CHAPTER 4

Operations strategies

OVERVIEW

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4.1 Introduction

To achieve operations goals and broader business goals, operations managers can apply numerous operations strategies. An overview of the operations strategies that can be applied are shown in figure 4.1. Note that the full range of operations activities is subject to the strategies. You can see that the strategies relate to inputs, sourcing and supply chain management and transformation (or throughput) processes that involve technology, quality management and inventory management as well as outputs.

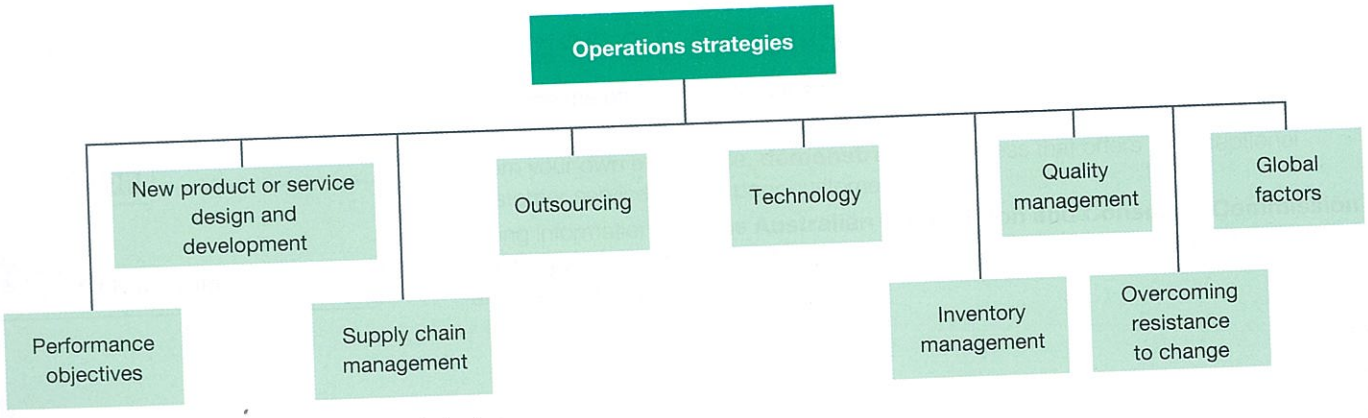


FIGURE 4.1 An overview of operations strategies

As with all strategies or tactics, the starting point is a set of goals or performance objectives. These performance objectives help define what inputs are required and influence all aspects of the transformation processes.

4.2 Performance objectives

When dealing with the operations function of business, particular performance objectives are targeted by managers. **Performance objectives** are goals that relate to particular aspects of the transformation processes. These objectives or targets will be set so that the business becomes more efficient, productive and profitable. The performance objectives help to inform all of the strategies that are discussed in this chapter. The operations strategies seek to achieve one or more of the performance objectives detailed below. The six main performance objectives that can be allocated to particular key performance indicators (KPIs) are:

- quality
- flexibility
- speed
- customisation
- dependability
- cost.

BizWORD

Performance objectives *are goals that relate to particular aspects of the transformation processes.*

4.2.1 Quality

As a performance objective, quality has many aspects, some of which are addressed later in this chapter. Quality is often determined by consumer expectations, which are used to inform the production standards applied by the business. Quality performance objectives include:

- quality of design
- quality of conformance
- quality of service.

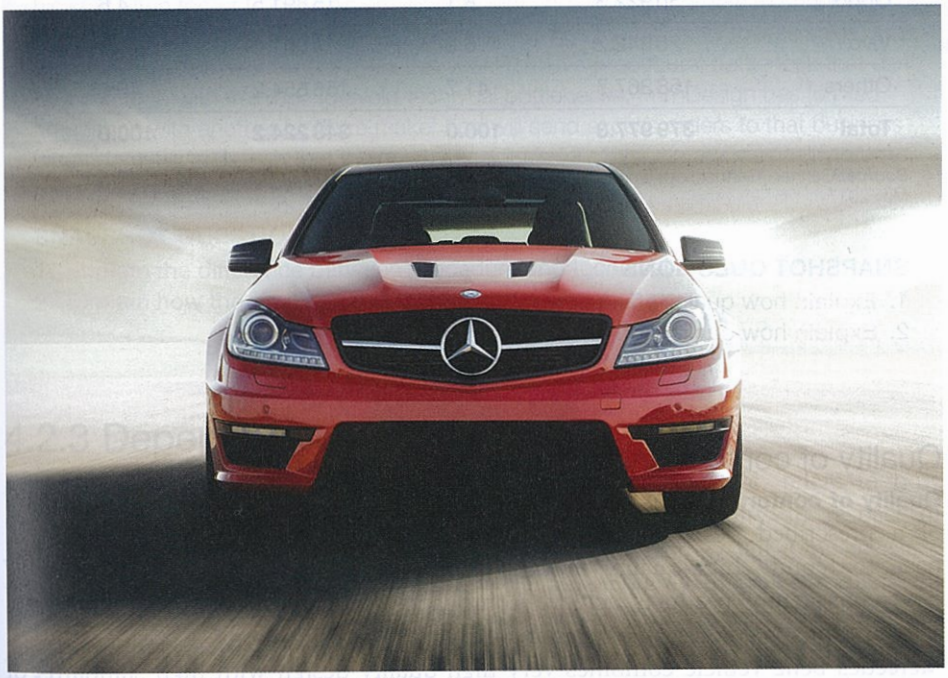


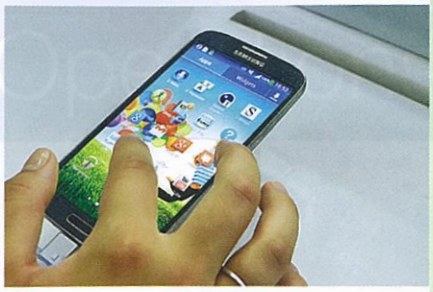
FIGURE 4.2 Mercedes-Benz — an example of an organisation that competes on quality

Quality of design

Quality of design arises from an understanding of consumers and their preferences. It extends to how well a product is made or a service is delivered. Design begins prior to the creation of a product. Design determines the inputs, and how the transformation processes will be arranged and will perform in relation to the production of the good or service. Typically, a high-quality design for a good will be clear from the high-grade materials used in manufacturing, the care and presentation of the good, how aesthetically pleasing and functional the good is, and how robust and long-lasting it is. Well designed and produced goods will normally attract a high price. As a performance objective, a business needs to decide the quality of product it will deliver to the market. As high-quality inputs add cost,

this will be reflected in a higher price that some consumers may not want to pay. In the electronics market, this is evident as shown in the following Snapshot.

SNAPSHOT



'Both Apple and Samsung are noted for their quality.'

Apple and Samsung — quality and price

While Apple is the most recognisable smartphone brand, it is not the most-sold or most-purchased brand (see table 4.1); Samsung makes the most-used mobile smartphone. Both Apple and Samsung are noted for their quality. High quality is achieved when a business focuses on its operations processes and implements strategies to achieve performance objectives such as quality. Global brands such as Apple and Samsung invest huge amounts of money into product design and into product development and testing. The large volume of investment and the focus on innovation means that these brands can charge a premium price that reflects the cost of investment as well as the quality of the products.

TABLE 4.1 Worldwide smartphone sales to end users by vendor in 1Q17 (thousands of units)

Vendor	1Q17 units	1Q17 market share (%)	1Q16 units	1Q16 market share (%)
Samsung	78 671.4	20.7	81 186.9	23.3
Apple	51 992.5	13.7	51 629.5	14.8
Huawei	34 181.2	9.0	28 861.0	8.3
Oppo	30 922.3	8.1	15 891.5	4.6
Vivo	25 842.2	6.8	14 001.0	4.0
Others	158 367.7	41.7	156 654.2	45.0
Total	**379 977.3**	**100.0**	**348 224.2**	**100.0**

Source: Gartner, 'Gartner says worldwide sales of smartphones grew 9 percent in first quarter of 2017', May 2017

SNAPSHOT QUESTIONS

1. **Explain** how quality affects the reputation of a product.
2. **Explain** how quality and price are related.

BizWORD

Quality of conformance *is the focus on how well the product meets the standard of a prescribed design with certain specifications.*

Quality of conformance

Quality of conformance is the focus on how well the product meets the standard of a prescribed design with certain specifications. The specifications do not have to require high-quality inputs. Quality of conformance is a measure of how consistently products achieve compliance (conformance with) the desired specifications regardless of the standard of the specifications. Consider this: a Mercedes Benz vehicle combines very high-quality design with high standards of conformance. A cheap plastic toy is of very low-quality design but if it meets the low-quality design specifications, it would have a high standard of conformance, indicating a certain quality of process.

Quality of service

Quality of design and quality of conformance can be applied to the design and delivery of services. In this sense quality refers to:

- how reliable the service is
- how well the service meets the specific needs of the client
- how timely or responsive the service delivery is.

Quality is a crucial aspect that distinguishes products in the market. Quality management is examined in more detail later in the chapter.

4.2.2 Speed

Speed refers to the time it takes for the production and the operations processes to respond to changes in market demand. Speed requires that changes in input levels and processing times can be made in response to consumer demand.

As a performance objective, speed aims to satisfy customer demands as quickly as possible. Therefore, goals for speed include:

- reduced wait times
- shorter lead times
- faster processing times.

To achieve these goals requires a reduction in procedural and technical bottlenecks and smooth internal communications. A procedural bottleneck can occur when internal processes that ensure smooth operations are not followed. Consider the following Snapshot.

BizWORD

Speed *refers to the time it takes for the production and the operations process to respond to changes in market demand.*

Case study: FurnDesign — avoiding bottlenecks

FurnDesign Pty Ltd accepts orders for handmade furniture. The sketches from the clients must be scanned then emailed, and FurnDesign turns these sketches into computer-generated images. All emails come into a common inbox and are generally held there until viewed by the salespeople. The senior salesperson and designer, Johnson, has requested his staff to send his clients' emails to him directly. However, his staff often forget to pass his emails onto him and Johnson forgets to check the common inbox. When this happens, the business has the potential to lose sales, and unfortunately, has already lost three this year. This is a procedural bottleneck that can be overcome with training. To avoid technical bottlenecks, FurnDesign has formed an alliance with another furniture maker and will send excess orders to that business when demand is so high that their own capacity is full. This change required staff training to ensure they follow procedures carefully.

SNAPSHOT QUESTIONS

1. **Explain** the difference between procedure and technical bottlenecks.
2. **Explain** how the procedural bottleneck can be overcome.

SNAPSHOT



'This is a procedural bottleneck that can be overcome with training.'

4.2.3 Dependability

Also called reliability, **dependability**, as a performance objective, refers to how consistent and reliable a business's products are. Dependability, in respect of goods, refers to how long the products are useful before they fail. One measure of dependability is measured by warranty claims. A highly durable product is a dependable product. Perishable products can also be dependable if they are of consistent and predictable standard.

In respect of services, dependability refers to consistency of service standards and reliability. A measure for service dependability is the number of complaints received; the fewer the complaints the more dependable the service.

BizWORD

Dependability, *as a performance objective, refers to how consistent and reliable a business's products are.*

4.2.4 Flexibility

Also called adaptability, **flexibility** refers to how quickly operations processes can adjust to changes in the market. For example, changes in market demand cause a pressure on capacity. However, it may take three months for the business to change capacity. Similarly, it can take a business months to create a new product or extend a product line. It is important to note that time and flexibility are related; the faster the processing time the greater the likelihood that processes can be adjusted quickly.

BizWORD

Flexibility *refers to how quickly operations processes can adjust to changes in the market.*

Flexibility can be best achieved by increasing the capacity of production. This can be done by using plant and machinery better. Alternatively a business can buy new technologies that increase flexibility and capacity. Another option is changing the product design, thus creating a broader variety. These options enable the business to better meet a broader range of consumer desires.

With services, flexibility can be achieved through increasing the number of service providers, increasing the provider's skill level and through improving the level of technology used when providing the service.

4.2.5 Customisation

BizWORD

Customisation *refers to creation of individualised products to meet the specific needs of the customers.*

Most products tend to be standardised; however, over time customer preferences are creating a custom option for goods. **Customisation** refers to creation of individualised products to meet the specific needs of the customers. Services are generally customised, although aspects of services can be standardised as seen in the fast-food sector.

A customer orientation to operations might imply that over time businesses would push operations processes towards customisation. However, while there is greater choice for consumers these days than at any time in history, standardisation of products is still the most widely used option. Variations in product features such as colour, size and functionality offer some level of differentiation between products. Consequently, the production of many of today's goods and services are based on the principle of **mass customisation**; a process that allows a standard, mass-produced item such as a motor vehicle or computer, to be personally modified to specific customer requirements. However, full customisation is rare and can only be offered when products (goods or services) are created after an order specifying the requirements is received. The cost of customisation is higher than the cost of mass producing standardised products. For this reason, only businesses with a product that can be easily adapted tend to customise unless the actual business model is one of a customised approach to all products.

BizWORD

Mass customisation *is a process that allows a standard, mass-produced item to be personally modified to specific customer requirements.*

SNAPSHOT



'. . . a unique mass production strategy . . .'

on Resources

Weblink: Adidas

Case study: Adidas — mass customisation

Adidas has come up with a unique mass production strategy. It undertakes mass customisation. In order to do so Adidas varies the standard product offerings for a range of shoes and clothing. Allowing people to personalise their purchase through detailing their specific size requirements, Adidas enables consumers to experience the benefits of mass customisation. The customisation aspect of Adidas is called 'miAdidas' — a reference to the individual consumer's chance to order customised (personalised) products. The level of personalisation can extend to varying the size (length and width) of shoes for either foot and can opt for colour, style and size variations in clothing. However, in order to allow production processes to adapt to variation in orders the number of variations or choices is limited. In this way the process may be termed 'constrained customisation'.

SNAPSHOT QUESTIONS

1. **What** is mass customisation?
2. **How** does mass customisation affect sales?
3. **Describe**, through visiting the miAdidas website, the range of customisable options available for consumers.



FIGURE 4.3 In what may sound like a contradiction in terms, many businesses are integrating mass production/standardisation principles with customisation: mass customisation. Most vehicle manufacturers use this process in their production and operations processes. Customers can add optional extras to suit their personal tastes.

4.2.6 Cost

Cost as a performance objective refers to the minimisation of expenses such that operations processes are conducted as cheaply as possible. When a business sets up its operations processes, often the costs incurred determine the price. Over time, businesses seek to become more efficient and thus allocate costs better. The acquisition of new technologies can help a business to lower costs, use inputs better and minimise wastage. All of these reduce operational costs. Moreover, a business will also seek to reduce supplier costs, manage inventory to reduce holding and movement costs, and find distribution methods that are most cost and time effective.

