21世纪电子商务与现代物流管理系列教材

现代物流专业英语（第二版）

易牧农　等编著

本书特色：

- 精准引用国外最新物流论著
- 系统分析物流运行全过程
- 准确把握物流发展新方向

中国水利水电出版社
www.waterpub.com.cn

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内 容 提 要

本书参考了大量国外物流管理领域最新的专业文献，概括地介绍了物流管理的基本概念、基本理论和基本框架。全书共分为十章，主要包括：物流概述、顾客服务、物流战略、供应链管理、存货战略与管理、运输战略、仓储管理、物流信息技术、物流组织、物流趋势、译文等内容。目的是培养大学二年级以上学生阅读物流管理领域英文文献的能力和初级翻译技巧。

本书主要作为物流管理及相关专业本科学生的教科书、参考书，也可作为物流管理工作者进一步提高物流管理方面英语水平的参考书。

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前　言

2006年，作为《21世纪电子商务与现代物流管理系列教材》之一，我们编著了《现代物流专业英语》一书，八年过去了，多所高校物流管理专业采用了此教材，在使用过程中为该书提出了很多好的修改意见和改进建议，对此作者深表感谢。当时撰写此书是基于物流管理将在中国企业发展中日益重要的预判，今天，预判已经变成了现实，当今的物流在规模、技术、管理等方面与2006年相比，均发生了巨大的变化，物流已经成为企业在全球供应链运营中重要的硬实力和软实力。为了改进、提升、更新该书的结构、内容，使其更加符合本科物流管理教学的使用和反映物流管理活动的最新实践成果，我们对该书进行了全面的修改、增补。

该书继续沿用本套教材“深入浅出”、“言简意明”、“务求实用”的原则，参考我国物流专业本科二年级学生实际的英语水平，对英语教材、专著、论文进行了科学的筛选，形成本书的核心内容。根据教材使用过程中教师和学生的反馈结果，我们继续采用了原有教材的框架结构，在正文之前，本书设计了关键问题、难点、学习目的，在课文后讲解了生词和术语，对难句进行了翻译，提出了思考题，并选编了与课文内容相配套的阅读材料。附录中还提供了相应的参考译文方便学生使用。与第一版相比，本书增加了供应链管理和物流组织两章，更换了物流趋势一章的全部内容。

本书由天津财经大学易牧农等编著，编著分工如下：

易牧农：第一章（第一节）、第二章、第三章、第五章、第七章、附录一（第一章、第二章、第三章、第五章、第六章、第七章、第八章的参考译文）；

曹海英、张潜：第一章（第二、三、四节）、第四章、第六章、第八章、第九章、第十章、附录一（第四章、第九章和第十章的参考译文）。

易牧农对全书进行了总纂。

在本书的编写过程中，得到了各方面的大力支持，特别感谢我的老师张理先生及为本书辛勤工作的曹海英老师。由于作者水平有限，书中不尽人意之处，敬请斧正。

作　者

2014年4月

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Chapter 1 An Introduction to Logistics

1.1 What Is Logistics?

Key points: logistics; demand; competitive advantage
Difficult points: logistics
Requirements:
By the end of this lesson, you should be able to

- understand the definition of logistics.
- understand the history of logistics.

In the early part of 1991 the world was given a dramatic example of the importance of logistics. **As a precursor to the Gulf War it had been necessary for the United States and its allies to move huge amounts of material great distances in what were thought to be impossibly short time-frames.** Half a million people and over half a million tones of material and supplies were airlifted 12,000 kilometers with a further 2.3 million tones of equipment moved by sea - all of this achieved in a matter of months.

Throughout the history of mankind wars have been won and lost through logistics strengths and capabilities-or the lack of them. It has been argued that the defeat of the British in the American War of Independence can largely be attributed to logistics failure. The British Army in America depended almost entirely upon Britain for supplies. At the height of the war there were 12,000 troops overseas and for the most part they had not only to be equipped, but fed from Britain. For the first six years of the war the administration of these vital supplies was totally inadequate, affecting the course of operations and the morale of the troops. An organization capable of supplying the army was not developed until 1781 and by then it was too late.

In the Second World War logistics also played a major role. The Allied Forces' invasion of Europe was a highly skilled exercise in logistics, as was the defeat of Rommel in the desert. Rommel himself once said that "... before the fighting proper, the battle is won or lost by quartermasters."

