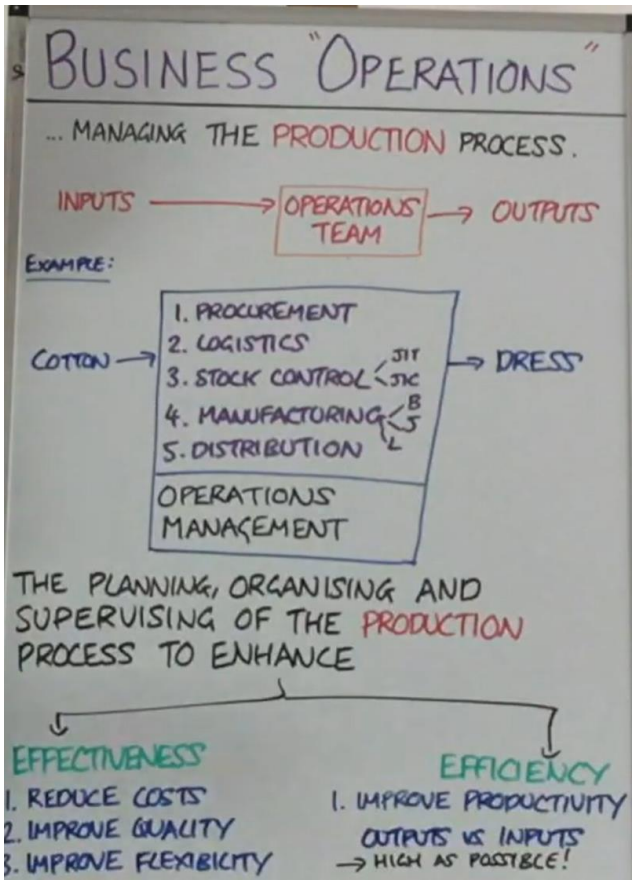
Operations intro



Business operations = Managing production process

Operations management

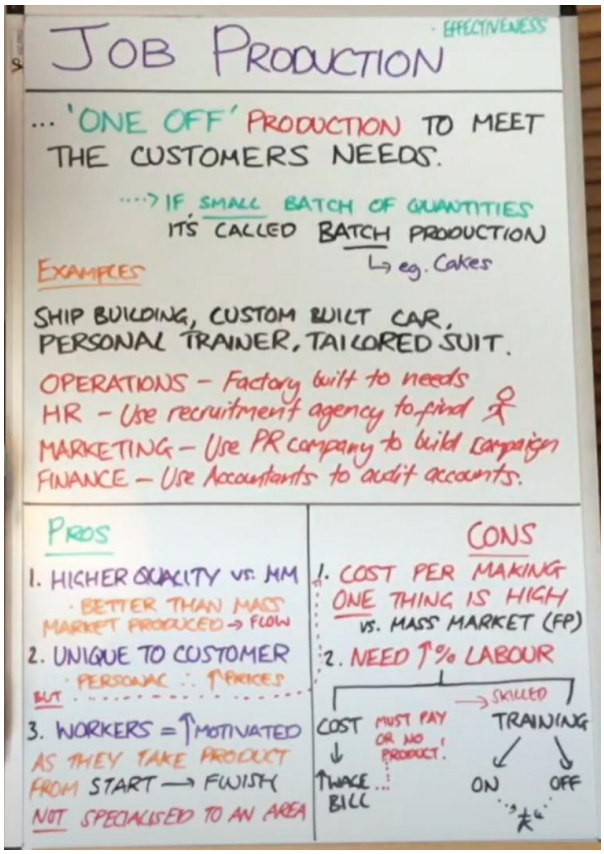
1. Procurement (make deals and negotiations)
2. Logistics
3. Stock control (just in time/case)
4. Manufacturing (job/flow production)
5. Distribution

Operations management = Planning, organising and supervising of the production process to enhance

- Effectiveness
    - Reduce costs
    - Improve quality
    - Improve flexibility

- Efficiency
    - Reduce waste (lean production) → maximise productivity

Job production



Job production = One off production to meet customer needs (ship building)

How departments adapt

- Operations: Buy factory built for needs
- HR: Use recruitment agency to find workers
- Marketing: Use PR company to build campaign
- Finance: Use accountants to audit accounts

