

Unit 46: Supply Chain Organisation

Unit code:	K/600/8607
QCF Level 3:	BTEC National
Credit value:	10
Guided learning hours:	60

● Aim and purpose

This unit aims to enable learners to develop an understanding of the global nature of the supply chain and how the nature of the supply chain has become synonymous with modern logistics. Learners will understand the impact of supply chain operations on the quality of customer service and, through this, develop a broader view of the profession.

● Unit introduction

This unit investigates how the job roles found in logistics are integrated into the wider nature of supply chain management. Learners will establish the purpose of logistics activities and how they are linked both internally and outside of the organisation by customer demands. The unit shows that taking a global view of the supply chain can enable those working in logistics to operate more effectively to meet customer expectations.

● Learning outcomes

On completion of this unit a learner should:

- 1 Understand the global nature of the supply chain
- 2 Know the job roles found in logistics
- 3 Understand how roles integrate within the logistics environment
- 4 Understand the impact of customer service on the supply chain.

Unit content

1 Understand the global nature of the supply chain

Global scope: the supply chain as a business network of interdependent organisations working towards the goal of customer satisfaction; the supply chain as a network of individual businesses which undertake logistics activities; how products and services have a chain of logistics activities eg the extraction and processing of raw materials, the manufacture of goods; the links between different logistics activities as a continual flow of processes to comprehend the nature of a supply chain eg product, marketing

Flow of goods: the flow of goods from extraction of raw materials to finished goods being bought by customers

2 Know the job roles found in logistics

Job roles: the different job roles found in the logistics workplace; the functional activities found in a typical organisation in a supply chain eg procurement, production planning, materials management, inventory, warehousing and transport; the activities undertaken by employees in different job roles; the objectives of job roles within logistics and how they affect the supply chain; the link between logistics job roles and the functional activities found in organisations eg supervisor, operator, technician, administrator

Adding value: definition, the concept of adding value to a product, process or operation and the effects of added value on job roles eg supervisor, operator, technician, administrator

3 Understand how roles integrate within the logistics environment

Integrating effect: the overlap of operations between logistics functions within an organisation eg supply chain nodes – where organisations within a supply chain interface; where one process ends and another begins; where supply chain nodes occur at the interface with other organisations

Information and communications technology: how ICT integrates logistics operations; the importance of information flow through a supply chain and how the supply chain is used to initiate processes and activities within organisations as well as with external partners; how the recording of data by businesses is vital to the operations of a supply chain and how it ensures its integration with external partners and that organisations are able to meet customer expectations eg scheduling of transport

Information technology and logistics: production interface eg computer-aided design (CAD), computer-aided manufacturing (CAM); facility for collating, transmitting and analysing information accurately and quickly; benefits eg greater speed of response, reduction of clerical effort, reduced inventory resulting from more accurate and immediate stock data, reduced clerical and operating costs through cutting down duplication, errors, stock-outs, stock handling, stock movement, greater accuracy, improved management control; systems concerning road freight transport eg fleet management – maintenance scheduling, vehicle parts control, fleet administration, fleet costing, tachograph analysis, routing and scheduling

4 Understand the impact of customer service on the supply chain

Impact: the impact of quality on customer service and how it influences the operations of organisations back down the supply chain; how accuracy of logistics operations is paramount due to the integrative nature of supply chain operations; how improving supply chain processes and levels of customer service can lead to cost savings or increased business activity; the importance of cooperation between organisations and coordination of activities within a supply chain

Competitive advantage: how an awareness of the impact of supply chain activities on customer service can give an organisation a competitive advantage; how this allows organisations within a supply chain to develop unique skills and capabilities, which competitors cannot easily duplicate

Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 discuss the global scope of supply chain networks [RL5]		
P2 illustrate a product's flow through a supply chain [CT2]		
P3 describe the different job roles found in the logistics workplace [IE3]		
P4 describe how value is added to a product, process or operation [IE1]	M1 analyse the effects of adding value on job roles	D1 analyse the cross functional nature of the activities undertaken by employees in different job roles
P5 explain the relationship between information flow and logistics functions [IE3]		
P6 examine how information technology is used within a logistics organisation [IE4]	M2 analyse the affects of information technology on the operations of a logistics organisation	D2 evaluate the affects of information technology on the operations of a logistics organisation.
P7 examine the impact of quality management on supply chain operations. [CT6]	M3 explain how good quality logistics operations in the supply chain can impact on customer service and provide competitive advantage.	D3 evaluate how good quality logistics operations in the supply chain can impact on customer service and provide competitive advantage.