However while the Generals and Field Marshals from the earliest times have understood the critical role of logistics, strangely it is only in the recent past that business organizations have come to recognize the vital impact that logistics management can have in the achievement of competitive advantage. This lack of recognition partly springs from the relative level of understanding of benefit of integrated logistics. Arch Shaw, writing in 1915, pointed out that:

The relations between the activities of demand creation and physical supply ... illustrate the existence of the two principles of interdependence and balance. ***Failure to co-ordinate any one of these activities with it group-fellows and also with those in the other group, or undue emphasis or outlay-put upon any one of these activities, is certain to upset the equilibrium of forces which means efficient distribution.***

The physical distribution of the goods is a problem distinct from the creation of demand ... Not a few worthy failures in distribution campaigns have been due to such a lack of co-ordination between demand creation and physical supply...

Instead of being a subsequent problem, this question of supply must be met and answered before the work of distribution begins.

It has taken a further 70 years or so for the basic principles of logistics management to be clearly defined.

What is logistics management in the sense that it is understood today? There are many ways of defining logistics but the underlying concept might be defined as follows:

Logistics is the process of strategically managing the procurement, movement and storage of materials, parts and finished inventory (and the related information flows) through the organization and its marketing channels in such a way that current and future profitability are maximized through the cost-effective fulfillment of orders.

This basic definition will be extended and developed as the book progresses, but it makes an adequate starting point.

New Words And Terms

frame	*n.* [freim]	构架、骨架、结构；框架、结构
time-frames		（事情发生时的）时间范围
logistics	*n.* [lə'dʒistiks]	物流学、后勤学；（生产活动等）有效安排、物流组织
strength	*n.* [streŋθ]	力量、实力
attribute	*v.* ['ætribju:t]	把……归因于；认为……属于
administration	*n.* [ədminis'treiʃən]	管理、经营；行政、行政机关
vital	*a.* ['vaitl]	生命的；有生命力的；致命的
inadequate	*a.* [in'ædikwit]	不充分的、不适当、不能胜任
allied	*a.* ['ælaid]	结盟的
Allied Forces		（第一次世界大战的）协约国军队；（第二次世界大战的）同盟国军队
invasion	*n.* [in'veiʒən]	入侵；侵害
quartermaster	*n.* [ˌkwɔ:tə'mɑ:stə]	军需军官
recognize	*v.* ['rekəgnaiz]	认识；承认
impact	*n.* ['impækt]	冲击力；作用

integrated	*a.* ['intigreitid]	整体的；互相协调的
illustrate	*v.* ['iləstreit]	（用图或例子等）说明
interdependence	*n.* [ˌintədi'pendəns]	互相依赖、互相依存
co-ordinate	*n.* [kəu'ɔdinit]	同等的事物
group-fellows		团队成员
equilibrium	*n.* [i:kwi'libriəm]	平衡；均势
distribution	*n.* [distri'bju:ʃən]	分配；分销
physical distribution		实体分配
underlying	*a.* [ˌʌndə'laiiŋ]	在下面的
strategically	adv. [strə'ti:dʒikli]	在战略上地
procurement	*n.* [prəˌkjuə'mənt]	获得、实现
storage	*n.* ['stɔ:ridʒ]	储存、保管；库存量；仓库、货栈
inventory	*n.* ['invəntri]	财产目录；存货
information flows		信息流
marketing	*n.* ['ma:kitiŋ]	市场营销
channel	*n.* ['tʃænl]	渠道
fulfillment	*n.* [fulˌfil'mənt]	履行、实现；完成
order	*n.* ['ɔ:də]	定货、定货单

Sentence Explanations

1. As a precursor to the Gulf War it had been necessary for the United States and its allies to move huge amounts of material great distances in what were thought to be impossibly short time-frames. 作为海湾战争的准备，美国和其同盟者在被认为不可能的时间内，必须超远距离地运输大量军需品。

2. However while the Generals and Field Marshals from the earliest times have understood the critical role of logistics, strangely it is only in the recent past that business organizations have come to recognize the vital impact that logistics management can have in the achievement of competitive advantage. 尽管将军和陆军元帅很早就认识到了后勤的关键作用，令人奇怪的是企业在不久之前才刚刚认识到物流管理在构筑竞争优势方面的重要作用。

3. Failure to co-ordinate any one of these activities with it group-fellows and also with those in the other group, or undue emphasis or outlay-put upon any one of these activities, is certain to upset the equilibrium of forces which means efficient distribution. 如果与活动中任何一个部分以及其他部分不能相互协调，或者不恰当地重点强调整体活动中的任何一个部分，肯定会打乱有效率分销的均势因素。

Questions

1. What is the logistics?

2. How do you comprehend the sentence "logistics encompasses much more than just the transportation and warehouse"?

Reading

What Is Logistics?

