



# Unit 2

## Introduction to Operations Management

### Learning Outcomes

By the end of this unit the learner will be able to:

- ✓ Apply the best methods for creating, leading, and managing your own business
- ✓ Establish an organizational framework through operations, finance, and leadership
- ✓ Set up an effective and efficient system for hiring, retaining, and succession planning
- ✓ Start researching and designing your strategic plan
- ✓ Describe the essential elements of marketing, sales, and your company brand
- ✓ Apply financial and accounting terms correctly

## Unit 2

### Introduction to Operations Management

#### Defining Operations Management

Operations management is about how you do what you do every day to make sure that the business is running efficiently. The nature of your company will decide some of these things, naturally, but the actual functions don't differ at all. An operations manager may look after other elements of the business as well as operations, depending on the size and complexity of the operation.

Operational functions include:

- Designing
- Planning
- Organizing
- Directing
- Controlling

This means that we:

- Gather resources (ideas, people, space, and money)
- Design products and/or services and decide how to deliver them
- Sell, distribute, and service those products and/or services
- Learn and improve the operation based on feedback

Operations is called a **transformational process**, because we take an undeveloped product (or service), make it into something that we can sell, and then sell it. While this transformation takes place, we apply our operations strategy to it.

If we drew the process, it might look something like this:



### Types of Operations

You'll need to carefully determine the type of operation you run so that you can remain flexible for changing markets and still meet licensing and regulatory requirements. In Canada, for example, anyone can set up a sole proprietorship and work from home. However, that same person might have to get a business license from their town or city to be allowed to have customers visit. The tax department has rules about how income is treated and what items you can write off against that income. In addition, while some businesses have to abide by regional rules (a company that manufactures car parts, for example), transportation businesses like airlines and trucking companies have to abide by federal regulations. As your company scope grows and you wish to do business across regions or in other countries, you have to follow those rules, too.

When we talk about operations management, we generally categorize the business in the following ways (with plenty of overlap just to keep things interesting!):

- Manufacturing
- Transportation
- Supplies
- Service

### **Manufacturing**

This is about things that we physically make, such as picnic tables, computer components, rakes, and tractors. It also includes the way that we run factories, manage inventory, and perform related activities.

### **Transportation**

This is how we get our materials to our customers. It can include a fleet of delivery vans, large tractor-trailer units, taxis, and aircraft.

### **Supplies**

These are products that someone purchases from the company. Retail stores, grocery stores, and equipment for dentists are all supplies where the ownership starts out with your company and then changes over to a purchaser.

### **Service**

Service can refer to customer service that the company provides. For example, a server in a restaurant provides a service, as does the chef who prepares the meal. Service can also be provided by someone in a call center who answers the phone when customers call with questions. Perhaps we need to rent a car for two weeks, in which case we are using a rental service. Part of the service application can also include the way in which the company collects feedback (customer surveys, for example) or the way they process purchases (in person with cash or a credit card, on a smartphone, or online).

