

Meeting customer needs

Design and research development

What is design? Design is working out how to make a product including its function, appearance and cost

Why is design important? Design helps a product stand out from the competition ie be different and better. Design is a way of creating product differentiation

What is the design mix? Product designers balance three elements:

- *Function*: what a product does and how well it works. Products must fulfil their function
- *Appearance*: how a product looks – an important opportunity for product differentiation
- *Cost*: the expense of making an item

Explain function. Function is what a product does and how well it works eg a raincoat keeps the wearer warm and dry

What is appearance? Appearance is the look of a product. Customers are much more likely to buy a good-looking items – ones they are proud to own and be seen using

Explain the role of cost in the design mix. Cost is the expense of making an item. Using cheap components lowers costs but often reduces reliability and functionality

What is the role of scientific research in design? New inventions and processes means firms can improve existing products and launch new ones – if they invest in R&D

What is R&D? R&D stands for research and development

- **Research** here is not market research but *scientific* research ie trying to find out new ways of making new or improved products
- **Development** is about putting theory into practice ie turning the results of scientific research into new or improved products

State the drawbacks of R&D? R&D requires investment in staff and facilities which raises costs and cuts profits – in the short term. Successful R&D means new products and long term profit

Managing stock

What is stock? Stock is any item stored by a business for use in production or sales. Often called *inventories*

List types of items typically held as stock. A car manufacturer can hold

- *Raw materials* eg cooper and *components* eg engine parts for eventual use in manufacture
- and *finished goods* awaiting held in store so that a customer order can quickly be met 'from stock'

Why do firms hold stock? Firms store raw materials and components to enable production. By holding finished good the firm can meet an unexpected order immediately.

How does a firm decide on stock levels? The level of stock depends mainly on storage costs and the predictability of demand.

What happens if firms are out of stock? Production stops. Workers and machines stand idle.

Describe the drawbacks of holding stock. Holding stock costs money eg warehousing costs of requires financing. Interest is paid (or lost) on the amount tied up in stock.

What is stock control? Stock control is the method used by a firm to decide on stock levels eg do we need 100 or 10 axles in the warehouse at any one time; when do we need to reorder?

State the type of stock control measures a firm can use. There are two main stock control methods: *buffer stock* for 'just in case' and *JIT* ie just in time

Explain how the buffer stock control works. Managers decide on

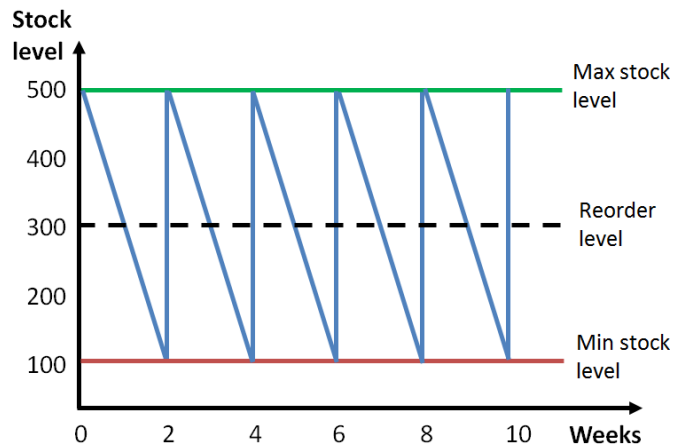
- a *maximum stock level*: the largest amount of items to be held
- a *minimum stock level*: the lowest amount of items to be held
- a *reorder level*: the minimum level of stock that triggers a reorder form the supplier

Interpret a bar gate stock control graph.

The firm has decided to hold at least 100 components in stock, but no more than 500 at any one time. Its buffer stock level is 100.

When stocks fall to 300 items, the firm reorders 400 items which take around a week to arrive.

The new components are delivered when stock is at its minimum desired level of 100, taking the amount held in the warehouse back up to 500 – the desired maximum



Is there an alternative to holding buffer stocks? Firms can opt to do away with warehouses and buffer stocks and arrange for the delivery of components of the day they are required in production. This is called just-in-time (JIT) the stock management. No just-in-case stock is held.

What happens to suppliers fail to deliver just-in-time? If the firm has no stocks of raw materials and components then production cannot continue.

List the advantages of JIT stock control. Holding stock cost money. If interest rates are 10%, the annual cost of holding say £80,000 of stock is $£80,000 \times 10\% = £8,000$. Switching from just in case to just-in-time stock control saves £8000 in interest charges. Warehousing costs fall.

State the potential drawbacks of JIT stock control. Firms become reliant on suppliers who may withdraw bulk buying discounts if they have to make frequent deliveries of small amounts

Managing quality

What is quality? A quality product meets a the standards set by customers

Does high quality mean a high price? If a cheap umbrella keeps a customer dry in a shower, it fulfils its function and meets the standards set by the customer. It is a quality item.

How are quality and price linked? They are not. A quality product does what customers expect it do whether it is expensive or cheap.

How can firms deliver quality? Firms can deliver quality by producing items that meet the standard set by customers.

