

CHAPTER 16

Purchasing and Inventory Control

Sections

16.1 Purchasing

16.2 Inventory Control



College
and Career
Readiness

Reading Prep

Before reading this chapter, flip through the pages and make notes of the major headings. Compare these headings to the objectives. What did you discover? How will this help you prepare to read new material?

Check Your Marketing IQ

Before you begin the chapter, see what you already know about marketing by taking the chapter pretest. The pretest is available at www.g-wlearning.com/marketing/.

DECA Emerging Leaders

Hospitality Services Team Decision-Making Event, Part 2

Career Cluster: Hospitality and Tourism
Instructional Area: Market Planning

Procedure, Part 2

1. In the previous chapter, you studied the performance indicators for this event.
2. The event will be presented to you through your reading of the Knowledge and Skills Developed, Specific Performance Indicators, and Case Study Situation. You will have up to 30 minutes to review this information and prepare your presentation. You may make notes to use during your presentation.
3. Teams will meet with the judge for a 15-minute presentation. The team will spend no more than ten minutes at the beginning of the interview describing the team's analysis of the situation given. Both members of the team must participate in the presentation. The judge will spend the remaining five minutes questioning the participants. Each participant must respond to at least one question posed by the judge.
4. Turn in all your notes and event materials when you have completed the event.

Case Study Situation

You are to assume the role of a management team at White Bear Resort, an upscale resort located in a very popular tourism and recreation area. The **owner (judge)** of White Bear Resort has asked you to develop a strategy to deal with a natural disaster that occurred last week.

White Bear Resort is located on picturesque Lake Loraine. It is a destination vacation resort featuring 720 rooms, four restaurants, a 200,000-square-foot indoor water park, fitness center, spa, tennis courts, boating, Jet Skis, parasailing, rock climbing, a championship golf course, and a miniature golf course. Targeted to middle- and upper-income customers, White Bear Resort is an all-suite resort charging \$325 to \$475 per night during the peak summer season. The resort employs mostly part-time and seasonal employees. Only 20 percent of the employees are full time.

Located in the Loraine Valley, the region forms one of the top family vacation destinations in the United States. Loraine Valley is an enormous vacation and

recreation area with three outdoor water parks, an amusement park, go-kart tracks, scenic boat tours, horseback riding, a thrill show, two shopping districts, several nightclubs, and two casinos. Yearly, the area boasts an estimated five million annual visitors who pump over \$1 billion into the local economy.

Last week, a dam holding back the water to Lake Loraine burst and the entire lake emptied into local rivers—turning Lake Loraine into one giant mud hole. The lake is expected to remain empty for more than a year. News of the unusual event was widely reported on television and radio. White Bear Resort has experienced a cancellation of 30 percent of their summer reservations in less than a week.

With Lake Loraine now empty, all boating and other lake activities have been cancelled. The remainder of White Bear Resort's operation is unaffected, however. In fact, 90 percent of all Loraine Valley attractions will operate as usual this summer. Nonetheless, many visitors to White Bear Resort are canceling their upcoming summer reservations.

The owner (judge) has asked to meet with you to hear your ideas on the following:

- a plan to try to get those who have already cancelled to reconsider their cancellations; and
- a strategy that White Bear Resort can implement to reduce the number of future cancellations and draw in new customers.

If it becomes necessary to reduce the workforce, how should those decisions be made and from which areas of operation should they come? Be as complete and specific as possible.

You will present to the owner (judge) of White Bear Resort in a meeting to take place in the owner's (judge's) office. The owner (judge) will begin the meeting by greeting you and asking to hear your ideas. When you have finished your presentation and have answered the owner's (judge's) questions, he or she will conclude the meeting by thanking you for your work.

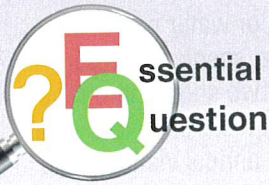
Critical Thinking

1. Other than reducing personnel, are there any other areas that White Bear Resort can look at to reduce overall expenses?
2. Should we mention the fact that Lake Loraine is currently empty in any of our advertising? Why or why not?

Visit www.deca.org for more information.

Published by DECA Inc. Copyright © by DECA Inc. No part of this publication may be reproduced for resale without written permission from the publisher. Printed in the United States of America.

Section 16.1



How do buyers decide what inventory they are going to stock?

Purchasing

Learning Objectives

- LO 16.1-1 Discuss two types of organizational buyers.
LO 16.1-2 List steps of the purchasing process.

Key Terms

business purchasing
organizational buyer
purchasing agent
buyer
purchasing process
electronic data interchange (EDI)
bid
negotiation

economy of scale
purchase order (PO)
receiving record
marking
invoice
terms for delivery
free on board (FOB)
quality control

LO
16.1-1

Business Purchasing

Business purchasing is the activity of acquiring goods or services to accomplish the goals of an organization. Businesses buy a wide variety of goods and services depending on their different needs.

The person who handles all the purchasing duties for a business or an organization is an **organizational buyer**. There are two types of organizational buyers: purchasing agents and buyers. However, sometimes the terms *purchaser* and *buyer* are used for the same purpose.

Purchasing Agents

Purchasing agents buy goods and services the company needs internally to operate its business. The goods purchased are not resold to customers; rather, they are used within the organization. Other terms for purchasing agents include *specialized purchaser* and *purchasing manager*.