### **Overlaps**

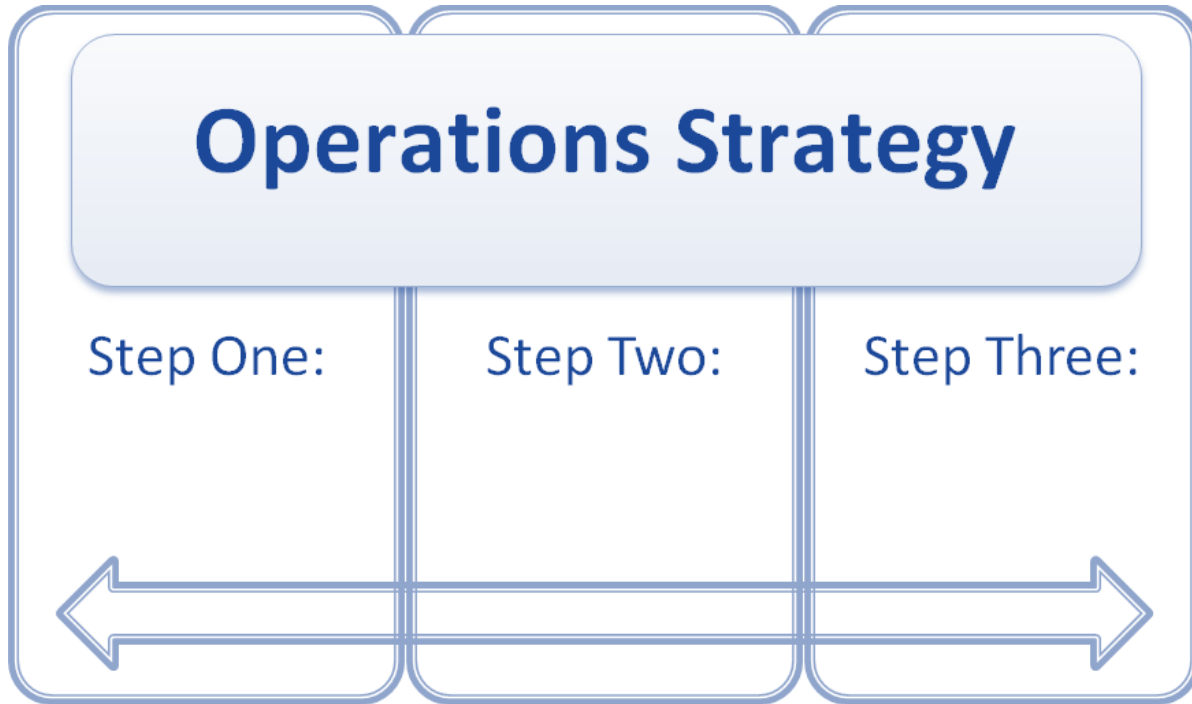
Naturally, there are companies who provide products or services that come from more than one area. This adds complexity to the operations management function, but is of the business world. For example, a company like Ikea Furniture has operations around the world. They manufacture and distribute furniture and accessories to their stores, and then sell, deliver, and in some instances assemble or install those purchases. They are involved in business as a manufacturer, a transportation provider, supplier, and service.

### **Buffers**

You will also see businesses who build buffers into their operations system. For example, a company that makes computers needs a steady supply of equipment and components in order to produce a complete unit. If a particular component is unavailable, the company cannot meet their manufacturing demands, and their customers will look elsewhere for their computers. As a result, the company may stockpile critical components in order to meet their targets. They also may arrange for backup suppliers or, to minimize the risk of a supply shortage, they'll also use several different suppliers.

**Practical Application**

Take the role of operations manager and put your operations strategy into the template below, considering the functions completed at each stage of the process. Be specific!



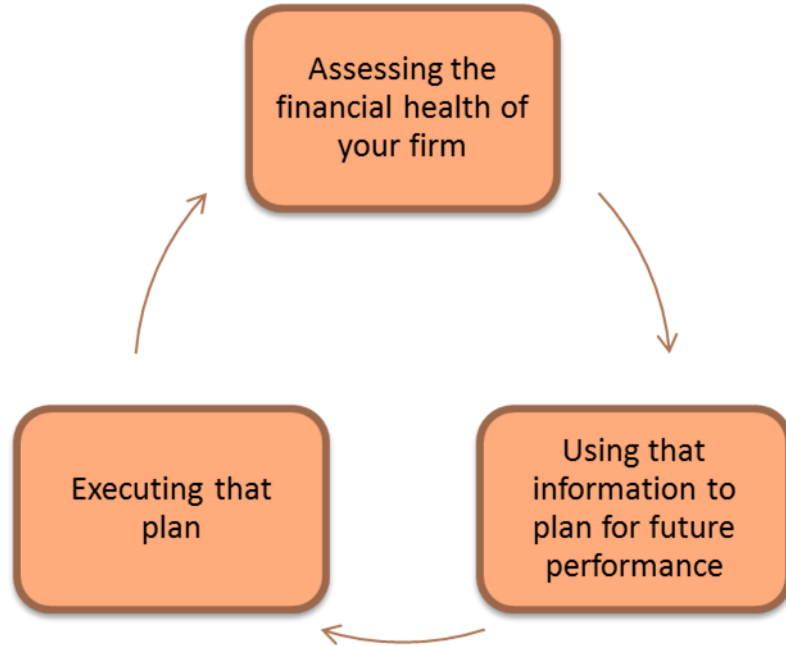
**Understanding Financial Terms**

**Accounting Terminology**

**Finance**

The Encarta Dictionary defines finance as, “the business or art of managing the monetary resources of an organization, country, or person.” Bookkeeping, banking, and accounting, are all separate processes with their own definitions.

