

高等院校物流与供应链双语实验教材

过程管理

供 | 应 | 链 | 的 | 增 | 值

PROCESS
MANAGEMENT

Creating Value along the Supply Chain

乔尔·D. 威斯纳 (Joel D. Wisner) 琳达·L. 斯坦利 (Linda L. Stanley) ◎著
纪寿文 房圆晨◎译注

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Joel D. Wisner and Linda L. Stanley

Process Management ; Creating Value along the Supply Chain

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译注者序

在当今经济全球化、一体化环境下，企业之间的竞争逐渐演变成供应链之间的竞争。在现代信息技术支持下，供应链各主体间业务过程的协同运作，成为创造供应链竞争优势的关键举措。针对现代生产制造和服务中业务活动比较灵活和个性化的特点，不仅需要从微观角度对业务流程进行精细管理，而且更需要从宏观和系统角度对业务过程进行统筹协调。

《过程管理：供应链的增值》一书着重介绍了以客户为导向的过程战略、制造和服务流程、精益生产系统、质量和过程执行、未来发展趋势等，以期帮助读者了解采购、制造和产品交付中的核心过程，以及这些过程在供应链框架下是如何管理和有机集成的。本书系统、深入地阐述过程管理理论和方法，并配以大量的案例进行分析，是一本难得的专门介绍过程管理的书籍。

全书根据内容的逻辑关系共分为4部分。

第1部分共4章，讨论了以顾客为核心，创造客户驱动的过程战略思想。首先阐明过程管理的内涵和供应链8个关键过程管理的定义，进而用3章的篇幅详细描述产生订单的新产品开发、客户关系管理和客户服务管理。

第2部分共5章，围绕制造和服务流问题展开探讨。第5章需求管理和预测，主要介绍需求预测的过程、方法和精度；第6章库存管理，主要介绍独立需求和非独立需求库存管理、供应链中的协同预测补货方法；第7章物料流管理，主要介绍车间布局、工作排程以及车辆调度方法；第8章顾客流和工作流管理，主要介绍服务能力变化分析、顾客排队分析和 workflow 分析方法；第9章信息流管理，主要介绍企业资源管理系统的功能、实施以及业务流程重组。

第3部分共3章，以精益生产系统为主线展开分析。第10章精益运营，主要介绍精益思想及5S等基本管理方法；第11章物流和订单执行，主要介绍运输计划和调度、仓储规划、物流网络规划；第12章采购和供应管理，主要介绍采购管理、监督和管理供应过程、电子采购等内容。

第4部分共3章，围绕过程执行和质量控制问题进行探讨。第13章持续质量改进，阐述质量改进的过程、协同计划和ISO 9000等标准；第14章六西格玛——将质量提高到更高水平，阐述六西格玛团队组建、过程执行和监控工具、项目文档等；第15章回收管理，阐述回收管理的策略、回收网络设计方法和回收管理实践。

本书案例分为导入案例和新观点案例两大部分，新观点案例又可分为“全球视角”、“电子商务视角”、“服务视角”等，读者在学习理论知识的同时，可以结

合案例进行更深入的思考。书中的过程管理对象以有形产品为主，此外也对提供无形服务产品的运营进行了分析。

为了给双语教学提供更好的指南，我们在译注过程中也进行了一些思考。中西方思维的差异和中英文表达方式的不同在一定程度上造成了英文教材学习和使用的特殊性。在译注过程中，我们结合自身经验和行业上对过程管理的一些共识，最大限度地保证了译注的准确性。

在全球供应链协同发展的趋势下，本书具有很好的前瞻性、针对性和实用性，可作为本科生、研究生过程管理或运营管理等专业课程教材，也可作为企业管理人员的工作参考书。

本书在译注过程中，得到了胡云超、王传涛、黄静云、谢芳、刘刚、武文玲、才笑琦、郭宇飞的帮助，在此深表谢意。

纪寿文 房圆晨

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Preface

Welcome to *Process Management: Creating Value along the Supply Chain; Text & Cases*. The past 25 years has been characterized by tremendous change in the areas of purchasing, transportation, production, information systems, and supply chain management. These changes have created significant changes in the processes used for product design, manufacturing, and distribution, and in the way companies manage their relationships with suppliers and customers. Companies have evolved from being strictly internally focused with adversarial supplier relationships and only a passive regard for customers, to what we commonly see today—significant efforts placed identifying customers and end-product users with the goal of continually satisfying their needs; and building long-term, mutually beneficial relationships with suppliers and customers in order to collaborate to better serve customers. When process collaboration or integration is performed correctly, supply chains become formidable competitive entities, customers get what they want and continue to return, and all of the companies along the supply chain benefit.