Advantages

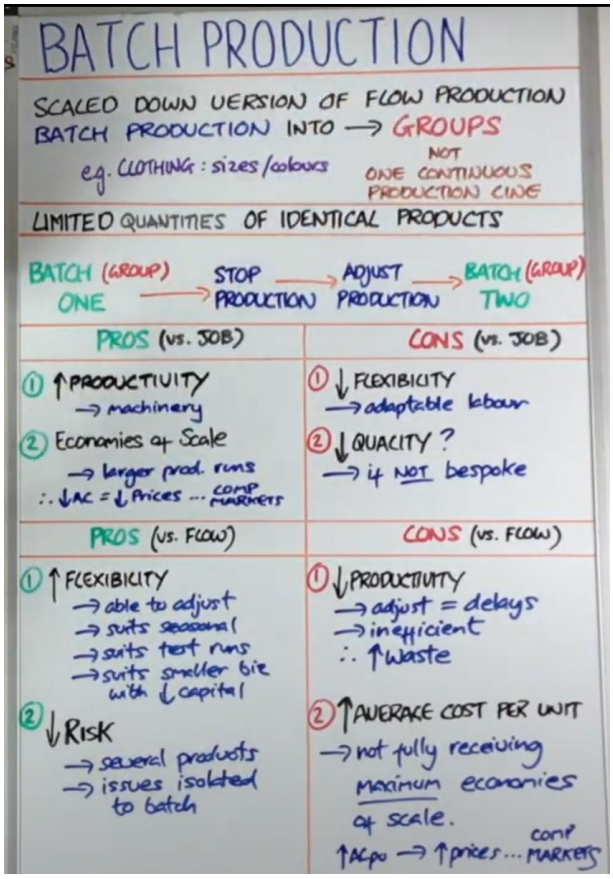
- Higher quality
- Unique to customer → charge higher price → more revenue

- Workers → more motivated
    - They see end product from start → finish

Disadvantages

- Cost per making one thing is high
- Need more labour
    - Training → increased costs → higher wage bill

Batch production



Batch production = Producing groups of items (red shirts)

Advantages (vs job)

- More machinery → increased productivity
- Economies of scale

    - Technical e.scale → more machines → producing larger quantities
    - Purchasing e.scale → Larger production runs → lower average cost/unit → able to reduce prices

Disadvantages (vs job)

- Less flexible → adaptable labour
- Lower quality → if not bespoke

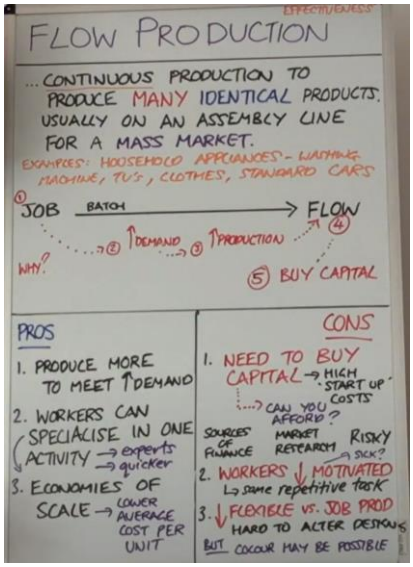
Advantages (vs flow)

- More flexible
    - Able to adjust
    - Suits seasonal businesses
    - Use for test runs
    - Use for small businesses lacking capital
- Less risk
    - Producing several products
    - Issues isolated to batch (less products have issues)

Disadvantages

- Less productive
    - Adjusting → delays
    - Inefficient → more waste
- Higher average cost/unit
    - Not fully receiving maximum e.scale → higher average cost/unit → higher prices → less competitive in market

<u>Flow production</u>



Flow production = Continuous production to produce many identical products on an assembly line for a mass market