Seth Godin describes finance as a three-cycle process that continues endlessly:



### Recording Financial Transactions

**Bookkeeping** is the exercise of identifying, categorizing, and recording all the transactions that take place in a business. In general, everything a company does results in a bookkeeping transaction, including things that take place between the business and:

- Customers, who buy products and services sold by the business
- Employees, who are paid wages and provided benefits
- Vendors, who sell services, equipment, and supplies to the business
- Government agencies, who collect taxes from the business
- Sources of equity capital (investors or owners who put money in and take it out of the business)
- Sources of debt capital (banks and lending institutions)

**Accounting**, on the other hand, is the methodology used to record the transactions and prepare financial statements and reports. Accounting guidelines govern how businesses record transactions. They also dictate the design of the recordkeeping system that a business uses and how reports are prepared, based on the information gathered and put into the system.

### General Accepted Accounting Principles (GAAP)

Accounting is simply a measurement. Measurements allow for consistency. Just like everyone knows what one foot (or 30 centimeters) of distance is, the business owner (or CEO) and all stakeholders should be confident that they know what a company's assets are. The accounting concepts and standards that govern consistency are called **generally accepted accounting principles (GAAP)**.

There can be slight differences between regions, but GAAP typically includes the following principles:

- Comparability among different companies
- Reliability of information
- The **business entity concept**: A business is a separate distinct entity from its owner/owners.
- The **matching principle**: Earnings and expenses must be recorded in the same accounting period that they relate to each other.
- The **cost principle**: Assets and service, and the resulting liability, are taken into the accounting records at cost.
- The **consistency principle**: A company's accounting procedures need to remain consistent over time. If they are changed, the reasons for the change and the financial impact of the change must be documented in detail.
- The **time period principle**: The operating period of the business is divided into equal periods of time, such as a month or a quarter.
- The **going-concern principle**: The business will continue to operate, using its assets to carry on its operations and, with the exception of merchandise, not offering the assets for sale that are necessary to run the business.
- The **objectivity principle**: Whenever possible, the amounts used in recording transactions are based upon objective evidence rather than on subjective judgments.
- The **stable currency assumption**: The idea that the purchasing power of the unit of measure used in accounting (such as the dollar or the euro) does not change. (In other words, a dollar bill will not become worthless overnight.)
- The **realization principle**: This principle defines revenue as an inflow of assets (not necessarily cash) in exchange for goods or services. It requires the revenue to be recognized at the time, but not before it is earned.

### Key Reports

#### The Income Statement

The **income statement** can also be called a profit and loss statement or operating statement. This is a summary of the income and expenses of a business during a certain period: monthly, quarterly, or annually. If the company has more income than expenses for a certain period it has net income (a profit). If the expenses exceed income, the company has a net loss.

Income can be broken into two broad categories: **service income** and **sales income**. The difference between the two lies in the need to consider inventory costs. Service income is derived from performing

a service while sales income is derived from selling a product. In general, service companies have staff that perform a service for a customer, while sales companies have product that they sell.

With service income, the profit can be determined simply by deducting expenses associated with performing the service. With sales income, however, you must consider the cost of creating the product (raw materials, labor, overhead, etc.). This inventory cost is referred to as the **cost of goods sold**.

### Income Statement Equation

The income statement equation typically looks like this:

$$\text{Revenue} - \text{Expenses} = \text{Net Income or Loss}$$

- **Revenue** is what the business earned from the sale of goods and services during this period.
- **Expenses** are bills (phone and Internet bill, insurance, payroll, advertising, etc.) incurred during this period.
- **Net income or loss** is the net financial result of the business efforts during that period. It must be added to the Equity portion of the balance sheet, which we will discuss in a moment.

Some examples of the types of accounts that influence net income and are reported on the income statement include:

- Revenue
- Advertising expenses
- Repair expenses
- Utilities expenses
- Wage expenses

### Sample Income Statement

Acme Widgets Inc. Income Statement For the Month Ended February 28, 20xx	
<b>REVENUE</b>	
Widget Sales	\$20,000
Widget Installation	\$1,500

Interest Income		\$500
<b>Total Revenue</b>		<b>\$22,000</b>
<b>EXPENSES</b>		
Rent	\$4,500	
Utilities	\$1,200	
Advertising	\$8,000	
Wages	\$5,000	
<b>Total Expenses</b>		<b>\$18,700</b>
<b>NET INCOME (LOSS)</b>		<b>\$3,300</b>

### The Balance Sheet

The purpose of a **balance sheet** is to show what a company **owns** and **owes** as of a specific date. Income statements are prepared “for the period ending” and balance sheets are prepared “as at” a certain date.