The objective of this textbook is to encourage readers to think about the key processes companies use to purchase, make, and deliver products and services successfully, and how these processes are integrated within a supply chain framework. This textbook would be most useful for a Process Management class in an undergraduate supply chain management curriculum, as an upper-level Operations Management class or elective, as an MBA class in Process or Operations Management, or as a business oriented course in Industrial Engineering. Most supply chain management degree programs have a course entitled Process Management, and this text is specifically suited for this class. This text is designed around the eight key value-creating supply chain processes listed in Chapter 1. Managers, too, will find this textbook extremely useful in creating strategies for improving their firms' competitive positions. Some of the unique things included in this text are: 21 easy-to-difficult cases spread throughout the sections and provided on the student and instructor CD-ROMs, three chapters addressing the concepts of flow management, a chapter on lean thinking, a chapter on returns management, and a chapter on future trends in process management. We think these and the other chapters will be a valuable source of information for business and engineering students and practicing business managers.

Part 1, *Creating Customer-Driven Process Strategies*, includes an introductory chapter discussing the concept of process management and how it is used as a way to create value along the supply chain, a product design chapter, and two chapters discussing the relationship between a firm and its customers. Chapter 1 introduces the eight key supply chain processes, while the core concepts in Chapters 2, 3, and 4 include customer and supplier input in the new product design process, designing an effective customer relationship management (CRM) process, CRM technologies, a framework for managing customer service, and integrating customer service in the supply chain. There are three cases focusing on customers and customer service issues to accompany Part 1.

Part 2, *Manufacturing and Service Flow Issues*, includes chapters on forecasting and inventory management, and then three chapters that are unlikely to be found in any other similar textbook; these are *Managing Material Flows*, *Managing Customer and Work Flows*, and *Managing Information Flows*. These important chapters introduce the concepts of flow management and the processes required to manage flow within the firm and between the firm and its trading partners. The key concepts discussed in Part 2 include the demand management process; collaborative planning, forecasting and replenishment; collaborative inventory management; material flow mapping; flow analysis; customer flow mapping; service delivery system design; managing work flows along the supply chain; and automating process management. Accompanying Part 2, there are four cases addressing these issues.

Part 3, *Lean Production Systems*, presents three chapters discussing a number of issues regarding lean thinking. Chapter 10 presents an introduction to lean production systems and lean thinking, while the other two chapters discuss the order fulfillment process, logistics network planning, strategic sourcing, and supplier relationship management. There are six cases dealing with lean thinking, logistics, and supply issues associated with Part 3 that we hope you will find thought-provoking.

Part 4, *Quality Issues and Process Performance*, contains three chapters. Chapter 13 discusses the basics for managing and controlling quality within the supply chain, while Chapter 14 presents a discussion of the very popular Six Sigma methodology for improving quality. Chapter 15 closes this section with a discussion of returns management. Core topics in this section include the quality improvement process; Six Sigma tools, initiatives, and challenges; developing a returns management strategy; and designing the returns network. There are five cases which are most appropriate for Part 4, discussing issues related to these topics.

We hope you agree that this unique combination of process management topics will keep readers interested and challenged. We welcome your comments and suggestions. Please email them to Dr. Joel D. Wisner at joel.wisner@unlv.edu.

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Joel Wisner would also like to thank all of the wonderful people at Hanken, the Swedish School of Economics and Business Administration in Helsinki, Finland, where he spent his sabbatical during the fall of 2005, and was graciously allowed the use of an office to work on this textbook. Specifically, he wishes to thank Dr. Anders Tallberg, Dr. Karen Spens, Oana Velcu, Ogan Yigitbasioglu, Gyöngyi Kovács, and Monica Stark for all of their help and inspiring conversations.

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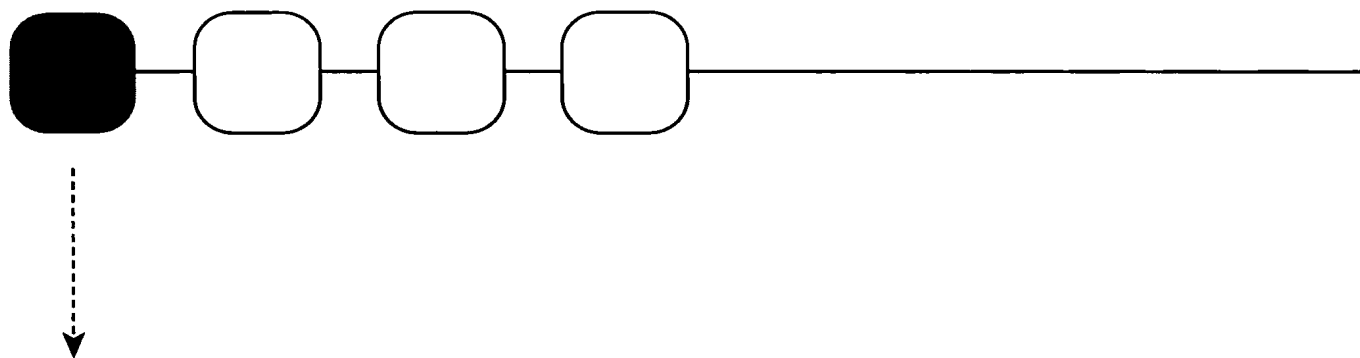
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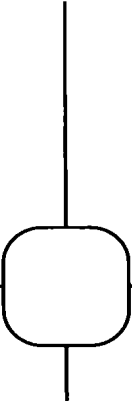
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Part 1