All of the performance objectives will be allocated particular targets or goals, and will be measured against the achievement of those targets. In this way, the performance objectives are expressed as KPIs, with particular levels associated with each. Although not all performance objectives can be fully realised all the time, a business will have targets for each of them and will allocate resources to target the performance objective that is most likely to have the best impact on the bottom line or business profitability.

BizWORD

Cost *as a performance objective refers to the minimisation of expenses so that operations processes are conducted as cheaply as possible.*

SUMMARY

- Operations strategies are based around the need to achieve performance objectives.
- Performance objectives are goals that relate to particular aspects of the transformation function and can be allocated to particular key performance indicators (KPIs) in the following areas.
  - Quality, including:
    - design — how well a good is made or a service is delivered
    - conformance — how well the good or service meets a prescribed design with a certain specification
    - service — how reliable, suitable and timely the service delivery is
  - Speed: the time it takes for the production and the operations processes to respond to changes in market demand
  - Dependability: how consistent and reliable a business's goods or services are
  - Flexibility: how quickly operations processes can adjust to changes in the market

studyon
Syllabus area 1
Topic 4
Concept 1
Performance objectives
Summary screen and practice questions

- Customisation: the creation of individualised goods or services to meet the specific needs of the customers
- Cost: the minimisation of expenses so that operations processes are conducted as cheaply as possible

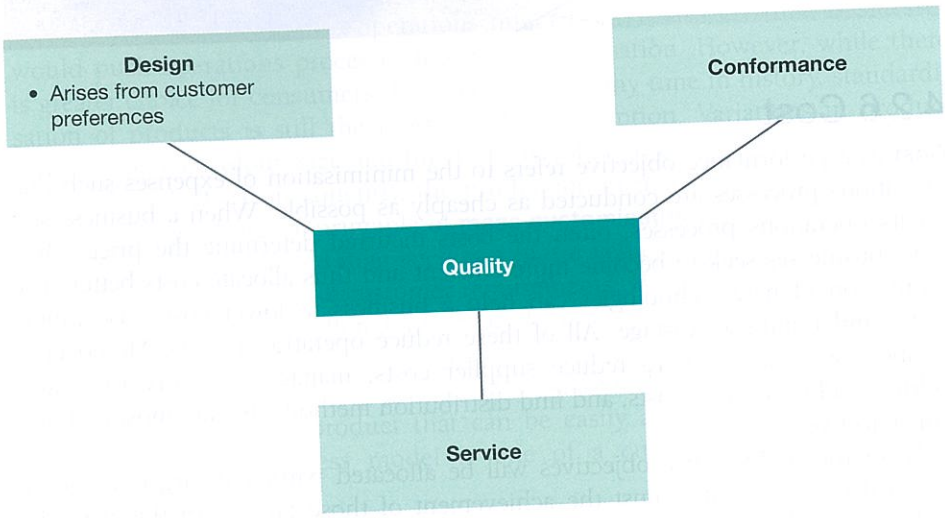
- Each of the performance objectives will be allocated targets or goals.

EXERCISE 4.1 REVISION

1 **What** are six performance objectives used by operations managers?

2 (a) **Identify** a performance objective for a business that makes cars.
(b) **How** can a service-based business, such as an accountant, use performance objectives?
(c) **When** are performance objectives necessary for a business?

3 Complete a concept map to **summarise** the three quality performance objectives. The concept map has been started for you.



4 **Demonstrate** what is meant by the term 'speed' in relation to operations processes.

5 **Recall** three goals for speed.

6 **Demonstrate** the impact of a bottleneck on speed in operations processes.

7 **What** is the relationship between dependability and the number of warranty claims or complaints received about a product?

8 **Describe** how flexibility of processes is linked to market demand.

9 **Why** is full customisation of products rare?

10 **Account** for why many businesses offer mass customised products.

11 **Identify** three operations strategies a business can use to reduce cost.

EXERCISE 4.1 EXTENSION

1 **Assess** the role of performance objectives in achieving maximum productivity.

2 In small groups, use the brainstorm technique to **determine** what happens when the product's performance:
(a) does not meet customer expectations
(b) meets customer expectations
(c) exceeds customer expectations.
Select a spokesperson to share your group's comments with the rest of the class.

3 Using the table that follows, **propose** how the performance objectives you have learned about can be used to evaluate the operations processes.

Key performance indicator	How the KPI can be used to evaluate the operations processes
Quality	
Speed	
Dependability	
Flexibility	
Customisation	
Cost	

4.3 New product or service design and development

An important strategy for the operations processes of business is the creation, or design and development, of new products (goods and services). The design, development, launch and sale of new products enables a business to grow and to attain a competitive advantage.

4.3.1 Product design and development

There are different approaches to product design and development. The first arises from a specific approach to product development. The preferences and desires of consumers, as identified by market research, determine which products are designed and developed.

The second arises from changes and innovations in technology that enable new, appealing products to be made because they use advanced technologies, which give products greater functionality. This is the approach that Apple and Samsung both use. Apple's major strength is that it maintains complete control over the design and development of both software and hardware, unlike many other companies that outsource product design to save on cost.

The steps in the product design and development process are shown in figure 4.5. This figure details some of the important considerations arising in product design and development.

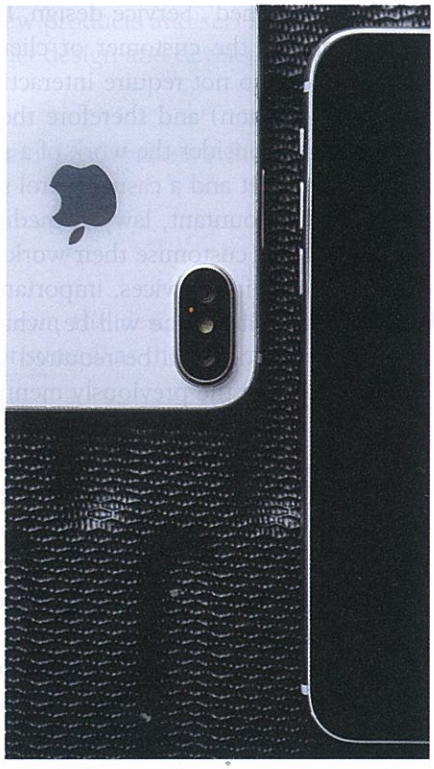


FIGURE 4.4 One of the main reasons for Apple's continued success is because they understand the power of product design and development. Apple has established a reputation as a company that produces extraordinary products that grab the attention, and loyalty, of customers.

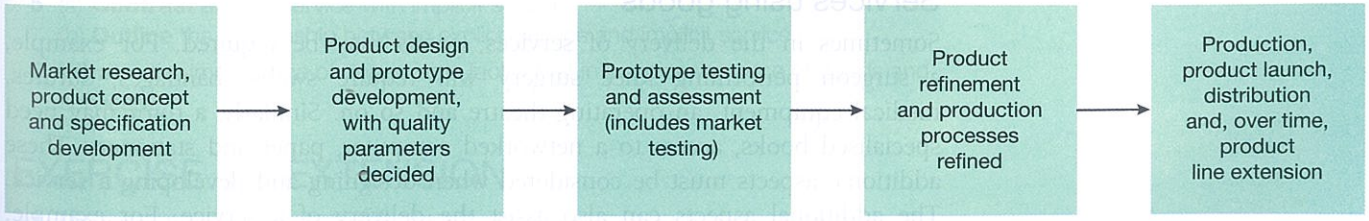


FIGURE 4.5 The steps in the product design and development process

Important considerations when designing and developing a product are quality, supply chain management, capacity management and cost. These factors must be taken into account throughout the design and development process. Supply chain management, as a factor, is an important consideration, because a new product will draw from suppliers and may extend the range of supplies sought, the timing or the volume of supplies. Quality is a factor that must be considered because in this market-orientated production, the customers will demand particular quality, and certain attributes and features. Furthermore, any new product will have an impact on capacity and may increase the use or range of present resources, or require an investment in new technology and machinery. Finally, cost must be considered. Cost arises from the addition of value through processing. Cost can be determined from the amount of inputs, time and energy used in processing. Value is directly related to cost but also includes the customer's perception of product utility. **Product utility** is defined as the usefulness and value that a product has from the consumer's point of view. These four factors (quality, supply chain management, capacity management and cost) should be considered by operations managers while proceeding through all aspects of product design and development.

BizWORD

***Product utility** is defined as the usefulness and value that a product has from the consumer's point of view.*

4.3.2 Service design and development

Services differ from goods in that they are intangible and as they are produced they are also 'consumed'. Service design, being customised in nature, has always taken the position of the customer or client as the starting point in design. However, some services do not require interaction with the customer or client (or have very limited interaction) and therefore they tend to be largely standardised in nature. For example, consider the work of a shelf packer in a grocer, a short-order cook in a fast-food outlet and a casual petrol station attendant. Contrast this work with the work of an accountant, lawyer, medical specialist or journalist. Each of the latter professions will customise their work to the needs of a client.

When designing services, important aspects must be considered. These include what the **explicit service** will be, what the anticipated **implicit service** will be and what, if any, goods will be required with the delivery of the service. Cost will be determined once the previously mentioned features have been determined.

BizWORD

***Explicit service** is also called the tangible aspect of the service being provided, such as the application of time, expertise, skill and effort.*

***Implicit service** is based on a feeling and is therefore intangible. The implicit aspects of a service are the psychological wellbeing — the feeling of being looked after — that comes with the provision of the service.*

Explicit service is also known as the tangible aspect of the service being provided such as the application of time, expertise, skill and effort. Implicit service is based on a feeling and is therefore intangible. The implicit aspects of a service are the psychological wellbeing — the feeling of being looked after — that comes with the provision of the service. In design, both the explicit and implicit aspects need to be addressed. All clients or customers using a service need to feel that their particular needs are being met. Therefore, when it comes to design, the service, level of skill, time and expertise must be considered so that as the service is being delivered, the customer knows that they have been specifically catered for. This would give implicit satisfaction.

Services using goods

Sometimes in the delivery of services, goods may be required. For example, a surgeon performing knee surgery will require swabs, bandages, sutures, medical equipment, an operating theatre and so on. Similarly, a tutor may need specialised books, access to a networked computer, paper and stationery. These additional aspects must be considered when designing and developing a service. The additional aspects can also assist the delivery of a service. For example, technological breakthroughs in equipment can create a range of services that did not previously exist, as shown in figure 4.6.

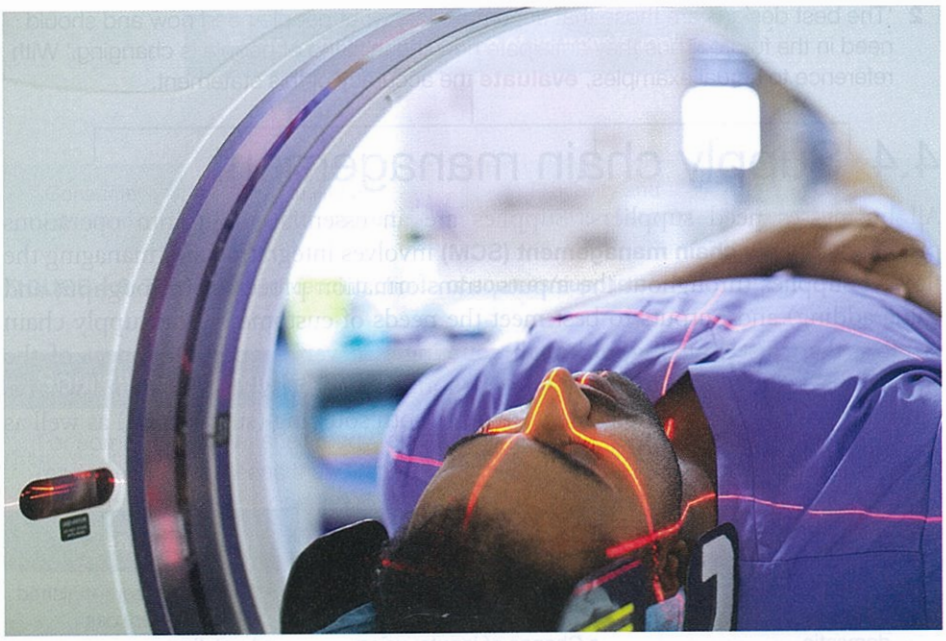


FIGURE 4.6 New services arise from technological breakthroughs. For example, developments in laser technology have led to the creation of new types of businesses that adopt such technologies. Laser technology is used in eye correction surgery, cosmetic surgery, hair removal and skin treatments.

SUMMARY

- A business needs to design and develop new products and services.
- Two different approaches determine product design and development:
  - consumer preferences
  - changes and innovations in technology.
- Important factors in new product design and development include:
  - quality
  - supply chain management
  - capacity management
  - cost.
- Service design and development differs from the design and development of products as services are intangible and 'consumed' as they are produced.
- A service can be:
  - explicit — the application of time, expertise, skill and effort
  - implicit — the feeling of being looked after.

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Syllabus area 1
Topic 4
Concept 2

New product/service design and development
Summary screen and practice questions

EXERCISE 4.2 REVISION

1 **Distinguish** between two approaches that can be used for product design and development.
2 **Why** is Samsung such a successful business? In your answer refer to some of Samsung's products and their approach to innovation.
3 **Describe** the four factors that must be given consideration when undertaking new product design and development.
4 **Why** are customers (or clients) important to the design and development of services?
5 (a) **Contrast** explicit service with implicit service.
(b) **Outline** the relationship between explicit service and implicit service.
6 **What** is the importance of design as a factor that influences the price of goods and services?

EXERCISE 4.2 EXTENSION

1 Research the designs created by a furniture-maker, clothing brand or car manufacturer and **assess** how well that producer takes into account customer needs when making designs. Make direct reference to a range of products in their portfolio.

2 'The best designs are those that accommodate what people need now and should need in the future. Thus they anticipate how the thinking of people is changing.' With reference to actual examples, **evaluate** the accuracy of this statement.

4.4 Supply chain management

BizWORD

Supply chain management (SCM) *involves integrating and managing the flow of supplies throughout the inputs, transformation processes (throughput and value adding) and outputs in order to best meet the needs of customers.*

All businesses need suppliers. Supplies are an essential input into operations processes. **Supply chain management (SCM)** involves integrating and managing the flow of supplies throughout the inputs, transformation processes (throughput and value adding) and outputs to best meet the needs of customers. The supply chain is more than just sourcing, although sourcing is a very important aspect of the supply chain. Since the supply chain is also influenced by what is sold and what is returned, supply chain management involves both sourcing (supply-side) as well as logistics and distribution (see figure 4.7).