The balance sheet summarizes what the business owns and compares it to what the business owes. It does so in a standard format to make it easy to see what kind of financial shape the business is in. If a business has more assets than liabilities, that’s a good sign. On the other hand, if a company has more liabilities than assets, it might be a sign of trouble.

### Balance Sheet Equation

$$\text{Assets} - \text{Liabilities} = \text{Equity}$$

- **Assets** are anything that the business owns. Some examples: cash, office equipment, vehicles, tools, real estate, buildings, and land. **Bills that are prepaid** (such as monthly insurance premiums) are also considered an asset, as are **accounts receivable** (money that others owe to you).

- **Liabilities** are anything the business owes to others, including banks and suppliers. Money which a company owes as a result of its ongoing trading are generally called **accounts payable**.
- **Equity** is often a measure of what the business is worth. It is the combination of profits and money invested in or withdrawn from the company by its owners.

This is what people refer to as balancing the books: ensuring that this equation is always in balance.

Accounts typically reported on the balance sheet include:

- Accounts receivable (money owed to the company but not collected)
- Cash
- Equipment
- Accounts and notes payable
- Prepaid items
- Unearned revenue
- Vehicles, land, and buildings, and their accumulated, individual depreciation (decrease in value)

The term **consolidated balance sheet** refers to the “consolidation,” or adding together, of individual balance sheets of various related companies into one balance sheet which shows the financial position of the entire group of companies.

### **Current vs. Fixed Assets**

On a balance sheet, the assets of a business are generally broken down into two groups: current assets and fixed assets.

**Current assets** are generally considered to be anything that will be converted into cash within one year, such as cash, accounts receivable, and inventory. Current assets continually turn over through the company.

**Fixed assets** are more permanent in nature. This includes vehicles, equipment, machinery, land, and buildings. They represent an investment in items that are necessary to carry on its normal operations. Fixed assets can also revolve (to purchase new equipment or update technology, for example) but usually they revolve very slowly.

**Liquidity** measures how quickly a company can convert its assets into cash. An ample cash balance provides security that the company can meet its obligations. The easier the conversion is, the more liquid the asset. Here is a list of current assets in order from most to least liquid:

- Accounts receivable
- Inventory
- Fixed assets

### Cash Flow Statement

This shows the flow of cash for an accounting period. This statement is a bridge between the cash accounting method and the accrual accounting method in that it analyzes what transactions impacted cash and what were accruals.

The cash flow statement is usually divided into three sections.

#### Operating

- Cash flow for day-to-day operations
- Examples: Customer revenue, tax payments, interest, supplies purchased

#### Investing

- Cash flow generated from or consumed by assets
- Examples: Sale of a vehicle or purchase of a building

#### Financing

- Cash flow in from selling stocks or bonds or borrowing
- Cash flow out from purchasing stock back, paying out dividends, and repaying borrowed money

### Statement of Retained Earnings

This statement shows how much of the company's profits were kept inside the company, and not paid out in dividends.

#### Sample Statement of Retained Earnings

<b>Statement of Retained Earnings for Acme Widgets Inc. As At February 28, 20xx</b>	
Opening retained earnings	0
Add net income for the period	\$3,300
<b>Total Retained Earnings</b>	<b>\$3,300</b>
Minus dividends paid	(300)
<b>Retained earnings</b>	<b>\$3,000</b>

## Getting the Right People in Place

### Six Essential Steps of Hiring

When you know you are stretching beyond your capacity, or you need some additional expertise, it could be time to grow your team! Here we will present a step by step process from thinking you may need someone, to bringing that person on board. Even someone who works in a sole proprietorship needs the support of others to keep their business running smoothly, so we encourage you to consider every aspect of this section.

#### Step 1: Determining That You Have a Position to Fill

Look at your organization with a long range view and review your goals for growth and development. This will help you to create and fill the right position, rather than creating a position that is perhaps serving you in the short term, but doesn't give you the results that you intended.

#### Step 2: Doing Your Homework

Once you decide on the position to fill, you'll need to create a position profile or job description so that you know the type of expertise you will need to recruit. This will put you through an exercise of determining what tasks can be completed by this person, and whether you will hire the person full time, part time, on contract, or as a consultant.