Advantages

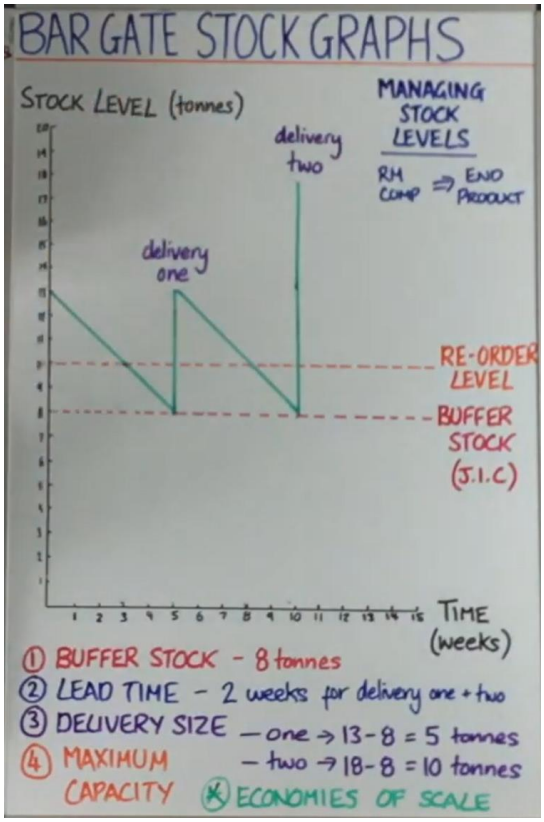
- Produce more to meet increased demand
- Workers can specialise in one activity
- Economies of scale

Disadvantages

- Need to buy capital
    - Could use sources of finance (government grant, overdraft)
    - Market research → see demand
    - Risky
- Workers become less motivated
    - Repetitive task
- Less flexible vs job production
    - Hard to alter decisions
    - However, technology is advancing

<u>Inventory control chart (bar gate stock graph)</u>

Chart used to manage stock levels



Larger capacity → more economies of scale

Buffer stocks

Buffer stock = Minimum stock business intends to hold (just in case)

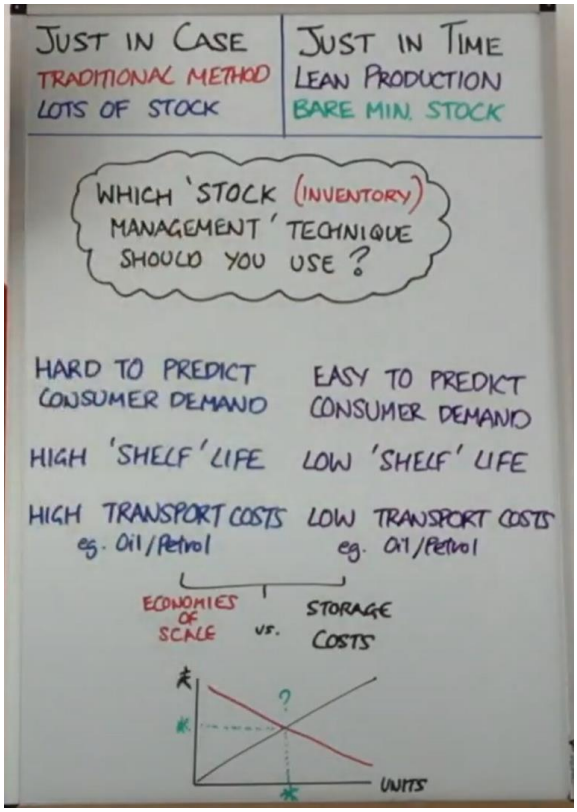
Advantages

- Manage uncertainty
    - Suppliers fail to deliver
    - Unexpected demand
    - Continue production → more sales
- Negotiate better deal with suppliers
    - Suggests larger order size (less frequent) → purchasing economies of scale → lower average cost/unit

Disadvantages

- Higher storage costs
    - Always holding a level of stock → less cashflow
- Wastage
    - Depending on what is being stored (food)

Just in case/time



Stock is also referred to as ‘inventory’

Advantages

- Get economies of scale
    - Buy in bulk
    - Lower transport costs
- If suppliers fail to deliver
    - Less risk
- React to unexpected change in demand

Disadvantages

- Storage costs
- Risk of waste

Advantages

- No storage costs
    - Warehouse
    - Workers

- Less risk of stock
    - Going off
    - Tampered
    - Stolen
- Less waste
- Increased cashflow
    - More freedom

Disadvantages

- Less likely to get economies of scale
    - Less orders → higher transport costs
- Communication risk
    - Speak to suppliers often → more workers?

Which stock/inventory management should you use?

