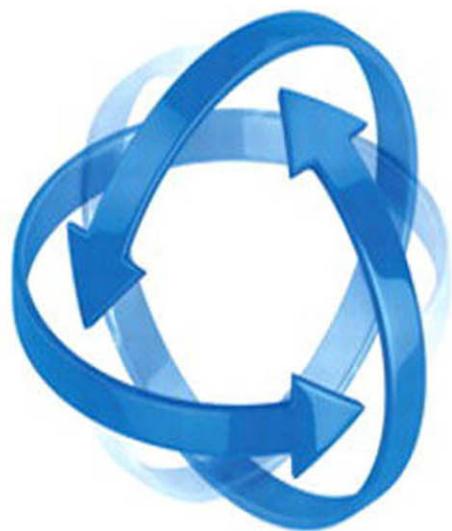


REINVENTING THE SUPPLY CHAIN LIFE CYCLE



STRATEGIES AND METHODS FOR
ANALYSIS AND DECISION MAKING



Marc J. Schniederjans • Stephen B. LeGrand
Contributing Editor, Barry Render, Ph.D.

Reinventing the Supply Chain Life Cycle

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enhancing food production while conserving and protecting natural water resources. Stephen is responsible for operations of the division's mechanized irrigation product lines, with manufacturing in the United States, Spain, Dubai, Brazil, China, and South Africa, and with warehousing operations in Australia, Mexico, and Russia. He has been an operations professional for more than 25 years, with experience in M&A, managing manufacturing, supply chain management, and the recruitment and development of international professionals. Before joining Valmont, he served as the Director of Worldwide Operations for the Power Systems Division of the Kohler Company, where he led global operations in Singapore, China, France, India, and the United States. Stephen has a strong background in lean manufacturing, Six Sigma (DMAIC), supply chain management, quality, manufacturing engineering, production, customer service, and safety. Before joining Kohler Power Systems, he served as Operations Manager, Production and Inventory Control Manager, and Scheduling Manager for divisions of Newell Rubbermaid, gaining experience in acquisitions while helping manage operations in Mexico, Canada, the United States, United Kingdom, and France within the retail and B2B industries. Prior to his eight-year association with Newell Rubbermaid, Stephen's experience included 11 years in the defense electronics industry for Rockwell International and Hughes Aircraft companies, where he held positions in engineering, production, materials, and quality, producing radar systems for military aircraft (F-18, F-14, and F-15) and manufacturing *global positioning systems* (GPS) for handheld, vehicle, and missile (SLAM, TLAM) applications. He holds a Masters of Business Administration (MBA) degree from the University of Iowa in operations and earned a Bachelor of Science (BS) degree in industrial technology from the University of Northern Iowa. In addition, he has certification in Integrated Supply Chain Management from the University of Tennessee, *Certified in Production and Inventory Management* (CPIM) certification from the *American Production & Inventory Control Society* (APICS) and certification in technology from the *Society of Manufacturing Engineering* (SME).

Preface

Supply chains for the goods and services we consume or use impact all of us, every day. Business organizations realize that supply chains have become a strategy for success to better serve customers and improve their bottom line. How efficient and successful supply chains are is determined by how well they are managed.

To conceptualize what is involved in managing a supply chain, practitioners and scholars have explored a variety of paradigms. For instance, a supply chain may be viewed in the context of product life cycle stages (that is, Introduction, Growth, Maturity and Decline). Marketers have long used the product life cycle as a transformational process that can guide the movement of a product back up its life cycle, allowing the product to continue almost indefinitely. Guided by the stages of the life cycle, marketers can reinvigorate a product with innovations and new ideas to keep its demand growing and the product alive. Life cycling takes place in a variety of applications beyond its application to a product and can provide an interesting framework to study any type of business activity.

Supply chains, like the products and services they deliver, have life cycles. Supply chains need to be constantly reinvigorated and reinvented to keep them functioning, alive, and purposeful. The book you are reading organizes its content around the life cycling concept as it is related to the entire supply chain. The focus here is not the life cycle of a single product or service, but the life cycling of products, operations, processes, and procedures that collectively make up a supply chain. The purpose of this book is to provide a selection of topical knowledge that can help supply chain managers reinvent their supply chains and, in doing so, add to the life of the supply chain cycling process.

