

Chapter 1 Operations Management at Hard Rock Cafe

Global Company Profile

Hard Rock Cafe

Operations managers throughout the world are producing products every day to provide for the well-being of society. These products take on a multitude of forms. They may be washing machines at Whirlpool, motion pictures at DreamWorks, rides at Disney World, or food at Hard Rock Cafe. These firms produce thousands of complex products every day—to be delivered as the customer ordered them, when the customer wants them, and where the customer wants them. Hard Rock does this for over 35 million guests worldwide every year. This is a challenging task, and the operations manager's job, whether at Whirlpool, DreamWorks, Disney, or Hard Rock, is demanding.



Hard Rock Cafe in Orlando, Florida, prepares over 3,500 meals each day. Seating more than 1,500 people, it is one of the largest restaurants in the world. But Hard Rock's operations

managers serve the hot food hot and the cold food cold.

Andre Jenny/Alamy Stock Photo



Operations managers are interested in the attractiveness of the layout, but they must be sure that the facility contributes to the efficient movement of people and material with the necessary controls to ensure that proper portions are served.

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Lots of work goes into designing, testing, and costing meals. Then suppliers deliver quality products on time, every time, for well-trained cooks to prepare quality meals. But none of that matters unless an enthusiastic waitstaff, such as the one shown here, holding guitars previously owned by members of U2, is doing its job.

Eamonn McCormack/WireImage/Getty Images

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Efficient kitchen layouts, motivated personnel, tight schedules, and the right ingredients at the right place at the right time are required to delight the customer.

Jack Picone/Alamy Stock Photo

Orlando-based Hard Rock Cafe opened its first restaurant in London in 1971, making it over 48 years old and the granddaddy of theme restaurants. Although other theme restaurants have come and gone, Hard Rock is still going strong, with 23 hotels and 168 restaurants in more than 68 countries—and new restaurants opening each year. Hard Rock made its name with rock music memorabilia, having started when Eric Clapton, a regular customer, marked his favorite bar stool by hanging his guitar on the wall in the London cafe. Now Hard Rock has 70,000 items and millions of dollars invested in memorabilia. To keep customers coming back time and again, Hard Rock creates value in the form of good food and entertainment.

The operations managers at Hard Rock Cafe at Universal Studios in Orlando provide more than 3,500 custom products—in this case meals—every day. These products are designed, tested, and then analyzed for cost of ingredients, labor requirements, and customer satisfaction. On approval, menu items are put into production—and then only if the ingredients are available from qualified suppliers. The production process, from receiving, to cold storage, to grilling or baking or frying, and a dozen other steps, is designed and maintained to yield a quality meal. Operations managers, using the best people they can recruit and train, also prepare effective employee schedules and design efficient layouts.

Managers who successfully design and deliver goods and services throughout the world understand operations. In this text, we look not only at how Hard Rock's managers create value but also how operations managers in other services, as well as in manufacturing, do so. Operations management is demanding, challenging, and exciting. It affects our lives every day. Ultimately, operations managers determine how well we live.

What Is Operations Management?

LO operations management

Student Tip

Let's begin by defining what this course is about.

Operations management (OM) is a discipline that applies to restaurants like Hard Rock Cafe as well as to factories like Ford and Whirlpool. The techniques of OM apply throughout the world to virtually all productive enterprises. It doesn't matter if the application is in an office, a hospital, a restaurant, a department store, or a factory—the production of goods and services requires operations management. And the *efficient* production of goods and services requires effective applications of the concepts, tools, and techniques of OM that we introduce in this book.

Video 1.1

Operations Management at Hard Rock

As we progress through this text, we will discover how to manage operations in an economy in which both customers and suppliers are located throughout the world. An array of informative examples, charts, text discussions, and pictures illustrates concepts and provides information. We will see how operations managers create the goods and services that enrich our lives.