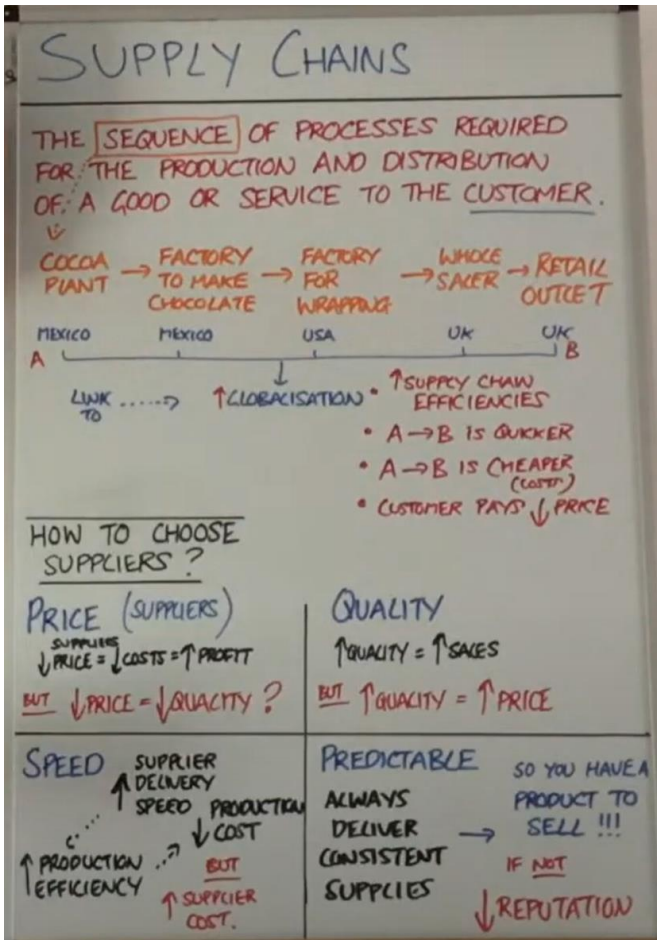
- Hard to predict consumer demand (use just in case)
- Easy to predict consumer demand (use just in time)

- High shelf life (just in case)
- Low shelf life (just in time)

- High transport costs (just in case)
- Low transport costs (just in time)

Should have balance between just in case and just in time because economies of scale decreases but storage costs get higher using just in case and vice versa

Supply chains



Supply chains = Sequence of processes required for the production and distribution of a good/service to the customer

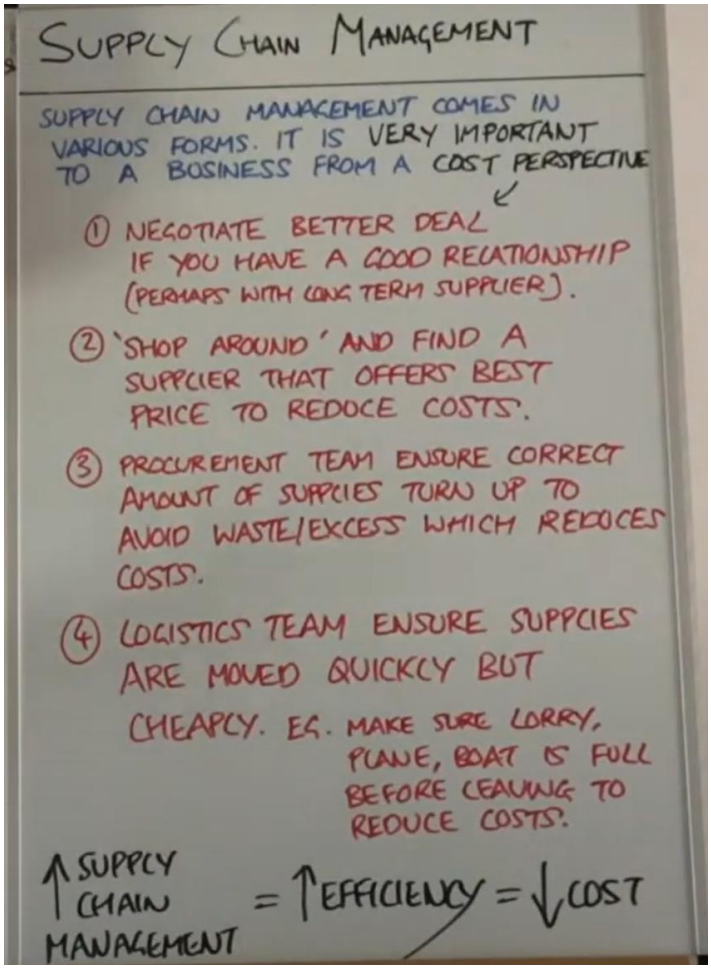
Increased globalisation → more efficient supply chains (quicker, cheaper) → customers pay lower prices