"Logistics means having the right thing, at the right place, at the right time."

Logistics - (*business definition*) Logistics is defined as a business planning framework for the management of material, service, information and capital flows. It includes the increasingly complex information, communication and control systems required in today's business environment. — (Logistics Partners Oy, Helsinki, FI, 1996)

Logistics - (*military definition*) The science of planning and carrying out the movement and maintenance of forces... those aspects of military operations that deal with the design and development, acquisition, storage, movement, distribution, maintenance, evacuation and disposition of material; movement, evacuation, and hospitalization of personnel; acquisition of construction, maintenance, operation and disposition of facilities; and acquisition of furnishing of services. — (JCS Pub 1-02 excerpt)

Logistics - The procurement, maintenance, distribution, and replacement of personnel and materiel. — (Websters Dictionary)

Logistics - 1. The branch of military operations that deals with the procurement, distribution, maintenance, and replacement of materiel and personnel. 2. The management of the details of an operation. — (American Heritage Dictionary)

Logistics - "...the process of planning, implementing, and controlling the efficient, effective flow and storage of goods, services, and related information from point of origin to point of consumption for the purpose of conforming to customer requirements." Note that this definition includes inbound, outbound, internal, and external movements, and return of materials for environmental purposes. — (Reference: Council of Logistics Management, http://www.clm1.org/mission.html, 12 Feb 98)

Logistics - The process of planning, implementing, and controlling the efficient, cost effective flow and storage of raw materials, in-process inventory, finished goods and related information from point of origin to point of consumption for the purpose of meeting customers' requirements. — (Reference: Canadian Association of Logistics Management, http://www.calm.org/calm/AboutCALM/AboutCALM.html, 12 Feb, 1998)

Logistics - The science of planning, organizing and managing activities that provide goods or services. — (MDC, LogLink / LogisticsWorld, 1997)

Logistics - Logistics is the science of planning and implementing the acquisition and use of the resources necessary to sustain the operation of a system. — (Reference: ECRC University of

Scranton / Defense Logistics Agency Included with permission from: HUM - The Government Computer Magazine "Integrated Logistics" December 1993, Walter Cooke, Included with permission from: HUM - The Government Computer Magazine.)

Logistics - To perform logistics functions or processes. The act of planning, organizing and managing activities that provide goods or services. — (MDC, LogLink / LogisticsWorld, 1997)

Logistics Functions - (*classical*) planning, procurement, transportation, supply, and maintenance. — (United States Department of Defense DOD)

Logistics Processes - (*classical*) requirements determination, acquisition, distribution, and conservation. — (United States Department of Defense DOD)

Business Logistics - The science of planning, design, and support of business operations of procurement, purchasing, inventory, warehousing, distribution, transportation, customer support, financial and human resources. — (MDC, LogLink / LogisticsWorld, 1997)

Acquisition Logistics - Acquisition Logistics is everything involved in acquiring logistics support equipment and personnel for a new weapons system. The formal definition is "the process of systematically identifying, defining, designing, developing, producing, acquiring, delivering, installing, and upgrading logistics support capability requirements through the acquisition process for Air Force systems, subsystems, and equipment." — (Reference: Air Force Institute of Technology, Graduate School of Acquisition and Logistics.)

Integrated Logistics Support (ILS) (1) - ILS is a management function that provides planning, funding, and functioning controls which help to assure that the system meets performance requirements, is developed at a reasonable price, and can be supported throughout its life cycle. — (Reference: Air Force Institute of Technology, Graduate School of Acquisition and Logistics.)