Video 1.2

Operations Management at Frito-Lay

In this chapter, we first define *operations management*, explaining its heritage and exploring the exciting role operations managers play in a huge variety of organizations. Then we discuss

production and productivity in both goods- and service-producing firms. This is followed by a discussion of operations in the service sector and the challenge of managing an effective and efficient production system.

Video 1.3

Celebrity Cruises: Operations Management at Sea

Production is the creation of goods and services. **Operations management (OM)** is the set of activities that creates value in the form of goods and services by transforming inputs into outputs. Activities creating goods and services take place in all organizations. In manufacturing firms, the production activities that create goods are usually quite obvious. In them, we can see the creation of a tangible product such as a Sony TV or a Harley-Davidson motorcycle.

In an organization that does not create a tangible good or product, the production function may be less obvious. We often call these activities *services*. The services may be “hidden” from the public and even from the customer. The product may take such forms as the transfer of funds from a savings account to a checking account, the transplant of a liver, the filling of an empty seat on an airplane, or the education of a student. Regardless of whether the end product is a good or service, the production activities that go on in the organization are often referred to as operations, or *operations management*.

Organizing to Produce Goods and Services

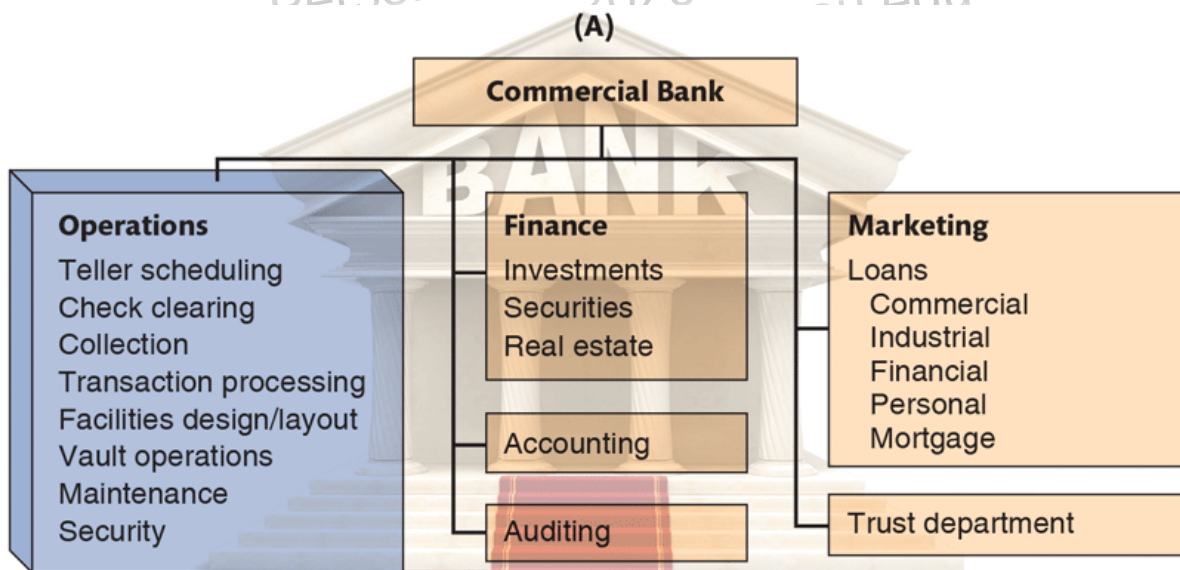
Student Tip

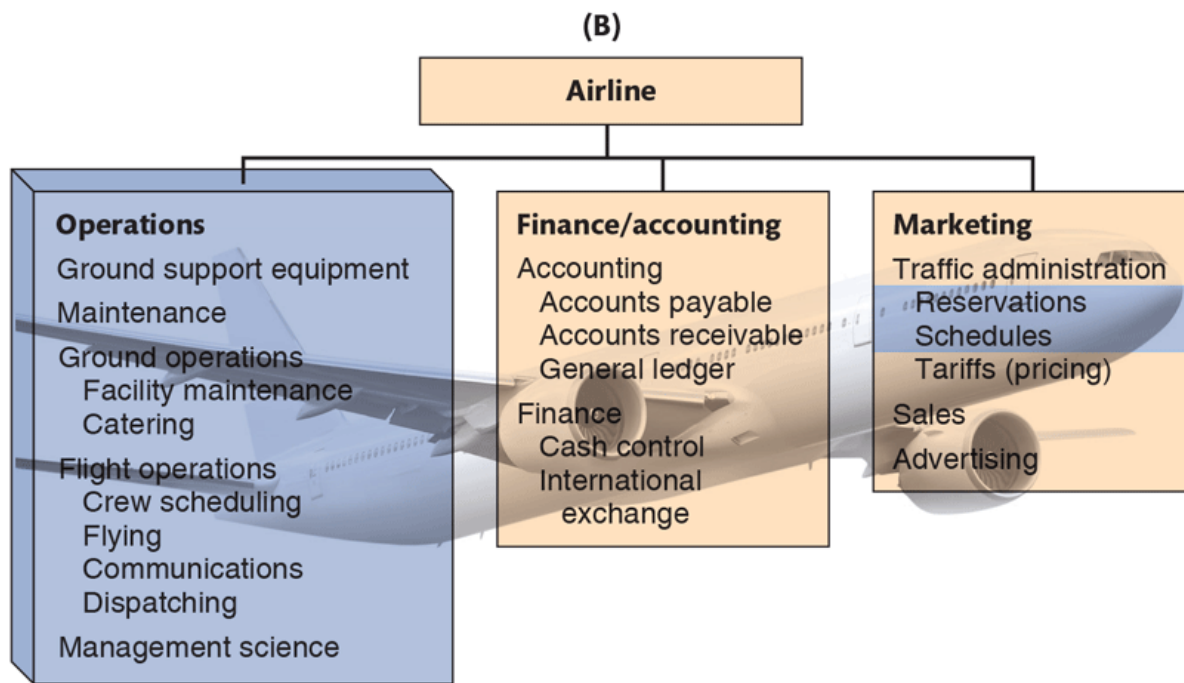
Operations is one of the three functions that every organization performs.

To create goods and services, all organizations perform three functions (see [Figure 1.1](#)). These functions are the necessary ingredients not only for production but also for an organization's survival. They are:

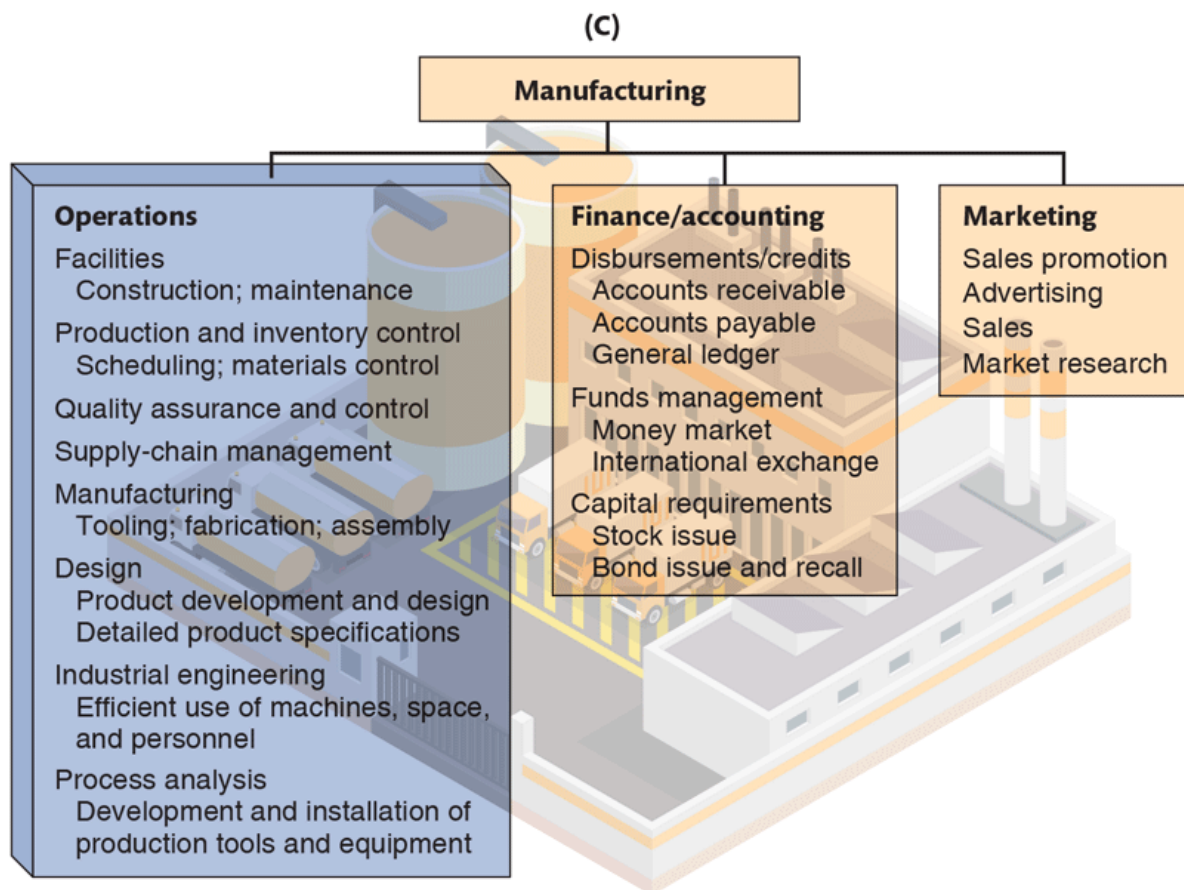
1. *Marketing*, which generates the demand, or at least takes the order for a product or service (nothing happens until there is a sale).
2. *Production/operations*, which creates, produces, and delivers the product.
3. *Finance/accounting*, which tracks how well the organization is doing, pays the bills, and collects the money.

Figure 1.1 Organization Charts for Two Service Organizations and One Manufacturing Organization





Sergiy Serdyuk/Fotolia



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(A) a bank, (B) an airline, and (C) a manufacturing organization. The blue areas are OM activities.

Universities, churches or synagogues, and businesses all perform these functions. Even a volunteer group such as the Boy Scouts of America is organized to perform these three basic functions. **Figure 1.1**  shows how a bank, an airline, and a manufacturing firm organize themselves to perform these functions. The blue-shaded areas show the operations functions in these firms.

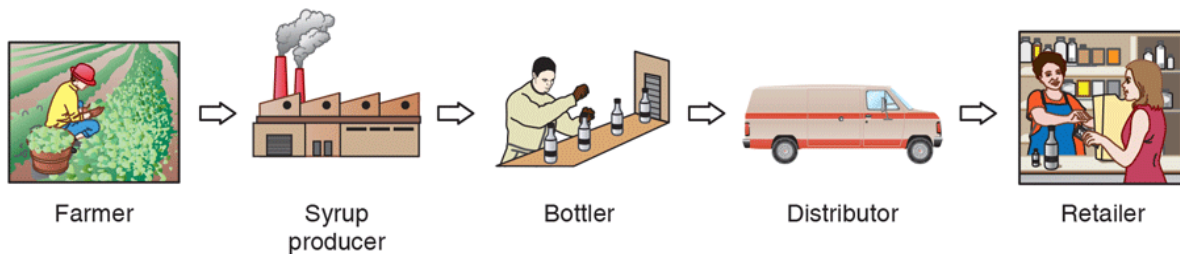
Student Tip

The areas in blue indicate the significant role that OM plays in both manufacturing and service firms.