How to choose suppliers

- Price (suppliers)
    - Low price → less total cost → higher net profit
    - Low price may mean lower quality
- Quality
    - Higher quality → higher sales
    - May lead to higher prices
- Speed

    - Increased delivery speed → higher production efficiency → lower production cost
    - May have higher supplier cost
- Predictable
    - Always deliver consistent supplies → no product to sell → destroy reputation

Supply chain management



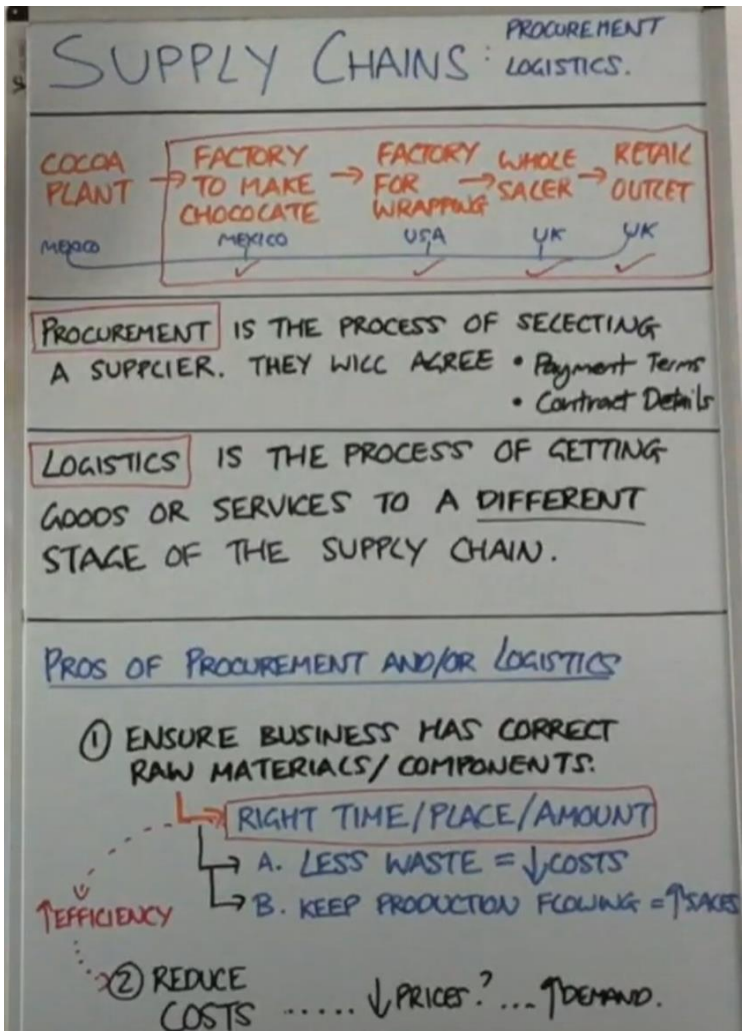
How to manage supply chain

- Negotiate better deal
    - If you have good relationship
    - Better with long term suppliers
- Shop around and find supplier that offers best price to reduce cost
- Procurement team ensure correct amount of supplies turn up to avoid waste → reduces costs

- Logistics team ensure supplies are moved quickly but cheaply (vehicle leaves completely full, not half empty)

Better supply chain management → higher efficiency → lower cost

Procurement and logistics



Procurement = process of selecting supplier that will agree with payment terms and contract details

Logistics = Getting goods/services to a different stage of the supply chain

Advantages

- Ensure business has correct raw materials/components
    - Right time/place/amount → increase productivity (workers don't stop producing)
    - Less waste → reduced costs
    - Keep production flowing → higher sales
- Reduce costs → lower prices for customers → higher demand

