price and quality of what is being exchanged in the market.
- Interpersonal relationships, networking, brand, and informative content marketing , videos, podcasts, webinars, blogs, e-books, conferences, and professional associations are the primary and most effective marketing tools.

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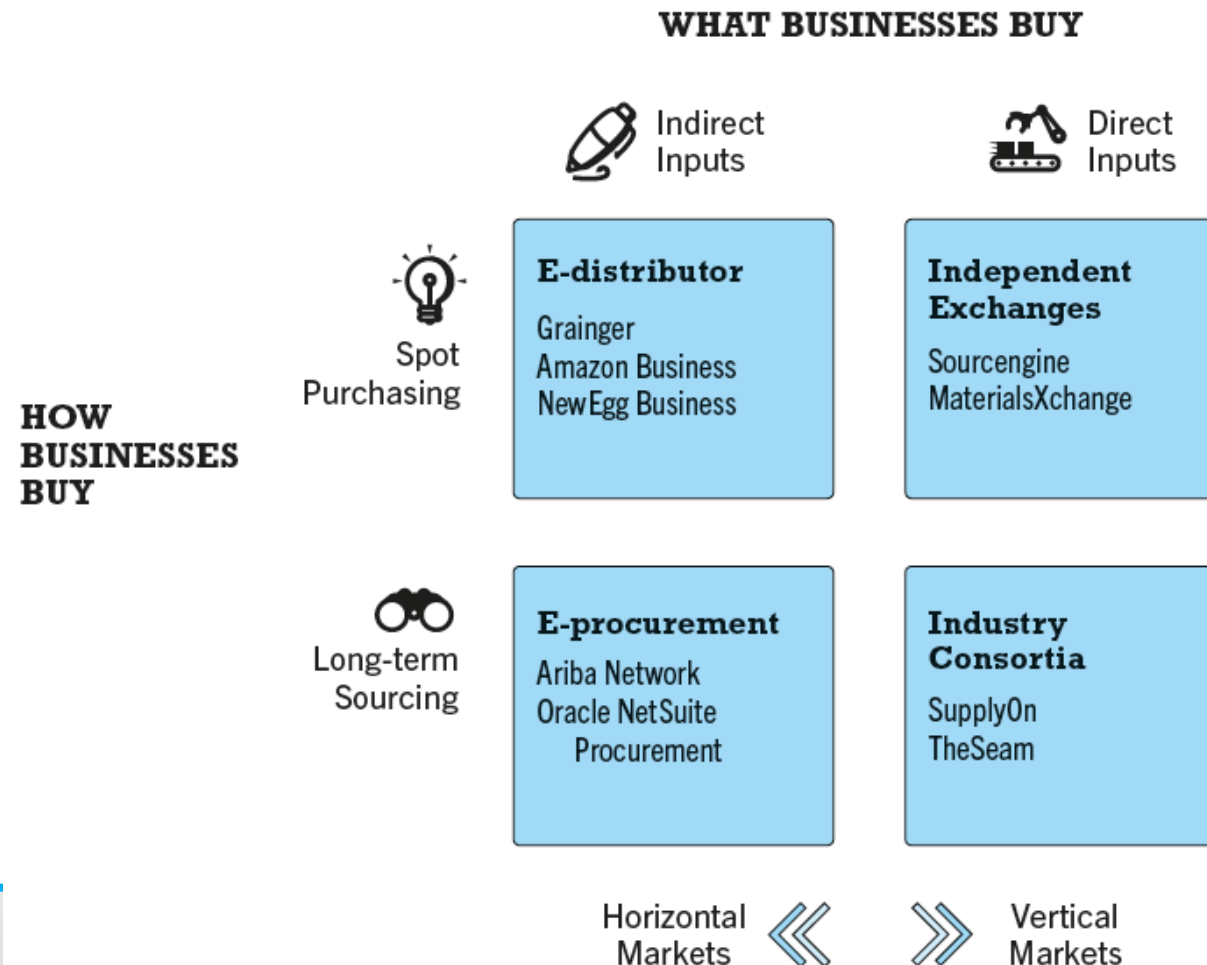
- There is a confusing variety of B2B e-commerce marketplaces today and several different ways to classify them.
- For instance, some classify B2B e-commerce marketplaces on the basis of their **pricing mechanisms** (fixed prices or more dynamic pricing, such as negotiation, auction, or bid/ask), while others classify markets based on characteristics of the **markets they serve** (vertical versus horizontal, or sell-side versus buy-side).