What happens if firms fail to deliver quality? Firms who supply products that do not meet customer standards lose sales - particularly in competitive markets

How can improving quality help a firm? Improving quality adds value and improves brand image, allowing a premium price to be charged. If demand is price insensitive, profits rise

How do firms manage quality? There are two methods of quality management:

- *quality control*: checking products meet the required standard

- *quality assurance*: ensuring a quality culture is in each stage of the production process

Explain how quality control can work in practice. Products are tested after they are made to ensure they meet set standards. Defects are thrown away, repaired or sold as seconds.

List the costs of traditional quality control methods. Testing finished products to ensure they meet set standards requires inspectors. Correcting defects costs money.

Explain the meaning of the term culture. Culture is the shared attitudes, values and behaviours of a group eg workers attitude to quality.

Explain the term quality culture. A quality culture exists when all staff understand the importance of ensuring all work at all stages of production meets standards

What does zero defects mean? Zero defects means all work meets quality standards

Explain how quality assurance can work in practice. All staff are responsible for checking the own work meet set standards. The aim is zero defects

Outline the main differences between quality control and quality assurance. In quality control, responsibility for fault finding rests with inspectors – not workers. Workplace culture assumes that defects are inevitable. With quality assurance, responsibility for fault finding rests with workers -not inspectors. Workplace culture assumes zero defects is normal in production

Operations and competitiveness

What is productivity? Output per worker ie how many items each employee makes in a period.

How is productivity measured? By dividing total output by the number of workers.

Give a worked example of measuring productivity. If a factory employing fifty staff produces 2000 tables a day, then the productivity of each worker is $2,000 \text{ tables} / 50 \text{ staff} = 40 \text{ tables}$

Why is productivity important? Productivity affects unit costs, competitiveness and the break even level of output

What is unit cost? Unit cost is the average cost of making an item. Eg if the unit cost of making one table is £50 then, on average, a firm spends £50 producing each table

How does an increase in productivity affect costs? If staff increase productivity for no extra pay, then unit costs fall eg from £50 to £40 a table

Define competitiveness. When a business has some kind of advantage over its rivals

How can an increase in productivity affect competitiveness? Increased productivity cuts unit costs. Firms can use these cost savings to cut prices and so gain sales from rivals

How can firms raise productivity? Productivity can be improved by training staff, investing in new equipment and by improving management.

Why spend money on training and investment? The short term cost of training staff and buying new equipment (investment) is worthwhile if the resultant productivity gains mean bigger cost savings in the long run.

List other cost cutting measures a firm can use to increase its competitiveness. Firms can

- *Cut overheads* in administration by making some support staff redundant
- *Ask suppliers to cut their charges* for components and services while maintaining quality
- *Relocate* to countries where staff with appropriate skills can be hired at lower wages
- *Redesign products* so item are easier and so cheaper to make

Customer service

Explain the term customer service. Customer service is the experience a buyer gets when using products made by the business.

What is effective customer service? Effective customer service creates satisfied buyers. The buyer's experience of dealing with the business at least meets customer expectations

What is a delighted customer? Delighted customers find their expectations are exceeded when dealing with a business

Why is customer service important? In competitive markets, buyers have choices. Satisfied customers make repeat purchases and recommend the product to friends.

How can firms deliver effective customer service? A business needs to understand customer expectations and then deliver products that match or exceed those expectations

Outline the link between price and customer service. Customers shopping in discount shops have low expectations. They anticipate a lower level of service than one from a designer shop

How can firms improve customer service? Listening to customers helps a firm adjust to better match consumer needs, and respond to any problems. Managers can also focus on

- *Improving information* eg on packaging so that customers better understand products
- *training staff* to give better advice or hiring extra staff to handle customer enquiries
- *Improving after sales service* eg contacting customers to ask if they are happy
- *Improving the payment process* eg by hiring more till staff to cut queues

List the likely consequences of poor customer service. In competitive markets customers are likely to switch to rivals who offer better customer service. Lower sales lower profits.

Consumer protection laws

What is the law? The law is the body of rules that regulate the way our society operates. The law sets out the rights and duties of both buyers and sellers.

Outline the main features of the Sale of Goods Act. The Sales of Goods Act is a civil law that helps customers get their money back if there is a problem with their purchase:

- Goods must be fit for purpose and of satisfactory quality ie working at the time of sale
- The seller, not the manufacturer, is responsible for ensuring goods are fit for purpose
- Buyers can ask for a repair, replacement or refund if sold faulty goods

Outline the main features of the Trades Descriptions Act. The Trades Description Act is a criminal law that makes it illegal for firms to sell products:

- *in misleading ways* eg advertise shirts as 100% cotton if they also contain nylon
- *by withholding key information* eg failing to mention that shirts are seconds or adding a service charge of 20% without having placed a notice in the restaurant window

Outline the effects of consumer protection law on a business. Businesses must take steps to know and comply with the law. This *increases costs of production*. They must take care to ensure they are selling products as described, of satisfactory quality, and fit for purpose. A firm that breaks a civil law like the Sale of Goods may end up paying compensation. Breaking a criminal law like the Trades Description Act can result in fines or even imprisonment if found guilty