Quality management

If choice of product between competitors → quality is very important

Advantages

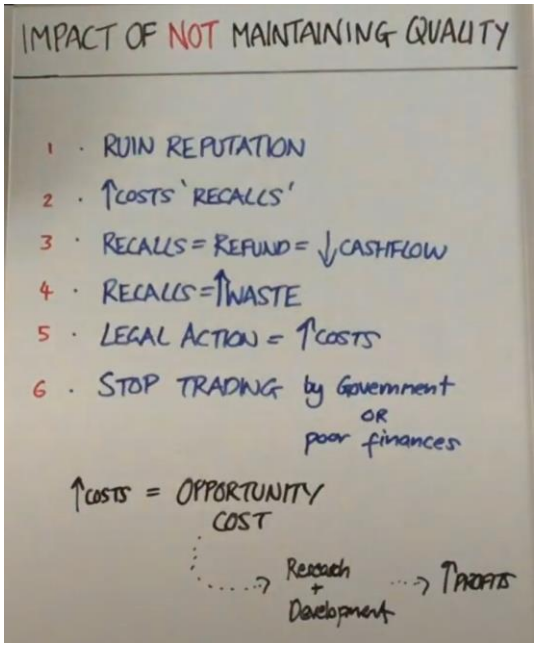
- Higher levels of repeat business
- New products likely to be stocked by retailers

- Charge higher prices due to increased brand loyalty

Firms may sacrifice quality for reduced costs

Disadvantages

- Lower quality → bad reputation → lower sales → reduce prices → lower revenue
- Retailers don't want to stock you because of more refunds → more hassle and customer service involved more



Impact of not maintaining quality

- Ruin reputation
- Increase costs → might have recalls → more refunds → lower cashflow
- More recalls → increased waste
- Legal action (electronics) → increased costs
- Stop trading (by govt or poor finances)

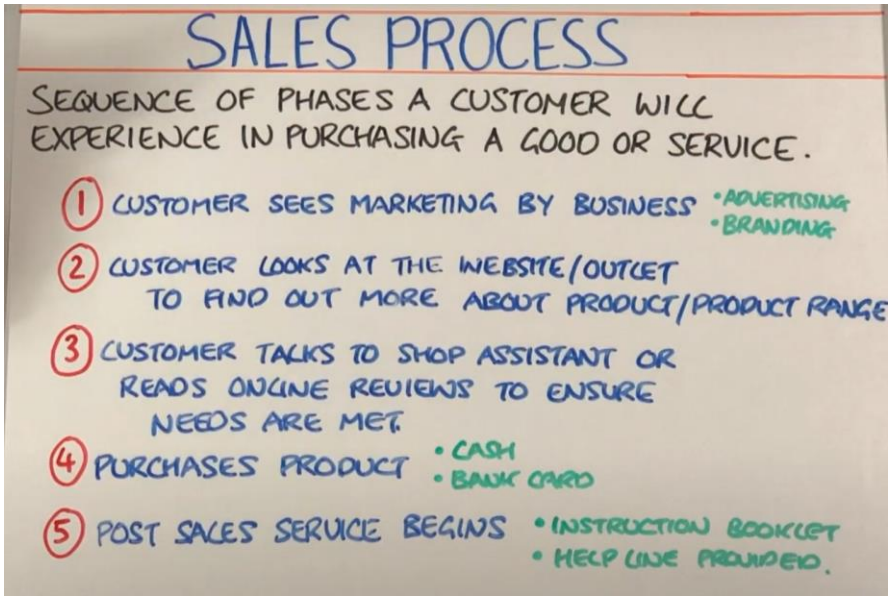
Increased costs = opportunity cost (could've used cash in research and development)

Issue with maintaining quality

- Increased costs
    - Regular checks on production line → more labour costs and more capital costs
- Quality training (train staff to detect good quality/train staff how to use capital)
- Slower process → lower units produced → lower sales
- Less efficient because of more labour costs

Still worth maintaining high quality?