Purchasing agents often need technical knowledge about the company's products or production



Chubarov Mikhail/Shutterstock.com

Purchasing agents buy goods and services the company needs to operate its business. **What goods do you think a business would need in its day-to-day operations?**



Case in Point

Target

Successful inventory management is critical for every business. Without it, retailers would have a challenge meeting customer needs. But at times, even the best inventory management strategies do not always keep a business from running out of stock.

Target is one of the largest discount retailers in the United States. Target offers a large and varied product mix at its stores. In recent years, the retail chain's inventory was not always able to keep up with customer demands as the store increased in popularity. Stock-outs led to disappointed, frustrated customers and lost sales for the company.

In order to solve the issue, the retailer asked its employees to look closely at what was selling on store shelves to identify different products that customers were not buying. The store began eliminating these low-selling products from its product mix.

Target's solution was to actually simplify its product mix, carrying selected varieties of products—fewer sizes, brands, flavors, and colors of myriad products. Simplifying the products in its inventory allowed Target to also simplify its supply chains. This strategy helped Target forecast inventory needs to make sure the most popular products were in stock and available for purchase. The strategy worked, as Target reported a forty-percent reduction in stock-outs during the 2015 holiday shopping season.

processes. For example, a purchaser for a manufacturer must know a great deal about the raw materials and equipment used for producing the company's products. Purchasers must also buy the furniture, fixtures, equipment, and supplies needed to run the business. Purchasing agents research where to get the best products at the best prices.

In small businesses, it is not always clear who makes the final buying decisions. There is often more than one person involved. Written approval is generally needed to make large purchases. Sometimes, the people making the decision are obvious, such as the company president or vice president. Sometimes, they are not obvious. For example, the person who knows the department's needs best may choose which computers are purchased. That person may be a manager or an administrative assistant.

Buyers

Wholesale and retail **buyers** purchase goods for the sole purpose of reselling them to customers. They purchase products that the business will not use, but resell to customers. Other terms for buyers include *professional buyer*, *retail buyer*, and *merchandise manager*. However, sometimes the terms *purchaser* and *buyer* are used for the same purpose.

The buyer in a retail business is in a very important position. Decisions about what goods to purchase for resale have a major effect on the

success of the business. Much planning goes into purchasing inventory. For example, retailers spend an average of 70 cents of every dollar made in sales on inventory. If the wrong inventory is purchased, customers may not buy enough for the business to make a profit. Depending on the type of business, inventory may be purchased daily, weekly, monthly, or even less frequently.

LO
16.1-2

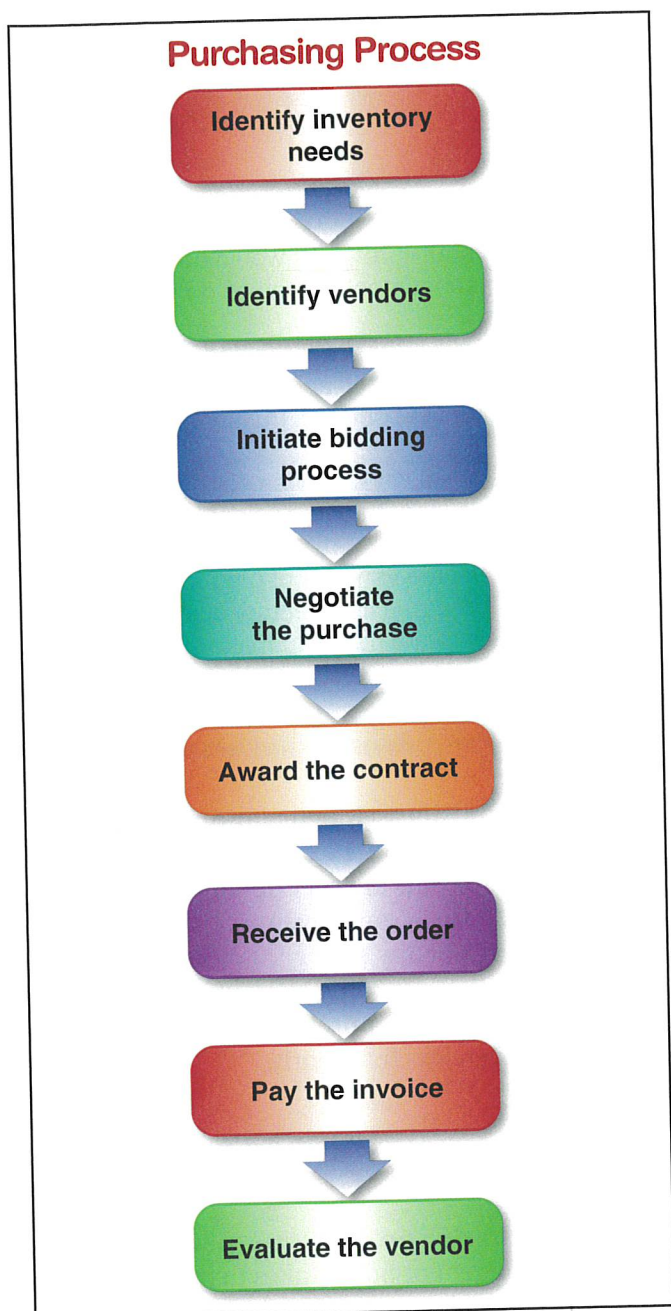
Purchasing Process

The **purchasing process** is a series of steps a purchasing agent or buyer takes to buy goods and services for a business. These steps may vary depending on the business, but in general, are similar. The specific steps in the purchasing process are shown in Figure 16-1.