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills which are embedded in the assessment of this unit. By achieving the criteria, learners will have demonstrated effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

Tutors delivering this unit have opportunities to use a wide range of techniques. Lectures, discussions, seminar presentations, site visits, supervised practical activities, research using the internet and/or library resources, and the use of personal and/or industrial experience, are all suitable. Delivery should stimulate, motivate, educate and enthuse learners. Visiting expert speakers could add to the relevance of the subject.

Learners should be encouraged to read an appropriate range of documents and library/internet source material relating to the unit content. Overall delivery of the unit should be supported by the use of case studies and other industry-related documents.

The learning outcomes are linked and form a logical, consistent and progressive structure, starting with the nature of supply chain networks and how goods flow through the chain. This is followed by activities, relevant job roles, the role of IT (information technology) as an enabler and, finally, how a company can achieve a competitive advantage by utilising good logistics.

Teaching and learning strategies designed to support delivery of the learning outcomes should take an integrated learner-centred approach. This would involve learners carrying out extensive investigative work. Learners will benefit from researching logistics-orientated organisations and outlets to find out about services, operations and activities.

Learners should be able to undertake research into the nature of supply chains and logistics operations through the internet and other media. This can be combined with practical research, including visits to existing logistics facilities, retailers or manufacturers to experience logistics operations in action. Learners may need to be given general information on logistics and the supply chain and encouraged to relate these to appropriate organisations. These topics can be used to develop participation in discussions and group work.

As far as possible, learners should be encouraged to research actual practice within the industry. Visits by speakers who are engaged in this work would be beneficial, as would visits to (or from) owners of both small and large operations.

Group activities are strongly recommended, but tutors will need to ensure that individual learners have equal experiential and assessment opportunities.

It is important that learners develop an appreciation of the underlying business principles within the industry, although there will also be ample opportunity to discuss the wider issues.

As far as possible, delivery should be learner centred and participatory, involving discussion and contact with a wide range of organisations and others involved with this sector. Arranging visits or visiting speakers may assist this.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way of planning the delivery and assessment of this unit.

Topic and suggested assignments/activities and/assessment
Tutor explanation: introduction to the unit.
Tutor explanation/class discussion: how can we organise a supply chain?
Tutor input: supply chain – organisations' interdependency.
Class exercise: group work on interdependent nature of the supply chain followed by short presentations to the class.
Tutor input: logistics activities.
Tutor explanation/class discussion: chain of activities – case studies.
Class exercise: group work: investigating the flow of a particular product/s followed by short presentations to the class.
Tutor input: functional activities – procurement and production planning materials management, inventory, warehousing and transport.
Tutor input: functional activities – materials management, inventory, warehousing and transport.
Tutor input: job roles in logistics.
Learner activity: investigating available job roles, preparing a description and presenting to the class – tutor to facilitate.
Guest speakers: from a large logistics organisation, professional bodies and/or recruiting agencies – available job roles, employer expectations regarding skills, attitude etc.
Tutor explanation/class discussion: concept of value – how can it be defined?
Learner activity: investigating affect of value on job roles for a given tutor brief followed by a brief group discussion – tutor to facilitate.
Preparation for assignment.
Assignment 1: Supply Chain Organisation – covering P1, P2, P3, P4, M1 and D1
Tutor explanation/class discussion: integration of operations.
Tutor input: effects of integration.
Class exercise: group work on effects of integration followed by short presentations to the class.
Tutor input: ICT – what it can do?
Tutor input: case study – ICT as an enabler.
Class exercise: investigating available tools and their capability/use followed by short in-class presentations – tutor to facilitate.
Tutor input: categorisation and use of ICT tools.
Learner activity: visit to a warehouse: learner to make notes on ICT tools and their use.
Tutor explanation/class discussion: what is quality? How it can be improved?
Tutor input: impact of quality on services and operations.
Learner activity: investigating impact of quality improvement on customer services and operations for a given tutor brief followed by presentations to the class – tutor to facilitate.
Tutor explanation: competitive advantage – how?
Tutor explanation/class discussion: short-and long-term benefits of competitive advantage.
Learner activity: working on a case study followed by a group discussion – tutor to facilitate.

