Chapter 29
Purchasing

Effective stock management, whether it is of raw materials, work in progress or of finished goods, is an important part of an efficient operations management plan. Purchasing of stock at the required quality and quantities is a key factor in the production process. Ensuring a smooth flow of goods from the production line to the final consumer is a complex process, which may involve numerous different suppliers.

Key aspects of effective stock management

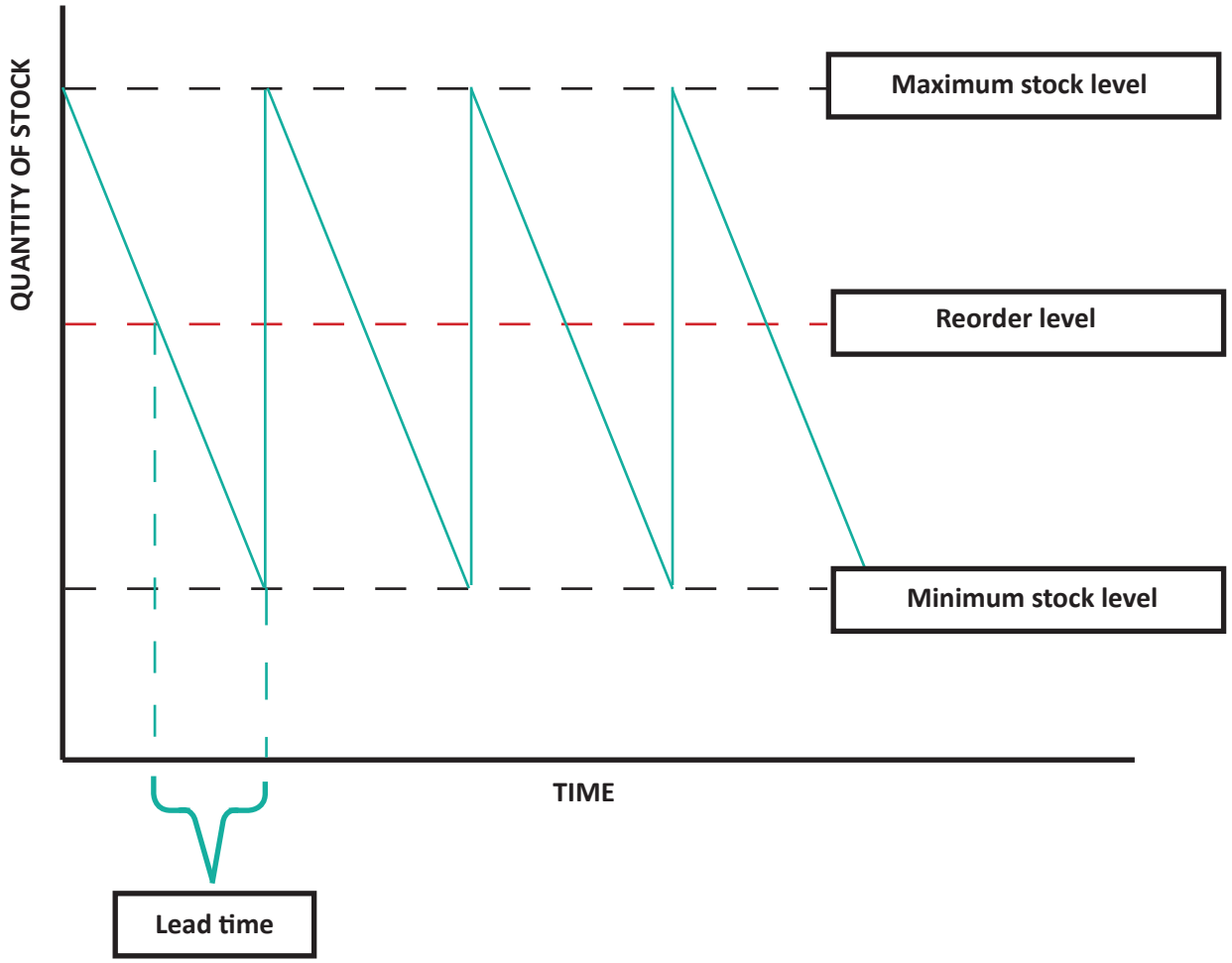
Businesses must ensure that stock is available for use within the manufacturing process as and when it is needed.