Much of the business purchasing process takes place electronically to maximize efficiency and easily maintain records. **Electronic data interchange (EDI)** is the standard transfer of electronic data for business transactions between organizations. Transactions can include orders, confirmations, and invoices.

Identify Inventory Needs

In a retail business, the type and quality of merchandise purchased depends on the goals



Goodheart-Willcox Publisher

Figure 16-1 The purchasing process includes these specific steps.

of the business stated in the marketing plan. Retail and service businesses must be aware of the changes in customer needs and wants. In order to maintain a successful business, inventory is adjusted to meet those needs. Before placing orders for merchandise, buyers study the target market. Marketers help the buyers know which products are popular, how often are they purchased, and about new trends. This information is important because inventory is purchased before a business needs it.

Identify Vendors

Vendors, also known as *suppliers*, are companies that sell products to other businesses. Depending on the products needed, there may be many vendors from which to choose. The service quality, product quality, and pricing can greatly differ by vendor. Buyers can check with other business contacts in their industry for vendor recommendations. The Better Business Bureau (BBB) also provides reports on vendor standings.

Initiate Bidding Process

Most organizations require their agents or buyers to get a number of bids from different vendors. The *bidding process* is a series of steps the buyer takes to obtain the best price for a purchase. A **bid** is a formal written proposal that lists all the goods and services that will be provided, their corresponding prices, and the timeline for delivery. After vendors have been researched and selected, an invitation to bid is extended to those who are interested in participating. Included in the invitation are the date the bid is due and specifications that the vendor must meet, such as size, colors, weight, or other important details. Interested vendors can then issue a bid.

Negotiate the Purchase

After all bids are received, the buyer determines which bid and vendor is the best for the business. The buyer makes a recommendation to the management team, who will eventually



michaeljung/Shutterstock.com

Inventory is adjusted to meet the changing needs and wants of customers. *How do you see changing customer needs and wants reflected in the products carried in local stores?*



Green Marketing

Ecofriendly Purchasing

A business typically chooses its vendors based on price, quality, and services offered. However, many businesses are also considering the location of vendors when making purchasing decisions. Minimizing the transportation miles required to receive inventory is an ecofriendly, energy-saving consideration in the purchasing process.

When evaluating vendor options, inquire about delivery routes and local distribution centers. Many businesses may choose to use local suppliers for materials and business services. Choosing local sources reduces the amount of travel needed, which lowers fuel consumption and emissions. Making use of local business resources has the added benefit of supporting the local economy.

approve the purchase. Organizations do not necessarily choose the lowest-priced bid. They take into consideration factors such as vendor quality, delivery time, and service.

Negotiation with a vendor may be necessary before making a final decision. **Negotiation** is when individuals come together in an attempt to reach an agreement. Negotiating a purchase involves getting a good price and payment schedule for the goods as well as timely delivery. It also includes confirming quality and value, as well as scale discounts.

Quality and Value

The quality of products a business can offer ranges from high-end and expensive to low-end and inexpensive. The key to negotiating for quality is to insist on *value*, or getting the highest quality for the lowest price. A business marks up the price it paid for items to earn a profit on customer sales. The choice of product quality also depends on how much the target market is willing to pay for certain items.

Buyers must understand how quality and price affect value in their industries to negotiate the best deals. Sometimes vendors offer higher-quality merchandise for very good prices to encourage a business to also buy inexpensive items. Depending on the vendor, this area is open for negotiation.

Economies of Scale

Most vendors offer *quantity discounts*, or a reduced per-item price based on the number purchased, to encourage larger orders. The greater the quantity purchased, the lower the per-unit price. It is usually more cost-effective for

businesses to purchase inventory in larger quantities to obtain the lower unit prices. After markup to the list prices, the profit margin on the goods sold is greater.

Quantity discounts are based on the economy of scale. **Economy of scale** is the decrease in unit cost of a product resulting from large scale manufacturing operations. The efficiency of production increases as more of a product is made. This in turn reduces the cost per piece.

Economies of scale also occur in other business functions. For example, the per-item shipping and handling cost on larger orders may be less than when purchasing fewer products. Transportation costs can be spread over the total cost of all the products purchased and not just one item.



djordjevla/Shutterstock.com

Economies of scale can reduce shipping and handling costs on large orders. *How might a business purchasing a large quantity of a product benefit the consumer?*

Award the Contract

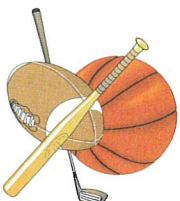
Once the vendor has been chosen and the details of the purchase have been negotiated, the business can award the contract to the vendor. This is done by notifying the vendor that their bid was accepted and completing a purchase order for the product. A **purchase order (PO)** is a form a buyer sends to the vendor to officially place an order. It lists the negotiated quantities, varieties, and prices for the products ordered. The purchase order includes the company information and the product, shipping, and payment details, as shown in Figure 16-2.

POs should be consecutively numbered so the recordkeeping system remains sequential. Copies of the PO are made for business records and for the vendor.

