

## Supply Chain



### Procurement

**Definition:** Involves obtaining or buying of goods and services from an external source. These are to be used in the production process or are to be sold on.

### Supply Chain

**Definition:** The various processes involved in producing a product and distributing it to buyers. Managing the supply chain includes procurement of supplies, logistics and inventory control.

### Warehouse

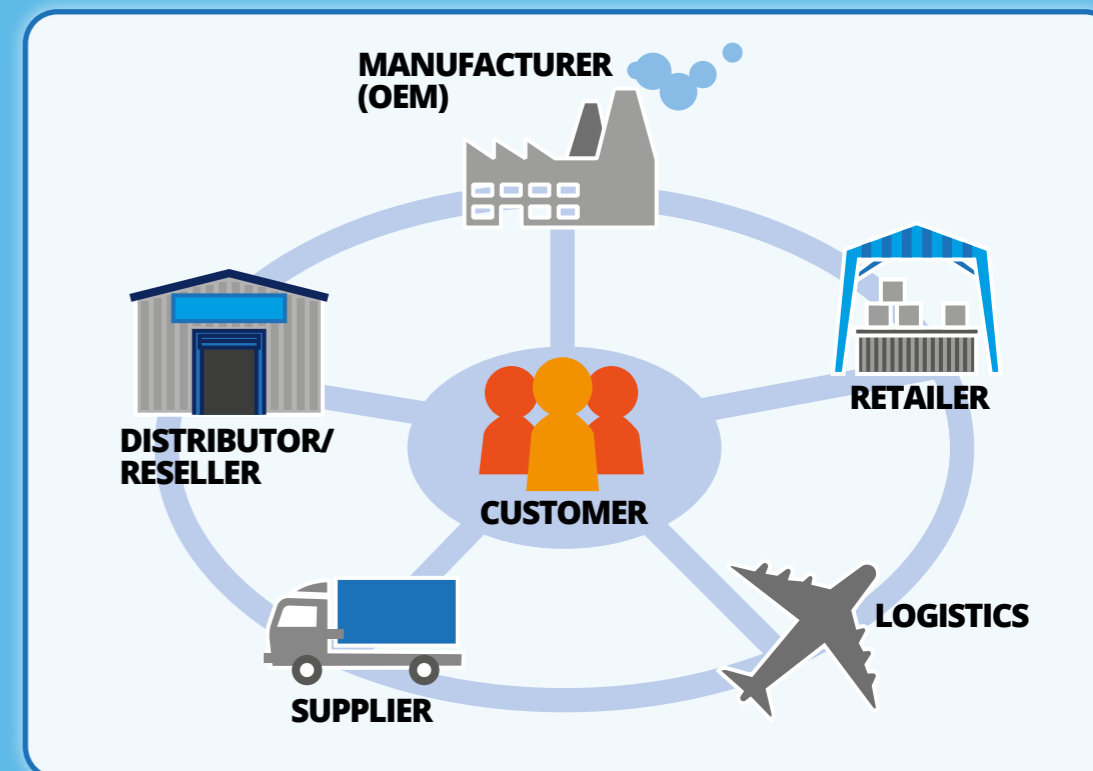
**Definition:** A place where resources or finished products are stored before they are sold.

### Why Supply Matters

- **Customer satisfaction** → businesses need stock to be delivered on time so that they can meet their own customer requirements → they will not run out of supplies or be unable to produce or sell
- **Costs** → if suppliers can produce efficiently this will help reduce the costs of the business → enables it to provide its products at a better price → increases its own profit margins
- **Quality of finished goods** → if a supplier provides good quality products this can help with the reputation and quality of the business → it will not have problems with defects and returned items
- **Reliability** → if suppliers can produce and deliver quickly and reliably, a business can hold relatively little stock because it can be replaced easily → this reduces stockholding costs

Suppliers can cause problems for businesses if:

- their deliveries are late
- their prices are high or keep changing
- the quality of the products they supply is poor



### Choosing Suitable Suppliers

The choice of suppliers is a critical one for businesses because it will affect the success of what they do.

The choice will involve a number of factors:

- **Cost**
- **Quality**
- **The range of products that can be supplied**
- **Speed of delivery**
- **Flexibility of the supplier** → in terms of the quantities that can be produced and the times of deliveries
- **Reliability** → e.g. the ability to deliver within a certain time slot
- **Reputation** → what have others said about working with this business
- **Payment terms** → e.g. how long does the business have to pay
- **The contract terms** → e.g. what financial compensation would be paid if deliveries were late
- **Behaviour of suppliers** → concerned about the ethics of the suppliers behaviour such as how they treat their staff → this could affect the business' own reputation

## Logistics

**Definition:** Involves the management of the movement of goods from where they are to where they are needed: often between the manufacturer and the consumer.