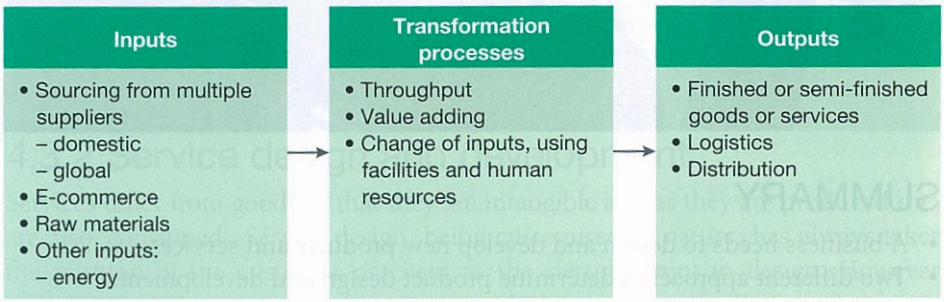


FIGURE 4.7 A representation of the supply chain for contemporary business

The supply chain for a product can be understood by starting with the final product and then tracing backwards through all processes that add value, all the way to inputs. This process demonstrates that the supply chain includes production processes, suppliers of raw materials, energy, labour, distribution and all sources (domestic and global). This type of analysis of supply, which is a 'top-down' or systems approach, is necessary when creating strategies for supply chain management.

There are three key aspects to supply chain management. In order of processing, these are:

- sourcing, including global sourcing
- e-commerce
- logistics.

4.4.1 Sourcing

BizWORD

Sourcing *refers to the purchasing of inputs for the transformation processes.*

Also called 'procurement' or 'purchasing', **sourcing** refers to the purchasing of inputs for the transformation processes. Sources or inputs are drawn from a range of suppliers. When determining which sources to use (choosing a supplier), a business will need to do each of the following.

- Assess consumer demand so that the volume of inputs required is known.
- Determine the quality of inputs that match the quality of the products that the business would like to deliver to the market in produced goods.
- Assess how responsive (flexible) and timely the supplier is with respect to changes in demand.
- Evaluate the cost of supplies/inputs from the supplier against other suppliers offering supplies of similar quality.

Sourcing strategy typically revolves around these four factors as shown in figure 4.8.

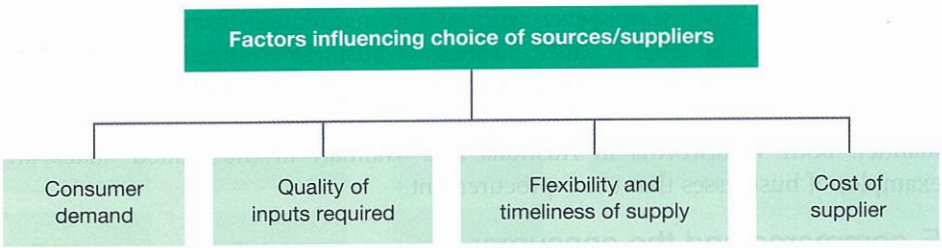


FIGURE 4.8 The factors influencing choice of sources/suppliers

Sourcing and packaging

For some years now 'shelf ready' packaging has been use by supermarkets. Shelf ready packaging means that the product is sold in the cartons they were transported in; the cartons can be opened to display product without removing the product from them. This saves the retailer time in stocking goods on the shelves in store and ensures that supplies are presented as desired by the manufacturer.

In addition, suppliers to the main supermarkets will actually measure the size of the fridges used in store. This information is used to determine how best to package product in order to fit as much stock as possible on the fridge shelves. In this way, the suppliers support the retailers, while ensuring they get as much exposure in store as possible.

SNAPSHOT QUESTIONS

1. **What** is meant by shelf ready packaging?
2. **Provide** examples of products you have seen that are displayed in shelf ready cartons.

SNAPSHOT

'This information is used to determine how best to package product in order to fit as much stock as possible . . .'

4.4.2 Global sourcing

Businesses are increasingly utilising technologies and structuring their operations in such a way as to take advantage of global sourcing. **Global sourcing** is a broad term that refers to businesses purchasing supplies or services without being constrained by location. In the supply chain management activity, global sourcing means buying or sourcing from wherever the suppliers are that best meet the sourcing requirements. Global sourcing carries particular benefits and also can create particular challenges. For example, particular benefits include cost and expertise advantages, and access to new technologies and resources. Challenges arising with global sourcing include the possible relocation of aspects of operations, the increased cost of logistics, storage and distribution, managing different regulatory conditions between nations, and the increasing complexity of overall operations when sourcing from diverse locations. Global sourcing is broadly discussed later in this chapter.

BizWORD

Global sourcing *is a broad term that refers to businesses purchasing supplies or services without being constrained by location. In the supply chain management activity, global sourcing means buying or sourcing from wherever the suppliers are that best meet the sourcing requirements.*

4.4.3 E-commerce

E-commerce involves the buying and selling of goods and services via the internet. With reference to supply chain management, e-commerce is relevant to particular forms of sourcing. The impact of e-commerce may be explained with reference to the business and its sourcing, and the customer and their orders that are received electronically.

BizWORD

E-commerce *involves the buying and selling of goods and services via the internet.*

Business sourcing and e-commerce (e-procurement)

Many businesses have their supply chain managed through electronic ordering. **E-procurement**, or the use of online systems to manage supply, allows suppliers direct access to the business's level of supplies. When stock falls to a pre-determined

BizWORD

E-procurement, *or the use of online systems to manage supply, allows suppliers direct access to the business's level of supplies.*

BizWORD

B2B *refers to direct access from one business (the supplier) to another (the buyer), allowing the supplier to assess the needs of the buyer and meet them in a timely manner.*

BizWORD

B2C *is the selling of goods and services to consumers over the internet, with payment usually by credit card.*

BizFACT

Note that e-commerce has had a significant impact on physical distribution. Consumers in Australia and other nations are increasingly shopping and buying online. This means that distribution from the business to the consumer must be quick, efficient and secure.

point, the supplier will supply even without a formal request from the buyer. This process is enabled by what is called business-to-business arrangement (B2B). **B2B** refers to direct access from one business (the supplier) to another (the buyer), allowing the supplier to assess the needs of the buyer and meet them in a timely manner. Both Woolworths in Australia and Walmart in the United States are examples of businesses that use e-procurement.

E-commerce and the consumer

The increasing use of e-commerce by consumers also has an effect on the supply chain. Businesses may opt to sell directly to consumers in transactions called business-to-consumer — **B2C**. Alternatively, technology may allow specialist sites to sell or auction to customers. An example is Agoda.com, which sells accommodation to travellers on behalf of hotels. A business that sells direct to consumers via the internet or that allows other internet-based businesses to do so clearly must be able to manage supplies that are affected by this diversity of ordering options. In this case, it should be clear that stock levels must be managed well and information exchanged frequently so that accurate stock levels can be presented to prospective customers.



FIGURE 4.9 The internet is revolutionising how businesses and consumers interact. When the Australian dollar trades at high levels, then online purchases are relatively cheap. Sometimes purchasing from other nations can be lower than half the cost of purchasing from a local retailer and freight may be free. This represents a very significant challenge for domestic retailers.

BizWORD

Logistics *is a term broadly referring to distribution but includes transportation (including transportation modes), the use of storage, warehousing and distribution centres, materials handling and packaging.*

Distribution *refers to the ways of getting the goods or services to the customer.*

4.4.4 Logistics

The third supply chain strategy involves the use of logistics. **Logistics** is a term broadly referring to distribution but also includes:

- transportation (including transportation modes)
- the use of storage, warehousing and distribution centres
- materials handling and packaging.

Distribution

Distribution refers to the ways of getting the goods or services to the customer. A business may use different forms of physical distribution. These are shown in figure 4.10.

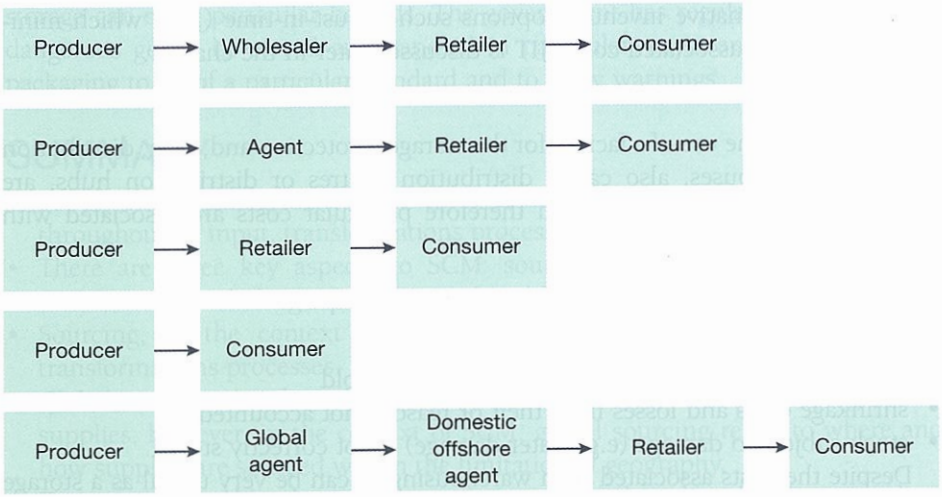


FIGURE 4.10 The different forms of distribution channel or channel choices that may be used in physical distribution

Transportation and distribution

This aspect of logistics is concerned with the physical movement of inventories. Various modes of transportation can be used and each has its own strengths and weaknesses, as shown in table 4.2.

TABLE 4.2 A comparison of different modes (forms) of transport used in distribution

Mode of transport	Speed	Distance	Cost	Capacity
Bicycle or motorbike courier	High in inner city areas	Low (under 10 km)	Low	Documents and files
Van	Moderate	Up to 100 km	Moderate	Up to 500 kg
Truck	Moderate	Up to 4000 km	Moderate	Large items, up to 20 tonnes
Train	Slow/moderate	Up to 8000 km	Low/moderate	High volume, up to 40000 tonnes/train
Aeroplane	High	Up to 40000 km	Very high	Moderate volume of between 100 and 150 tonnes
Ship	Slow/moderate	Up to 40000 km	Low	Large coal carriers, up to 200000 tonnes, but oil carriers may be able to carry twice this weight

The type of product and the cost of transportation will determine the mode of transportation selected. Some products, due to their nature, can be transported only by particular modes (for example, coal and crude oil, which can be transported only by freighter on the seas or by train on land), whereas for other products there is a variety of choices (for example, native Australian flowers).

Storage, warehousing and distribution centres

Storage involves finding a secure place to hold stock until it is required. When dealing with inventories or stocks, a business must address the issues of storage, warehousing and the use and location of distribution centres. Storage for inventory is necessary when there are numerous outlets through which stock is sold and when demand is variable and needs a responsive supply chain. However, storage is a factor that must be addressed by most businesses some or all of the time. Storage may be long term or short term and may have particular characteristics that help preserve the product. For example, cold storage is used for perishable goods and assists to increase the shelf-life of the product. Storage is closely associated with warehousing, although storage does not require the use of warehouses.

BizWORD

Storage *involves finding a secure place to hold stock until it is required.*

There are alternative inventory options such as just-in-time (JIT), which minimise storage and associated costs. JIT is discussed later in the chapter.

Warehousing

Warehousing is the use of a facility for the storage, protection and, later, distribution of stock. Warehouses, also called distribution centres or distribution hubs, are places for holding inventories and therefore particular costs are associated with warehousing including the cost of:

- the premises
- insurance and security for the stock
- stacking and moving the stock
- carrying excess stock or redundant stock if not sold
- shrinkage costs and losses from theft or reasons not accounted for
- stock subject to damage (e.g. water damage) if not correctly stored.

Despite the costs associated with warehousing, it can be very useful as a storage point for durable items that may need to be transported with little notice. Although there is a management trend to lower costs through lean production and reducing inventories, warehousing can actually save costs if used well.

Distribution centres (DCs)

A distribution centre is slightly different to a warehouse in that it is not intended for long term storage. Rather, distribution centres are strategically located so as to minimise the time it take to supply stock to retail outlets. The use of distribution centres is an important operations strategy and requires mangers to balance the cost of such centres with the time saved in logistics. Distribution centres may be air conditioned and/or have cold storage facilities, and they may also be co-located with transportation hubs.



Materials handling and packaging

A final aspect of logistics concerns materials handling and packaging. Materials handling is an important aspect of the movement and storage of goods, and therefore particular standards and methods of operating need to be applied. This is because some products require particular skills, care or attention when being moved. For example, delicate glassware needs to be transported and stored carefully, and it needs to be packaged in a way that protects it from damage. Similarly, some goods can be dangerous (such as chemicals and fuels) and their transportation and

BizWORD

Warehousing *is defined as the use of warehouses for the storage, protection and, later, distribution of stock.*

BizFACT

Major retailers such as Aldi, Coles and Woolworths use a network of distribution centres to assist with inventory management, distribution and costs management. The location of the centres is very carefully assessed and they are often highly technologically advanced facilities. The location of the centres is designed to lower lead times and also avoid stock out (shortages).

BizFACT

In the very competitive supermarket sector, Coles has undertaken two innovations that affect how it distributes product. The first is the creation of a 'dark store' that services the online market. The second is the use of Deliveroo — a business that can distribute product within thirty minutes of the order. Both these developments were in response to increased competition and, it is argued, the entry of Amazon into the Australian market.

FIGURE 4.11 The main purpose of distribution centres is the short-term storing, handling and wholesale distribution of goods. They have easy access to either a railway hub or a major road network. They allow a business to consolidate local operations and centralise the distribution hub, providing operational efficiencies and cost savings.

storage can carry particular hazards. The government has regulations that require dangerous goods be stored and handled in particular ways, and it also requires packaging to be of a particular standard and to carry warnings.

SUMMARY

- Supply chain management (SCM) involves the management and flow of supplies throughout all input, transformations processes and outputs.
- There are three key aspects to SCM: sourcing (including global sourcing), e-commerce (including e-procurement) and logistics.
- Sourcing, in the context of SCM, involves the purchasing of inputs for transformations processes.
- Global sourcing involves the use of global markets for the purchasing of any supplies; however, in the context of SCM, global sourcing refers to where and how supplies are sourced within the limitation of geography.
- E-commerce enables businesses to source through online links to suppliers through business-to-business (B2B) processes and also enables customers direct access to products through business-to-consumer (B2C) processes.
- Logistics refers to the physical distribution and transportation of products. The use of warehouses and distribution centres is crucial to the successful management and movement of inventories.