The Supply Chain

Through the three functions—marketing, operations, and finance—value for the customer is created. However, firms seldom create this value by themselves. Instead, they rely on a variety of suppliers who provide everything from raw materials to accounting services. These suppliers, when taken together, can be thought of as a *supply chain*. A **supply chain** (see Figure 1.2) is a global network of organizations and activities that supply a firm with goods and services.

Figure 1.2 Soft Drink Supply Chain



A supply chain for a bottle of Coke requires a beet or sugar cane farmer, a syrup producer, a bottler, a distributor, and a retailer, each adding value to satisfy a customer. Only with collaborations between all members of the supply chain can efficiency and customer satisfaction be maximized. The supply chain, in general, starts with the provider of basic raw materials and continues all the way to the final customer at the retail store.

As our society becomes more technologically oriented, we see increasing specialization. Specialized expert knowledge, instant communication, and cheaper transportation also foster specialization and worldwide supply chains. It just does not pay for a firm to try to do everything itself. The expertise that comes with specialization exists up and down the supply chain, adding value at each step. When members of the supply chain collaborate to achieve high levels of customer satisfaction, we have a tremendous force for efficiency and competitive advantage. Competition in the 21st century is not between companies; it is between *supply chains*.

Why Study OM?

Student Tip

Good OM managers are scarce, and as a result, career opportunities and pay are excellent.

We study OM for four reasons:

1. OM is one of the three major functions of any organization, and it is integrally related to all the other business functions. All organizations market (sell), finance (account), and produce (operate), and it is important to know how the OM activity functions. Therefore, we study *how people organize themselves for productive enterprise*.
2. We study OM because we want to know *how goods and services are produced*. The production function is the segment of our society that creates the products and services we use.
3. We study OM to *understand what operations managers do*. Regardless of your job in an organization, you can perform better if you understand what operations managers do. In addition, understanding OM will help you explore the numerous and lucrative career opportunities in the field.
4. We study OM *because it is such a costly part of an organization*. A large percentage of the revenue of most firms is spent in the OM function. Indeed, OM provides a major opportunity for an organization to improve its profitability and enhance its service to society. **Example 1**  considers how a firm might increase its profitability via the production function.

Example 1 Examining the Options for Increasing Contribution

Fisher Technologies is a small firm that must double its dollar contribution to fixed cost and profit in order to be profitable enough to purchase the next generation of production equipment. Management has determined that if the firm fails to increase contribution, its bank will not make the loan and the equipment cannot be purchased. If the firm cannot purchase the equipment, the limitations of the old equipment will force

Fisher to go out of business and, in doing so, put its employees out of work and discontinue producing goods and services for its customers.

APPROACH

Table 1.1^a shows a simple profit-and-loss statement and three strategic options (marketing, finance/accounting, and operations) for the firm. The first option is a *marketing option*, where excellent marketing management may increase sales by 50%. By increasing sales by 50%, contribution will in turn increase 71%. But increasing sales 50% may be difficult; it may even be impossible.

Table 1.1 Options for Increasing Contribution

		MARKETING OPTION ^a	FINANCE/ACCOUNTING OPTION ^b	OM OPTION ^c
	CURRENT	INCREASE SALES REVENUE 50%	REDUCE FINANCE COSTS 50%	REDUCE PRODUCTION COSTS 20%
Sales	\$100,000	\$150,000	\$100,000	\$100,000
Costs of goods	-80,000_	-120,000_	-80,000_	-64,000_
Gross margin	20,000	30,000	20,000	36,000
Finance costs	-6,000_	-6,000_	-3,000_	-6,000_
Subtotal	14,000	24,000	17,000	30,000
Taxes at 25%	-3,500_	-6,000_	-4,250_	-7,500_
Contribution ^d	\$ 10,500	\$ 18,000	\$ 12,750	\$ 22,500

^aIncreasing sales 50% increases contribution by \$7,500, or 71% ($7,500/10,500$).