Types of B2B E-commerce Marketplaces

- Figure 12.9, we present a classification of B2B e-commerce marketplaces that focuses on their business functionality
- Marketplaces providing either indirect goods (goods used to support production) or direct goods (goods used in production)
- Markets providing either contractual purchasing or spot purchasing
- The intersection of these dimensions produces four main types of B2B e-commerce marketplaces that are relatively straightforward: e-distributors, e-procurement networks, exchanges, and industry consortia.

B2B E-commerce Marketplaces: The Selling Side of B2B

Types of B2B E-commerce Marketplaces



B2B E-commerce Marketplaces: The Selling Side of B2B

Types of B2B E-commerce Marketplaces

- **E-distributors**

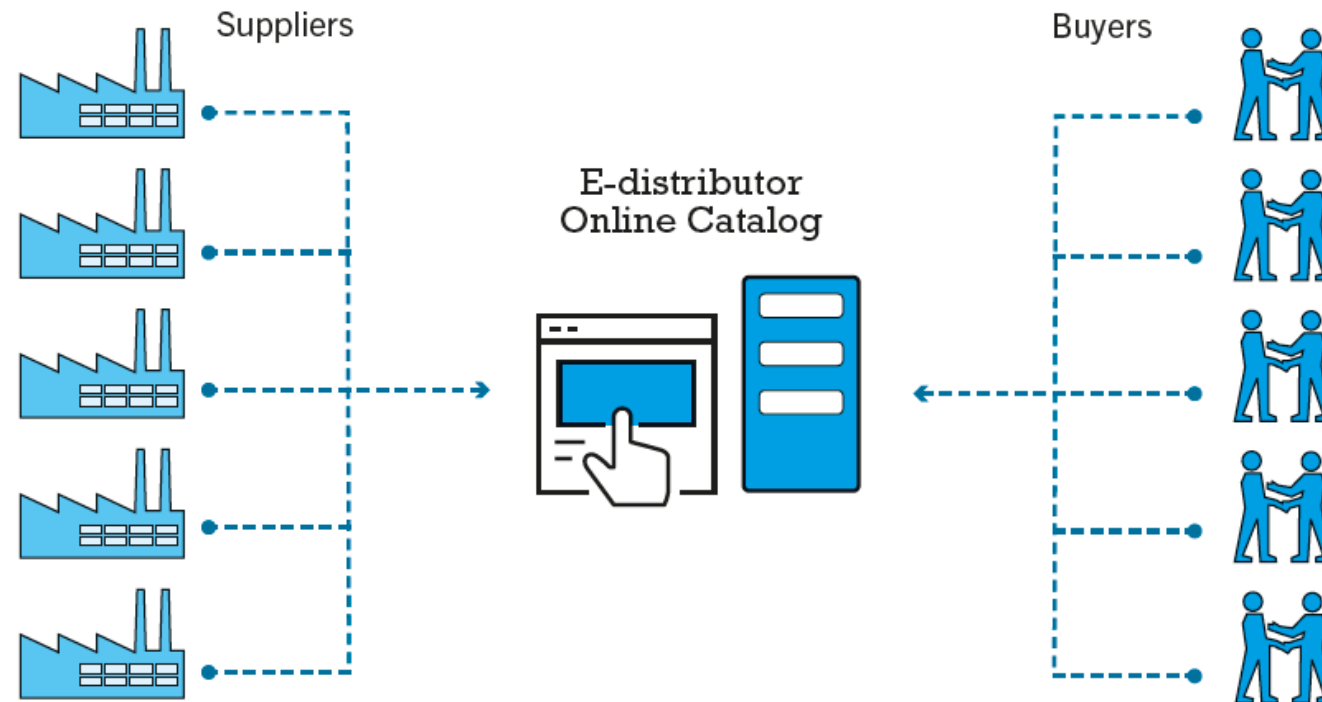
- ❖ An e-distributor provides an online catalog that represents the products of thousands of direct manufacturers
- ❖ E-distributors are independently owned intermediaries that offer industrial customers a single source from which to order indirect goods (often referred to as MRO goods).
- ❖ E-distributors make money by charging a markup on products they distribute.
- ❖ E-distributors operate in horizontal markets because they serve many different industries with products from many different suppliers.
- ❖ The primary benefits are lower search costs, lower transaction costs, wide selection, rapid delivery, and low prices.