Topic and suggested assignments/activities and/assessment

Preparation for assignment.

Assignment 2: IT and its Impact of Quality – covering P5, P6, P7, M2, M3, D2 and D3

Review of unit delivery and assessment.

Assessment

Evidence for this unit may be gathered from visits to commercial organisations, work placement or evidence from a part- or full-time job.

Case studies may be useful, particularly to identify a range of different types of logistics businesses and the links they may have with other businesses in the area.

Evidence for this unit may be gathered from a variety of sources, including well-planned investigative assignments, case studies or reports of practical assignments.

There are many suitable forms of assessment that could be used, and centres are encouraged to consider and adopt these where appropriate. Some examples are suggested below. However, these are not intended to be prescriptive or restrictive, and are provided as an illustration of the different forms of assessment evidence that would be acceptable.

Some criteria could be assessed directly by the tutor during practical activities. If this approach is used, suitable evidence from guided activities would be observation records or witness statements. Guidance on the use of these is provided on the Edexcel website.

Evidence for learning outcomes can be achieved through well-planned assignments and projects. These will usually be undertaken individually but it is possible to introduce elements of teamwork into the collection or collation of data or in simulations of the planning process such as public consultation or inquiry. Where available, evidence from the workplace can be incorporated provided that is appropriate and authenticated as the learner's own work. Integrative assignments will help to link this unit with other units. The volume of evidence required for each assessment should take into account the total number of assessments and the design of the overall teaching programme.

Formative assessments should be used throughout the unit, giving learners the opportunity to receive developmental and constructive guidance and feedback. This will allow them to gain an understanding of their personal achievement and the methods they can use to develop their learning.

Formative assessment should consider diverse sources of evidence. These may come from activity-based projects, observation and questioning, peer/tutor/logistics organisation witness testimony or personal statements. Group or individual planning and implementation documents are also an invaluable source of evidence.

The structure of the unit suggests that the grading criteria may be fully addressed by using two assignments. The first assessment would cover learning outcomes 1 and 2 (P1, P2, P3, P4, M1 and D1) and the second learning outcomes 3 and 4 (P5, P6, P7, M2, M3 and D2).

To achieve a pass grade, learners must meet the seven pass criteria listed in the grading grid.

For P1, learners must be able to discuss the global scope of supply chain networks. Learners should demonstrate their understanding of the supply chain as a network of interdependent organisations as well as individual businesses. They should be able to discuss particular supply chain activities. Evidence for this criterion could be a report supported by examples.

For P2, learners must be able to illustrate a product's flow through a supply chain. This should include all stages from extraction of raw materials to when it is bought by a customer. Evidence for this criterion could be an illustration supported by annotations and/or descriptions.

For P3, learners must be able to describe the different job roles found in the logistics workplace. Learners should produce a typical job description with the roles clearly set out. Examples of suitable evidence approaches are the same as for P1.

For P4, learners must describe how value is added to a product, process or operation. They should first define the concept of adding value followed by specific examples. Suitable evidence approaches are the same as for P1.

For P5, learners must be able to explain the relationship between information flow and logistics functions. They should address the occurrence of overlap of operations, and existence of nodes (by identifying points where these operations overlap), both within and outside the organisation. Suitable evidence approaches are the same as for P1.

For P6, learners must be able to examine how information technology is used within a logistics organisation. Learners must relate these technologies to enabling the activities. Learners should be able to include at least four technologies. Evidence for this criterion could be a report/presentation and/or oral questioning.

For P7, learners must be able to examine the impact of quality on supply chain operations. Learners must include the impact on customer services and logistics operations. Learners should be given access to industrial documentation or their work experience should be considered. The overall approach should be to provide a simulated work experience. Suitable evidence approaches are the same as for P6.

To achieve a merit grade, learners must meet all of the pass grade criteria and the three merit grade criteria.

For M1, learners must analyse the effects of adding value on job roles. This can be set as an extension to P4. Suitable evidence approaches are the same as for P1.

For M2, learners must analyse the effects of information technology on the operations of a logistics organisation. Learners must include aspects such as credibility and speed in accessing data. This can be set as an extension to P6. Suitable evidence approaches are the same as for P1.

For M3, learners must explain how good quality logistics operations in the supply chain can impact on customer service and provide competitive advantage. This can be set as an extension to P7. Suitable evidence approaches are the same as for P1.

