



DP IB Business Management: SL



Your notes

5.1 Introduction to Operations Management

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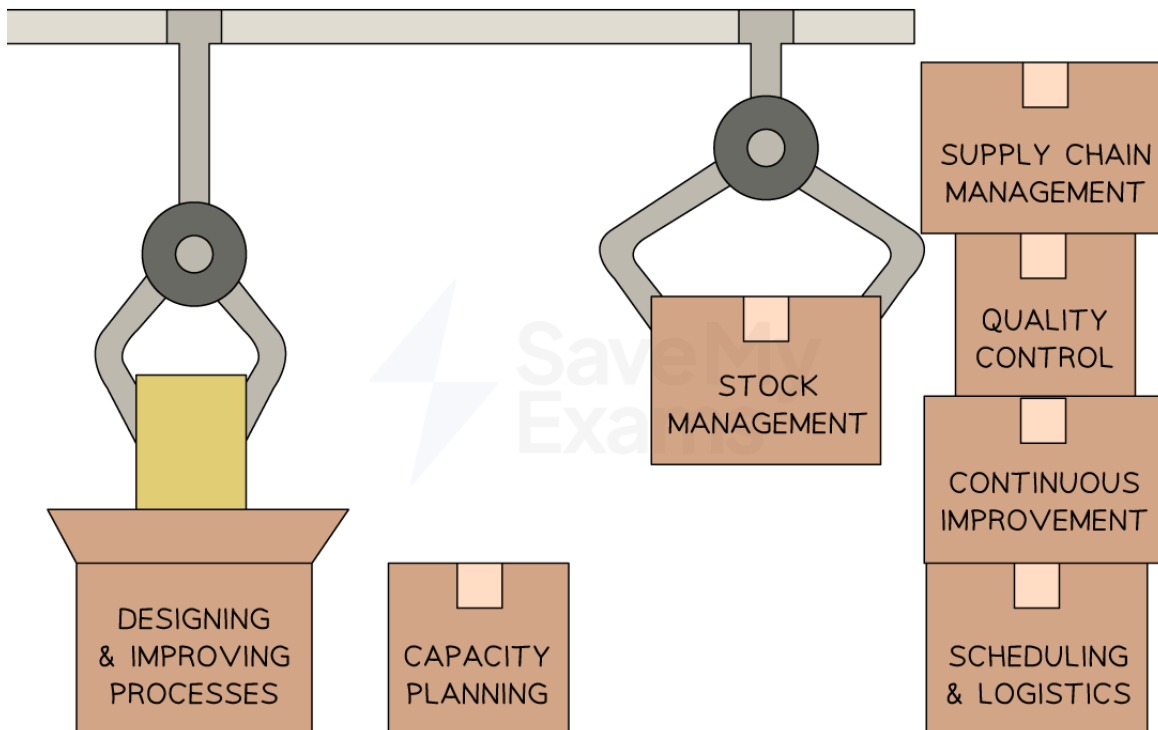
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The Purpose of Operations Management

What is Operations Management?

- Operations management focuses on **designing, controlling** and **improving** the **processes** used in the **production of goods and services**
 - It involves overseeing the entire production process, from acquiring raw materials to delivering the final product/service to customers
- The goal of operations management is to ensure that the **production process is efficient, cost-effective and meets the desired quality standards**
 - It involves making decisions related to production planning, stock management, resource allocation, scheduling and quality control

Diagram: operations management tasks



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The range of tasks for which operations management are responsible

1. Designing and improving processes



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- Operations managers analyse existing processes and **find ways to optimise them**
 - They may use tools and techniques such as process mapping and **lean production** to identify inefficiencies and eliminate waste

2. Capacity planning

- Operations managers determine the production capacity required to meet customer demand
 - They analyse historical data and market forecasts to ensure that the production resources are adequate to fulfil orders in a timely manner

3. Stock management

- Operations managers are responsible for managing the stock levels of raw materials, **work-in-progress** and finished goods
 - They aim to minimise costs while ensuring that enough stock is available to meet customer demand and allow the production process to continue **without running out of resources**