B2B E-commerce Marketplaces: The Selling Side of B2B

Types of B2B E-commerce Marketplaces

FIGURE 12.10 E-DISTRIBUTORS



B2B E-commerce Marketplaces: The Selling Side of B2B

Types of B2B E-commerce Marketplaces

- **E-procurement**



- ❖ E-procurement marketplaces are sometimes referred to as many-to-many markets.
- ❖ They are mediated by an independent third party that purports to represent both buyers and sellers, and hence claims to be neutral.
- ❖ On the other hand, because they may include the catalogs of both competing suppliers and competing e-distributors, they likely have a bias in favor of the buyers.
- ❖ Nevertheless, by aggregating huge buyer firms into their networks, they provide distinct marketing benefits for suppliers and reduce customer acquisition costs.

Types of B2B E-commerce Marketplaces

- **Exchanges**

- ❖ An exchange is an independently owned B2B e-commerce marketplace that connects hundreds to potentially thousands of suppliers and buyers in a dynamic, real-time environment.
- ❖ Exchanges create vertical markets that focus on the spot-purchasing requirements of large firms in a single industry, such as computers and telecommunications, electronics, food, and industrial equipment.

How The Stock Exchange Works



B2B E-commerce Marketplaces: The Selling Side of B2B

Types of B2B E-commerce Marketplaces

- **Exchanges**

- ❖ Exchanges make money by charging a commission on the transaction. The pricing model can be through an online negotiation, auction, RFQ, or fixed buy-and-sell prices.
- ❖ The benefits offered suppliers are access to a global purchasing environment and the opportunity to unload production overruns (although at very competitive prices and low profit margins).
- ❖ Even though they are private intermediaries, exchanges are public in the sense of permitting any bona fide buyer or seller to participate.

Types of B2B E-commerce Marketplaces

- **Industry Consortia**

- ❖ An industry consortium is an industry-owned vertical market that enables buyers in the industry to purchase direct inputs (both goods and services).
- ❖ Industry consortia typically emphasize long-term contractual purchasing, the development of stable relationships, and the creation of industry-wide standards.
- ❖ Industry consortia are more focused on optimizing long-term supply relationships than independent exchanges, which tend to focus more on short-term transactions.

Review

■ Discuss the B2B e-commerce business processes, as well as its potential benefits and challenges.

B2B Commerce Involves key business processes such as:

- Customer Relationship Management (CRM)
- Demand Management
- Order Fulfillment
- Manufacturing Management
- Procurement
- Product Development
- Returns
- Logistics/Transportation
- Inventory Management

Review

- **Discuss the B2B e-commerce business processes, as well as its potential benefits and challenges.**
- **Supply Chain:** A network of interconnected businesses involved in the production and delivery of goods and services
- **Customer Relationship Management (CRM):** CRM software helps store, organize, automate, and synchronize customer interactions across sales, marketing, support, and technical teams.
- **Order Fulfillment:** The process of receiving, processing, and delivering customer orders.

Review

- **Discuss the B2B e-commerce business processes, as well as its potential benefits and challenges.**
- **Procurement Software:** Centralizes purchasing processes, automating tasks like: Vendor and contract management - Quote requests and purchase orders - Invoice matching and electronic payments - Improves delivery speed, cost control, and vendor communication
- **Logistics:** Covers the movement of materials and goods across the supply chain.
- **Inventory Management:** Tracks goods from manufacturer to consumer.
- It affects customer satisfaction and profitability by ensuring product availability without overstocking.
- Automated systems provide visibility across channels, optimize processes, and save time and money.