Sales process



Sales process = Sequence of phases a customer will experience in purchasing a good/service

Process

1. Customer sees marketing by business (advertising/branding)
2. Customer looks at website/outlet to find out more about product/product range

3. Customer talks to shop assistant/reads online reviews to ensure needs are met
4. Purchases product (cash/card)
5. Post sales service begins
    - Instruction booklet
    - Helpline provided

Customer service

Better customer service → better loyalty → repeat customers → more retained profits → more investment research and development (make things cheaper) → Long term profits → potentially able to charge lower prices

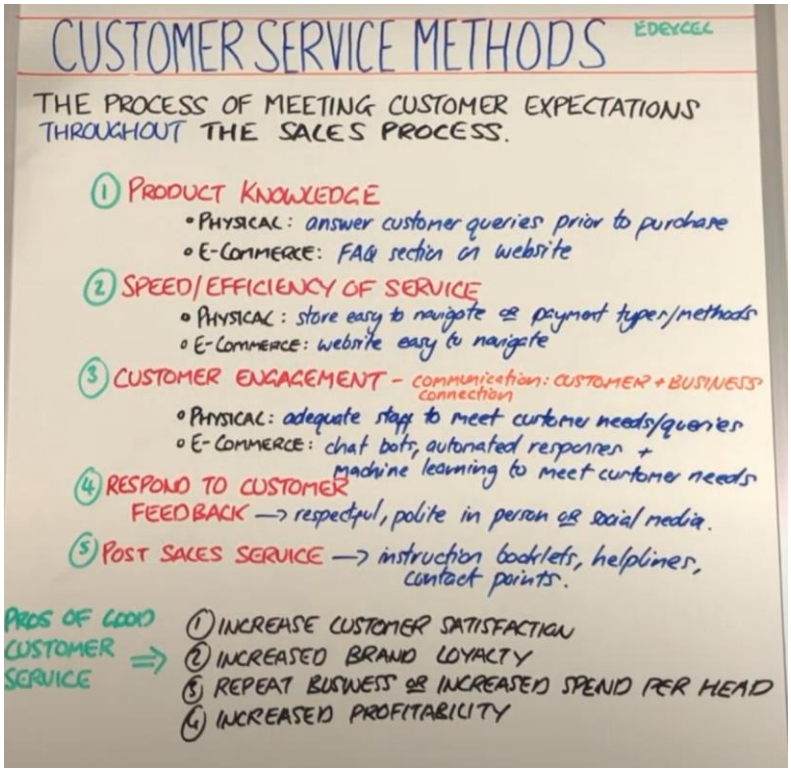
How to provide good customer service (traditional)

- Pre sale
    - Staff have product knowledge
    - Throughout sale → increase relationship → better customer engagement
- Post sale
    - Instruction manual

    - Easy to refund/repair/exchange
    - Fast delivery

How to provide good customer service (technological way)

- Website 24/7
    - Buy products
    - FAQs
- E-commerce platforms
    - Customer reviews/testimonials
    - Previous search history suggestions (data analysis)
- Social media
    - Firms can reply and deal with negative feedback (twitter)