#### Step 3: Recruiting

This is the process of finding and attracting the people that you want. Whether you do this yourself or use the expertise of a recruiter, it's important that you find the right people. In many cases, the people that you want to hire are already working. You'll need to find a way to reach them specifically. The way that we recruit and hire has changed dramatically in the last several years; we don't always advertise in the classified section of a newspaper anymore. Companies almost exclusively want e-mail and electronic submissions, but there are plenty of people who do not search the internet looking for work if they are happy in their job. You have to find them, rather than expect them to be looking for you. In a tight labor market, or when highly specialized skills are required, your ability to network, research, attract, and retain people becomes an essential skill.

#### Step 4: Selecting

The next step is to sort through your candidates and select the best candidate. **Interviewing** is the standard for determining if the person might be a good fit for your company. **Formal testing** helps to assert whether their claims of certain abilities and skills are valid, although there are legal issues that can arise if you use invalid tests. The other challenge to testing is that some people are really bad at writing tests, and you might pass on a candidate who could be a great fit for the company and has the ability to learn what is needed just because they do not test well. **Reference checking**, which is becoming more

and more difficult due to privacy concerns, is still relied upon and necessary to validate a person's work experience and their formal education.

### **Step 5: Offering**

You know who you want, and in this stage you offer them the job. During this conversation, you need to have information gathered that includes the salary you are willing to offer and terms of employment (contracts the candidate will have to sign, benefit entitlement, vacation, hours of work, expectations of the job, etc.). You also need to know to what extent you are willing to negotiate the contract, since your candidate may have some ideas about what they are willing to agree to.

### **Step 6: Orientation and Onboarding**

This is both the final step in the recruiting process and the first steps that the individual takes as a part of your organization. When employers do this badly, good people (whom they spent a lot of time and resources to find) leave the organization. Or worse, they wish they had left but continue to collect a paycheck from you while they keep their eyes open for new opportunities.

Be prepared for the new person **before** they start their new job, and then be ready to provide them with a welcome so that they start off on the right foot. This means that their workstations are ready (whether this is a cubicle, a position at a cash register, or the cab of a truck), people know they are coming, and that orientation forms are ready for them to sign.

People take from two to six weeks to decide whether they have made a good decision in starting a new job: your job is to engage their interest and commitment during the recruiting process, which might be well before they actually start work with you. If they arrive on the first day and cannot enter the building because they do not have an access pass, things are already off to a rocky start. The **orientation** period includes that critical first week or two the person is on the job, while they adapt to their new surroundings, and get familiar with their position and the team.

**Onboarding** is something we look at with a slightly longer lens than orientation. Onboarding is about the development of the individual's career within the new environment. Depending on the job itself, it can take from six months to a year or more for someone to feel fully competent, which may include experiencing a full cycle of the business. Your responsibility in the onboarding process includes providing the newcomer with appropriate feedback, ensuring that they are developing the skills and expertise to succeed (which benefits your organization), and that they are engaged in the work they are doing.

### **Test your Knowledge**

**Think of the recruiting process that you are using now.**

**Are you using all six steps that we have outlined?**

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**What are you missing?**

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**How can you incorporate what is missing with the process outlined here?**

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## Getting Your Product Together

### Inventory Management

Managing inventory is about having what you need when you need it, and being able to move it. Salespeople prefer to have ample inventory available so that they do not lose a sale. For example, a car salesperson needs to have a good selection of cars available so that potential customers don't walk across the street and buy from the competition. Financially, however, we actually want to keep as little inventory in stock as possible, because money tied up in products that we are storing until sold is money that we cannot use somewhere else.

The balancing act, then, is to figure out how much inventory to hold and how much our customers will demand. Products that are held in a retail situation (such as a bookstore) are often sold at a retail price, and then the price gets reduced on older merchandise so that the store can bring in different products. If the original supply of books, in this example, does not sell, the product may be returned to the

manufacturer, who then has lost revenue to contend with. Working with all of these elements is what we refer to **supply chain management**.

Inventory has three forms that are common in all business, whether you are working in a computer assembly plant or a frozen treat company:

- Raw material (sugar, water, food coloring, flavor, wooden sticks, paper)
- Work in progress (frozen treat base being mixed in different colors and flavors)
- Finished product (orange, lime, and pineapple frozen treats ready for sale)