Integrated Logistics Support (ILS) (2) - Encompasses the unified management of the technical logistics elements that plan and develop the support requirements for a system. This can include hardware, software, and the provisioning of training and maintenance resources. — (Reference: ECRC University of Scranton / Defense Logistics Agency Included with permission from: HUM - The Government Computer Magazine "Integrated Logistics" December 1993, Walter Cooke.)

Logistics Support Analysis (LSA) - Simply put, LSA is the iterative process of identifying support requirements for a new system, especially in the early stages of system design. The main goals of LSA are to ensure that the system will perform as intended and to influence the design for supportability and affordability. — (Reference: Air Force Institute of Technology, Graduate School of Acquisition and Logistics.)

Notes

Competitive Advantage 竞争优势

由美国人波特（Michael E. Porter）在1985年出版的《Competitive Advantage》一书中提出。竞争优势是指企业的产品和服务与竞争者有所区别并享有优势，并能提供给客户更多的价值。

1.2 The Logistics of Business Is Big and Important

Key points: supply chain; competitive advantage
Difficult points: competitive advantage
Requirements:
By the end of this lesson, you should be able to

- understand the importance of the logistics.
- describe the relationship between logistics and firms.

It is through the logistical process that materials flow into the manufacturing capacity of an industrial nation and products are distributed to consumers. The recent growth global commerce and the introduction of e-commerce have expanded the size of complexity of logistical operations.

Logistics adds value to the supply chain process when inventory is strategically positioned to achieve sales. Creating logistics value is costly. Although difficult to measure, most experts agree that the annual expenditure to perform logistics in the United States was approximately 10.1 percent of the $9.96 billion Gross Nation Product (GNP) or $1.006 billion. As further illustrated by Dell, the logistics of business is truly big business!

DELL GOES TO THE EXTREME

According to industry legend. Henry Ford's manufacturing philosophy was "You can have any color you want as long as it's black." The manufacturing strategy that has fostered unprecedented success for Dell Computers is the exact opposite of Ford's mindset: "Build every order to order." Essentially, it spawns the ultimate manufacturing oxymoron: mass customization.

The critical component to facilitate mass customization is a logistics program built upon a concept of "extreme warehousing" and a superior software platform. Ryder Integrated Logistics, a subsidiary of Ryder Systems, Miami, Florida, houses supplier-owned inventory for Dell at locations in Austin, Texas, and Nashville, Tennessee. The Austin facility is fed by 50 global suppliers and the Nashville site is fed by 60 vendors worldwide.

"Dell requires suppliers to respond with order fulfillment within two hours. The only way suppliers can meet this expectation is to utilize our logistics management," explains Dave Hanley, director of business development for Ryder. "Dell maintains less than six days of inventory, and turns work-in-process approximately 264 times annually. The company uses our services to minimize investment in inventory, and to abolish 'dead space' or 'nonproductive storage areas'."

"We replenish to kanbans and maintain a working inventory at the production facility," Hanley says. "Dell does an incredible job of estimating what products will be selling, and different products peak at various times. Laptops are big now and business machines are more popular in the first quarter of the

year than in the last."

Currently, Ryder has responsibility for the inventory from the time it arrives at its facilities until it delivers to Dell. Hanley is confident that incorporating Ryder's processes and logistics management across all inbound shipments from suppliers, beginning at every point of origin, would bring tremendous additional value to Dell.

While he acknowledges Dell is the master of execution in manufacturing, Hanley says the software used by Ryder to manage the extreme warehousing requirements is one of the computer manufacturer's "top three critical success factors."

The software had to satisfy many requirements—from open architecture to a scalable platform that would grow with Dell. The solution has done precisely that, expanding with the Austin facility as it grew from 12,000 square feet in 1997 to more than 600,000 square feet by 1999.

"Extreme warehousing demands fast response and critical management," says Hanley. "There's a live customer waiting for the order, and a mistake today means a disappointed customer in just two days."

This rapid fulfillment doesn't allow recovery time for mistakes, so the WMS has to execute perfectly and flawlessly on every order, he notes.

(Source: Anonymous, "Dell Goes to the Extreme", Inbound Logistics, January 2000, p. 122.)