Receive the Order

Tracking purchases is an important step to make sure shipments are correct and delivered when promised. When a shipment of goods is received, it includes a *packing list*, sometimes called a *packing slip*, that lists the contents of the package. The person receiving the shipment verifies the contents by comparing items to the packing slip. The confirmation process ensures that everything received also agrees with the PO.

A **receiving record** is the form on which all merchandise received is listed as it comes into the place of business. After receiving and inspecting the shipment, the details are recorded on a receiving record and filed for future use. Sometimes the contents will not match the packing slip.

Extreme Sporting Goods 123 Main Street Tampa, FL 33601 Phone: (813) 555-1234 Fax: (813) 555-1235				PURCHASE ORDER	
PO #: 003725			Date: 03/31/20--		
Vendor Name/Address: Salt Lake Wholesale 9807 Second Avenue Atlanta, GA 30060 (678) 555-1236			Vendor ID: 24		Customer ID: 1068A
SHIPPING METHOD		SHIPPING TERMS		DELIVERY DATE	
Ground		Received by 05/01/20--		05/01/20--	
Item	Job	Description	Qty	Unit Price	Line Total
013188	12	Extreme water bottles	24	3.70	88.80
011088	12	Small camping packs	60	11.25	675.00
012488	12	12-pack DC golf balls	48	6.15	295.20
				Subtotal	1,059.00
1. Please send two copies of your invoice. 2. Enter this order in accordance with the prices, terms, delivery method, and specifications listed above. 3. Please notify us immediately if you are unable to ship as specified. 4. Send all correspondence to: Extreme Sporting Goods E-mail: extremesport@esg.com Fax: (813) 555-1235			For resale? ☒ Yes ☐ No	Tax ID: 12-3456789	Sales Tax —
			Shipping		126.95
			Total	Net 30 days	\$1,185.95
			Authorized by: <i>Carl Jackson</i>		

Goodheart-Willcox Publisher

Figure 16-2 A buyer sends a purchase order (PO) to the vendor to officially place an order.



XiXinXing/Shutterstock.com

The contents of a shipment are verified by comparing items to the packing slip. *What might occur if the business does not have an employee verify the package contents?*

Or, products may have become damaged in the shipping process. In those cases, the receiving record is used to help the vendor correct an order.

Marking is the process of attaching the price to each item that will be sold. Once goods are received and checked, they are usually marked with tickets or UPC codes. These tickets record the price and also serve as inventory tracking information.

Pay the Invoice

An **invoice** is a vendor bill requesting payment for goods shipped or services provided. After an order is shipped, the vendor sends an invoice to the buyer. The invoice lists the goods purchased, amount owed, and payment terms. Before paying an invoice, the buyer makes sure that the costs and payment terms listed on the invoice match those on the PO. In addition, the buyer must verify that the receiving record matches the invoice. Large businesses often have a formal process for payment and approval of invoices that includes management. After approval, the buyer submits invoices to accounting for payment.

Discounts

Most vendors expect payment either upon receipt of goods or within 30 days. Recall that

some vendors offer a cash discount to encourage businesses to pay invoices early. A **cash discount** is usually a percentage deducted from the total invoice amount offered to encourage a customer to pay a bill early. A cash discount often shows up in a format similar to *2/10, net 30*. This means that a 2 percent discount off the invoice total applies if the customer pays the bill within 10 days. Otherwise, the customer has 30 days to pay the entire bill without receiving a penalty. Cash discounts encourage customers to pay bills early, which helps the cash flow of the vendor.

Terms for Delivery

Terms for delivery are the delivery arrangements made between the buyer and seller. **Free on board (FOB)** indicates which party, the buyer or shipper, has liability for the shipment if damages are incurred and at what point ownership of the goods changes hands.

- **FOB shipping point** means the buyer is responsible and pays for shipping.
- **FOB destination point** means the seller is responsible until the shipment reaches the buyer. The seller pays the shipping.

Insurance is typically purchased by the party responsible for the shipping. By purchasing insurance, potential losses are covered.

Evaluate the Vendor

The person or department responsible for receiving shipments helps buyers to evaluate vendors. Checking the merchandise received for any damages, shortages, or overages is crucial. At this point, the business is performing quality control. **Quality control** is the activity of checking goods as they are produced or received to ensure the quality meets expectations.

A good time for a buyer to evaluate vendors is after receiving their invoices. A form similar to the one shown in Figure 16-3 can be used to monitor the track record of vendors over time. A rating scale is helpful to score the criteria. If a vendor proves to be reliable and provides value and consistent product quality, the vendor can be used again.

Vendor Evaluation Form

Vendors	Date	Availability of products	Quality	Reliability	On-time delivery	Damages or discrepancies	Service	Price
Vendor #1								
Vendor #2								
Vendor #3								
Vendor #4								

Goodheart-Willcox Publisher

Figure 16-3 A vendor evaluation form can be used to monitor the track record of vendors over time.

Section 16.1 Review

Check Your Understanding

1. Why do purchasing agents buy goods and services?
2. Why do buyers for a business purchase products?
3. What is the bidding process?
4. What does negotiating a purchase involve?
5. Explain the difference between FOB shipping point and FOB destination point.

