



PD13

Warehousing

Standards

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PD13 | Warehousing

Unit purpose and aim

This option unit presents the fundamental warehouse management knowledge required of managers in logistics and the storage and distribution industry. It covers the role of the warehouse and how warehouse strategy fits into the logistics strategy. The key elements are operational functioning of a warehouse, its technology and effective control. The unit aims to deliver the understanding and competence of those key elements of warehouse management practice that are fundamental to both commercial and non-commercial organisations.

Elements

- PD13-1 The Role of the Warehouse in Logistics Strategy
- PD13-2 Warehouse Operational Procedures and Processes
- PD13-3 Technology in the Warehouse
- PD13-4 Warehouse Cost Management and Performance Controls

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Element PD13-1

The Role of the Warehouse in Logistics Strategy

Learning Outcomes

The learner will:

- 1.1. Know the role of the warehouse in logistics strategy.
- 1.2. Understand warehouse strategy options.
- 1.3. Understand the impact that a warehouse can have on customer service.

Assessment Criteria

The learner can:

- 1.1.1. Design a warehouse network appropriate to the organisation's logistics policy.
- 1.2.1. Identify trade-offs that will reduce cost or enhance service.
- 1.3.1. Evaluate the customer service requirements.

Indicative Content

Role	Future requirements: short, medium, long term. Network/channel design; quantity; location. In house v contract out. Customers; suppliers; products; volumes.
Strategy options	Objectives: minimising operational cost; constraints/opportunities; cost adding v value adding; trade-offs. Warehouse flow; layout; controls; labour; space; equipment.
Impact on customer service	Desired service level: understanding; planning; providing. Response/cycle time; accuracy/availability; quality/reliability; inventory policy; de-coupling points. Interfunctional relationships. Internal/external customers.

Element PD13-2

Warehouse Operational Procedures and Processes

Learning Outcomes

The learner will:

2.1. Know how to plan, organise, direct and control warehouse operations.

2.2. Know the resource requirements of a warehouse.

2.3. Know the characteristics and requirements of different products.

2.4. Understand the basic concepts of inventory control.

2.5. Understand the legislation applicable to a warehouse.

Assessment Criteria

The learner can:

2.1.1. Evaluate and select the most appropriate warehouse processes.

2.2.1. Evaluate and select the most appropriate warehouse resources.

2.2.2. Plan an optimal warehouse layout.

2.3.1. Evaluate and select the most appropriate handling and storage equipment.

2.4.1. Analyse and apply data relating to the supply and demand for products.

2.5.1. Identify the legal and security requirements of a warehouse.

Indicative Content

Operating methods	Training; processes and procedures; standards; responsibilities; security.
Resource requirements	Specification; selection; maintenance. Storage equipment: racking. Handling equipment: forklift trucks; automated equipment. Layout.
Product characteristics and requirements	Volume; mix; size; shape; weight; life. Solid/liquid/gas. Packaging. Temperature. Special requirements.
Inventory control	Supply profile; demand classification; supply & demand variables. Forecasting. Life cycle; safety stock; cycle stock; service level; stockturn; ABC analysis. Product handling groups.
Legislation	HASAWA 1974; Management of H & S Regs 1998; ACOP ride-on truck legislation; PUWER food hygiene regulations. Duties and responsibilities; enforcement and penalties.

Element PD13-3

Technology in the Warehouse

Learning Outcomes

The learner will:

- 3.1. Know how technology interfaces the warehouse with the rest of the supply chain.
- 3.2. Know how technology interfaces the warehouse with the customer.
- 3.3. Understand the technology available to support the warehouse's physical operation.
- 3.4. Understand the technology available to support the management of the warehouse.
- 3.5. Know how data transfer systems integrate with warehouse equipment.

Assessment Criteria

The learner can:

- 3.1.1. Use IT systems to integrate upstream process with warehouse operations.
- 3.2.1. Use IT systems to communicate order data to customers.
- 3.3.1. Use IT systems to manage the warehouse's physical operation.
- 3.4.1. Use IT systems to plan, organise, direct and control warehouse operations.
- 3.5.1. Use IT systems that link warehouse management systems to warehouse handling equipment.

Indicative Content

Interfacing with the rest of the supply chain	Purchasing & procurement; production; transport; sales order processing; inventory; customer service; administration.
Interfacing with the customer	EDI; EPOS; vendor managed inventory; JIT; service level gap analysis.
Supporting the warehouse physical operation	On-line receipts; verified stock locating; stock rotation; utilisation; interactive picking; unitisation; controlled replenishment. Productivity: FLT travel minimisation; document production; monitor equipment performance; equipment maintenance.
Supporting the management of the warehouse	Technology to: plan; organise; direct; control resources & processes.
Data transfer systems integration	Communication: RF networks; on-line status; radio data terminals; bar coding; scanners.

Element PD13-4

Warehouse Cost Management and Performance Controls

Learning Outcomes The learner will:	Assessment Criteria The learner can:
4.1. Understand the importance of setting standards and performance indicators.	4.1.1. Develop a set of performance indicators.
4.2. Know how to manage in a warehouse using standards and benchmarks.	4.2.1. Use performance indicators and benchmarking to effect improvements in warehouse performance.
4.3. Know how to identify and manage the cost of warehouse operations.	4.3.1. Develop and implement a financial budget for a warehouse operation.
4.4. Know how to recognise and manage cost trends.	4.4.1. Produce a financial report showing outcomes against budget for a warehouse operation.
4.5. Know how to minimise the occurrence and effect of emergencies.	4.5.1. Develop and implement a warehouse contingency plan.

Indicative Content

Standards and performance indicators	Method study; time study; work measurement; process charting; flow process charts. Defining productivity. Activity analysis; establish necessity; establish constraints; defining level of performance; task measurement. Economic considerations; technical factors; human reactions. Standard setting.
Using standards and benchmarks	Performance measurement; benchmark comparison.
Managing cost	Expenditure appraisal: overheads/fixed costs; people costs; equipment costs; facility costs. Productivity; utilisation.
Trends	Data analysis; flexible budgeting; cost centres; variance analysis; variable cost control.
Emergencies	Avoidance; risk assessment. Classification of emergencies. Identification of 'what ifs'. Contingency planning; disaster recovery. Responsibilities.