Lesson 3: Efficiency: lean production and just in time

KNOWLEDGE ORGANISER

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🎯 Learning goals

- ✓ Explain what efficiency means in production
- ✓ Describe lean production and the waste it reduces
- ✓ Explain just in time (JIT) and its benefits and risks
- ✓ Explain why JIT increases risk

🔑 Key words

Efficiency Producing at the lowest cost with the least waste.

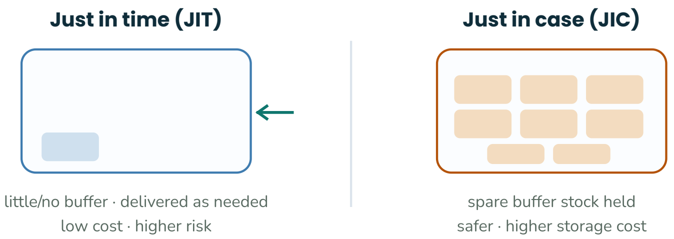
Lean production Methods that cut waste and improve efficiency.

Waste Anything that adds cost but not value: excess stock, delays, extra movement.

Just in time (JIT) Stock arrives only when it is needed for production.

Buffer stock Spare stock kept in case of problems.

📘 What you need to know



JIT keeps stock low and fresh; JIC holds a buffer to be safe.

1. Efficiency in production

Efficiency means producing goods at the lowest possible cost with the least waste. The more efficient a business is, the lower its unit costs, so it can charge less or earn more profit.

2. Lean production

Lean production is a set of methods that aim to reduce **waste** and improve efficiency. Waste includes excess stock sitting in a warehouse, time delays, and unnecessary movement of goods or people. Cutting these lowers cost without harming the product.

> *"Lean production removes waste so the business produces more value for less cost."*

3. Just in time (JIT)

Just in time is a lean method where stock arrives only when it is needed for production. The business holds little or no **buffer stock**.

JIT — benefits

- ✓ Lower storage and holding costs.
- ✓ Less money tied up in stock.
- ✓ Less waste from unsold or out-of-date stock.

JIT — risks

- ✗ Production stops if a supplier is late.
- ✗ No buffer stock to fall back on.
- ✗ Needs very reliable suppliers.

JIT increases risk because there is little or no spare stock — so one late delivery can halt production.

✅ Test yourself

Cover the answers below, answer Q17–Q23, then check.

Q17 What is meant by efficiency in production?

Q18 What is lean production?

Q19 Give one example of waste lean production aims to reduce.

Q20 What is Just in Time (JIT) production?

Q21 Give one benefit of JIT.

Q22 Give one risk of JIT.

Q23 Why might JIT increase risk for a business?

ANSWERS

A17 Producing goods at the lowest possible cost with minimal waste.

A18 A production method that aims to reduce waste and improve efficiency.

A19 Excess stock, time delays, unnecessary movement.

A20 A system where stock arrives only when needed for production.

A21 Lower storage and holding costs.

A22 Production delays if suppliers fail to deliver on time.

A23 There is little or no buffer stock.