Build Your Vocabulary

As you progress through this text, develop a personal glossary of key terms. This will help you build your vocabulary and prepare you for a career. Write a definition for each of the following terms and add them to your personal glossary.

bid
business purchasing
buyer
economy of scale
electronic data interchange (EDI)
free on board (FOB)
invoice
marking

negotiation
organizational buyer
purchase order (PO)
purchasing agent
purchasing process
quality control
receiving record
terms for delivery

Section 16.2



Why is it important for a business to manage its inventory?

Inventory Control

Learning Objectives

- LO 16.2-1 Explain inventory management.
- LO 16.2-2 Describe inventory-control systems.
- LO 16.2-3 Identify the role of sales forecasting in inventory management.
- LO 16.2-4 Discuss inventory shrinkage.

Key Terms

inventory management	point-of-sale (POS) software
stockout	radio frequency identification (RFID)
reorder point	periodic inventory-control system
buffer stock	just-in-time (JIT) inventory-control system
carrying costs	80/20 inventory rule
physical inventory	turnover rate
perpetual inventory-control system	inventory shrinkage
manual-tag system	internal theft
unit-control system	external theft

LO
16.2-1

Managing Inventory

Every business wants to maximize profits. Managing inventory correctly is one key factor in keeping costs down while maintaining enough products for maximum sales. **Inventory management** is ordering the goods, receiving them into stock on arrival, and paying the supplier or vendor. It also includes managing the costs of shipping, storage, and other tasks while keeping the costs associated with the inventory low. Inventory management is usually the responsibility of the supply chain manager. When managing inventory, there are three factors that need to be considered:

- lead time;
- stock needs; and
- carrying costs.



wavebreakmedia/Shutterstock.com

Inventory management is ordering goods, receiving them into stock, and paying the supplier or vendor. *Why is it important for a business to manage its inventory?*

Lead Time

It takes time for vendors to process an order and send it to the business. *Lead time* is the total time it takes from placing an order until it is received. Lead time could be days, weeks, or longer, depending on the product and vendor. The product may need to be made or assembled. The vendor may not have enough of the product in stock when the order is placed. Lead time must be taken into consideration when planning for inventory purchases.

Stock Needs

Forecasting sales is always a challenge for businesses. It can be difficult to gauge how much product is needed each day or month of a selling season. A business should avoid being out of stock of any items and missing sales opportunities. A **stockout** is running out of stock. Moreover, a business does not want to fail to meet customer needs by not having the latest products.

It is necessary to have a reorder point for each item. The **reorder point** is the point at which a business orders more of a product before the inventory gets too low. This puts a control in place to trigger placing an order before a stockout could occur. However, a business also needs to avoid purchasing too much inventory in the event projections were incorrect.

To help avoid running out of inventory, stock may be maintained as a buffer or cushion. **Buffer stock**, also known as *safety stock*, is additional stock kept above the minimum amount required to meet forecasted sales. This helps prevent the business from running out of stock. Some businesses anticipate that certain products sell more on a seasonal basis. For example, many more barbeque grills are sold in the summer than in the winter. *Anticipation stock* is the necessary extra stock of products that sell more in certain seasons.

Carrying Costs

Carrying costs are costs directly related to carrying, or holding, inventory and are part of inventory management. These are the costs that must be controlled as they directly affect profit. Carrying costs include the following.

- *Capital costs* are related to borrowing cash from lenders to purchase inventory from vendors.

- *Handling costs* are related to the physical handling of the inventory and any necessary clerical work.
- *Storage costs* are paid for renting warehouse space or building a company-owned warehouse.
- *Inventory-risk costs* include the cost of inventory shrinkage, slow-moving inventory, damaged or obsolete inventory, and nonselling merchandise that must be destroyed or donated for a tax write-off.
- *Inventory insurance costs* include premiums and taxes that are calculated as a percentage of the inventory value.

The cost of carrying inventory is often described as a percentage of the inventory value, as shown in Figure 16-4. Carrying costs can usually run between 24 percent and 48 percent of the inventory value per year. Businesses use this percentage to help them determine how much profit can be made on current inventory.

Calculating Inventory Carrying Rate and Costs

1. Add the annual inventory costs:

Example:

\$1,500 = storage

\$2,000 = handling

\$2,500 = clerical

\$5,000 = obsolete, damaged, and dead products
(markdowns and losses)

\$4,000 = theft

\$15,000 total inventory costs

2. Divide the inventory costs by the inventory value:

Example:

$\$15,000 \div \$100,000 = 15\%$

3. Add the percentages for insurance and taxes:

5% = insurance premiums as a percentage of
inventory value

6% = taxes as a percentage of inventory value
11%

4. Add all of the percentages:

$15\% + 11\% = 26\%$

inventory carrying rate = 26% (or .26)

5. Multiply the inventory value by the inventory carrying rate:

carrying costs = $\$100,000 \times .26 = \$26,000$

Goodheart-Willcox Publisher

Figure 16-4 The carrying cost is often described as a percentage of the inventory value.

LO
16.2-2

Inventory-Control Systems

There are three primary types of retail inventory-control systems: perpetual, periodic, and just-in-time. Every business has different inventory needs, so the supply chain manager chooses the system that best fits the goals of the company business plan.

No matter which inventory-control system a business uses, it is important to conduct a physical inventory once or twice a year. A **physical inventory** is an actual count of all items in inventory at that time. It is used to verify the inventory-control system counts. If there are differences in the counts, the physical count is considered accurate. The records of the inventory-control system must be adjusted to reflect the physical count.