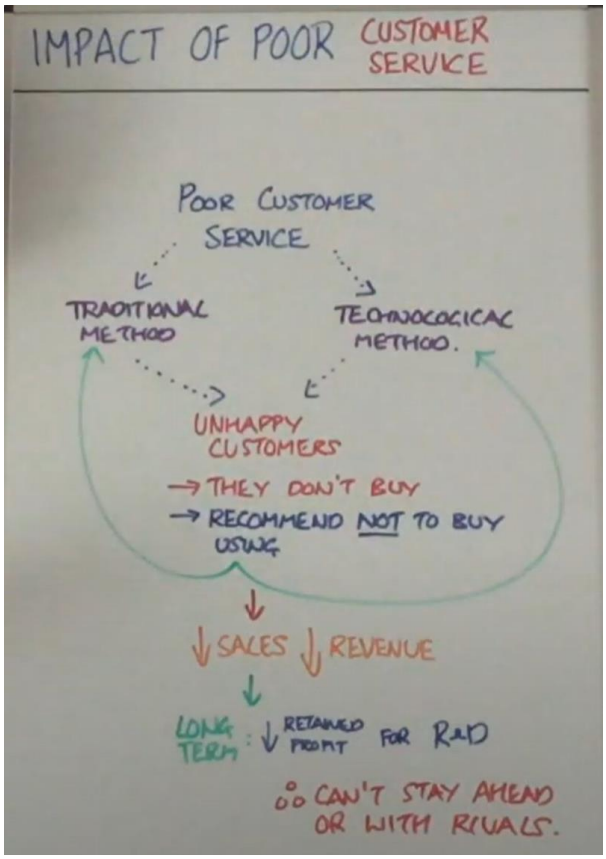
Customer service methods

- Product knowledge
    - Physical: Answer customer queries before purchase
    - E-commerce: FAQs section on website
- Speed/efficiency of service
    - Physical: Store easy to navigate or payment types
    - E-commerce: Website is easy to navigate

- Customer engagement
    - Physical: Adequate staff to meet customer needs
    - E-commerce: Chat bot, automated response, machine learning to meet customer needs
- Respond to customer feedback (respectfully)
- Post sales revenue
    - Instruction booklets, helplines, contact

Advantages

- Increase customer satisfaction
- Increased brand loyalty
- Repeat business/increased spend per head
- Increased profitability

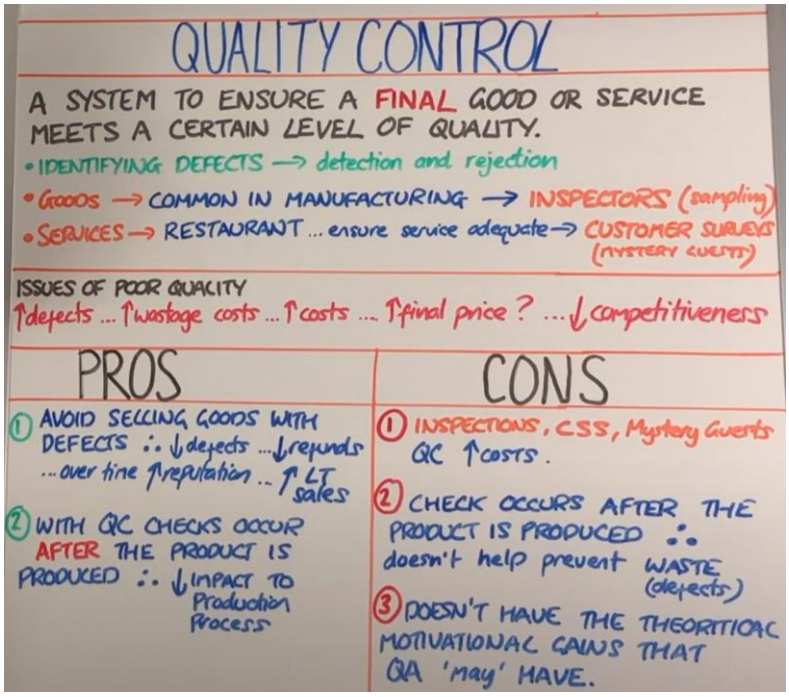


Impact of poor customer services

Customers don’t buy

→ recommend not to buy (may go viral on social media)
→ less sales
→ less revenue
→ long term: less retained profit for research and development
→ can't stay ahead of rivals
→ business fails

Quality control



Quality control – System to ensure a final good/service meets certain level of quality

- Identifying defects (detection and rejection)
- Goods → common in manufacturing (use inspectors)
- Services → Restaurant (ensure adequate service)

Impact of poor quality

→ More defects
→ More wastage cost
→ Higher costs

→ Charge higher prices
→ Less competitive

Advantages

- Avoid seeing goods with defects → less defects → less refunds → overtime, reputation increases → long term sales increases
- With QC checks occur after product is produced → less impact to production process

Disadvantages

- Increased costs (inspectors)
- Products checked after production doesn't prevent wastage
- Doesn't have motivation gains

Quality assurance

Quality assurance = Systems are used to prevent defects from occurring

Advantages

- Less defects → less waste → less production costs → ability to lower prices → increase competitiveness
- Less defects over times → increase reputation → more sales
- QA → team needs to design → more involved → more motivation

Disadvantages

- More costs
    - Design process

    - Training for design skills
    - Training workers in production
- Following QA process may slow down production → less productivity
- Resistance (may not want to be involved/responsible) → demotivating