

Exercise walk-through

# 9.3

## Operations strategy

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A-Level Business

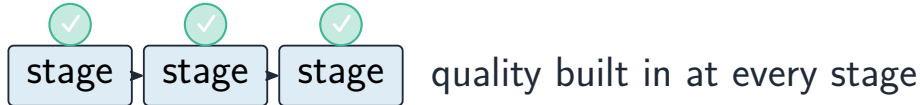
# Managing quality

**Quality** is how well a product meets the customer's needs.

## quality control



## quality assurance



- **quality control** –  
check at the **end**
- **quality assurance** –  
build in at every stage
- **TQM** –  
everyone owns quality
- **benchmarking** –  
copy the best

# Why quality matters, and how it is managed

**quality**

how well a product meets the **customer's** needs – not how expensive it is

**what good quality wins**

repeat custom, a higher price, a protected brand, and fewer returns

**quality control**

inspecting at the end and **removing** faulty goods – the waste is already made

**quality assurance**

building checks into every stage to **stop faults happening**

**TQM**

total quality management: every employee responsible for quality, aiming at zero defects

**the cost**

assurance and TQM need training and cultural change, and neither is quick

Control finds the fault; assurance prevents it. The saving is in the units that were never made wrong.

# Lean production

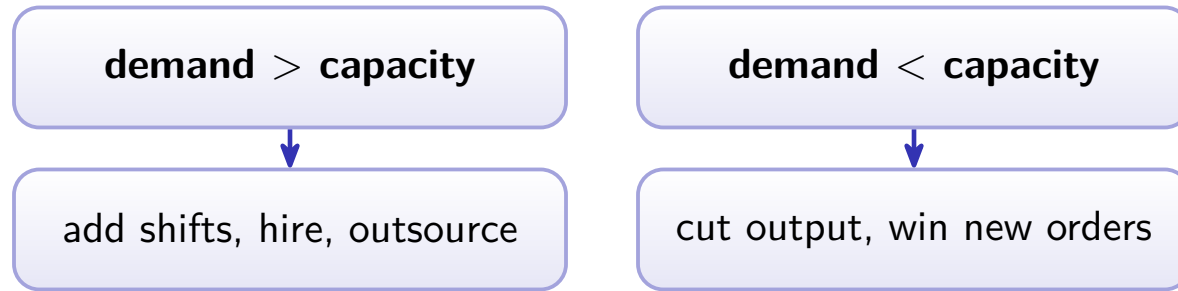


**Lean production**

makes products with the least possible **waste**  
materials, space and effort.

– of time,

# Capacity management and technology



**Capacity management**

matches output to demand; new **technology**  
(automation, data) lifts output, quality and cost together.

## Exercises 2.1-2.3

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**2.1** Define the term *lean production*.

[2]

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**2.2** An activity has an LFT of 14, a duration of 6 and an EST of 5. Calculate its total float.

[2]

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**2.3** Define the term *critical path*.

[2]

## Exercises 2.1-2.3

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**2.1** Define the term *lean production*. [2]

**2.1**

- producing goods with the least possible waste of time, materials, space and effort (2 for a clear definition; 1 for a partial idea)

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**2.2** An activity has an LFT of 14, a duration of 6 and an EST of 5. Calculate its total float. [2]

**2.2**

- total float =  $14 - 6 - 5 = 3$  (2; award 1 for a correct method with the wrong figure)

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**2.3** Define the term *critical path*. [2]

**2.3**

- the chain of activities with zero float, which sets the minimum time the project can take (2 for a clear definition; 1 for a partial idea)

## Exercises 3.1·3.2

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**3.1** Explain one benefit to a business of using **lean production**.

[3]

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**3.2** Analyse two benefits to a business of using **critical path analysis** to plan a project.

[8]

## Exercises 3.1-3.2

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**3.1** Explain one benefit to a business of using **lean production**.

[3]

### 3.1

- [3] **AO1** 1 – name a benefit (lower costs; less waste; less money tied up in stock; higher quality). **AO2** up to 2 – develop it, e.g. less waste of materials
- lower cost per unit
- higher profit or lower prices (2 developed / 1 limited)

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**3.2** Analyse two benefits to a business of using **critical path analysis** to plan a project.

[8]

### 3.2

- [8] For **each** of two benefits: **AO1** 1 + **AO2** 1 + **AO3** up to 2. Example chains – *find critical tasks*: CPA shows which tasks have zero float
- managers focus resources on them
- the project is less likely to be late. *Order resources on time*: knowing each task's earliest start
- materials and labour arrive just when needed
- lower holding cost and no idle time. Maximum 4 per benefit, 8 total

## Exercise 3.3

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**3.3** Evaluate the usefulness of critical path analysis to a business managing a complex project. [12]

## Exercise 3.3

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**3.3** Evaluate the usefulness of critical path analysis to a business managing a complex project. [12]

### 3.3

- [12] **AO1** 2 / **AO2** 2 / **AO3** 2 / **AO4** up to 6. **Useful:** shows the shortest project time, the critical tasks and where spare time (float) exists, helping plan resources and spot delays. **Limited:** it is only as good as the time estimates, cannot show quality or cost, and a complex network is hard to manage if conditions change. **Judgement:** CPA is valuable for planning a large project's time and resources, but it must use realistic estimates and be combined with cost and quality judgement – its usefulness depends on the accuracy of the data