Despite the sheer size of logistical expenditure, the excitement of lean logistics is not cost containment or reduction. The excitement generates from understanding how select firms use logistical competency to achieve competitive advantage. Firms that have developed world-class logistical competency enjoy competitive advantage as a result of providing important customers superior service. Leading logistical performers typically implement information technology capable of monitoring global logistical activity on a real time basis. Such technology identifies potential operational breakdowns and facilitates corrective action prior to delivery service failure. **In situations where timely corrective action is not possible, customers can be provided advance notification of developing problems, thereby eliminating the surprise of an unavoidable service failure. In many situations, working in collaboration with customers and suppliers, corrective action can be taken to prevent operational shutdowns or costly customer service failures. By performing at above industry average with respect to inventory availability, speed and consistency of delivery, and operational efficiencies, logistically sophisticated firms are ideal supply chain partners.**

New Words And Terms

consistency	*n.* [kən'sistənsi]	一致、一贯；浓度、坚度、硬度
capacity	*n.* [kə'pæsəti]	容纳力、学习力、理解力；能量、容量、效能
position	*v.* [pə'ziʃn]	安置在适当的位置、决定……之位置
contain	*v.* [kən'tein]	控制

reduction	*n.* [ri'dʌkʃən]	减少、减小、缩减
Gross Nation Product(GNP)		国民生产总值
sheer	*a.* [ʃiə]	纯粹的、全然的
identify	*v.* [ai'dentifai]	认出、识别、鉴定
notification	*n.* [ˌnəutifi'keiʃn]	通知（书）、布告
availability	*n.* [əveilə'biliti]	有效（性）、可得性
sophisticated	*a.* [sə'fistikeitid]	老于世故的、高级的
implement	*v.* ['implimənt]	贯彻
real time		实时
breakdown	*n.* ['breikdaun]	崩溃、倒塌、失败
collaboration	*n.* [kə'læbəreʃn]	合作

Sentence Explanations

1. It is through the logistical process that materials flow into the manufacturing capacity of an industrial nation and products are distributed to consumers. 通过物流过程，原材料进入一个工业国家形成制造能力，并且将产品分销给消费者。

2. The recent growth global commerce and the introduction of e-commerce have expanded the size of complexity of logistical operations. 近来全球商业的增长和电子商务的引入已经扩大了物流运营的复杂程度。

3. In situations where timely corrective action is not possible, customers can be provided advance notification of developing problems, thereby eliminating the surprise of an unavoidable service failure. 在不能及时采取正确行动的情形下，顾客可以预先得到出现问题的通知，由此不会使顾客对于一个不可避免的服务失败感到惊讶。

4. In many situations, working in collaboration with customers and suppliers, corrective action can be taken to prevent operational shutdowns or costly customer service failures. 在很多情况下，与顾客和供应商一起合作，公司可以采取正确的行动来防止运营的停滞或高代价的顾客服务的失败。

5. By performing at above industry average with respect to inventory availability, speed and consistency of delivery, and operational efficiencies, logistically sophisticated firms are ideal supply chain partners. 当存货有效，交货的速度和一致性以及操作效率都超过行业平均水平时，那么这家企业的物流工作水平就高，它就是理想的供应链合作伙伴。

Questions

1. Discuss the functions of the logistics.

2. Give some examples to illustrate the importance of a firm's logistical activities.

3. Could you explain how a firm can achieve competitive advantage by using logistical competency?

Reading

Logistics and Supply Chain as Competitive Business Weapons

If you do not already consider and treat Logistics and Supply Chain Management as a weapon in your company's competitive business arsenal, now is the time to take a sober second look at this rapidly advancing area. Existing competition, or new wave online competitors may already be taking aim at your firm and your customers as you read this article.

It is indeed absolutely astounding how fast change is now occurring in Logistics and Supply Chain Management. This week represents the first in a series of features here on About.com focusing on the three major reasons Logistics and Supply Chain Management is rapidly becoming one of the most central of business issues as we enter the new millennium.

In this feature, we explore the major impact the more slowly growing Internet Home Shopping and Consumer Direct business models will have over time on traditional distribution methods and channels, and end with descriptions of two related future features outlining the other important reasons why keeping up to date on Logistics and Supply Chain Management is critical to the future health and success of your company.

Traditional players ignore this threat at their peril and must rapidly begin to adjust their networks to support and defend against these challenges from surviving online pioneers like Amazon.com, Net Grocer and Peapod.com to name a few. Any traditional firms who do not rise to this challenge will sooner or later face significant negative business fallout and increasing percent to sales expense ratios as this growth occurs.