4. Supply chain management

- Operations managers work closely with suppliers to ensure the timely delivery of raw materials and components
 - They establish relationships with suppliers, negotiate contracts and monitor supplier performance to ensure a reliable supply chain

5. Quality control

- Operations managers implement quality control measures to ensure that the products/services meet the required quality standards
 - They develop and enforce **quality assurance** processes, conduct inspections and address any quality issues that arise

6. Continuous improvement

- Operations managers strive for ongoing improvement in processes, productivity and efficiency
 - They identify opportunities for innovation, implement new technologies or techniques and encourage a culture of continuous improvement (**Kaizen**) among employees

7. Scheduling and logistics

- Operations managers develop **production schedules** and coordinate the flow of materials, equipment and labour to ensure smooth operations

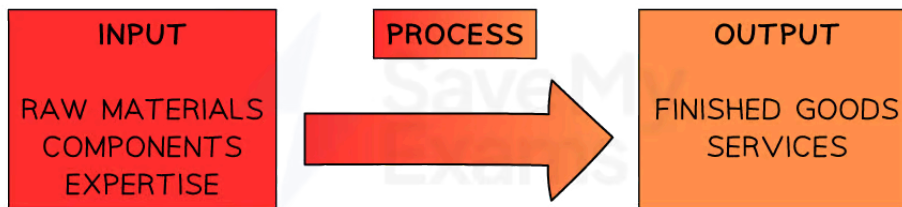
Operations & the Production of Goods/Services



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- Operations management **does not only focus on the production of tangible goods/services** in the secondary sector
 - It is equally applicable in the primary, tertiary and quaternary sectors
- The input-output model is a simple explanation of the operations process

Diagram: the input-output model



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The input-output model

Examples of the Input-Output Model in Different Sectors

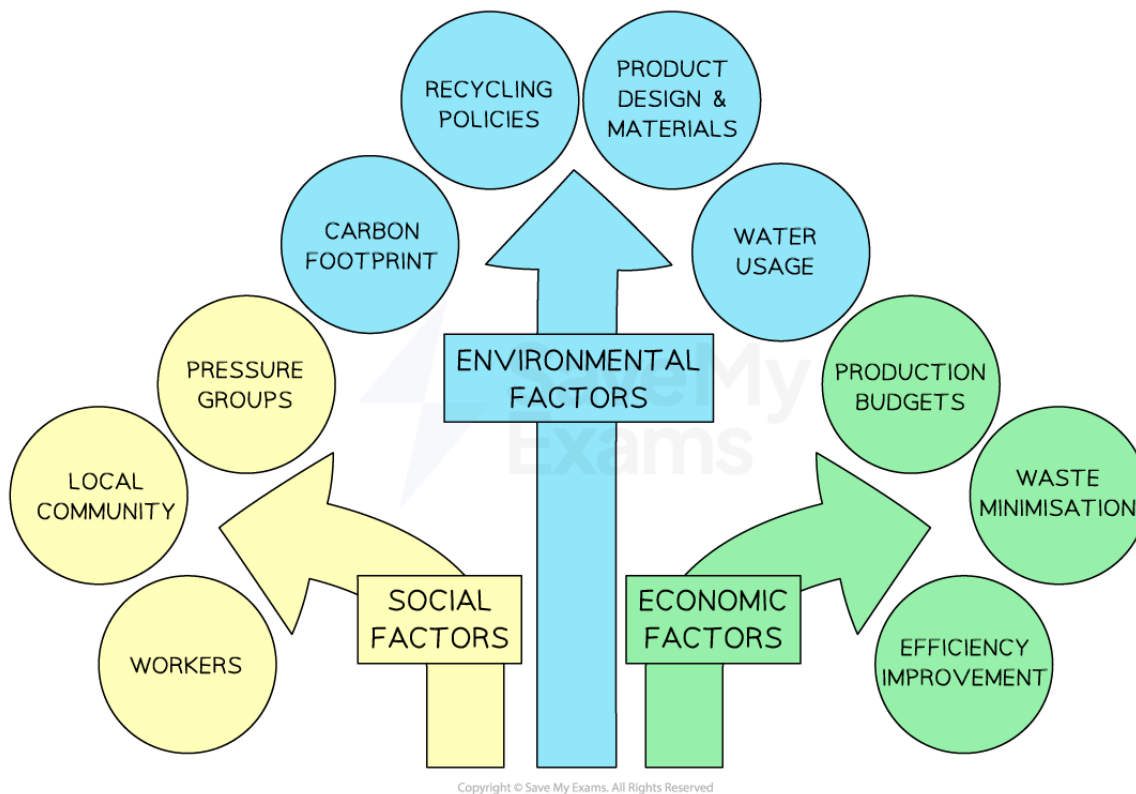
| Sector & Example | Inputs | Process | Outputs |
|--|--|---|---|
| Primary (Fishing) | <ul style="list-style-type: none"> Bait and nets Skilled and experienced fisheries workers | <ul style="list-style-type: none"> Trawl fishing Pot harvesting | <ul style="list-style-type: none"> Quantities of fresh fish or seafood ready for wholesale |
| Secondary (Car manufacture) | <ul style="list-style-type: none"> Engine parts Glass & paint Production line workers | <ul style="list-style-type: none"> Flow production Cell production | <ul style="list-style-type: none"> Finished vehicles, ready for sale to consumers |
| Tertiary (Restaurant) | <ul style="list-style-type: none"> Ingredients Gas & electric Skilled chefs | <ul style="list-style-type: none"> Baking, roasting & grilling Plate presentation and table service | <ul style="list-style-type: none"> Prepared meal delivered to a customer's table |