^bReducing finance costs 50% increases contribution by \$2,250, or 21% ($2,250/10,500$).

^cReducing production costs 20% increases contribution by \$12,000, or 114% ($12,000/10,500$).

^dContribution to fixed cost (excluding finance costs) and profit.

The second option is a *finance/accounting option*, where finance costs are cut in half through good financial management. But even a reduction of 50% is still inadequate for generating the necessary increase in contribution. Contribution is increased by only 21%.

The third option is an *OM option*, where management reduces production costs by 20% and increases contribution by 114%.

SOLUTION

Given the conditions of our brief example, Fisher Technologies has increased contribution from \$10,500 to \$22,500. It may now have a bank willing to lend it additional funds.

INSIGHT

The OM option not only yields the greatest improvement in contribution but also may be the only feasible option. Increasing sales by 50% and decreasing finance cost by 50% may both be virtually impossible. Reducing operations cost by 20% may be difficult but feasible.

LEARNING EXERCISE

What is the impact of only a 15% decrease in costs in the OM option? [Answer: A \$19,500 contribution; an 86% increase.]

Example 1 underscores the importance of the effective operations activity of a firm.

Development of increasingly effective operations is the approach taken by many companies as they face growing global competition.

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What Operations Managers Do

LO 1.2 the 10 strategic decisions of operations management

LO 1.3 career opportunities in operations management

All good managers perform the basic functions of the management process. The management process consists of *planning, organizing, staffing, leading, and controlling*. Operations managers apply this management process to the decisions they make in the OM function. The **10 strategic OM decisions** are introduced in Table 1.2. Successfully addressing each of these decisions requires planning, organizing, staffing, leading, and controlling.

Table 1.2 Ten Strategic Operations Management Decisions

DECISION	CHAPTER(S)
1. DESIGN OF GOODS AND SERVICES: Defines much of what is required of operations in each of the other OM decisions. For instance, product design usually determines the lower limits of cost and the upper limits of quality, as well as major implications for sustainability and the human resources required.	5, Supplement 5
2. MANAGING QUALITY AND STATISTICAL PROCESS CONTROL: Determines the customer's quality expectations and establishes policies and procedures to identify and achieve that quality.	6, Supplement 6
3. PROCESS AND CAPACITY STRATEGIES: Determines how a good or service is produced (i.e., the process for production) and commits management to specific technology, quality, human resources, and capital investments that determine much of the firm's basic cost structure.	7, Supplement 7
4. LOCATION STRATEGIES: Requires judgments regarding nearness to customers, suppliers, and talent, while considering costs, infrastructure, logistics, and government.	8

5. LAYOUT STRATEGIES: Requires integrating capacity needs, personnel levels, technology, and inventory requirements to determine the efficient flow of materials, people, and information.	9
6. HUMAN RESOURCES, JOB DESIGN AND WORK MEASUREMENT: Determines how to recruit, motivate, and retain personnel with the required talent and skills. People are an integral and expensive part of the total system design.	10
7. SUPPLY CHAIN MANAGEMENT: Decides how to integrate the supply chain into the firm's strategy, including decisions that determine what is to be purchased, from whom, and under what conditions.	11, Supplement 11
8. INVENTORY MANAGEMENT: Considers inventory ordering and holding decisions and how to optimize them as customer satisfaction, supplier capability, and production schedules are considered.	12, 14, 16
9. SCHEDULING: Determines and implements intermediate- and short-term schedules that effectively and efficiently use both personnel and facilities while meeting customer demands.	13, 15
10. MAINTENANCE: Requires decisions that consider facility capacity, production demands, and personnel necessary to maintain a reliable and stable process.	17

Where Are the OM Jobs?