Review

■ Discuss the evolution and growth of B2B e-commerce, as well as its potential benefits and challenges.

- Potential **benefits** of B2B e-commerce include lower administrative costs, lower search costs for buyers, reduced inventory costs, lower transaction costs, improved quality of products, decreased product cycle time, increased opportunities for collaborating with suppliers and distributors, greater price transparency, and increased visibility and real-time information sharing among all participants in the supply chain network.
- Potential **risks** and challenges include lack of real-time data, environmental impacts, natural disasters, labor concerns, and the impacts of economic, financial, and political instability.

Review

■ Understand how procurement and supply chains relate to B2B e-commerce.

The procurement process refers to the way business firms purchase the goods they need in order to produce the goods they will ultimately sell to consumers. Firms purchase goods from a set of suppliers who in turn purchase their inputs from their own set of suppliers. These firms are linked in a series of connected transactions. The supply chain is the series of transactions that links sets of firms that do business with each other. It includes not only the firms themselves but also the relationships among them and the processes that connect them.

There are two different types of procurements (purchases of **direct goods** and purchases of **indirect goods**) and two different methods of purchasing goods (**contract purchases** and **spot purchases**).

Review

■ Identify major trends in supply chain management

- **Supply chain management (SCM)** refers to a wide variety of activities that firms and industries use to coordinate the key players in their procurement process.
- **Supply chain simplification** involves reducing the size of the supply chain and working more closely with a smaller group of strategic supplier firms to reduce both product costs and administrative costs while improving quality.
- **Just-in-time production** is a method of inventory cost management that seeks to eliminate excess inventory to a bare minimum.

Review

■ Identify major trends in supply chain management and collaborative commerce.

- **Lean production** is a set of production methods and tools that focuses on the elimination of waste throughout the customer value chain.
- **Adaptive supply chains** allow companies to react to disruptions in the supply chain in a particular region by moving production to a different region.
- **Accountable supply chains** are those where the labor conditions in low-wage, underdeveloped producer countries are visible and morally acceptable to the ultimate consumers in more developed industrial countries.
- **Sustainable supply chains** involve using the most efficient environment-regarding means of production, distribution, and logistics.

Review

- **Identify major trends in supply chain management and collaborative commerce.**
 - **Cloud-based B2B** systems shift much of the expense of B2B systems from the firm to a B2B network provider, sometimes called a data hub or B2B platform.
 - *Blockchain*, coupled with IoT, promises to bring about a transformation in supply chain management.
 - **B2B marketing:** For long-term sourcing, interpersonal relationships, networking, branding, and informative content marketing are the primary and most effective marketing tools.

■ Understand the different characteristics and types of B2B e-commerce marketplaces.

- **E-distributors** are independently owned intermediaries that offer industrial customers a single source from which to make spot purchases of indirect or MRO goods. E-distributors operate in a horizontal market that serves many different industries with products from many different suppliers.
- **E-procurement** companies are independently owned intermediaries that help businesses automate their procurement processes and in some instances provide a marketplace that connects suppliers to buyers who pay a fee to join the market. E-procurement marketplaces operate in a horizontal market in which long-term contractual purchasing agreements are used to buy indirect goods.

■ Understand the different characteristics and types of B2B e-commerce marketplaces.

- **Exchanges** are independently owned B2B e-commerce marketplaces that connect hundreds to thousands of suppliers and buyers in a dynamic real-time environment. They are typically vertical markets in which spot purchases can be made for direct inputs (both goods and services). Exchanges make money by charging a commission on each transaction.
- **Industry** consortia are industry-owned vertical markets where long-term contractual purchases of direct inputs can be made from a limited set of invited participants. Consortia serve to reduce supply chain inefficiencies by unifying the supply chain for an industry through a common network and computing platform.

Reference