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Syllabus area 1
Topic 4
Concept 3

Supply chain management
Summary screen and practice questions

EXERCISE 4.3 REVISION

1 Match the term by **recalling** the correct definition.

Term	Definition
Supply chain management	a. Involves the buying and selling of goods and services via the internet
B2B	b. The distribution, transportation, storage, warehousing, and materials handling and packaging
Sourcing	c. Involves assessing the number of suppliers in order to reduce the number of suppliers to the least amount
E-commerce	d. Businesses purchasing supplies of services without being constrained by location
E-procurement	e. Involves integrating and managing the flow of supplies throughout the inputs, transformations and outputs
Global sourcing	f. The purchasing of inputs for the transformation process
Supplier rationalisation	g. The use of online systems to manage supply, which allows suppliers direct access to the business's level of supplies
Logistics	h. Business-to-business transactions

2 **Why** is it vital that the supply chain be well managed?

3 **Identify** three key aspects of supply chain management.

4 **What** are the four factors a business should consider when sourcing (choosing a supplier)?

5 **Outline** the benefits and challenges of global sourcing.

6 Complete the sentences below by **identifying** the correct term from the following list:

consumers chain e-procurement stock information supply

(a) Many businesses today have their supply _____ managed through electronic ordering referred to as _____.

(b) The increasing use of e-commerce by _____ has an effect on the _____ chain.

(c) When a business engages in e-commerce, ________ levels must be managed well and ________ exchanged frequently so that accurate stock levels can be presented to prospective customers.

7 **Determine** the most suitable method of transportation for the following items. **Justify** your answer.
(a) Coal from the Hunter Valley to China
(b) Motor vehicles from the factory to a retailer
(c) A legal document from one office to another within the same city
(d) A small parcel from Sydney to London
(e) Food from a local fast-food restaurant to a household
(f) Cartons of fresh and packaged food from a warehouse to the local supermarket

8 With reference to appropriate examples, provide a brief **summary** of storage, warehousing and distribution centres.

9 **What** is the importance of materials handling and packaging?

EXERCISE 4.3 EXTENSION

1 **Assess** the role and importance of transportation and distribution in effective supply chain management.



2 The Wordle (or word cloud) above is created from the text in this section. As you can see, the words in the cloud are arranged at random and there is no 'right' way to read it. Some words stand out due to their size. This means that those words were used more frequently than others. Therefore, we might expect that the bold and big words relate to the most important information in the text. Select five words from the Wordle that you believe can be used to summarise the main point made in the text. **Justify** your choices.

4.5 Outsourcing — advantages and disadvantages

Outsourcing involves the use of external providers to perform business activities. The theory behind outsourcing is that when a service is performed by an external provider that specialises in a particular business function, it will do so at a lower cost and with a greater effectiveness than the same task done within the business hierarchy. The term 'outsourcing' is often called business process outsourcing (BPO). Business process outsourcing is a term that captures a range of outsourced business processes including:

- operations such as manufacturing, value-adding manufactures, design, merchandising, sourcing, distribution and logistics
- human resources including employee remuneration, employee counselling, pensions, data management, training and development, and travel and expenses management
- administrative work including data entry and 'back office' work
- information technology (IT) including data work, desktop outsourcing and network outsourcing (remotely hosted software applications).

Other types of outsourcing include:

- finance and accounting outsourcing (FAO) including preparation of financial accounts and reports, analytics and taxation compliance
- knowledge process outsourcing (KPO) including the outsourcing of managerial work such as marketing strategy, public relations and management decision making
- legal process outsourcing (LPO) including paralegal support, legal support (including drafting, research and counsel) and other legal services (such as patents and trademarks).

As can be seen, a very wide range of business functions and activities can be outsourced. The different forms of outsourcing that may be used by business are shown in table 4.3.

TABLE 4.3 A summary of the different forms of outsourcing with reference to examples

Forms of outsourcing	Onshore	Offshore
Captive or in house (do-it-yourself)	Commonwealth Bank of Australia (CBA), Sydney	Dell or Intel in Penang, serving all of Dell or Intel globally
Non-captive (outsourced to third parties through the market) External providers/vendors	Unilever India, using Capgemini in Bangalore and Dairy Farm in Hong Kong using Capgemini	British Airways (UK) using WNS Global Services (Mumbai, India) or General Motors using AT&T (Americas)

4.5.1 The outsourcing decision

Before a business decides to use outsourcing as an operations strategy, operations managers need to assess whether the use of outsourcing is viable. The factors that must be considered when assessing whether and when to use outsourcing are:

- Whether to outsource or not: this requires assessing whether the use of outsourcing is cheaper and more efficient than performing the work in house.
- If deciding to outsource, the managers must decide which geographical location is favoured.
- The managers must also decide which vendors to use.
- If the decision is to outsource then details such as the management of the outsourcing contract, the length of contract, the KPIs and service levels are required.

Four different outsourcing options can be used, as shown in table 4.4.

TABLE 4.4 The various outsourcing options

Outsourcing option	Name of outsourcing option	Features of the outsourcing option
Option 1	Creation of shared services centres (SSC)	This is an in-house outsourcing option that involves the creation of an in-house centre that performs work for multiple subsidiaries.
Option 2	Use of 'fee-for-service' arrangement	A low-risk, short-term strategy that involves engaging a supplier for fixed services at a pre-determined price. It allows the business to test the outsourcing market prior to making a change.
Option 3	Joint ventures	The business engages an outsourcing services provider but the provider is also free to outsource to other businesses in the same industry. An example of such a provider is WNS Global Services (Mumbai, India), which British Airways used for ticketing. WNS Global Services now provides ticketing for at least 26 other major airlines including Virgin Atlantic.
Option 4	Use of a 'build-operate-transfer' approach	This involves offshore outsourcing and involves contracting with external organisations. The use of contracts that detail agreed levels of service against pre-determined KPIs is a feature. The relocation of services to a new offshore location (build-operate) is then transferred to an independent vendor that the company contracts.

The incidence of outsourcing, either domestically or globally, is increasing worldwide, with business structures changing to benefit from lower cost and greater efficiency. Outsourcing can be highly beneficial for businesses, but it also can present a number of significant challenges or issues.

SNAPSHOT



'... the same consumers who criticise businesses that use outsourcing as an option often take advantage of the lower prices that result.'

Outsourcing — for and against

The term outsourcing describes a range of different types of arrangements where a business takes on contractors to do work that can be performed by the business. Outsourcing may be *onshore* (in the same nation), *near-shore* (in a close nation within the region) or *offshore* (a third nation that can be outside of the immediate region). Technological advances have enabled a high degree of outsourcing. As all facets of business can be outsourced, technology can enhance communications and allow for management of outsourced activities.

Outsourcing brings a number of benefits, including cost savings, the capacity to have specialised support, the simplification of business processes and improvements in quality. This can be seen in the outsourcing of financial processes to India by Australia's 'big four' banks that have become both increasingly efficient and also profitable.

However, outsourcing has also been criticised. For example, when Bonds decided to outsource there was a perception by Australian consumers that quality would be compromised. Moreover, the loss of domestic employment caused negative publicity. Nevertheless, the same consumers who criticise businesses that use outsourcing as an option often take advantage of the lower prices that result. For example, Virgin and Optus customers benefit from discounted telecommunications costs in part as a result of the use of outsourcing of the call centre to the Philippines.

SNAPSHOT QUESTIONS

1. **What** is outsourcing?
2. **List** two advantages of outsourcing.
3. If a business utilises outsourcing, **what** two issues may arise?
4. **When** is it appropriate for businesses to use offshore outsourcing?

Co-sourcing

This is a variation on outsourcing where the two parties are fully involved in managing the success of the particular aspect of business. In this regard, the work is not done by an external party, but rather by an external expert who works within the business as a contractor. Co-sourcing is increasingly popular as it helps the business take better control over what is given to a specialist third party. Co-sourcing is used by Myer with its technology partner OracleCMS.

4.5.2 Advantages of outsourcing

The advantages or benefits of outsourcing are the following.

- *Simplification*. This arises from reducing the number of activities performed within the business.
- *Efficiency and cost savings*. Access to cheaper labour, regulatory differences and skilled labour in offshore locations all lead to cost savings for business.
- *Increased process capability*. This comes from access to improved technologies and highly skilled labour. Improved process capability means products are produced and delivered to the market with improved levels of service.
- *Increased accountability*. This is achieved through the use of service level agreements (SLAs), which contractually bind the vendor to pre-determined targets on KPIs
- *Access to skills/resources lacking within the business*. A business outsourcing to a nation such as India or Vietnam, may well find that there is access to highly skilled and disciplined labour at low cost. This gives a double saving as there is then no need to spend money on training and developing labour resources.
- *Capacity to focus on core business or key competencies*. The use of outsourcing enables a business to focus on that which it cannot outsource: its vision, purpose, sustainable advantage through innovation, and so on.
- *Strategic benefits*. There are four important aspects to this.
  - The first benefit arises from using outsourcing to get around trade barriers. For example, global businesses may offshore into different Chinese provinces to become a 'local' supplier and hence get around barriers that prevent foreign companies from trading.
  - A second benefit is that the use of a vendor that outsources for others within the same industry can bring the benefit of expertise gained from outsourcing to competitors.
  - A third benefit arises from trading in different time zones. The use of India, Malaysia, the Philippines, Vietnam and China for processing work allows businesses in Australia, USA and Europe to conduct operations during the day and to have processing work done overnight by the outsourcing vendor.
  - A fourth benefit is that strong partnerships between the business and the outsourcing vendor can lead to the vendor suggesting innovative solutions to the business that may increase the business efficiency and productivity over time.
- *Improvements to in-house performance*. A business using outsourcing and therefore focusing on core competencies can improve in-house performance as it can really focus on making internal changes that reduce cost and improve profitability.

These advantages are very significant and businesses that undertake outsourcing do not readily reverse the decision. However, there are also issues arising with the use of outsourcing, which businesses must address or overcome if they are to realise the benefits of outsourcing as a strategy.



FIGURE 4.12 There are many advantages of outsourcing to offshore locations, as well as issues that businesses need to address in order to realise all of its benefits.

4.5.3 Disadvantages of outsourcing

The challenges and issues facing businesses that use outsourcing include the following.

- *Payback periods and cost*. This refers to how long it takes to repay the cost of organising outsourcing and make the required organisational changes. Over time businesses will experience cost savings; however, it could take two or three years. If a business reduces internal inefficiencies, businesses may become more efficient and productive without using outsourcing.
- *Communication and language*. This is an issue between the business and the outsourcing vendor, and is a key issue in managing the relationship. When negotiating to outsource, the business might focus too much on the decision to outsource rather than consider the ongoing relationship with the vendor (which typically lasts three to five years). This can lead to confusion over expectations. Moreover, as outsourcing often occurs across two or more regions, there can be cultural differences, language differences and differences in the way business issues and problems are managed. This can lead to a misalignment between the business and the outsourcing vendor. There may also be misunderstandings about what the agreed service levels are and what KPI measures are acceptable.
- *Loss of control of standards and information security*. When a business opts to outsource, it can feel a loss of control over standards and also over how information is used. Recent issues have occurred where a Chinese manufacturer of toys for the Mattel brand (a leading United States of America toy brand) did not adhere to the design specifications outlined in the SLA and used too much lead in toys. Similarly, Australian banks have found privacy within outsourced operations in India may not be as secure as it is was when the functions were performed in-house.
- *Hierarchies*. A business using outsourcing may be aiming to eliminate costs associated with hierarchies, yet managing complex outsourcing agreements can create its own hierarchies, thereby maintaining business inefficiency.
- *Organisational change and redesign*. Outsourcing may be accompanied by a high level of business change and organisational redesign. There may be downsizing, causing the loss of domestic employment. An option can exist for job migration for employees who may be losing work to gain employment in the outsourcing

vendor business. However, even if desired, work permits/work visas may prevent this from being an option.

- *Loss of corporate memory and vulnerability*. A significant disadvantage arises from the reliance on the outsourcing provider. Key knowledge of processes and solutions may be lost with the transfer of business processes to outside parties. To counter this, some businesses such as the banks create 'shadow teams' to retain corporate knowledge and, if required, processing capability. Business may also require that the outsourcing vendor have strategies in place in case there is a regional crisis (such as an earthquake) that severely disrupts communication and leads to information losses.
- *Information technology*. As the use of outsourcing grows so too does the need for supporting information technology (IT). There is a cost and time associated with the use and adaptation of IT to the specific requirements of the business and the outsourcing vendor. The cost and time can significantly reduce any financial advantages accruing in the short term with the use of outsourcing.

It should be clear that although outsourcing is one of the operations strategies that may be pursued, the use of outsourcing needs to be carefully assessed as it can present significant challenges and problems if not well managed.

SUMMARY

- Outsourcing involves taking to market those internal business processes and activities that can be done better and at lower cost when given to external vendors.
- The term 'outsourcing' is often called business process outsourcing (BPO) and captures a range of outsourced business processes including:
  - finance and accounting outsourcing (FAO)
  - knowledge process outsourcing (KPO)
  - legal process outsourcing (LPO).
- The outsourcing decision should consider several factors and can involve the use of different options.
- Numerous advantages are associated with outsourcing:
  - simplification
  - efficiency and cost savings
  - increased process capability
  - increased accountability
  - access to skill/resources lacking within the business
  - provides a capacity to focus on core competencies, thus improving in-house performance and several strategic benefits.
- The disadvantages associated with outsourcing include:
  - the cost and uncertainty associated with payback
  - issues with communication and language
  - loss of control of standards and information security
  - loss of corporate memory and costs associated with IT, organisational change, redesign and management of hierarchies.

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Syllabus area 1
Topic 4
Concept 4

Outsourcing
Summary screen and practice questions

EXERCISE 4.4 REVISION

1. **State** the theory behind outsourcing.
2. **Clarify** four different outsourced business processes.
3. **Examine** table 4.3. **Distinguish** between onshore and offshore outsourcing.
4. **What** are the factors that a business must consider when assessing whether and when to use outsourcing?
5. **Detail** the four outsourcing options that may be applied.

6 Use a 'T' table to **summarise** the advantages and disadvantages of outsourcing. The 'T' table has been started for you.

Outsourcing	
Advantages	**Disadvantages**
1. Simplification: fewer activities performed within the business	1. Payback periods and costs: how long it takes to recoup costs

7 Carefully look at all the advantages and disadvantages you listed in question 6. If you were a business manager and owner, would you choose to use outsourcing or not? Provide reasons for your decision.

EXERCISE 4.4 EXTENSION

1 Use the Think, Pair, Share technique to **investigate** current issues concerning outsourcing.
   (a) For two minutes, **outline** your ideas about the meaning of and the perceptions associated with outsourcing.
   (b) Select a partner. For about five minutes share your ideas with your partner. Then have your partner share his or her ideas with you.
   (c) In your pairs, **create** a definition for outsourcing.
   (d) Next, **construct** a table that records shared views about outsourcing, using the following headings:
   - Plus points — the favourable points about outsourcing
   - Minus points — the unfavourable points about outsourcing
   - Interesting points — the exciting or appealing points about outsourcing.

