

Supply Chain Operations: The Context

HIGHER NATIONAL DIPLOMA


物流经营范围

【英】苏格兰学历管理委员会 (SQA)

Unit Student Guide

SUPPLY CHAIN



 中国时代经济出版社


SCOTTISH
QUALIFICATIONS
AUTHORITY

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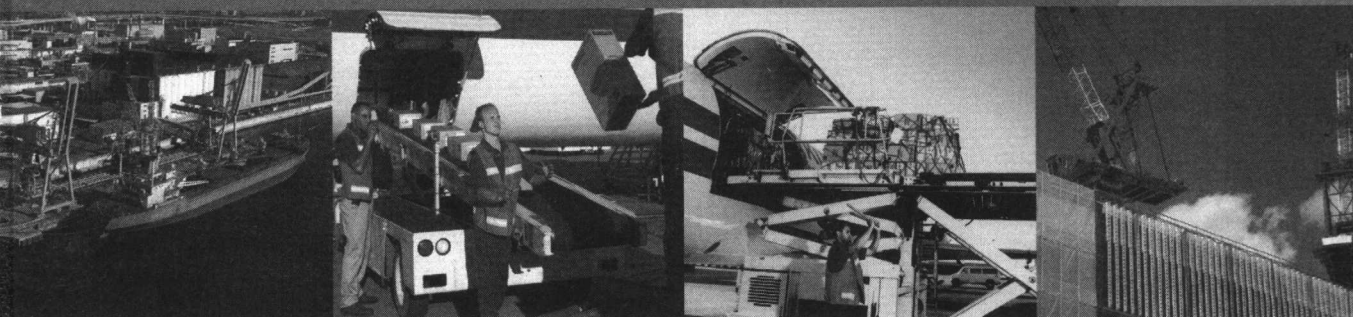
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物流经营范围

苏格兰学历管理委员会著

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1

Introduction to the Scottish Qualifications Authority

This Unit **Supply Chain Operations: The Context** has been devised and developed by the Scottish Qualifications Authority (SQA). Here is an explanation of the SQA and its work:

The SQA is the national body in Scotland responsible for the development, accreditation, assessment, and certification of qualifications other than degrees.

Its website can be viewed on: www.sqa.org.uk

SQA's functions are to:

- devise, develop and validate qualifications, and keep them under review
- accredit qualifications
- approve education and training establishments as being suitable for entering people for these qualifications
- arrange for, assist in, and carry out, the assessment of people taking SQA qualifications

- quality assure education and training establishments which offer SQA qualifications
- issue certificates to candidates.

In order to pass SQA units, students must complete prescribed assessments. These assessments must meet certain standards.

The Unit Specification outlines the **three** Outcomes that students must complete in order to achieve this unit. The Specification also details the knowledge and/or skills required to achieve the outcome or outcomes. The Evidence Requirements prescribe the type, standard and amount of evidence required for each outcome or outcomes.

2

Introduction to the Unit Student Guide — Learning Resource Pack

2.1 Introduction to the Unit

This unit **Supply Chain Operations: The Context** will assist you to become familiar with the basic supply chain concept and have an understanding of the integration of functions that are required to transform a customer requirement into the delivery of that requirement to the customer. You will have an insight to management in a manufacturing environment and the various functions associated with manufacturing, inventory, stores, production, and distribution planning, demand management and purchasing.

There are **three** outcomes for this unit:

1. Describe the three types of industry, primary, secondary and tertiary, indicating the role each type plays within the Supply Chain.
2. Describe the three flows evident in a supply chain and explain how each of these flows interact with, and influence, the other flows.
3. Describe the “Bullwhip” effect on the supply chain that their organisation operates within and describe the effect this has on the inventory levels in their

own organisation and also at their suppliers.

The approximate study time that you should allocate for the completion of the unit is **40** hours.

2.2
Learning
Material
Required for
this Unit

The Learning Resources in Section 3 provide relevant information to assist you to complete the unit.

You may also find it useful to refer to the following text ***Purchasing and Supply Chain Management*** by *Lysons and Gillingham* (published by Prentice Hall through Pearson Education, Essex, England, www.pearsoneduc.com, ISBN 0 273 65764 X) Part four is particularly relevant to this unit.

It would be advantageous to have access to the following web sites. You should explore the links in these sites and select email newsletters where appropriate.

www.supply-chain.org/

This is the home page of the Supply Chain Council with a lot of information about SCOR.

www.bitpipe.com/

This is a very useful site for up-to-date information on

aspects of Supply Chain Management. Join as a member (no charge) to receive regular email newsletters.