Perpetual Inventory

A **perpetual inventory-control system** is a method of counting inventory that shows the quantity on hand at all times. The system records the receipt of goods into stock and all merchandise sales. There are two types of perpetual inventory systems: manual and computerized.

Manual Perpetual Inventory-Control System

In a *manual perpetual inventory-control system*, the inventory is calculated by physically

counting and recording individual items. A person records each item that comes into inventory and each item that goes out of inventory as a sale or vendor return. This information is recorded on a spreadsheet or entered into a software program. The important part to note is that the inventory is done manually, *not* electronically.

One example of a manual perpetual inventory-control system is the manual-tag system that some small retailers use. A **manual-tag system** tracks sales by removing price tags when the products are sold. The retailer keeps the tags and uses them to deduct the sales from the inventory. Another example of a manual perpetual inventory-control system is the **unit-control system**, which uses a visual determination to decide when more stock is needed. This can be done by looking at the inventory to see if it looks low. It may also be done by using bin tickets. A *bin ticket* is a tiny card placed by the product. It lists the stock number, description, minimum and maximum quantities, and cost in a code known only by store employees. A set number of bin tickets are placed with the merchandise. Each time a unit is sold, a bin ticket is removed. When the supply of bin tickets gets low, it is a visual signal to order more inventory.

In both manual-tag and unit-control systems, the reorder point is determined manually. The business must then place POs and hope the lead time is acceptable. A manual perpetual inventory-control leaves a business open to human errors and can be an inefficient use of time.



You Do the Math

Unit Conversion

Different systems of measurement are used throughout the world. The United States uses a system called the US Customary System that consists of feet, pounds, and degrees Fahrenheit. However, most of the world uses a variation of the metric system called the *Système International d'Unités* (SI), or International System of Units. The SI system consists of meters, grams, and degrees Celsius. The following are some common conversions:

- To convert degrees Fahrenheit to degrees Celsius, subtract 32, multiply by 5, and divide by 9.
- One inch is equal to 25.4 millimeters.
- One pound is equal to 0.45 kilograms.

Solve the following problems.

1. If a carton ready for shipping weighs 18.7 kilograms, how many pounds does it weigh?
2. Marion must ship a temperature-sensitive good to a country that uses the metric system. The product cannot be exposed to temperatures below 0 degrees Fahrenheit. She must place a label on the package indicating this temperature in Celsius. What temperature must she write on the label?
3. Luis must order a length of specialized steel rod from a company in Germany. He needs 0.3 feet of the rod. However, the rod must be ordered in increments of 10 millimeters. What length of rod must be ordered?

80/20 inventory rule helps a buyer determine which merchandise to keep in stock at higher levels and which products to keep at a minimum. The buyer will then need to decide how much to purchase in advance and when to place the orders.

Turnover Rate

When forecasting inventory, another factor to consider is the turnover rate of stock. A **turnover rate**, or *turnover ratio*, is the number of times inventory has been sold during a time period, usually one year. A *ratio* is a way to see how two numbers compare with each other. To calculate turnover rate, use the following formula.

$$\frac{\text{cost of goods sold}}{\text{average inventory value}} = \text{turnover rate}$$

The following shows an example of using the turnover-rate formula. A business has a cost of merchandise sold of \$120,000 for the previous year. The cost of merchandise sold includes beginning inventory, plus any inventory purchased during the year, minus ending inventory. The business has stated that the average inventory of merchandise on hand at the end of the year was \$50,000.

$$\frac{\$120,000}{\$50,000} = 2.4 \text{ turnover rate}$$

The turnover rate for this business is 2.4. Is that number good? It depends on the business. This ratio indicates that inventory has been turned a total of 2.4 times during the year. A turnover rate is an indicator of how effectively a business

is managing its inventory. A high turnover rate generally indicates higher sales and a more productive inventory. Depending on the industry, a business may benefit from ordering high-turnover products in larger quantities to save shipping costs and lower the price per unit. Merchandise with a low-turnover rate means the inventory is sitting on the shelves longer and is nonproductive.

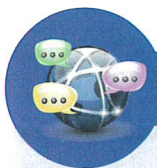
LO
16.2-4

Inventory Shrinkage

When the annual physical inventory is completed, the results are compared against the perpetual inventory. The two inventories are rarely exactly the same. The physical inventory usually shows fewer items in stock than the perpetual inventory indicates. The difference between the perpetual inventory and the actual physical inventory is called **inventory shrinkage**. There are three main causes for inventory shrinkage.

- Data-input errors can occur during receiving, stocking, or selling.
- Product damage, or breakage, may occur when products are being moved from receiving dock to storage to store shelves.
- Theft can be from employees or outsiders, such as customers or burglars.

Theft is the largest cause of inventory shrinkage. There are two types of theft: internal and external. **Internal theft** is committed by employees of a store, a supplier, or a delivery



Social Media

Facebook

With over a billion users, Facebook is a must for most businesses, both large and small. Businesses, organizations, and brands create pages to share their stories and connect with potential customers. Like personal time lines, a business can customize pages by adding apps, posting stories, hosting events, and more. A marketer can communicate directly with customers about products, promote a brand, and work toward other SMM goals. Facebook is also a great tool for engagement marketing, which is a strategy that encourages visitors to participate in live events.