Logistics is the flow of materials:

- **Into a business from suppliers**
  - Delivery and transportation from suppliers
  - Correct quantity and quality on time
- **Within a business as raw materials are transformed into a finished product**
  - Warehousing and stock management
  - Inventory of supplies and finished goods
  - Packaging of finished goods
  - Security of supplies and finished goods
- **Out of a business to reach the customer**
  - Transportation and distribution of finished products



Any disruptions in any part of this flow will mean that a business is unable to match supply to demand.



## Stock

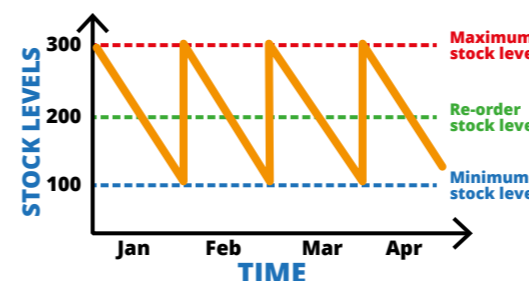
**Definition:** Raw materials that have not yet been used or products that have been made, but not sold.

It can also include semi-finished goods or finished goods.

Holding stocks are important in order to:

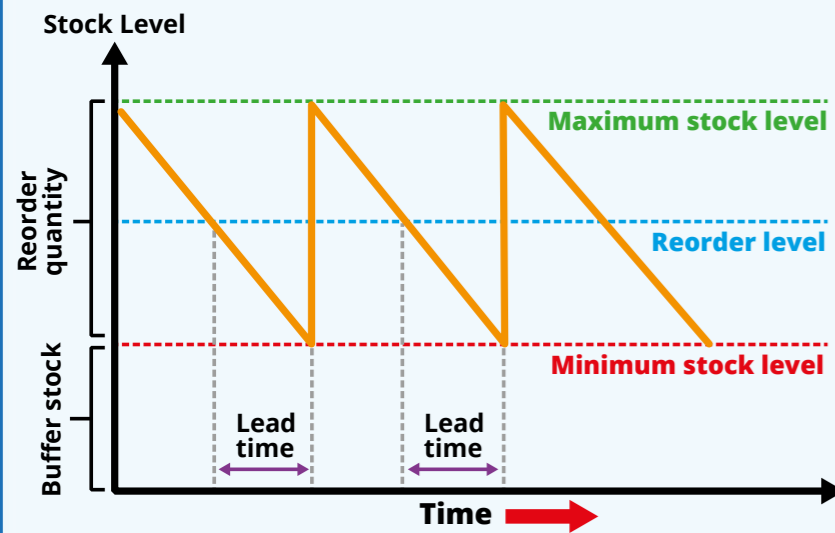
- have supplies to keep production going
- have stocks to meet customer demand.

Stock Control Method	Just-in-Case (Traditional)	Just-in-Time
<b>Definition</b>	<ul style="list-style-type: none"> <li>• Holds stock just-in-case there is a delay from suppliers or a sudden unexpected increase in demand.</li> </ul>	<ul style="list-style-type: none"> <li>• Requires businesses who adopt the idea to keep their stocks of finished goods and / or materials to a minimum.</li> <li>• Goods will only be produced when orders are received and / or materials are only received when they are needed.</li> <li>• This process saves storage costs and avoids having assets tied up in stocks.</li> </ul>
<b>Advantages</b>	<ul style="list-style-type: none"> <li>✓ <b>Stock usually available</b> → not held up by bottlenecks / delays in delivery</li> <li>✓ <b>Bulk purchases</b> → discounts available → lower prices → lower costs</li> <li>✓ <b>Quality of stock can be checked</b> → longer time available</li> <li>✓ <b>Stock can be kept in correct environment</b></li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Stock only bought when needed</b> → no need for warehouse → lower storage cost</li> <li>✓ <b>Materials generally in good condition</b> → straight from manufacturer</li> <li>✓ <b>Up-to-the-minute materials bought</b> → based on current technologies</li> <li>✓ <b>Little waste</b> → only buying what needed → small surplus of stock in downturn</li> <li>✓ <b>Stock delivered straight to where it is needed</b> → no extra cost / reduced chance of damage</li> <li>✓ <b>Can reduce cash flow problems</b></li> </ul>
<b>Disadvantages</b>	<ul style="list-style-type: none"> <li>✗ <b>Need to find storage</b> → warehousing can be expensive → may be lost depending on other business</li> <li>✗ <b>Stock needs to be moved from where it is stored to factory</b> → expensive / greater chance of damage</li> <li>✗ <b>Labour costs</b> → involved in looking after stored goods</li> <li>✗ <b>Materials may deteriorate</b> → perhaps wrong environment</li> <li>✗ <b>Materials may become out-of-date</b> → technology means new material always being developed</li> <li>✗ <b>Downturn in business means high cost materials not needed</b> → cannot be resold → will not get outlay back</li> </ul>	<ul style="list-style-type: none"> <li>✗ <b>Depend on suppliers</b> → if they run out of materials → production may have to stop</li> <li>✗ <b>Delivery difficulties</b> → delays through weather / congestion / accidents</li> <li>✗ <b>No bulk buying</b> → deliveries more expensive → more need to be paid for → no economies of scale</li> </ul>



### JUST-IN-TIME STOCK CONTROL





## Buffer Stock

**Definition:** The amount of stock held between the minimum stock holding and zero stock. Used in case of late deliveries or extra orders.