No single book can cover all the topics required to equip supply chain managers with total knowledge about a subject. The content in this book seeks to achieve three goals: (1) to provide basic

text material on the practice and theory related to a select group of topics important in the management of supply chains, (2) to share experiential knowledge from executives through interviews to provide current thoughts on supply chain management, and (3) to make learning entertaining through the novelettes based on actual supply chain situations. To achieve these goals, this book is organized into 3 parts consisting of 22 chapters in total. In Part I, the basic text material of the book is presented in the first 13 chapters. These chapters cover a series of topics related to supply chain management, including, developing strategies; designing; staffing; managing; aligning; negotiating; outsourcing; social, ethical, and legal considerations; sustainability; building agility and flexibility; developing partnerships; risk management; and lean and other cost strategies. Each of these chapters begins with an outline to overview the organization of the chapter and a list of terms to hint at what follows in the content of the chapter itself. A short novelette follows this and is based on real supply chain managers' experiences in dealing with problems related to each chapter. The novelettes are a continuous story from the perspective of a Vice President of Operations and the management of an organization's operations, including the supply chain. These novelettes are followed in each chapter by a section designed for inexperienced supply chain managers that covers prerequisite material. Also, a final section, "What's Next?" gives supply chain managers a look ahead based on current research about what the next three to five years may hold, again relating to the topic of each chapter.

Part II contains seven chapters. Each chapter contains an interview with a supply chain executive. These executives share their individual organization's approach to dealing with planning in the supply chain life cycles of their products or services. These interviews cover interesting strategies and tactics from small, medium, and large firms, as well as from manufacturing and service organizations.

In Part III, two additional novelette case studies are presented as a way of concluding the running novelette used in the first 13

chapters. Like the earlier novelettes in Part 1, they are based on the actual experiences of a supply chain executive.

This book has been written for supply chain practitioners, managers, executive, and CEOs, but any manager, and particularly those with operations responsibilities, will find its topics useful for helping to manage their supply chains. Engineers interested in the conceptual and strategic aspects of managing a supply chain may also find this book useful. One of the book's features for this audience is the "Prerequisite Material" section conveniently located in the beginning of each of the first 13 chapters. This material could be redundant for the experienced manager and so can be skipped or used as a review for managers who may need it. Also, the usual academic theory is almost completely absent from this book. Instead, we have drawn much of our material from recent trade publications of major supply chain organizations like the *Institute of Supply Management* (ISM). In addition, the fundamental analytical techniques that are usually distracting from the text material are not a part of this book. We have placed them in an accompanying workbook for those who want to learn more about the procedural aspects. The workbook is chiefly designed for undergraduate or graduate-level students majoring in supply chain management. The accompanying workbook provides a series of methodologies mentioned in the book and others that represent fundamental content in supply chain management. It also provides the educational pedagogy for use in college programs and support learning. Faculty adopters will also be provided with standard educational pedagogy (PowerPoints and a test bank).

We want to acknowledge the help of individuals who provided needed support for the creation of this book. First and foremost, we truly appreciate the generous time and effort given by the supply chain executives who shared with us their wisdom in dealing with supply chain management planning and decision making. Alphabetically, these executives include Brent Beabout, Senior Vice President of Supply Chain at Office Depot; Eddie Capel, Manhattan Associates

Executive Vice President and Chief Operating Officer; James Chris Gaffney, Senior Vice President Product Supply System-Strategy for Coca-Cola Refreshments; Mark Holifield, Senior Vice President of Supply Chain for The Home Depot; Yadi Kamelian, Vice President of Materials and Customer Service for Lincoln Industries; Mike Orr, Senior Vice President of Operations & Logistics for Genuine Parts Company; and Ronald D. Robinson, Director of Supply Chain Management for LI-COR Biosciences. We also want to acknowledge the great editing help we received from Jill Schniederjans. The book is now much less wordy than it might have been. Others who have contributed at the Financial Times Press include our very supportive executive editor, Jeanne Glasser Levine, and our consulting editor, Barry Render. They made the book a pleasure to write and worked with us to improve the final product.

While many people have had a hand in the preparation of this book, its accuracy and completeness are the responsibility of the authors. For all errors that this book may contain, we apologize in advance.

Marc J. Schniederjans and Stephen B. LeGrand

August 1, 2012

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