   (e) **Analyse** these views and explain each point. It is important that you can support each point with reliable evidence (not unsubstantiated claims). Therefore, your final task is to search for evidence to **justify** each point.

2 Over the past few years, Qantas has outsourced a number of functions, including aircraft maintenance, information technology, and reservations and bookings, to both onshore and offshore companies. Use the internet to **investigate** and **assess** the possible impact of outsourcing on Qantas employees.

3 **Investigate** the use of co-sourcing and, through providing relevant business examples, state why it is increasingly popular.

4.6 Technology — leading edge, established

All businesses benefit from the thoughtful application of technology. The use of technology can be an operations strategy particularly if it helps the business to create a competitive advantage. Some businesses innovate and thereby create new technologies. Whether a business is leading the industry or market through innovation or adapting to use technology once it has already been established, it is clear that technology plays a crucial part in business success.

Technology in the operations function may be classified according to whether it applies to and improves inputs, transformations processes and outputs; or whether it makes the managerial and administrative functions smoother.

BizFACT

Bleeding edge technology refers to technology that is so new it has a greater degree of risk in terms of unreliability for those who adopt it.

BizWORD

Leading edge technology *is the technology that is the most advanced or innovative at any point in time.*

4.6.1 Leading edge technology

Leading edge technology is the technology that is the most advanced or innovative at any point in time. Operations managers can distinguish their operations processes by utilising the best available technologies. This can help businesses to create products more quickly and to higher standards, with less waste, and also help a business to operate more effectively.

Leading edge technologies, in both the use of inputs and processes, have assisted in making the publicly listed Australian company CSL Ltd one of the world's most innovative pharmaceutical companies. Similarly, Woolworths demonstrated considerable innovation and set the benchmark in Australia when it used leading edge technologies integrated with distribution centres.

Note that leading edge technologies are created by innovative processes and innovative thinking. When innovative inputs are created, new products can be made, which can change markets. Consider the current development of nanotechnologies and use of nanoparticles that allows for water to be purified when scooped into water bottles. This is revolutionising the cosmetics industry and has medical applications.

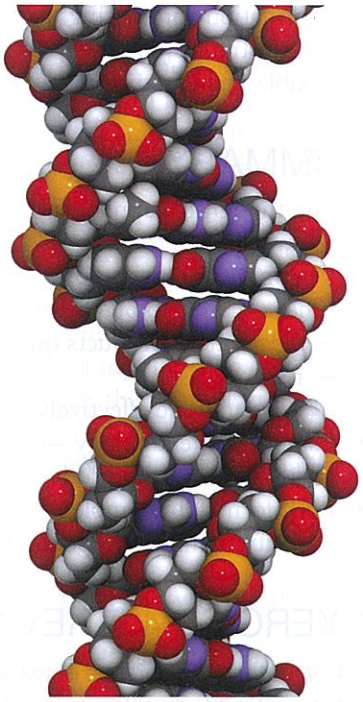


FIGURE 4.13 Nanotechnology is an example of leading edge technology. Nanotechnology is the manipulation of molecules and atoms at a 'nanoscale' — one nanometre is about a million times smaller than the diameter of a pinhead. This technology is expected to affect all parts of human life, including energy, food, healthcare, computers and consumer products.

Advice from algorithms — cutting edge technology

Leading edge technology is also called 'cutting edge' technology and refers to innovations that drive change in business. An example is the development of fintech and robo-advisors — two technologies being used by banks to assist customers make financial and investment decisions. These technologies are used with smartphones or through computer enabled access. The software development underpinning the technology uses computer algorithms to determine what investors seek and to give them various investment options based on their risk preferences, volume of investment, preferred term of investment, and so on.

By embedding options based on customer responses, the technology adapts to present choices aligned to the customer's needs. In this way, the advice can be accurate and specific, while being available 24-hours a day. This can reduce legal complications arising from financial advice given by financial advisers and can make the options far more tailored to individual customers. Over time the software will map a history of the customer's choices and thus be better able to help customers make informed choices about future investments.

SNAPSHOT QUESTIONS

1. **What** is an alternative name for leading edge technologies?
2. **How** do the fintech and robo-advisor algorithms work?
3. **Detail** three benefits of robo-advisors.

SNAPSHOT

'By embedding options based on customer responses, the technology adapts to present choices aligned to the customer's needs.'

4.6.2 Established technology

Established technology is technology that has been developed and widely used, and is simply accepted without question. Such technologies include the use of computers and various software packages in managing business operations and functions. Established technologies are functionally sound and help to establish basic standards for productivity and speed. In the operations function, established technologies include:

- barcoding and point-of-sale (POS) data for inventory management
- robotics for complex and detailed manufacturing
- computer-aided design (CAD), computer-aided manufacturing (CAM) and computer-integrated manufacturing (CIM) for integrating transformations processes

BizWORD

Established technology *is technology that has been developed and widely used and is simply accepted without question.*

- information processing technologies and information technologies (IT) for administration, logistics, input modelling, demand analysis and distribution
- flexible manufacturing systems (FMS) for transformations processes.

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Syllabus area 1 | Topic 4 | Concept 5 — **Technology** Summary screen and practice questions

SUMMARY

- The thoughtful application of technology helps a business create a competitive advantage.
- Leading edge technology — the most advanced or innovative at any point in time — can help businesses to:
  - create more products quickly and to higher standards
  - reduce waste
  - operate more effectively.
- Established technology — that is widely accepted and used — helps to establish basic standards for productivity and speed.
- Both forms of technology give businesses efficiencies, productivity gains and a capacity to improve operations processes.

EXERCISE 4.5 REVISION

1 **What** is the difference between leading edge and established technology?
2 **List** two leading edge technologies and two established technologies you have seen used by businesses.
3 **Outline** two benefits of leading edge technology.
4 **How** are innovation and technology related?
5 'Businesses need to acquire leading edge technology in order to compete effectively.' **Discuss**.
6 **Recall** four forms of established technology.

EXERCISE 4.5 EXTENSION

1 **Examine** the work of Micromine, a Perth-based global provider of innovative software solutions and services for the mining and exploration industry. **Determine** the benefits to a mining or exploration business in using Micromine's cutting edge technology.
2 Use newspaper reports from the internet to **investigate** the use of leading edge technology in either a manufacturing business such as a pharmaceutical business or a service business such as a bank. **Create** either a 300-word report or three-minute oral presentation and present your information to the rest of the class. Alternatively, present this as a PowerPoint presentation.

on Resources

Weblink: Micromine

4.7 Inventory management

BizWORD

Inventory *or* **stock** *refers to the amount of raw materials, work-in-progress and finished goods that a business has on hand at any particular point in time.*

Inventory or **stock** refers to the amount of raw materials, work-in-progress and finished goods that a business has on hand at any particular point in time. Inventory management is another crucial facet of operations management, and the strategies applied to the management of inventory will have a significant impact on transformations processes.

There is some debate in management and business about the definition of stock or inventory and also the advantages and disadvantages of holding stock. Some business managers think of stock as being any unused or underutilised resources. Stock is the product either in partial or full transformation, which has yet to be sold. It therefore represents the difference between what is supplied to the business as product inputs and what leaves as outputs.

4.7.1 Advantages of holding stock

All businesses will carry some stock. The issue of importance to business is exactly how much to carry. There are several advantages associated with holding stock:

- Consumer demand can be met when stock is available. This may prevent the consumer from seeking to buy from an alternative business. This is a risk reduction strategy.
- If a particular product line runs out, an alternative can be offered, thereby generating income for the business instead of a lost sale.
- It reduces lead times between order and delivery.
- Stocks give the opportunity for a business to generate immediate revenue. It is very hard to generate revenue from partially transformed inputs.
- Stocks can be distributed to distribution centres, which then rapidly transport the products to places as indicated by demand.
- A store of stock allows the business to promote use of products in non-traditional or even new markets.
- Older stock can be sold at reduced prices and thereby encourage cash flow and also attract sales of other products.
- Stocks are an asset and are of value to the business, reflecting well on the balance sheet.
- Making products in bulk may reduce costs as there are economies of scale in purchasing inputs. This could be cheaper than the cost of holding the stock once it is made.

4.7.2 Disadvantages of holding stock

Despite there being many advantages of holding stock, the trend is to hold as little stock as possible and to adopt a 'make-to-order' approach. That is, there are many perceived disadvantages of holding inventory. These include:

- the costs associated with holding stock (see figure 4.14), including storage charges, spoilage, insurance, theft and handling expenses.
- the invested capital, labour and energy cannot be used elsewhere as it has been used to create the stock
- the cost of obsolescence, which can occur if stock remains unsold.



FIGURE 4.14 The costs associated with holding stock in warehouses can be as high as 30 per cent of the value of the stock.

4.7.3 Inventory valuation methods

Businesses that buy stock need to decide how much to carry in inventories. At the end of an accounting period, it is important that the value of unsold stock be determined. It is also very important to know the value of stock sold so that profit can be correctly determined. However, how do you calculate the value of

the remaining stock — the inventory valuation — if the price of the goods making it up change during the accounting period? There are different approaches to inventory valuation. The main inventory valuation techniques include:

- **LIFO (last-in-first-out)**
- **FIFO (first-in-first-out).**

Each of these will now be examined with reference to this example: Assume that a business buys and re-sells mobile phones. It purchases 1000 mobile phones in a batch for $100 each. Call this stock 'Batch A'. Assume half of Batch A stock is sold for $150 each. There are 500 mobile phones left in stock. A second batch, Batch B, of 1000 mobile phones is then purchased at a cost of $110 each. This takes the stock up to 1500 mobile phones. Another 900 mobile phones are sold, but this time at a price of $160. This leaves 600 phones in stock. A third batch, Batch C, of 500 phones is purchased at $120 each. The business sells 800 phones for $180 each, leaving stock of 300 phones at the end of the period.

Batch A
Purchase 1000 phones @ $100. Total cost is $100 000.

Batch B
Purchase 1000 phones @ $110. Total cost is $110 000.

Batch C
Purchase 500 phones @ $120. Total cost is $60 000.

Total sales = (500 × $150) + (900 × $160) + (800 × $180)
= $75 000 + $144 000 + 144 000 = $363 000

BizWORD

*The **LIFO (last-in-first-out)** method of pricing inventory assumes that the last goods purchased are also the first goods sold and therefore the cost of each unit sold is the last cost recorded.*

*The **FIFO (first-in-first-out)** method of pricing inventory assumes that the first goods purchased are also the first goods sold and therefore the cost of each unit sold is the first cost recorded.*

LIFO (last-in-first-out)

A total of 2200 items were sold. In businesses applying a LIFO approach, the business would apply cost on a last-in-first-out basis, meaning the stock bought last would assume to have been sold first. This would give the following cost:

The last group of 500 phones would be assumed to have sold first. Therefore, 500 of the phones would attract a cost of $120 each for a total cost of $60 000. The second last purchased cost would apply to the next 1000 phones sold. This gives the cost of that 1000 at $110 each, totalling $110 000. The first stock sold is assumed to have sold last, meaning the remaining 700 phones that sold would be given the first cost of $100 each for a total of $70 000.

Under this analysis, the total cost of goods sold is $60 000 + $110 000 + $70 000 = $240 000 and the unsold stock has a value of 300 units × $100 = $30 000.

BizFACT

The advantage of using LIFO is that the prices used to calculate the cost of sales, and therefore the gross profit, are more recent and therefore more closely reflect their economic value. However, in times of falling prices, LIFO overstates profits and maximises taxes.

FIFO (first-in-first-out)

A total of 2200 items were sold. In businesses that apply a FIFO approach, the business would apply cost on a first-in-first-out basis, meaning the stock bought first would assume to have been sold first. This would give the following cost:

The first group of 1000 phones would be assumed to have sold first. Therefore, 1000 of the phones would attract a cost of $100 each for a total cost of $100 000. The second purchased cost would apply to the next 1000 phones sold. This gives the cost of that 1000 at $110 each, totalling $110 000. The last stock sold is assumed to have sold last, meaning the remaining 200 phones that sold would be given the first cost of $120 each for a total of $24 000.

Under this analysis, the total cost of goods sold is $100 000 + 110 000 + $24 000 = $234 000 and the value of unsold stock 300 × $120 = $36 000.

BizFACT

In general, neither LIFO nor FIFO is necessarily better. The important point to remember is that during periods of price changes, two businesses (performing equally well in most respects) could legitimately report differing profit levels depending upon the inventory valuation method used. Because the inventory valuation method has such a powerful impact on gross profit, a business must state in the footnotes to its financial accounts which method is used.

4.7.4 LIFO and FIFO — their impact

Clearly, the method of valuation affects both the calculation of the value of the goods sold (which in turn affects gross profit) and also the value of the unsold stock.

Operation managers can apply either of these methods or a weighted averaging approach as all are allowed under accounting standards. However, if LIFO is used, it may overstate cost and understate gross profit (especially when the cost of purchased goods rises over time). Moreover, it may undervalue stocks on hand at the end of the period. Alternatively, under a FIFO approach, stock costs may be understated and profits overstated. Moreover, stocks at the end of the period may be overvalued.

4.7.5 Just-in-time (JIT)

One means of managing stock is to apply a **just-in-time (JIT)** approach, which aims to overcome the problem of end-of-period stock valuation: a lean production method. This is because a JIT approach aims to have the business make only enough products to meet demand. A JIT approach also allows retailers to display a wider range of products as they need to store less and can order in response to consumer demand. This, therefore, saves money as there are no expensive holding and insurance costs. Moreover, shrinkage costs and losses due to obsolescence are also minimised. However, a JIT approach requires a very flexible operations function with flexible processing. It also requires a very high ability to respond quickly to changes in market demand as well as reliable supplier deliveries which must be received at the appropriate time.

Just-in-time is *not* an inventory valuation technique. It is a method of managing the flow and storage of stock. This means that the use of JIT is not separate from the valuation strategies — they are not alternatives. A business can use LIFO or FIFO and also be applying the JIT method of inventory management.

BizWORD

Just-in-time (JIT) *is an inventory management approach which ensures that the exact amount of material inputs will arrive only as they are needed in the operation process.*



FIGURE 4.15 Inventory control software provides managers with precise knowledge of quantities and locations of stock, which is essential when using a just-in-time stock management system.

SUMMARY

- Inventory or stock refers to the amount of raw materials, work-in-progress and finished goods that a business has on hand at any particular point in time.
- Inventory management is a key operations strategy.
- There are advantages associated with holding stock, including being able to respond quickly to changes in demand and allowing development of new markets that can supply stock quickly.
- There are also disadvantages that come with carrying stock, including the costs and tying up of money that could be applied elsewhere.
- There are alternative inventory valuation methods, including LIFO (last-in-first-out) and FIFO (first-in-first-out).
- At the end of an accounting period, it is important that the value of unsold stock be determined.