How does one get started on a career in operations? The 10 strategic OM decisions identified in Table 1.2 are made by individuals who work in the disciplines shown in the blue areas of Figure 1.1. Business students who know their accounting, statistics, finance, and OM have an opportunity to assume entry-level positions in all of these areas. As you read this text, identify disciplines that can assist you in making these decisions. Then take courses in those areas. The more background an OM student has in accounting, statistics, information systems, and mathematics, the more job opportunities will be available. About 40% of *all* jobs are in OM.

Student Tip 

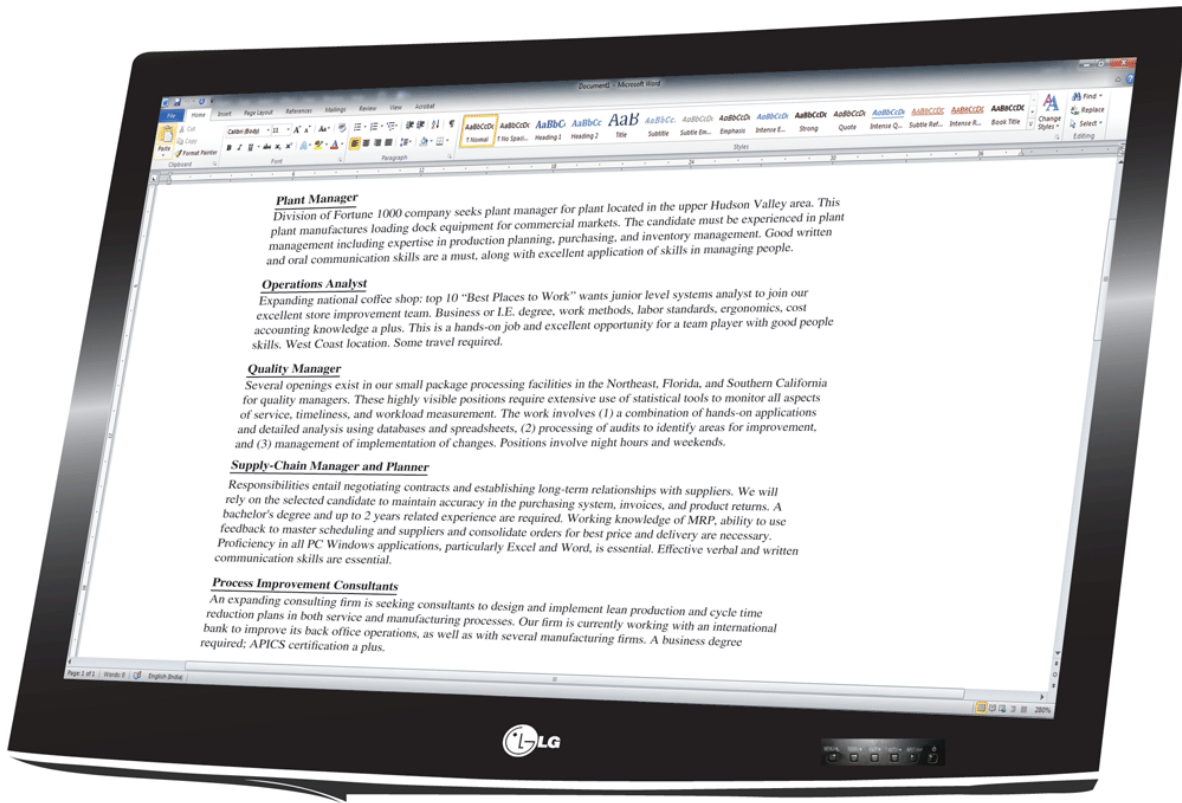
An operations manager must successfully address the 10 decisions around which this text is organized.

The following professional organizations provide various certifications that may enhance your education and be of help in your career:

- APICS, the Association for Operations Management (www.apics.org)
- American Society for Quality (ASQ) (www.asq.org)
- Institute for Supply Management (ISM) (www.ism.ws)
- Project Management Institute (PMI) (www.pmi.org)
- Council of Supply Chain Management Professionals (www.cscmp.org)

Figure 1.3 shows some recent job opportunities.