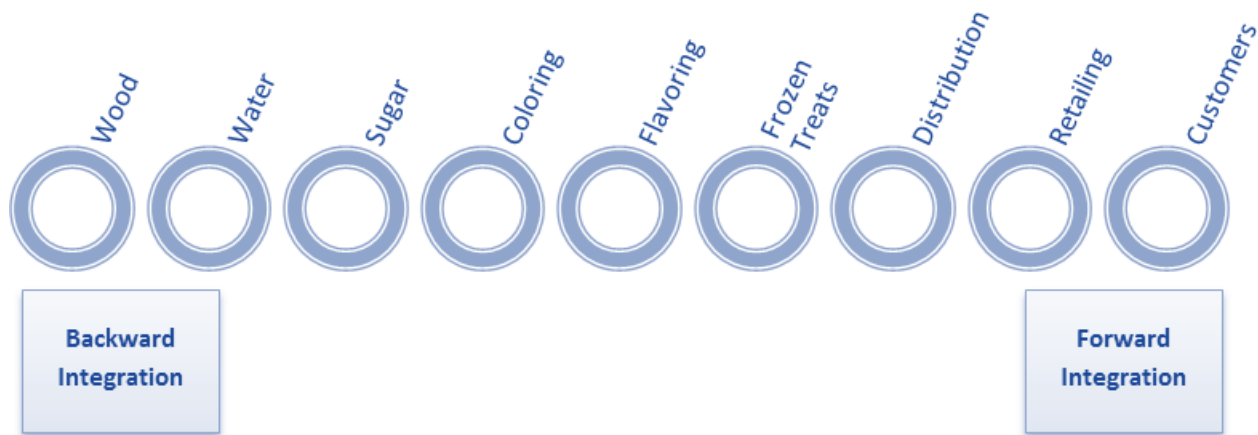
As you can see, your inventory includes resources involved in material production and labor. If you hold your inventory (and there are lots of reasons that companies do so), your money cannot be directed to other areas.

Reasons to hold inventory might include:

- **Buffer or Pipeline:** Inventory held to avoid production delays and to maintain efficiency.
- **Cycle:** Suppliers (or bulk pricing) may require that you order minimum amounts that are larger than you can use quickly.
- **Contingency:** Supply shortages cost money if production is stopped because of uncertain availability.
- **Anticipation:** Inventory that is stocked up in preparation for high demand period. (Example: Back to school supplies that flood stores before the school year begins.)
- **Speculation:** When supplier prices are expected to increase, the company purchases ahead of time to avoid the increase.

### Understanding the Value Chain

Understanding your value chain helps to answer the question, “What business are you in?” by figuring out the value of your products. The frozen treat maker’s value chain looks like this:



At each link in the chain, we can identify participants who add value at that step. When a company participates closer to the raw product, they are termed as being integrated backward. If they work closer

to the finished product, they are integrated forward. So, if your company steps into the chain at the beginning (perhaps you make the rounded stick from birch), you are integrated backward. If you are distributing the finished products to retail stores after marketing the range of colors and flavors, you are integrated forward.

**Test your Knowledge**

Use the space below to draw a value chain diagram for one of your products or services.

**Are you in a position of backward or forward integration?**

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**Is where you intended to be?**

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**Do you need to make changes?**

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**Outsourcing Options**

As you consider your business, who you will hire, and what inventory you will hold at certain times, you can see where costs can quickly escalate. As the business grows, the owner also becomes pulled in many different directions. One way to minimize some of these issues is to contract out, or outsource certain elements of work. **Outsourcing** includes contracting elements of the work to another company or individual who can provide you with that you need.

Pros	Cons

**Quality Control**

Despite what people may think, **quality does not mean that our products or services are supposed to be perfect.** It means that they meet a particular standard.

**The process of quality control** ensures that products or services meet the standard which might be defined in an employment contract, through product specifications, or by your customers. As customers become more and more demanding, they may have very high expectations about quality. Sometimes it is the job of the company to clarify what level of quality can be expected.

In a call center, quality standards may state that all calls must be answered within 30 seconds. In a bread bakery, a quality standard may state that all loaves meet a particular size when they are baked.

Quality is influenced heavily by the **management philosophy** that underpins the organization. In some instances, managers may take a pessimistic view of their employees and see them as always needing to be encouraged and motivated externally. In other organizations, managers believe that workers are motivated, that they want to learn, and that they want more responsibility. Some of these theories led to speculation about how some companies can get a competitive advantage. There is a lot of debate

about how valid the theories are, but it cannot be disputed that some companies have better results than others.

To improve quality, operations must continuously review results and look for ways to improve efficiency. A practice which started in Japan and has now been widely adopted is to hold regular meetings called **quality circles**, where employees and managers meet and discuss challenges and implement improvements that will meet the standard.

**Identify some areas within your company where you need to consider a quality control process.**

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**Further Reading:**