BizFACT

Although the just-in-time approach was first used by the Ford Motor Company, it was adopted and publicised by Toyota as part of its production system.

studyon

Syllabus area 1
Topic 4
Concept 6

Inventory management
Summary screen and practice questions

- The method of valuation affects the calculation of the value of the goods sold, the value of the unsold stock and the gross profit.
- Businesses are seeking to become 'lean', meaning they emphasise low cost.
- Lean businesses apply a just-in-time (JIT) approach to inventory management, which means to make to order.

EXERCISE 4.6 REVISION

1 **What** is inventory management?
2 Provide an alternative name for inventory.
3 Select what you consider to be the four most important advantages of holding stock. **Justify** your selection.
4 **Summarise** three disadvantages of holding stock.
5 **What** do the acronyms LIFO and FIFO represent?
6 On 1 May Zegna Shoes orders 200 pairs of joggers at $30 apiece and sells 150 pairs for $50. Eight weeks later, Zegna Shoes orders 100 more pairs at a new price of $35 and sells 60 of these at $55. By the end of the accounting period 210 of the 300 pairs are sold. **Calculate** the total cost of sales (cost of stock), total sales and gross profit using the (i) LIFO and (ii) FIFO simplified cost analysis methods.
7 **Contrast** the use of LIFO and FIFO in terms of their effect on profitability and stock valuation.
8 **How** does the just-in-time approach to inventory management improve productivity and reduce costs?
9 **Determine** the potential problems that you can see with the just-in-time approach. Summarise your answer.

EXERCISE 4.6 EXTENSION

1 Chan is the operations manager of a large clothing manufacturer. Recently the business has found itself in financial trouble as retail customers begin to recognise it as being a very poor supplier. The clothes are rarely delivered on time, and always in the wrong quantities. The main problem for Chan is that the materials for some clothing lines keep running out. Some lines just won't sell and the storage areas are full of materials for those lines.
   (a) **Determine** the costs of having too many materials in storage.
   (b) **Predict** what problems can occur when there are not enough materials on hand.
   (c) Suggest any other materials management approaches you think would help Chan to optimise the clothing operations. **Justify** your answer.
2 'Management's goal is to minimise total inventory costs by balancing inventory carrying and ordering costs.' **Distinguish** between carrying costs and ordering costs. Provide examples of each in your answer.
3 Imagine you are the business reporter for a daily newspaper. You are asked to **create** a 300-word article including one captioned image about inventory management, with an emphasis on the just-in-time approach. The article will be posted online. The headline of your article is 'Take stock — the untold story'.

4.8 Quality management

BizWORD

Quality management *refers to those processes that a business undertakes to ensure consistency, reliability, safety and fitness of purpose of product.*

'Quality' is a term used to describe the degree of excellence of a product or service, and its fitness for a stated purpose. **Quality management** refers to those processes that a business undertakes to ensure consistency, reliability, safety and fitness of purpose of product. In operations, quality management includes quality controls at each stage of processing. There are numerous approaches to achieving quality within businesses, but many of the more common contemporary approaches include:

- quality control — inspection, measurement and intervention
- quality assurance — application of international quality standards
- quality improvement — total quality management and continuous improvement.



FIGURE 4.16 Amazon, a world-leading online retailer, uses a quality management approach known as Six Sigma.

4.8.1 Quality control (QC)

Quality control (QC) reduces problems and defects in the product by using inspections at various points in the production process.

In the first instance, a business needs to have defined quality standards and parameters. These standards need to be broadly applied across the range of products and processes. Once the standards have been set, a range of tests needs to be designed to assess the quality of products and processes against the standards. Pre-determined quality targets would be set, and any failure to meet the targets would need to be assessed and appropriate action taken to correct any issue that has caused quality standards to fall below expectation. This reactive approach needs to be balanced against a more proactive approach that encourages a continuous improvement model.

Quality control management may require that labour is appropriately trained to apply quality standards throughout working processes.

BizWORD

Quality control (QC) *involves the use of inspections at various points in the production process to check for problems and defects.*

Quality control — customer service

The salesperson was on her phone when the customer arrived. The customer was looking for a pair of shoes for a job interview and was feeling a little anxious about buying a pair that would match the workplace culture. As the customer browsed through the available pairs on display, the salesperson scrolled through the phone, messaging and smiling to herself. The customer was trying to make eye contact in order to get some service. At one stage the salesperson looked up but only briefly as the phone buzzed, causing the salesperson to smile and reply to a message.

The customer found a pair of shoes that were perfect for the interview. The shop, as it turned out, had a very unusual range and there were several pairs that the customer wanted to buy. However, the salesperson was still preoccupied on her phone. The customer eventually walked to the counter and said, 'Hi . . . I think you have awesome stock here and I would love to buy three or four pairs of the shoes you sell . . .'

The salesperson looked up momentarily but her eyes flicked back to her phone. The customer continued, 'However the quality of your service here is the worst I have ever experienced. I have watched you message and laugh while I am here with money ready and willing to buy. There is no-one else in this store to help me. The quality of the stock you sell is brilliant but I will never buy from a store with such hopeless customer service!'

SNAPSHOT QUESTIONS

1. **What** are the two distinct elements of service in the Snapshot?
2. **How** do quality of product and quality of service relate to one another?
3. **How** could the experience of quality have been improved from the customer's perspective?

SNAPSHOT



'. . . the quality of your service here is the worst I have ever experienced.'

BizFACT

In a speech in 1890, Mahatma Gandhi said, 'A customer is the most important visitor on our premises. He is not dependent on us. We are dependent on him. He is not an interruption of our work. He is the purpose of it. He is not an outsider of our business. He is part of it. We are not doing him a favour by serving him. He is doing us a favour by giving us the opportunity to do so.'



FIGURE 4.17 Certification of the ISO 9000 Quality Management System series is easily recognised by the 'five ticks' Quality Endorsed Company Standards Mark.

BizWORD

Quality assurance (QA) *involves the use of a system to ensure that set standards are achieved in production.*

Inspection and quality control

To ensure output meets required standards, many businesses carry out inspections of all or part of the total volume of production. When an inspection is conducted, the goods or services under inspection can be passed as 'okay' or 'defective'. This is an *attribute inspection*, which might answer questions such as: does an electric switch turn off and on? Does a hinge open and close? Does a water container have any leaks? In service businesses, an inspection of employee performance may be conducted. A bank may inspect teller accuracy, courtesy, speed and efficiency; and a supermarket may check operator scanning rates.

4.8.2 Quality assurance (QA) — international quality standards

Quality assurance (QA) involves the use of a system to ensure that set standards are achieved in production. This is done through taking a series of measurements and assessing them against pre-determined quality standards. Quality assurance is a proactive approach to quality rather than a reactive one. This means that a business emphasises quality in the design of a product and brings it to the market with a level of quality that provides comfort to prospective buyers. Aspects of quality that are important to QA include:

- the notion of 'fitness for purpose' or how well a product does what it is designed to do
- the desire to achieve 'right first time' so that products do not need to be reworked, which wastes time, energy and other resources.

A series of quality assurance standards has been developed in response to the impact of globalisation and the international emphasis on quality. Such standards can be applied universally, which means that a component from Korea that meets the accepted international standard is theoretically of the same quality as a similar component from an Australian manufacturer. Given that several different manufacturers in different countries could produce components for a plasma television, such standards are an important quality control mechanism for 'global' companies.

A widely used international standard is the ISO 9000 series of quality certifications (see figure 4.17). 'ISO' stands for International Organization for Standardization. ISO standards are voluntary but many businesses comply with their requirements to enhance their domestic and international competitiveness.

SNAPSHOT

'The owners took advantage of a gap in the market'

Case study: Coco & Lucas' Kitchen

Australian business Coco & Lucas' Kitchen was inspired by the need to create a range of healthy foods for children. The owners took advantage of a gap in the market for children aged 3–12 years and created a range of high-quality and well-packaged foods that have the following features.

- Gluten & lactose free
- All natural ingredients
- No preservatives
- No artificial flavours or colours
- Made in Australia
- Handmade
- 100% Aussie meat
- Truly recyclable packaging
- No GM ingredients
- Frozen, locked in full of goodness
- Contains more than 25% protein

Some of the products made by the business include spaghetti bolognaise, cottage beef pie, honey soy chicken and penne pasta. These products are handmade from local ingredients and are packaged so that children can take these products to school to eat at lunch.

The business concept was inspired by the owner's need to make food for her nephew who had lactose and gluten intolerance. Accordingly, Coco & Lucas' Kitchen created Australia's first 'junior foodies'range that is gluten and lactose free.

The business focuses on using high-quality ingredients and handmade processing that is done within Australia. Coco & Lucas' Kitchen supplies products to Australian supermarkets and was recognised for its quality and innovation at the 2017 World Food Innovation Awards being nominated in each of the following categories:

- Best convenience food innovation
- Best children's food
- Best new brand or business (which it won) and
- Best frozen food.

SNAPSHOT QUESTIONS

1. **What** was the inspiration behind the Coco & Lucas' Kitchen range of foods for children?
2. **Discuss** whether there is a need for the foods made by Coco & Lucas' Kitchen.
3. Research and **outline** the importance of quality and innovation to the development of Coco & Lucas' Kitchen.

4.8.3 Quality improvement (QI)

Quality improvement (QI) focusses on two aspects: continuous improvement and total quality management.

Continuous improvement

Continuous improvement is the belief that over time processes will be made more efficient and effective. Improvement may be a monumental breakthrough achieved through innovation all at once or it may be incremental and gradual over time. The basis of successful improvements in quality is the inclusion of staff into improvement processes. That is, all staff are encouraged to demonstrate initiative and to suggest areas where improvements can be made. In this way, all processes can be improved simultaneously and 'ownership' for improvement extends to all.

As a strategic aspect of operations management, a focus on improvement is likely to help a business to obtain and maintain a competitive advantage as outlined in the following Snapshot.

BizWORD

Continuous improvement *is an ongoing commitment to improving a business's goods or services.*

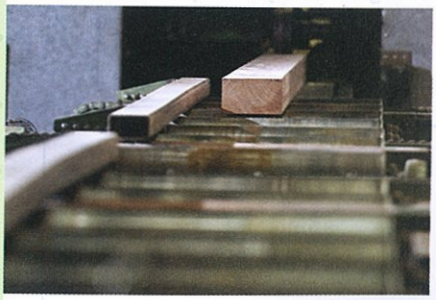
Six Sigma

Six Sigma is a quality management approach which was originally developed by US telecommunications company Motorola in the mid-1980s. Six Sigma is used to identify and remove the causes of problems in the operations process, so that a business produces only 3.4 defective parts per million opportunities. This translates to a perfection rate of 99.9997 per cent. It uses typical quality management methods, including statistical tools to measure variations in the operations processes, empowerment of staff and training, a commitment to improving quality through the whole business and continuous improvement.

A special team of people within the business is established. This is composed of staff who have been given Six Sigma training, and are able to coordinate others in adopting methods to improve quality. A five-step process to problem solving applies to Six Sigma, commonly referred to as DMAIC.

Six Sigma is a relatively old approach to business process improvement, but is still widely used in many Australian businesses. Qantas and ANZ are examples of large Australian businesses that use methods from Six Sigma to achieve process improvements. Both of these businesses used Six Sigma to identify and remove non-productive or non-value adding processes and activities. The focus on cost

SNAPSHOT



'... businesses use Six Sigma to identify and remove non-productive or non-value adding processes and activities.'

BizWORD

Six Sigma *is a quality management approach that seeks to identify and remove the causes of problems in the operations processes, achieving virtually defect-free production.*

efficiencies and productivity through the use of Six Sigma has led to process improvements at Coca-Cola Amatil (CCA), the Flight Centre Travel Group (FCTG) and National Australia Bank (NAB).

SNAPSHOT QUESTIONS

1. **Explain** what is involved in the Six Sigma approach.
2. **Identify** what aspects of Six Sigma make it a quality management approach.
3. **Deduce** whether Six Sigma seems like an original approach to you or whether it is just another form of TQM.

BizWORD

The **total quality management (TQM)** *concept focuses on managing the total business to deliver quality to customers.*



FIGURE 4.18 W. Edwards Deming's approach instils quality values throughout every activity in a business, with frontline employees closely involved in the process.

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Syllabus area 1
Topic 4
Concept 7

Quality management
Summary screen and practice questions

Total quality management (TQM)

Some businesses approach the issue of quality management by assigning this responsibility to a particular department. The Japanese discovered that this approach implied that only specific personnel were responsible for quality. The **total quality management (TQM)** approach is a 'holistic' approach, however, in that quality becomes both a commitment and the responsibility of every employee of the business. Originally developed by W. Edwards Deming, it is an ongoing, business-wide commitment to excellence that is applied to every aspect of the business's operation. He advocated a shift away from an inspection-oriented approach to quality control towards an emphasis on employee involvement in the prevention of quality problems. Build the product right in the first place and you avoid the expense of inspection and the waste of rejected products, he insisted. Improving quality, said Deming, can also help businesses increase their market share (as a result of better quality and lower priced products). To achieve TQM objectives requires four elements: benchmarking, employee empowerment, a focus on the customer and continuous improvement.

SUMMARY

- Quality management refers to those processes that a business undertakes to ensure consistency, reliability, safety and fitness of product purpose.
- The most common quality management approaches are:
  - quality controls — inspection, measurement and intervention
  - quality assurance — application of international quality standards such as the ISO 9000 series
  - quality improvements — continuous improvement and total quality management.
- A focus on continuous improvement is an ongoing commitment to improving a business's goods or services.
- Innovation, employee involvement and quality are closely aligned and indicate quality working processes.
- Total quality management (TQM) focuses on managing the total business to deliver quality to customers.
- To achieve TQM objectives requires four elements: benchmarking, employee empowerment, a focus on the customer and continuous improvement.

EXERCISE 4.7 REVISION

1. **What** is 'quality management'?
2. **List** three different approaches to quality management.
3. **What** quality controls would a consumer make when purchasing clothing?
4. **Outline** the steps involved in the quality control approach.
5. **Why** is quality control important in the manufacture of pharmaceutical products?
6. **How** does the quality assurance system operate?