Figure 1.3 Many Career Opportunities Exist for Operations Managers



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The Heritage of Operations Management

The field of OM is relatively young, but its history is rich and interesting. Our lives and the OM discipline have been enhanced by the innovations and contributions of numerous individuals. We now introduce a few of these people, and we provide a summary of significant events in operations management in [Figure 1.4](#).

Figure 1.4 Significant Events in Operations Management



Cost Focus		Quality Focus	Customization Focus	Globalization Focus
Early Concepts 1776–1880 Labor Specialization (Smith, Babbage) Standardized Parts (Whitney)	Mass Production Era 1910–1980 Moving Assembly Line (Ford/Sorensen) Statistical Sampling (Shewhart) Economic Order Quantity (Harris) Linear Programming (Dantzig) Material Requirements Planning (MRP)	Lean Production Era 1980–1995 Just-in-Time (JIT) Computer-Aided Design (CAD) Electronic Data Interchange (EDI) Total Quality Management (TQM) Baldrige Award Empowerment Kanbans	Mass Customization Era 1995–2005 Internet/E-Commerce Enterprise Resource Planning International Quality Standards (ISO) Finite Scheduling Supply Chain Management Mass Customization Build-to-Order Radio Frequency Identification (RFID)	Globalization Era 2005–2025 Global Supply Chains and Logistics Growth of Transnational Organizations Sustainability Ethics in the Global Workplace Internet of Things (IoT) Digital Operations Industry 4.0
Scientific Management Era 1880–1910 Gantt Charts (Gantt) Motion & Time Studies (Gilbreth) Process Analysis (Taylor) Queuing Theory (Erlang)				

Everett Collection/Newscom

Eli Whitney (1800) is credited for the early popularization of interchangeable parts, which was achieved through standardization and quality control. Through a contract he signed with the U.S. government for 10,000 muskets, he was able to command a premium price because of their interchangeable parts.

Frederick W. Taylor (1881), known as the father of scientific management, contributed to personnel selection, planning and scheduling, motion study, and the now popular field of ergonomics. One of his major contributions was his belief that management should be much more resourceful and aggressive in the improvement of work methods. Taylor and his

colleagues, Henry L. Gantt and Frank and Lillian Gilbreth, were among the first to systematically seek the best way to produce.

Another of Taylor's contributions was the belief that management should assume more responsibility for:

1. Matching employees to the right job.
2. Providing the proper training.
3. Providing proper work methods and tools.
4. Establishing legitimate incentives for work to be accomplished.

By 1913, Henry Ford and Charles Sorensen combined what they knew about standardized parts with the quasi-assembly lines of the meatpacking and mail-order industries and added the revolutionary concept of the assembly line, where men stood still and material moved.

Quality control is another historically significant contribution to the field of OM. Walter Shewhart (1924) combined his knowledge of statistics with the need for quality control and provided the foundations for statistical sampling in quality control. W. Edwards Deming (1950) believed, as did Frederick Taylor, that management must do more to improve the work environment and processes so that quality can be improved.

Operations management will continue to progress as contributions from other disciplines, including *industrial engineering, statistics, management, analytics, and economics*, improve decision making.

Innovations from the *physical sciences* (biology, anatomy, chemistry, physics) have also contributed to advances in OM. These innovations include new adhesives, faster integrated circuits, gamma rays to sanitize food products, and specialized glass for iPhones and plasma TVs. Innovation in products and processes often depends on advances in the physical sciences.

Especially important contributions to OM have come from *information technology*, which we define as the systematic processing of data to yield information. Information technology—with wireless links, Internet, and e-commerce—is reducing costs and accelerating communication.

Decisions in operations management require individuals who are well versed in analytical tools, in information technology, and often in one of the biological or physical sciences. In this textbook, we look at the diverse ways a student can prepare for a career in operations management.

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