Much of the change we speak of is driven by the concept of Disintermediation which basically represents the removal of all "middlemen" which add no real value between the process of manufacturing a product and its' movement and ultimate sale to the end consumer. In the purest form, application of this concept challenges the need for a manufacturer to use distributors and even retailers as channels to move their products to end consumers. In most cases, traditional distributors and retailers only add cost and their profit margins to the total "to end consumer" cost.

Companies who are current intermediaries that ignore this reality and do not ensure that their involvement adds true value will be cut out of the consumer delivery channel by savvy Manufacturers and/or ultimately the direct price market forces caused by consumers demanding the lowest total end consumer price.

Wal-Mart is one firm which has already identified this key challenge and are moving rapidly to provide true value add for the manufacturers who work with them to give consumers better ultimate value. In interviews before stepping aside, ex-Wal-Mart CEO David Glass said that although their online business only represented a very small part of their current total revenues, they consider it to be a key part of Wal-Mart's future strategy. If you visit their website through the link above you will notice that it is now a prime time business site which less than a few years or so ago wasn't much more than an outlet for clearance merchandise.

As well, it is important to note that Wal-Mart offers variable service and delivery cost models

like the US Postal Service or UPS Express Delivery as examples, giving the consumer control of the end cost to themselves based on the actual level of service and speed they desire. Given the coming dramatic shift to Direct to Home Delivery and associated smaller order sizes, courier companies are incredibly well positioned with current high levels of delivery density in all markets. This means that companies like Wal-Mart with huge volumes of business and low rates with these courier companies will be very well positioned. As well, tight business interfaces between these firms add even more efficiency to the mix and a company like Wal-Mart which actually has named Courier Departments in all of their Distribution Centers across the country are even further advantaged.

Not only satisfied with positioning such as described above, companies like Wal-Mart have also worked diligently for several years to integrate themselves with their manufacturer partners to together remove costs and time from the Logistics and Supply Chain parts of the business and are pioneers and leaders in initiatives such as CPFR.

Where do all of these developments point and what are the dynamics that may arise from the concepts described above? The author suggests that we will see the rise of Competing Supply Chains. In a nutshell, what may ultimately emerge are tightly knit competing supply chains which battle for the lowest costs and methods of serving the consumer on a worldwide basis. Specific Consumer Products Manufacturers and Retail/Order Delivery Entities will ultimately align themselves to develop the most collaborative, lowest cost and truly competitive supply chain.

Notes

Supply Chain 供应链

货物从生产者到消费者的整个流通过程。供应链又称销售链（sales chain），如果强调的是客户则可称为需求链（demand chain）。

1.3 The Work of Logistics

Key points: supply chain; order processing; inventory; transportation; warehousing; materials handling; packaging; facility network

Difficult points: logistical value

Requirements:

By the end of this lesson, you should be able to

- understand the interrelated nature of the five areas of logistical work.
- understand integrated logistical management.
- describe the personality of every functional work of the logistics.

In the context of supply chain management, logistics exists to move and position inventory to achieve desired time, place, and possession benefits at the lowest total cost. Inventory has limited value until it is positioned at the right time and at the right location to support ownership transfer or value-added creation. If a firm does not consistently satisfy time and place requirements, it has nothing to sell. For a supply chain to realize the maximum strategic benefit of logistics, the full range of functional work must be integrated. Decisions in one functional area will impact cost of all others. It is this interrelation of functions that challenges the successful implementation of integrated logistical management. Figure 1.3.1provides a visual representation of the interrelated nature of the five areas of logistical work: (1) order processing; (2) inventory; (3) transportation; (4) warehousing, materials handling, and packaging; and (5) facility network. As described below, work related to these functional areas combines to create the capabilities needed to achieve logistical value.