## Lead Time

**Definition:** The amount of time that elapses between placing an order and the delivery of that order.

## Where to Source Supplies

Locally v globally and less developed countries

- **Ethics**
  - Are suppliers paid a fair rate?
  - Can ethical behaviour be tracked back through the e-supply chain e.g. working conditions or child labour?
  - Impact on local economy e.g. jobs
- **Costs**
  - Do cost savings justify the uncertainties or risk to quality?
- **Logistics**
  - Delivery time
  - Risk of stock not arriving or being damaged

## Computerised Stock Control

Stock control systems can be computerised.

When a specified quantity is reached new stock is automatically ordered.

Stock levels are recorded using barcodes and scanners i.e. each time materials are removed from a warehouse they are scanned and the stock level updated.

Relies on accuracy e.g. all workers remember to scan, no loss of stock, system is set up correctly.

## The relationship between the functional areas of a business and its supply chain

### Marketing

- Cost of raw materials and manufacturing to inform pricing decisions
- Product features and functions
- USP e.g. ethically sourced
- Quality of product → leading to brand loyalty and repeat sales
- Customer satisfaction
- Place available to end customer

### Operations

- Quality of supply will affect the quality of the product
- Frequency of delivery will affect the operations process

### Finance

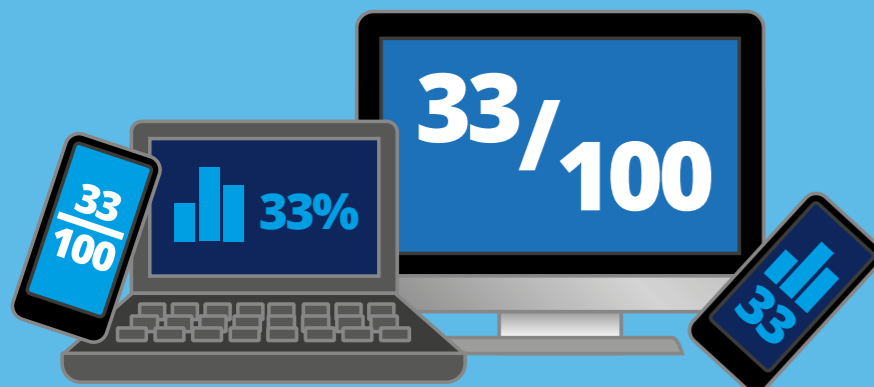
- Cost of raw materials
- Payment terms negotiated with suppliers, impacting on cash flow
- Sales revenue
- Higher profit margins from increased efficiency, lower stock holding costs and less waste



## How to Store and Distribute Supplies

This will depend on the:

- frequency and size of deliveries
- storage requirements e.g. security or special conditions such as refrigerated
- flow of materials through the production process
- distribution of finished goods
- right quantity and quality at the right time
- ability to match supply to demand to achieve customer satisfaction.



## Picking a Supplier

Suppliers will **affect unit costs** in the following ways:

- The price of the components directly affects the cost of a product.
- Discounts may be offered for buying in bulk.
- Appropriate payment terms will help businesses avoid bank charges.
- If a supplier can deliver reliably and regularly then stock holding costs can be reduced.

Suppliers will have a **direct influence on prices** as:

- High quality components allow businesses to charge a higher price.
- Reliability and speed of supply can add value to a product and allow a premium price to be charged.
- Reliability and quality will help a business establish a good reputation.

Suppliers will affect **reputation and customer satisfaction**:

- quality of raw materials entering the production process
- delivery of supplies on time
- flexibility to match supply to demand
- speed of delivery



### MANUFACTURING PLANT



### DISTRIBUTOR - 1



### DISTRIBUTOR - 2



### DISTRIBUTOR - 3



### RETAILER - 1

### RETAILER - 2

### RETAILER - 3

### RETAILER - 4



## Summary of the impacts a supplier can have on a business

Selecting the right supplier is important as they will impact on a business in the following ways:

- costs.
- quality of finished goods.
- price changes.
- customer satisfaction.
- reputation.
- sales.
- profits.

## The impact of supply decisions on stakeholders

**The owners of the business** → supply decisions impact on features such as quality of the products, the costs and the speed of delivery → this will affect sales, profits and dividends

**The local community** → transportation of products will impact on air pollution and congestion → choice of local suppliers can create jobs and help grow the community

**The suppliers themselves** → if a supplier wins a contract it may be able to expand and reward its own staff and investors → if they lose a contract then they may see sales and profits fall

**The government** → movement of products around the country will affect the pressure on infrastructure such as the road system. Choosing a UK supplier will boost the economy.



SUPPLIER



DISTRIBUTOR



RETAILER