Part-finished goods (work in progress) do not sit around the factory floor unused and losing value: instead they are brought to the next stage as soon as possible.

Finished goods are available for timely delivery to customers and are not made before customers are found for them.

Traditionally the main method of ensuring a ready supply of raw materials has been the maintenance of large buffer stocks. These are relatively large stock holdings held 'just in case' they might be needed. This method of stock management was to an extent understandable. Businesses in the 1970s and 1980s were operating during times of considerable industrial strife, with interruptions to supplies an everyday occurrence. However, the industrial landscape has changed and this has allowed the operations management emphasis now to be on the reduction of stock holdings and the freeing-up of working capital. The old idea of buffer stocks has been largely abandoned in favour of the effective use of just-in-time systems.

A traditional stock management chart



reorder level	This is the level of stock at which a new order is placed.
reorder quantity	This is measured by the difference between the maximum and minimum stock holding levels.
lead time	This is the amount of time taken for delivery to take place following the placement of an order.
buffer stock	This is the stock level that will always be held in case of problems with delivery – i.e. the amount of stock below the minimum stock holding level and zero stock.

Computerised stock control

Businesses today hold their stock details on computer databases. This improves efficiency and accuracy. When the quantity of stock decreases or increases, the database is updated instantly which allows for accurate stock checks and the automatic reordering of stock if the level falls below the reorder level. The best example of this is the stock control systems used by the main supermarkets. The system is connected via computers to the checkout tills, and when products are scanned in the stock control database is automatically updated.

Just-in-time (JIT)

Many businesses today operate a JIT manufacturing system which is designed to minimise the costs of holding stocks of raw materials, components, work in progress and finished goods. This is achieved by carefully planned scheduling in order that resources can flow through the production process smoothly. There are a number of key requirements for JIT to operate effectively:

- a very efficient ordering system;
- suppliers that reliably deliver raw materials and components just when they are required;
- a well-trained workforce which can be trusted and who are willing to work in teams;
- a cooperative (non-confrontational) culture, whereby management encourage workers to achieve their goals and work flexibly.

Under a JIT system materials are delivered shortly before they are required by the manufacturers and go straight onto the production line – virtually no stock is stored on site. Products are not made unless an order has already been placed, and when the goods are complete they leave the factory to be delivered to the customer.

The operation of a JIT system is not without its problems. Ordering and administration costs are likely to rise and the advantages of bulk buying may be lost. Suppliers who do not deliver on time can bring the whole production line to a halt, leading to a manufacturer's reputation being damaged if customers do not receive their goods on time.

Systems for effective stock management

For effective stock management to work there must be systems and relationships put in place. These systems and relationships include:

- **Effective relationships with suppliers and customers.** Suppliers must be able to switch to the new, very efficient ordering system. There is no point in expecting to have regular and timely deliveries just when they are required if suppliers are unable to comply with this requirement. Often this type of ordering and delivery system will involve some integration between the two companies. This type of integration of systems can be achieved by the use of EPOS and bar coding systems.

- **Effective internal relationships**. There must be a customer chain within the manufacturing process. This means that internal supply operates on the same basis as external supply - in other words, each team within the production process treats the next as its customer. Goods and parts are only supplied precisely when they are needed in the next stage of production.

Advantages of effective stock management

- **Reduction in working capital**. This frees money for investment and improves liquidity. There is an opportunity cost of holding stock. This means that if money is tied up in stock it is not free for use elsewhere in the business.
- **Improved relationships with customers**. Helping to guarantee ongoing orders.
- **Freeing of storage space**. This can release retail or manufacturing space.
- **Less stock wastage and discounting**. Smaller buffer stocks and supplies of finished goods will mean that stock is less likely to be damaged before it is used and finished goods are less likely to become out of date or out of fashion.
- **Easier stock rotation**. Stock rotation means ensuring that older stock is used before newer stock. When buffer stocks are small and deliveries are regular this becomes easier – this is because stock is used shortly after delivery.

Discussion themes
Why is it important to a business to have an efficient purchasing function?
Explain how a business can control its stock.
Why does it cost to hold stock?
What is meant by lead time and buffer stock?
Explain the possible advantages to a business of adapting a JIT stock control system.
Explain how technology has improved stock control.
'It is better to have too much stock than too little'. Do you agree with this statement?