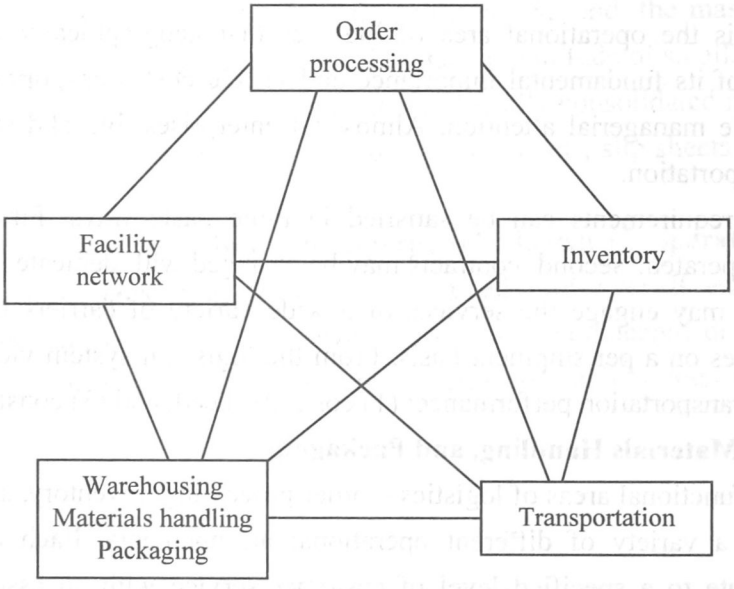

Figure 1.3.1 Integrated Logistics

Order Processing

The importance of accurate information to logistical performance has historically been under appreciated. While many aspects of information are critical to logistics operations, the processing of orders is of primary importance. Failure to fully understand this importance resulted from a failure to understand how distortion and dynamics impact logistical operations.

Inventory

The inventory requirements of a firm are directly linked to the facility network and the desired level of customer service. Theoretically, a firm could stock every item sold in every facility dedicated to servicing each customer. Few business operations can afford such a luxurious inventory commitment because the risk and total cost are prohibitive. The objective in inventory strategy is to achieve desired customer service with the minimum inventory commitment. Excessive inventories may compensate for deficiencies in basic design of a logistics system but will ultimately result in higher-than-necessary total logistics cost.

Logistical strategies should be designed to maintain the lowest possible financial investment in

inventory. The basic goal is to achieve maximum inventory turn while satisfying service commitments. A sound inventory strategy is based on a combination of five aspects of selective deployment: (1) core customer segmentation, (2) product profitability, (3) transportation integration, (4) time-based performance, and (5) competitive performance.

Every enterprise that sells to a variety of different customers confronts uneven opportunity. Some customers are highly profitable and have outstanding growth potential; others do not. The profitability of a customer's business depends upon the products purchased, volume, price, value-added services required, and supplemental activities necessary to develop and maintain an ongoing relationship. Because highly profitable customers constitute the core market of every enterprise, inventory strategies need to focus on them. The key to effective logistical segmentation rests in the inventory priorities dedicated to support core customers.

Transportation

Transportation is the operational area of logistics that geographically moves and positions inventory. Because of its fundamental importance and visible cost, transportation has traditionally received considerable managerial attention. Almost all enterprises, big and small, have managers responsible for transportation.

Transportation requirements can be satisfied in three basic ways. First, a private fleet of equipment may be operated. Second, contracts may be arranged with dedicated transport specialists. Third, an enterprise may engage the services of a wide variety of carriers that provide different transportation services on a per shipment basis. From the logistical system viewpoint, three factors are fundamental to transportation performance: (1) cost, (2) speed, and (3) consistency.

Warehousing, Materials Handling, and Packaging

The first three functional areas of logistics – order processing, inventory, and transportation can be engineered into a variety of different operational arrangements. Each arrangement has the potential to contribute to a specified level of customer service with an associated total cost. In essence, these functions combine to create a system solution for integrated logistics. The fourth functionality of logistics – warehousing, materials handling, and packaging – also represents an integral part of a logistics operating solution. However, these functions do not have the independent status of those previously discussed. Warehousing, materials handling, and packaging are an integral part of other logistics areas. For example, inventory typically needs to be warehoused at selected times during the logistics process. Transportation vehicles require materials handling for efficient loading and unloading. Finally, the individual products are most efficiently handled when packaged together into shipping cartons or other unit loads.

When distribution facilities are required in a logistical system, a firm can choose between the services of a warehouse specialist or operating their own facility. **The decision is broader than simply selecting a facility to store inventory since many value-adding activities may be performed during the time products are warehoused. Examples of such activities are sorting, sequencing, order selection, transportation consolidation, and, in some cases, product modification and assembly.**

Facility Network

Classical economics neglected the importance of facility location and overall network design to