Creating Customer-Driven Process Strategies

制定以顾客为导向的过程战略



Chapter 1

Introduction to Process Management

【学习目标】

- 通过实例定义和讨论过程管理
- 理解过程管理的商业价值
- 描述供应链中链接不同组织主体的 8 个过程
- 论述过程管理在服务中的重要性
- 描述为什么质量管理和即时制造（JIT）是过程管理的重要活动
- 描述如何对过程进行建模和改进，以及企业如何监测过程执行
- 论述运用信息技术集成供应链中的过程以及过程管理的其他趋势

【内容简介】

本章首先给出了过程和过程管理的概念，然后介绍了业内普遍认同的供应链 8 个过程。这些过程是本书的基础内容，在后续的各章中会进行细致讨论。进而介绍了过程管理相关的理念及过程管理的几个趋势。最后，本章解释了过程管理协同的重要性，以及企业如何通过有效的过程管理提高自身在整个供应链中的竞争力。

Process Management in Action

HP's Portal Strategy

The Telecommunications Infrastructure Division of Hewlett-Packard (HP) is a single part of one of the world's largest corporations, but it also is a sizeable and rather complex business in its own right. This division—which makes control stations for wireless networks—revolves around a “project center” in Cupertino, California, where a group of workers coordinate all of the tasks involved in building and delivering these network control systems to HP customers around the world.

When a wireless network operator orders an HP base controller, the project center is expected to give the salesperson handling that transaction instant feedback on the availability and expected delivery date for the equipment. The project center also must make sure that the delivery date is no more than two days after the customer places the order.

“The challenge for the project center is figuring out how to keep track of exactly what is going on throughout the entire supply chain,” says Andre Kuper, process technology manager with HP's Supply Chain Services Group. “They are pulling data from at least five different ERP systems, and communicating with multiple organizations, each of which has its own unique business processes.”

This past spring, Kuper's Supply Chain Services Group, which in effect does business process and information technology consulting for HP's various business units, launched a pilot project that it expects will make the project center's job easier, and ultimately make HP's Telecommunications Infrastructure Division a more profitable enterprise. The centerpiece of this project is an enterprise portal platform that Kuper refers to as “an information backbone”.

HP leases this portal infrastructure from Global Factory, located in Santa Clara, California. Since connecting to the Global Factory Network, Kuper estimates that HP's project coordinators spend at least 50 percent less time on mundane tasks, such as verifying that they have current information before inquiring about the status of a particular order. “With the portal, we have moved into a collaborative environment,” Kuper says. “Instead of arguing over whether we are looking at the right documents, we are proactively working to make sure we are meeting customer demand.”

That simple change also has allowed the division to create more effective business processes. “The end result is that everyone is performing fewer nonvalue-added tasks,” Kuper says. “That means we can process orders faster, which ultimately should increase revenue by allowing our project coordinators to handle more orders simultaneously.”

Source: Hill, S., “See the Whole Chain,” *Manufacturing Systems* (MSI), V. 19, No. 10, 2001. Used with permission.

◀ HP 公司电信设施部依托在加利福尼亚建立的“项目中心”，实现了供应链上信息的无缝采集和准确跟踪，推动了订单处理、生产、运输等过程的协同，加快了订单执行效率，提升了业务流程的有效性。

Introduction

In today's highly competitive global marketplace, organizations must continually assess, adjust, and redefine themselves to win new orders, please existing customers, and stay competitive. Large new markets have opened up in China and Russia, for instance, and many smaller markets in developing countries are continually opening and growing as political climates change. Many foreign organizations are coming to the United States and other highly developed nations and adding competition, while domestic firms are constantly seeking to expand into new product areas and new markets to improve profitability. These dynamic conditions create a need for organizations to be continually reducing costs, improving responsiveness, and improving quality, while designing new and exciting products to meet constantly changing customer requirements.

For most organizations, becoming and then staying competitive is like hitting a swiftly moving target. Firms must study their customers, determine what their needs are now, and anticipate what their needs will be in the future. Then they must develop or adjust processes, products, and services to meet current and (hopefully) future customer needs. Processes are woven throughout all organizations and represent unique ways that organizations provide what their customers want. **World-class businesses manage** processes in part by successfully managing inventories, creating long-lasting and mutually beneficial partnerships with suppliers and