Facebook also offers support to businesses to help guide them in making the most of this social-media tool. Analytics are available to help businesses track how many people visit the page, visitors' demographics, and other important marketing information. In addition, a business page provides marketers tips and tricks for making the most of social media to meet its business goals.

company. It is also called *employee theft*. It is the source of most inventory shrinkage. **External theft** is stealing by people who are not employed or otherwise associated with the retailer. A *shoplifter* is a person posing as a customer who takes goods from the store without paying for them.

To discourage theft, closed-circuit television (CCTV) and video-security systems may be installed. Sensing devices placed on merchandise, ringing alarms, and security guards also help to prevent theft. The obvious presence of security measures cuts down on stealing.

Section 16.2 Review

Check Your Understanding

1. What is lead time?
2. List examples of carrying costs.
3. How often should a business conduct a physical inventory?
4. State the turnover-rate formula.
5. Provide examples of how businesses might discourage theft.

Build Your Vocabulary

As you progress through this text, develop a personal glossary of key terms. This will help you build your vocabulary and prepare you for a career. Write a definition for each of the following terms and add them to your personal glossary.

80/20 inventory rule

buffer stock

carrying costs

external theft

internal theft

inventory management

inventory shrinkage

just-in-time (JIT) inventory-control system

manual-tag system

periodic inventory-control system

perpetual inventory-control system

physical inventory

point-of-sale (POS) software

radio frequency identification (RFID)

reorder point

stockout

turnover rate

unit-control system

Chapter Summary

Section 16.1 Purchasing

LO 16.1-1 Discuss two types of organizational buyers.

Two types of organizational buyers are purchasing agents and buyers. Purchasing agents buy goods and services the company needs internally to operate its business. Wholesale and retail buyers purchase goods for the sole purpose of reselling them to customers.

LO 16.1-2 List steps of the purchasing process.

The purchasing process is a series of steps a purchasing agent or buyer takes to buy goods and services for a business. These general steps are identify inventory needs, identify vendors, initiate bidding process, negotiate the purchase, award the contract, receive the order, pay the invoice, and evaluate the vendor.

Section 16.2 Inventory Control

LO 16.2-1 Explain inventory management.

Inventory management is ordering goods, receiving them into stock, and paying the supplier or vendor. It also includes managing shipping costs, storage, and other tasks while keeping the costs associated with the inventory low. Inventory management is usually the responsibility of the supply chain manager. Three factors to be considered in inventory management are lead time, stock needs, and carrying costs.

LO 16.2-2 Describe inventory-control systems.

Three primary types of retail inventory-control systems are perpetual, periodic, and just-in-time. A perpetual inventory-control system shows the quantity on hand at all times. Two types of perpetual inventory

systems are manual and computerized. A periodic inventory-control system involves taking a physical count of merchandise at regular periods. The just-in-time (JIT) inventory-control system keeps a minimal amount of production materials or sales inventory on hand at all times.

LO 16.2-3 Identify the role of sales forecasting in inventory management.

A business needs to determine the correct amount of money to invest in inventory. Sales forecasting based on previous sales history helps businesses plan for upcoming inventory needs. It is usually done a year in advance. Most businesses review actual weekly sales and adjust the sales projections, which will also impact inventory orders. Many businesses use the 80/20 rule to forecast sales.

LO 16.2-4 Discuss inventory shrinkage.

The difference between perpetual inventory and actual physical inventory is called inventory shrinkage. Main causes for inventory shrinkage include data input errors, product damage, and theft. Internal theft is committed by employees of a store, a supplier, or a delivery company. External theft is stealing by people who are not employed or otherwise associated with the retailer.

Check Your Marketing IQ

Now that you have completed the chapter, see what you have learned about marketing by taking the chapter posttest. The posttest is available at www.g-wlearning.com/marketing/.

Review Your Knowledge

1. Discuss two types of organizational buyers.
2. List the steps of the purchasing process.
3. How are bids selected?
4. Explain the receiving process.
5. Explain inventory management.

6. Describe inventory-control systems.
7. What is required for a just-in-time (JIT) inventory-control system to be successful?
8. Identify the role of sales forecasting in inventory management.
9. In the 80/20 inventory rule, which percentage represents the productive inventory?
10. Discuss inventory shrinkage.

Apply Your Knowledge

1. All businesses buy products to operate the company. What products, including both goods and services, might your business need to buy?
2. In earlier chapters, you identified the product or service for which you are creating a marketing plan. Make a list of the inventory your business carries.
3. How does the specific target market for your business impact its inventory needs?
4. In what ways might your business be able to utilize economies of scale when making business purchases?
5. A stockout can negatively impact the image of a business. How would you handle stockouts in your business as a marketing manager?
6. Compare and contrast the inventory-control systems described in this chapter and choose the one you think is most appropriate for your business. Write an argument in support of the type of inventory-control system you would use.
7. List products you think will have a low turnover rate in your business and those you think will turn over quickly.
8. As a marketer, what steps might you recommend the business take to increase stock turnover while still keeping inventory at adequate levels?
9. Describe strategies that could be used in your business to reduce internal theft.

10. What methods could your business use to reduce external theft?

Apply Your Math Skills

When forecasting inventory, the turnover rate of stock is often considered. To calculate turnover rate, use the following formula.

$$\frac{\text{cost of goods sold}}{\text{average inventory value}} = \text{turnover rate}$$

Apply your math skills to solve the following problems.