7 **Account** for the development of an international quality standard.
8 **Clarify** what the term ISO represents.
9 **Outline** the concept of continuous improvement.
10 **Why** is TQM characterised as a 'holistic' approach to quality management?
11 **What** is the central focus of W. Edwards Deming's TQM concept?
12 **Recommend** why a business should adopt a TQM program.
13 **Determine** why the successful implementation of a TQM program depends on commitment from everyone in the business.
14 **Recall** how continuous improvement can occur.
15 View a **Standards Australia** video from their website and select a case study that interests you.
   (a) **Identify** the key benefits to the company of adopting standards developed by Standards Australia.
   (b) **Explain** how Standards Australia helped the business develop.

on Resources

Weblink: Standards Australia

EXERCISE 4.7 EXTENSION

1 Imagine you are responsible for quality management within the school canteen. **Identify** which quality management approach you would adopt. **Justify** your decision.
2 **Analyse** the effectiveness of a focus on continuous improvement on work processes.
3 Use business magazines, newspapers and the internet to **examine** quality failures of Samsung, Volkswagen and Takata. **Create** a 300-word report on the issues faced by the chosen business. In your report, mention the impact on the business's reputation, revenue and profitability.

4.9 Overcoming resistance to change

A notable influence on operations strategy arises from the need to manage and be responsive to change. All businesses are subject to change from the external environment. Legislative and regulatory changes, changes in economic conditions, social changes over time and technological breakthroughs all impact on the business and shape its operations. Moreover, change can also come from within the business through the initiative of staff or the application of technology and a focus on innovation.

When changes arise from external sources, a business must learn to adapt. This may require a significant internal realignment. Change can often be resisted as it can cause uncertainty and uncertainty can be stressful. In economic terms, uncertainty represents risk and most people are adverse to risk. Thus, a business needs to apply particular skills to help manage change processes.

Resistance to change arises from two principal sources within a business:
- financial
- psychological/emotional.

The most important step in overcoming resistance to change is to ensure that managers understand the main reasons why change is resisted. Once these factors have been identified, managers can put in place strategies to overcome the resistance.

BizFACT

Theories of human behaviour reveal that for most of us, personal change is achieved only with a great deal of effort. Over the last decade, management has realised that change also represents a serious obstacle for businesses.

4.9.1 Financial costs and resistance to change

One major cause of a resistance to change from managers and business owners is that of financial costs. The main financial costs associated with change include the:
- cost of purchasing new equipment
- cost of redundancies
- costs of retraining employees

BizFACT

According to change management consultant Mr McCulloch, it is essential managers ask one fundamental question when introducing changes: 'Am I giving as clear a picture as I can of the what, when, how and why of the changes?'

- costs associated with structural reorganisation of the business, including changes to plant and equipment layouts.

Each of these costs to a greater or lesser extent can be a cause for concern by business owners and operations managers who need to manage change.

Purchasing new equipment

A major cost associated with change is that of the investment in plant and equipment. The purchase of equipment such as machinery and technology is considered a capital cost. Such costs are usually quite high and the cost can be recouped through use (which adds value in transformation processes) and through depreciation. Although the purchase of new equipment can be high, there can be very significant market advantages from making the capital investment. In so doing, a business may find some key operational goals are better achieved, such as:

- improved processing flexibility
- improved processing speeds and shorter lead times
- more consistency in production
- higher overall quality of processing
- reduced wastage and losses from equipment failure.

Prior to making the investment in new equipment, it is highly likely that operations managers will assess the cost of purchase against the cost of leasing new equipment and technology. Leasing does not require a high upfront payment, but it can be more expensive as an ongoing operational cost.

BizWORD

Redundancy *refers to employees losing their jobs, where the employees' job or work no longer needs to be done. It may be necessary due to a lack of work, as in the case of a fall in demand for a product or service, or the position may have been restructured or replaced by technology.*

BizFACT

During 2017 the LEGO Group experienced a massive downturn in revenue arising from lower than forecast sales. The major concern for LEGO was that it had recently allocated increased investment expenditure to new factories in anticipation of increased demand. Following the unexpected downturn in sales the business announced the loss of 1400 jobs from the manufacturing plants globally.

Redundancy payout

Redundancy is defined as a loss of work arising from job skills that are no longer required or relevant to the workplace. Redundancy means that employees lose their jobs. This leaves those employees to seek jobs elsewhere in the same industry or to retrain and 'upskill' so that they have more relevant job skills in related or alternative industries. A significant cost associated with redundancies is the redundancy payout. Redundancy payout is the money that is given to employees when they are forced out of work because their job skills are no longer relevant. Typically, redundancy payouts are quite high because the value of the payout depends on:

- the length of employment the employee has had with the business. Under legislation a certain number of weeks of pay must be paid when a person is made redundant
- the level of pay the employee is on prior to being made redundant
- the amount of unused leave that the employee has accrued (including annual leave and long service leave)
- any outstanding wages.

Redundancy costs can be very substantial because the cumulative effect of the payments that must be made can be high. This is especially the case when many employees are made redundant. This typically occurs when capital, in the form of machinery and technology, replaces labour in what is called 'capital-labour substitution'.

Retraining

This cost arises from change that causes a reorganisation of the business's internal hierarchy or from the acquisition of technology. In the first instance, job roles may change requiring employees to acquire different work skills. This can be achieved through training. In the second situation, the purchase of technology often requires training or retraining on new software. Retraining may be performed on the job or off the job.

Reorganising plant layout

As was explained in chapter 3, plant refers to the facilities in which the machinery is arranged. Typically the plant layout is organised around the needs of the product and the transformation processes required to create the products. Minor changes may have little or no effect on plant layout. However, major changes such as the complete re-engineering of systems often require extensive reorganisation of the layout within the facility. There can be high costs associated with reorganising the plant. One cost is incurred when transporting, placing and bringing power to the new plant and equipment. Further costs are incurred in the downtime when transferring from the old machinery to the new machinery and when testing new equipment, machinery and technology. Further costs come with losses of productivity, arising from staff orientating themselves with new work processes and arrangements.



FIGURE 4.19 To improve efficiency and productivity, the installation of new equipment may require reorganisation of the plant layout. As well, as new technology is introduced, employees must be retrained. The full benefit of new technology cannot be realised without expenditure on training and development.

4.9.2 Psychological resistance to change — inertia

Another source of resistance arises from what is called **inertia**. Inertia is a term that describes a psychological resistance to change. A feeling of uncertainty or fear of the unknown, when change is imminent or pressing, can lead people to resist. This feeling is common to most people. You may be familiar with the reaction of a parent who is in the car when their P-plate teenager is driving. The parent will often suggest a different route even if the one taken by the teenager is quicker. This is an everyday example of resistance to change. How much more resistance would be felt by people who feel like their job prospects may be threatened, who fear loss of career opportunities or who find new technology and equipment intimidating.

Although inertia is not a financial resistance to change, when people do not change or adapt then the business can feel financial effects of that resistance.

BizWORD

Inertia *is a term that describes a psychological resistance to change.*

4.9.3 Strategies to overcome resistance to change

Identifying the reasons for resistance to change are important because the resistance needs to be carefully managed if businesses are to successfully adapt to circumstances and situations that change. Change is constant and in small ways business processes are continually being refined and adapted over time. Even though change is continuous, sometimes there is major change and that acts like a discontinuity. Such change must be planned and it needs astute management.

Successful managers are the ones who anticipate and adjust to changing circumstances rather than being passively swept along or, worse still, being caught unprepared. Such people are *proactive* — they initiate change rather than simply react to events, rather than *reactive* — those who wait for a change to occur and then respond to it.

To be constructive, changes must:

- occur at a pace at which they can be absorbed by, and integrated into, the business
- be evaluated thoroughly to assess their overall impact. Poorly managed changes normally result in employee resistance, tension and lost productivity.
- be introduced into a workplace culture that supports employee participation.



FIGURE 4.20 Employees who are not informed about why changes are necessary will ultimately resist such changes and turn to the rumour mill for information — most of which will be incorrect gossip.

4.9.4 Change management strategies

To manage significant change, a business should formalise its approach to change management. This can be done by applying the following steps for change management.

- Identify the source(s) of change and assess whether there is a need to accommodate change through adjustments to business processes. Generally the sources of change are external and the business is responding to the threat that change can pose.
- Lower the resistance to change through communicating with employees about the need for change and getting widespread support for the change.
- There may be a need to use **change agents** (internal staff or external professionals). If staff are included in the process of creating a culture of change and setting goals, they will generally be more supportive.
- It may be necessary to apply change models such as Kurt Lewin's unfreeze-change-refreeze model or the more contemporary Kotter's eight-step change model (see the following Snapshot), which has been applied by businesses.

Adapting to change through overcoming the financial and psychological resistance can help businesses to create sustainable competitive advantage even when faced with what appear to be threats.

BizWORD

*A **change agent** is somebody who initiates change or facilitates the change process.*

Change management — models for business

Kurt Lewin's unfreeze/change/refreeze model

Suppose someone gave you a plastic cup filled with clear, solid ice. At the bottom of the cup is a twenty-cent piece lying heads up. Now, suppose you want the twenty-cent piece to be frozen in a tails-up position. What can you do to bring about this desired change? There is only one practical solution. You let the ice in the cup thaw (unfreeze), reach in and turn the coin over (change) and then freeze (refreeze) the cup of water. This is how Lewin recommended that change be handled in organisations. Lewin outlined each of the steps as follows.

1. *Unfreezing*. This process breaks down the forces supporting the existing system and prepares the business for change.
2. *Change*. The new procedures and behaviours must be communicated and implemented.
3. *Refreezing*. This requires that the manager offers positive reinforcement to make sure the change lasts.

John Kotter's eight-step model

Management researcher John Kotter maintains that the change management process consists of the following eight steps.

1. *Establish a sense of necessity*. Examine the current business environment to highlight impending threats or potential opportunities.
2. *Form a guiding group*. Establish a team of people to act as facilitators.
3. *Create a vision*. Provide employees with a clear, shared sense of direction that will allow them to achieve a common objective.
4. *Communicate the vision*. Communicate the vision with all those the change will affect to build cohesion between employees to dispel fear of the unknown.
5. *Empower people to fulfil the vision*. People who have the opportunity to be actively involved in the change process generally develop a sense of ownership.
6. *Recognise and reward achievements*. Recognition and reward should be given to encourage further risk taking and reinforce the positive aspects of embracing change.
7. *Consolidate improvements*. As the change process proceeds, assemble the benefits attained into the business's operating procedures and systems.
8. *Institutionalise the changes*. Make a clear statement to show the connections between the new procedures and the success of the business.

SNAPSHOT QUESTIONS

1. **Identify** and briefly **outline** the three steps involved in Lewin's unfreeze/change/refreeze change model.
2. **Why** would a change program without proper 'unfreezing' have limited chance of success?
3. **What** are Kotter's eight steps for managing change?
4. **Explain** whether a structured approach to managing change is necessary.
5. **Determine** how an understanding of these models assists a manager who wants to introduce changes into the business.

SNAPSHOT



'Communicate the vision with all those the change will affect . . .'

SUMMARY

- Generally, the sources of change are external and the business is responding to the threat that change can pose.
- Resistance to change can be a major obstacle to the realisation of operations goals. Overcoming the resistance to change is a necessary aspect of change management.
- There are two principal sources of resistance to change: financial and psychological (inertia).
- The financial costs of change include:
  - the cost of purchasing new equipment and technology
  - the cost of redundancies

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Syllabus area 1
Topic 4
Concept 8

Overcoming resistance to change (influence)
Summary screen and practice questions

  - the cost of retraining employees
  - the costs associated with structural reorganisation.
- Inertia can be due to a feeling of uncertainty or fear of the unknown.
- Resistance to change can be overcome by a business identifying the source(s) of change and assessing whether there is a need to accommodate change.
- Lowering the resistance to change through communicating a need for change will result in widespread support for the change.
- Change agents initiate change or facilitate the change process.
- Kurt Lewin's or John Kotter's change models help manage change effectively.

EXERCISE 4.8 REVISION

1 **What** are two sources of resistance to change?

2 Complete the following table to **summarise** the financial costs which create resistance to change. The first one has been started for you.

Financial cost	Explanation
1. Purchasing new equipment	• Capital costs are usually quite high
2. Redundancy payout	
3. Retraining	
4. Reorganising plant layout	

3 **Recall** the kinds of resistance to change you have observed recently. **Propose** how they could have been overcome.

4 **What** is the effect of psychological uncertainty on change management processes?

5 **List** three factors that create constructive change.

6 **Summarise** three steps a business can follow when it wants to manage large change.

7 **Describe** the role of a change agent.

8 'The most important step in overcoming resistance to change is to ensure that managers understand the main reasons why change is resisted.' **Discuss**.

EXERCISE 4.8 EXTENSION

1 Select a major change in your life and complete the following:
   (a) **Determine** the reasons why you liked or disliked the change. Share your thoughts.
   (b) **Classify** the reasons that were common among the group.
   (c) **Explain** what this tells you about the strategy a manager could best use to help overcome resistance to change.

2 When the new CEO for Bradley Southport Limited attempted to make some major changes, she encountered resistance among some senior level managers. **Analyse** why these managers may have resisted the changes.

3 **Outline** and **evaluate** Kotter's eight-step change model.

4 Assume you have been appointed managing director of an engineering business that is facing increased competition from products made overseas and needs, therefore, to improve productivity. **Create** a plan for overcoming employee resistance to the changes that are necessary to increase production.

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Weblink: Kotter International

4.10 Global factors

Several global factors present opportunities when assessing the operations strategies available for operations managers. These opportunities may be classified as:

- global sourcing
- economies of scale
- scanning and learning
- research and development (R&D).

4.10.1 Global sourcing

An aspect of global sourcing was introduced in section 4.4 when we looked at supply chain management. Recall, global sourcing is a broad term that refers to businesses purchasing supplies or services without being constrained by location. Although a key aspect of global sourcing involves procurement for the supply chain, the concept is much broader than simply a supply chain management strategy. Global sourcing as an operations strategy involves the sourcing of any business operations that gives the business cost advantages. In this broad meaning, global sourcing includes any business operations outsourced.

Most non-core business activities can be outsourced as we saw when we explored the notion of outsourcing (see section 4.5). Global sourcing ensures that the outsourcing decision is exposed to the global market so that the best decision is made based on cost, efficiency, productivity, technical ability and an ability to operate over more hours of the day.

The benefits of global sourcing include cost advantages, access to new technologies, advantages of expertise and labour specialisation, access to other resources and the ability to operate over extended hours. Challenges arising with global sourcing include the possible relocation of aspects of operations, the increased cost of logistics, storage and distribution, managing different regulatory conditions between nations, and the increasing complexity of overall operations when sourcing from diverse locations. One of these complexities is financial and the other is contractual. Financial concerns arise from the risk associated with exchange rate fluctuations. Contractual concerns arise from language and cultural variations, and regulatory differences and misunderstanding created by poorly negotiated SLAs.



FIGURE 4.21 To remain competitive, businesses are forced to find ways to reduce costs of production and to improve their goods or services. One solution is global sourcing, which enables the business to find suppliers who have lower prices, higher quality products and more advanced technology.