To achieve a distinction grade learners must meet all of the pass and merit grade criteria and the two distinction grade criteria.

For D1, learners must be able to evaluate the effects of information technology on the operations of a logistics organisation. This can be set as an extension to M2. Suitable evidence approaches are the same as for P1.

For D2, learners must evaluate how good quality logistics operations in the supply chain can impact on customer service and provide competitive advantage. This can be set as an extension to M3. Suitable evidence approaches are the same as for P1.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the assessment and grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P1, P2, P3, P4, M1, D1	Supply Chain Organisation	You have recently joined a national logistics organisation. Your manager has asked you to carry out research into the nature of the supply chain, available job roles, their nature and interdependence.	A portfolio/report containing a description of job roles and a discussion of global networks. For higher level achievement, an analysis of the effect of adding value on job roles as well as cross-functional activities would be produced.
P5, P6, P7, M2, M3, D2, D3	IT and its Impact of Quality	Your first report has been well received. Your manager has now asked you to look into how IT can affect the operations of a logistics organisation. You have also been asked to examine the impact of quality on logistics operations and customer service.	A portfolio/report examining the role of IT in logistics operations and the impact of quality on logistics operations. For higher level achievements, an analysis of the effects of IT and an evaluation of the impact of quality measures would be produced.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

Achievement of the learning outcomes of this unit will contribute towards the skills, knowledge and understanding of several units of the National Occupational Standards for:

- Supply Chain Management
 - ◇ Unit S3: Improve the performance of the supply chain
 - ◇ Unit M3: Propose improvements to the supply chain
 - ◇ Unit T2: Analyse information on the supply chain
 - ◇ Unit T3: Apply improvements to the supply chain
- Traffic Office
 - ◇ TO2: Improve the customer relationship
 - ◇ TO11: Contribute to the selection of personnel for activities
 - ◇ TO12: Contribute to the development of teams and individuals
- Logistics Operations Management
 - ◇ Unit LOM9: Improve the quality of logistics operations.

Essential resources

Learners will benefit from having access to logistics outlets and sufficient library and/or internet resources to allow them to research the current activities of logistics organisations.

Visits to and/or visiting speakers from logistics organisations will be helpful. Learners should have access to a learning resources centre with a good range of logistics trade journals, local and national newspapers and specialist periodicals.

Tutors will need to ensure that learners have up-to-date information regarding local and national logistics organisations.

Health, safety and welfare issues must be considered at all times and risk assessments should be undertaken for all site visits used in the delivery or assessment of the unit. Access to suitable development sites may require permission from the owner, especially if learners need to visit the site for research.

Employer engagement and vocational contexts

The use of vocational contexts is essential in the delivery and assessment of this unit. Much of the work can be set in the context of case studies of local employers. Learning outcome 4 lends itself to investigating industrial practices.

Indicative reading for learners

Textbooks

Bowersox D J and Closs D J – *Logistical Management: The Integrated Supply Chain Process* (McGraw-Hill, 1996) ISBN 9780070068834

Gattorna J and Trost G – *Handbook of Logistics and Distribution Management* (Human Resource Development, 1994) ISBN 9780566076251

Rushton A, Croucher P and Baker P – *The Handbook of Logistics and Distribution Management, 3rd edition* (Kogan Page, 2006) ISBN 9780749446697

Journals

Focus (The Chartered Institute of Logistics and Transport)

Motor Transport (Reed)

Supply (CIPS)

Delivery of personal, learning and thinking skills

The table below identifies the opportunities for personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are ...
Independent enquirers	analysing the effects of IT on logistics operations analysing the effects of adding value to a job role explaining the relationship between information flow and logistics functions
Creative thinkers	explaining the impact of quality on customer service and supply chain operations.

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Team workers	working on and presenting joint research outcomes
Reflective learners	appraising and improving their own work.

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	investigating job roles
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	investigating logistics operations
ICT – Develop, present and communicate information	
Enter, develop and format information independently to suit its meaning and purpose including: <ul style="list-style-type: none"> • text and tables • images • numbers • records 	preparing reports and presenting results of their research
Bring together information to suit content and purpose	presenting the results of their investigations
Present information in ways that are fit for purpose and audience	presenting information using a variety of methods
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	discussing global scope of supply networks
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	explaining impact of quality.