| | | | |
|--|--|--|---|
| <p>Quaternary (Business consultancy)</p> | <ul style="list-style-type: none"> ▪ Business data ▪ Specialist software ▪ Qualified analysts | <ul style="list-style-type: none"> ▪ Market research ▪ Data analysis | <ul style="list-style-type: none"> ▪ Finished business report or presentation to clients |
|--|--|--|---|

Operations & Sustainability

- Sustainable operations management involves integrating **sustainability practices** into all aspects of the operations management process, from sourcing materials to delivering products
- There are three elements to sustainable operations management

Diagram: sustainable operations management



Examples of sustainability considerations in operations management

- There are a range of ways to improve sustainability in operations management

Examples of Sustainability Practices in Operations Management



Your notes

| Method | Explanation | Example |
|--|--|--|
| Green Supply Chain Management | <ul style="list-style-type: none"> Selecting environmentally friendly suppliers, reducing waste, and minimising the businesses carbon footprint throughout the supply chain | <ul style="list-style-type: none"> Outdoor clothing brand Patagonia uses sustainable materials, including organic cotton and recycled polyester, in its garments, follows fair labour practices throughout its supply chain and discloses information about its supply chain to the public |
| Energy Efficiency | <ul style="list-style-type: none"> Implementing energy-saving technologies, optimising equipment and machinery and reducing energy consumption wherever possible | <ul style="list-style-type: none"> Danone is committed to using 100% renewable energy sources, with an ambitious goal to reduce its environmental impact by 2030 and become carbon neutral by 2050 |
| Waste Reduction and Recycling | <ul style="list-style-type: none"> Introducing waste management systems, adopting lean manufacturing principles and designing products with a focus on recyclability and reduced material usage through the use of eco-friendly materials and designing for durability | <ul style="list-style-type: none"> Fairphone designs modular smartphones targeted at environmentally-conscious consumers that enable users to replace and upgrade individual components easily, extending the life of the device |
| Promoting fair labour practices | <ul style="list-style-type: none"> Ensuring healthy and safe working conditions through policies such as flexible working, ample breaks, access to training and advice as well as physical protection such as air filters and safety equipment in place | <ul style="list-style-type: none"> At Google workers can benefit from free meals, nap pods and on-site doctors, amongst many other facilities, and can even bring their pets to work! The company monitors employee satisfaction and happiness and has moved to a hybrid working model, which provides workers with flexibility |