4.10.2 Economies of scale

Economies of scale refers to cost advantages that can be gained by increasing the size, or scale, of production. This means that businesses can lower their per unit input costs. Economies of scale becomes a global factor when businesses respond to increases in demand and volume that necessitate making higher product volumes. Clearly, any individual nation has a limited population to sell to. When a business expands into global markets, the need to source globally becomes a strategic decision. Similarly, the need to sell to global markets becomes a decision based on scale advantages. As the scale of production increases, the costs per unit falls. This means that profitability can rise. Moreover, product lifecycles are extended, which means there is greater added value on production.

Economies of scale arise in several different areas of business. There are clear production advantages of producing high volumes. Economies of scale can also be derived on capital investment and the improved use of technologies. For very large multinational corporations (MNC), economies of scale can arise in marketing, with global branding and global advertising saving costs on duplication. Further economies of scale can be created in the field of human resources (HR) through the application of training, and development and range of HR strategies globally.



FIGURE 4.22 Assisted by improvements in communication, transport and technology, large businesses are able to achieve economics of scale, which are the savings resulting from mass production.

4.10.3 Scanning and learning

All businesses can benefit from scanning the global environment and learning from the best practice of businesses around the world. Much of contemporary business practice is influenced by the post–WWII industrial success of Japanese businesses, which emphasised quality, care and continuous improvement (**kaizen**). Management journals, industry and business associations, conferences and other forums act as opportunities for business people to learn from one another. Another source of learning comes from staff members and managers who have worked in other businesses and in other nations. Diversity of experience helps businesses learn how to handle any issue with flexibility and insight.

BizWORD

Kaizen *is Japanese for 'improvement'. It emphasises continuous improvement in all areas of a business, from the way the CEO manages to the way assembly line workers perform their jobs.*

SNAPSHOT



'. . . scanning and learning helps to change and improve business practices.'

Scanning and learning — supermarket wars

Also called 'environmental scanning', the processes of scanning and learning occur when businesses watch what other businesses are doing and then adapt in order to compete more effectively. This can involve watching other businesses within the same industry or learning from businesses in different industries.

Scanning and learning has been a feature of the supermarket wars in Australia. From how businesses create their supply chains through to the investment in self-scan checkout technologies, the major supermarkets are continually using environmental scanning to improve the customer experience.

When Coles invested in self-scan technology, Woolworths followed with an improved iteration. When Aldi created strong supplier relationships that threatened both Coles and Woolworths, it forced the larger supermarket chains to re-evaluate their supply chain management practices. Aldi brought its success from operating in different markets overseas to the Australian market.

In this way, scanning and learning helps to change and improve business practices.

These is some suggestion that the arrival of Amazon may affect the supermarkets but this has been largely dismissed by industry observers. The arrival of Amazon

will probably affect Australian goods retailers more than the supermarket industry. Nevertheless, all of the main supermarket retailers are increasing their investment in online selling as a defensive response to a possible threat.

SNAPSHOT QUESTIONS

1. **What** is an alternative term for 'scanning and learning'?
2. **How** does scanning and learning affect business practices?
3. **Research** and **outline** changes that have occurred in customer retail shops as a consequence of scanning and learning.

4.10.4 Research and development (R&D)

Innovative companies spend time and money on research and development (R&D). R&D helps businesses to create leading edge technologies, and to create innovative products and solutions. Government encourages R&D, and may offer taxation incentives and grants. These incentives and grants assist businesses to invest and allocate resources into R&D. Companies like CSL Ltd and 3M spend huge amounts of money in R&D, developing innovative products to better meet the needs of consumers. A central aspect of R&D is ascertaining what consumers want and assisting to create products that meet their needs.

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Syllabus area 1
Topic 4
Concept 8

Global factors (as opportunities)
Summary screen and practice questions

SUMMARY

- Four key global factors affect operations strategy and provide opportunities for operations managers: global sourcing, economies of scale, scanning and listening, and research and development (R&D).
- Global sourcing is a broad reference to sourcing business supplies or services without being constrained by location and it therefore includes all outsourcing.
- Economies of scale can lead to significant cost saving in various aspects of the business enterprise.
- Scanning and listening can be a very valuable operations management tool as it can help managers adapt best practice to the business operations.
- R&D can make a very big difference to the level of innovation, quality and competitive advantage of a business.

EXERCISE 4.9 REVISION

1 **What** are four global factors that affect operations strategy and provide opportunities for operations managers?
2 **Why** do businesses source globally?
3 **State** the benefits and challenges associated with global sourcing.
4 **Distinguish** between financial and contractual concerns associated with global sourcing.
5 **Define** the term 'economies of scale'.
6 **What** is the relationship between economies of scale and profitability?
7 **Clarify** why an effective manager should continuously scan the business environment.
8 **Detail** the importance of R&D as an operations strategy.

on Resources

- **Digital doc:** Chapter summary (doc-24806)
- **Interactivity:** Chapter crossword (int-7155)
- **Interactivity:** Multiple choice quiz (int-7156)
- **Weblink:** CSL Limited

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Sit HSC exam

EXERCISE 4.9 EXTENSION

1 **Examine** the concept of economies of scale. Contrast this with economies of scope. **Determine** why many large businesses adopt both of these operational strategies.

2 'A global web (supply chain) strategy reduces costs of production by creating a network of cost-effective facilities located around the globe all contributing to the final product. Its benefits outweigh its costs.' (Adzumi Saito, Operations & Logistics Manager, ZenTech Industries.) **Assess** the accuracy of this statement. In your answer **explain** how a global web strategy results in reduced production costs.

3 **Evaluate** the importance of research and development to CSL Limited.

Operations

MULTIPLE CHOICE QUESTIONS

1. Which of the following is a list of performance objectives?
   (a) Quality, speed, dependability and cost
   (b) Quality, flexibility, customisation and profit
   (c) Speed, cost, flexibility and choice
   (d) Dependability, customisation, profit and choice
2. Which is *not* an important aspect of quality?
   (a) Control
   (b) Assurance
   (c) Process
   (d) Improvement
3. What is the correct order of steps in the product design and development process?
   (a) Market research, product design and prototype, prototype testing, product distribution and product refinement
   (b) Market research, product design and prototype, prototype testing and assessment, product and production processes refined, product distribution and launch
   (c) Market research, product refinement, prototype testing and assessment, product development, product launch and product line extension
   (d) Product design and prototype, prototype testing and assessment, product refinement, market research and production, distribution and specification development
4. Which is *not* a trend in supply chain management (SCM)?
   (a) Cost minimisation
   (b) Supplier rationalisation
   (c) Responsive supply chain processes
   (d) Forward vertical integration
5. Which is an essential aspect of logistics?
   (a) Creating a budget for new machinery
   (b) Materials handling and packaging
   (c) Checking the quality of outputs
   (d) Undertaking a skills audit
6. What is a cost associated with warehousing?
   (a) Costs of new machinery
   (b) The expenses associated with borrowing
   (c) Insurance and security of the stock held
   (d) The time saving in distribution
7. Which is *not* a form of outsourcing?
   (a) Business process outsourcing (BPO)
   (b) Finance and accounting outsourcing (FAO)
   (c) Knowledge process outsourcing (KPO)
   (d) Marketing processes outsourcing (MPO)
8. Which is an example of established technology?
   (a) Laptop computers
   (b) Nano particle technology
   (c) Bluetooth technology that can cross the globe
   (d) None of the above
9. What is a disadvantage of carrying stocks of unsold inventory?
   (a) If a particular product line runs out, an alternative can be offered thereby generating income for the business instead of a lost sale.
   (b) It reduces lead times between order and delivery.

(c) Stocks give the opportunity for a business to generate immediate revenue. It is very hard to generate revenue from partially transformed inputs.
(d) The cost of obsolescence

10. Which of the following is *not* a financial cost associated with change?
(a) Redundancies
(b) Inertia
(c) Purchase of new equipment
(d) Retraining

SHORT RESPONSE QUESTIONS

1. (a) **Define** the term 'operations'. *2 marks*
(b) **Distinguish** between inputs, transformations processes and outputs in operations processes. *6 marks*
2. (a) **What** is meant by total quality management? *2 marks*
(b) **Demonstrate** the main differences between quality control and quality assurance. *6 marks*
(c) **How** can quality management make a business more competitive? Refer to actual examples. *10 marks*
3. (a) **Identify** the main advantages and disadvantages of holding stock. *3 marks*
(b) **What** is the importance of inventory management? *5 marks*
(c) **Evaluate** which inventory management system is preferable for a medium-sized manufacturing business: LIFO (last-in-first-out) or FIFO (first-in-first-out). *10 marks*
4. (a) **Examine** three examples of ethically and socially responsible issues that may arise in operations management. *6 marks*
(b) **Assess** the benefits and costs of operations managers acting in an ethical and socially responsible manner. *12 marks*
5. (a) **Identify** the main types of layout. *3 marks*
(b) **Deduce** what an operations manager needs to consider when selecting the optimum facilities design and layout. *6 marks*

EXTENDED RESPONSE QUESTIONS

1. 'Inventory is a redundant concept in this modern world of flexible businesses and adaptable business processes.' **Discuss** this statement with reference to the advantages and disadvantages of holding stock, and **analyse** different approaches to inventory management.
2. Intense competition in the internet service provider (ISP) industry has forced WireFree Technology, a Sydney-based ISP serving the metropolitan areas of Sydney and Wollongong, to evaluate its operational management systems.

   Prepare a report that could be given to WireFree Technology's management team. In your report, you should:
   (a) **Outline** the concepts of cost leadership and product differentiation.
   (b) **Propose** three operations management strategies WireFree Technology could implement to improve its competitive position.
3. **Identify** the main influences on operations management and **evaluate** three operations management strategies that can be implemented in response to the influences.
4. Strategies that businesses use to maximise their operations can be divided into five areas. These are: facilities design and layout; materials management; quality management; technology; and outsourcing. Select three areas from this list. **Identify** and **explain** one operations management strategy from each of the three areas selected.
5. **Demonstrate** the importance of outsourcing and global sourcing to modern business and **assess** the effect of outsourcing as a response to overcoming resistance to change.

on Resources

Digital doc: Sample HSC Business Report (doc-14150)

"Social media is a great way to engage with our local community..."

Resources

Kaitumandd case study: Marketing (doc-14:90).

TOPIC 2

MARKETING

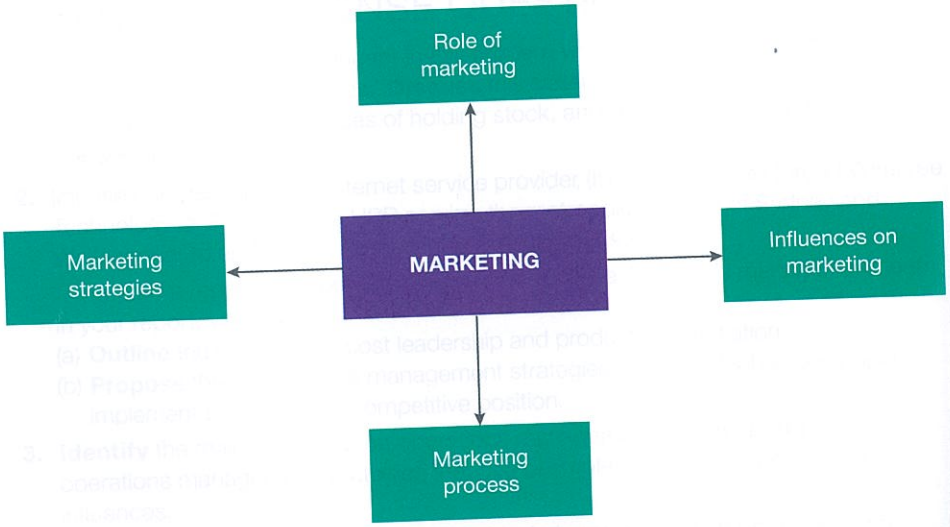
FOCUS AREA

The focus of this topic is the main elements involved in the development and implementation of successful marketing strategies.

OUTCOMES

Students should be able to:

- critically analyse the role of business in Australia and globally
- evaluate management strategies in response to changes in internal and external influences
- discuss the social and ethical responsibilities of management
- analyse business functions and processes in large and global businesses
- explain management strategies and their impact on businesses
- evaluate the effectiveness of management in the performance of businesses
- plan and conduct investigations into contemporary business issues
- organise and evaluate information for actual and hypothetical business situations
- communicate business information, issues and concepts in appropriate formats
- apply mathematical concepts appropriately in business situations.





Case study: Social media advertising — #MesCheveaux

After gaining seventeen years' experience in the hairdressing industry and establishing a great reputation through working at prestigious salons, Charlie Helou decided to take the risk and start his own salon, Mes Cheveux, in 2015 with business partner Josephine Staltari.

With high-quality products, modern facilities and highly skilled and creative professionals, MesCheveaux has positioned itself as a five-star luxurious salon in the Parramatta area. Being in the establishment phase, the owners didn't have a lot of funds to spend on marketing and so they came to rely on social media advertising.

Mes Cheveux has a vibrant social media presence on Instagram and Facebook. Since hairdressing is a visual industry, social media is the perfect platform for the salon to 'show off' their work as well as their exclusive products and services. 'This is probably the main way we use social media: to showcase what our talented stylists can do. We often post before-and-after pictures of our client's new hairstyles. Not only is this proof of what we do, but if the customer shares those photos with their own personal networks, this generates greater exposure for our business.' Social media has also changed the requests they get from clients. 'Many clients refer to some of our posts for inspiration on their cut, colour or style and come in already knowing what they want done.'

Being in a prime location in Westfield Parramatta, the salon gets a lot of business from passing trade. However, Charlie has found that a large percentage of new business has been generated from social media. 'Salon testimonials and reviews are a great way to attract brand new clients to the salon. Word of mouth recommendations through social media are an effective way of building brand awareness and increasing new client patronage.'

Social media is a powerful marketing tool that has allowed them to 'chat' with customers even after they've left the salon. 'We can show customers new things around the salon, remind them to use certain products, send warm wishes on special occasions and of course show everyone our work!' Charlie receives many enquiries through social media outside their opening hours, which he always makes sure he responds to in a timely manner.

Charlie also uses social media as a research tool. He currently follows industry leaders, fashion houses and other stylists. Social media platforms have enabled him to keep up with the latest industry trends, be inspired by other hairdressers' creativity and keep an eye on what their competition is doing.

'Two of the best things about social media is that it's not an expensive form of marketing and it's simple to use — it requires only a small amount of attention each day to create a loyal brand following. Social media is a great way to engage with our local community as well as current and potential customers and spread more awareness about our salon.'



'Social media is a great way to engage with our local community …'

on Resources

Kathmandu case study: Marketing (doc-14390)