1. A business has a cost of merchandise sold of \$480,000 for the previous year. The average inventory of merchandise on hand at the end of the year was \$190,000. What is the turnover rate of this business?
2. A business has a cost of merchandise sold of \$64,000 for the previous year. The average inventory of merchandise on hand at the end of the year was \$15,000. What is the turnover rate of this business?

Communication Skills



**College
and Career
Readiness**

Writing Etiquette is the art of using good manners in any situation. Etiquette is especially important when establishing and maintaining professional relationships. Create a script that you would use in accepting a vendor's bid during the bidding process. Practice your script with a classmate. How would you and your classmate rate your use of good manners?

Listening Engage in a conversation with someone you have not spoken with before. Ask the person his or her definition of a *quality product*. Actively listen to what that person shares. Build on his or her ideas by sharing your own. Try this again with other people you have not spoken to before. How clearly were the different people able to articulate themselves? How is having a conversation with someone you do not normally speak with different from a conversation with a familiar friend or family member?

Speaking It is important to be prepared when you are speaking to an individual or to an audience. Style and content influence how the listener understands your message. Create a short presentation about methods of inventory management. Make use of visuals or demonstrations to enhance the presentation. Adjust your presentation length to fit the attention of the audience.

Internet Research

Business Procurement The term *procurement* is used in business when purchasing goods and services for use in the business. Conduct Internet research on *business procurement*. Write one to two paragraphs that relate the concept of procurement to what you learned in this chapter.

Inventory Shrinkage Research the level of retail inventory shrinkage in the last year. What were the most common sources of inventory shrinkage? Identify techniques a company can use to prevent this issue.

Pareto Principle The 80/20 rule is also known as Pareto principle. Conduct an Internet search for *Pareto principle*. What did you learn about the 80/20 rule that you can apply to other parts of business, marketing, or your life?

Teamwork

Working with a teammate, select a retail business with which you are familiar. Focus on one type of product that consumers may buy from the business. Create a flowchart for the purchasing process that the business might use for that product. Use graphics to illustrate each step. Share your flowchart with the class.

Portfolio Development



**College
and Career
Readiness**

Talents You have collected documents that show your skills and qualifications. Select a book report, essay, or poem that you have written that demonstrates your writing talents. If you are an artist, include copies of your completed works. If you are a musician, create a video with

segments from your performances.

1. Create a Microsoft Word document that lists your talents. Use the heading "Talents" along with your name. Next to each talent listed, write a description of an assignment or performance and explain how your talent is shown in it. If there is a video, state that it will be made available upon request or identify where it can be viewed online. Indicate that sample screenshots are attached.
2. Scan hard-copy documents related to your talents to serve as samples. Save screenshots from a video, if appropriate, in an appropriate file format. Place hard copies in the container for future reference.
3. Place the video file in an appropriate subfolder for your digital portfolio.
4. Update your master spreadsheet.

UNIT 6

Place

Building the Marketing Plan

Place decisions are some of the most important decisions marketers can help their businesses make. Place activities can affect pricing as well as how the end users receive products and experience the company. Every retail or service business has inventory it must purchase and store. The purchasing and inventory management processes directly impact the bottom line of the company. Controlling those costs is vital to making a profit.

Part 1 Supply Chain

Objectives

- Describe the supply chain for your company.
- Explain the channel of distribution as it pertains to the marketing and company goals.

Directions

In this activity, you will continue writing the Marketing Strategies section of the marketing plan. Marketing strategies are the decisions made about product, price, place, and promotion. Access the *Marketing Dynamics* companion website at www.g-wlearning.com/marketing/. Download the activity file as indicated in the following instructions.

1. **Unit Activity 6-1—Supply Chain** A supply chain is the businesses, people, and activities involved in turning raw materials into products and delivering them to end users. Show the supply chain and the distribution channel for your company. Explain how each member contributes to the marketing and company financial goals stated in the marketing plan.
2. Open your saved marketing plan document.
3. Locate the Marketing Strategies section of the plan. In the Marketing Mix subsection, start writing the Place Strategies subsection. Use the suggestions and questions listed to help you generate ideas. Delete the instructions and questions when you are finished recording your responses. Proofread your document and correct any errors in keyboarding, spelling, and grammar.
4. Save your document.

Part 2 Inventory Management

Objective

- Explain the purchasing process and inventory management systems for the business for which you are writing the marketing plan.

Directions

In this activity, you will continue writing the Marketing Strategies section of the marketing plan. Marketing strategies are the decisions made about product, price, place, and promotion. Access the *Marketing Dynamics* companion website at www.g-wlearning.com/marketing/. Download the activity file as indicated in the following instructions.

1. **Unit Activity 6-2—Purchasing and Inventory Management** Create a flowchart showing the purchasing process for your business. After performing online research, identify several computerized inventory-control systems that may work well for your particular business. List the pros and cons of each, and select the one you think is the most efficient.
2. Open your saved marketing plan document.
3. Locate the Marketing Strategies section of the plan. Complete the Place Strategies subsection. Use the suggestions and questions listed to help you generate ideas. Delete the instructions and questions when you are finished recording your responses. Proofread your document and correct any errors in keyboarding, spelling, and grammar.
4. Save your document.