2.3 Using the Unit Student Guide — Learning Resource Pack

The Learning Resource Pack is designed to lead you through a series of learning activities that will allow you to consolidate your understanding on the topic areas included in the unit **Supply Chain Operations: The Context**.

It is likely that you will need to spend around 30 hours working your way through the learning resources in this Pack, 10 hours researching and investigation relevant to your Assessment and a further 4 hours preparing the assessment for submission.

As you work through the Pack there will be considerable scope for discussion and you are encouraged to contribute fully from your own knowledge and experience. The activities are intended to focus ideas on your own workplace and local industry. When participating in a group activity you should give full and free rein to their imagination concerning different types of supply chain. Knowledge of the operating environment of the company you work for, or a business you have some experience of, will be useful when participating in some of the activities and discussions.

As you work through the Pack you will encounter the following symbol which indicates that you should carry out an Activity.



Usually, activities are used to improve or consolidate your understanding of the subject in general or a particular feature of it.

2.4**What Do I
Have to Do
to Achieve
this Unit?**

In order to give evidence of your competence across the three learning outcomes that comprise this unit, you must successfully complete the integrated assessment covering all three outcomes. The assessment is in the form of a 2500 to 3000 word report based on the candidates' own organisation or an organisation that the candidate is familiar with. The report should identify suppliers and upstream suppliers, customers and downstream customers and be able to explain the difference between them. They should also identify the tertiary industries supporting their supply chain. The report should also clearly indicate the different flows and the process of transformation and value adding as material progresses through a supply chain. Finally, it should indicate the increasing effect of customers orders in anticipation of future demand and the 'knock-on' effect this has as the demand is processed along the supply chain.

3

Learning Material

The Learning Resources in this Section have been divided into 9 Sections:

Section 1

This section introduces you to the characteristics of a supply chain by discussing the steps followed to deliver a product to you as a customer. During the first section questions are asked such as “What is a supply chain?” and the class group are expected to discuss this and form some idea of what they think the concept is. Various elements of supply chain thinking are introduced and group activities are used to draw out student’s ideas. Each group requires a spokesperson to lead a discussion on their findings.

Section 2

This section introduces the various categories that industries are divided into and the relationship between these categories. The place of the industries in the supply chain is discussed and the importance of supplier/customer relationships is highlighted.

The concepts introduced include: *saleable products, durable and non-durable goods, services and valued adding*. The manufacture of a relatively simple product is used to illustrate the place that these various industrial categories have in the supply chain.

Section 3

In this section the three standard classifications of industry are discussed in relation to the likely location of facilities. The driving force behind a location decision is discussed and an approach to making such choices is suggested. A discussion on the historic perspective of facility location is undertaken and a view on weight/volume reduction in relation to location is introduced.

Section 4

This section continues the discussion on facility location and introduces approaches for single and multiple location appraisal with particular emphasis on warehouse location and distribution. A number of methods are introduced including the Heinz model and heuristic methods for solving the location problem.

Section 5

The importance of effective transport systems is examined in this section. Historical aspects of transport and comparisons between *developed, emerging and developing* nations are made. The various choices of

transport services are introduced, both single and inter-modal services are discussed.

Section 6

The transformation process is introduced along with the concepts of transformed and transforming resources. The application of 'transformation' to a variety of operations is discussed and applied to such wide ranging scenarios as health service, food manufacture and airlines. Outputs from the transformation process are examined and the operational mix of goods and services used to highlight the various mix of applications.

Section 7

The concepts of the three flows apparent in a supply chain are introduced, material, information and money, and the relationship between these flows is discussed. The text book concept of material flow is contrasted with the real-life flow through a network or web of suppliers and customers. The importance of co-ordination is emphasised and the various ideas in the section are illustrated using everyday situations. A potential fourth flow is mentioned, reverse logistics, and the environmental requirements of today's world.

Section 8

In this section the consequences of an unmanaged supply chain are discussed and the concept of the

“Bullwhip effect” are introduced. The causes of such uncontrolled order aggregation are discussed together with suggested countermeasures to the effect.

Section 9

The future of supply chain operations is discussed from a historical perspective, examining the development of planning and control systems through the 20th century. Future developments are suggested with particular emphasis on speed within the supply chain, or more correctly velocity as being speed with direction. The influence of customers’ demands and the effect these have along the supply chain are discussed and future developments in this area are suggested. The situations are illuminated using an everyday situation of a supermarket EPOS system and the way this information migrates through the chain.

3.1 Section 1 — The Structure of a Supply Chain

3.1.1 Introduction

Good morning! You’ve just arisen after a good night’s sleep and you are ready and willing for an exciting day