



SUPPLY AND OPERATIONS
MANAGEMENT COLLECTION

Steven Nahmias, *Editor*

Orchestrating Supply Chain Opportunities

*Achieving Stretch
Goals Efficiently*

Ananth Iyer
Alex Zelikovsky



www.busessexpertpress.com

Orchestrating Supply Chain Opportunities

*Achieving Stretch
Goals Efficiently*

Ananth Iyer and Alex Zelikovsky



Orchestrating Supply Chain Opportunities: Achieving Stretch Goals Efficiently

Copyright © Business Expert Press, LLC, 2011.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means—electronic, mechanical, photocopy, recording, or any other except for brief quotations, not to exceed 400 words, without the prior permission of the publisher.

First published in 2011 by

Business Expert Press, LLC

222 East 46th Street, New York, NY 10017

www.busessexpertpress.com

ISBN-13: 978-1-60649-223-9 (paperback)

ISBN-13: 978-1-60649-224-6 (e-book)

DOI 10.4128/9781606492246

A publication in the Business Expert Press Supply and
Operations Management collection

Collection ISSN: 2156-8189 (print)

Collection ISSN: 2156-8200 (electronic)

Cover design by Jonathan Pennell

Interior design by Scribe Inc.

First edition: March 2011

10 9 8 7 6 5 4 3 2 1

Printed in Taiwan

Abstract

This book provides a *flexibility, agility, real options* (FAR) framework to orchestrate supply chain opportunities. Using best-practice cases across the industry spectrum, from nonprofits to retail, from demand surges to regulatory impacts and natural disasters, orchestrating supply chain opportunities requires deliberate management choices. This book provides a primer for success.

Keywords

supply chain management, real options, flexibility, agility, ecommerce, disasters, opportunities

Preface

Companies operate best with efficient planning and superior execution based on clear objectives. For many companies, the planning process is carefully orchestrated, objectives are set, budgets are negotiated, resources are allocated, and then it's up to the organization to execute. But what happens when the unexpected occurs? Say an event occurs that throws the status quo into turmoil. If your business declines by 40% in 1 month, what do you do? Conversely, what if your demand spikes by 50% in just a few months? Suppose a natural disaster happens or a new technology creates a significant but unplanned opportunity? We call these events "stretch opportunities." Our focus is on orchestrating these supply chain opportunities.

Current business challenges include significant shifts in product volumes and customer preferences; global industry shifts that affect manufacturers and distributors; environmental regulations; government-sponsored bailouts; new technologies that revolutionize products; mass customization; and catastrophic climate effects and wild economic swings, to name a few. What do all of these drivers of change have in common? We suggest that all of them can be viewed as "events" that offer significant "stretch opportunities." In every case we researched for this book, there was a short window of opportunity in which a company was able to attain a significant advantage. As these events are inevitable, the key question becomes, how should a company position itself to capitalize on such stretch opportunities?

This book will focus on strategic thinking and tactical examples of how best to prepare for such events. We will outline common themes across all such challenges. We will introduce three key management concepts: *flexibility*, *agility*, and *real options* (FAR). We will present several unique cases illustrating how companies have orchestrated stretch opportunities. The Amazon.com story describes a significant growth opportunity in the early days of e-commerce that occurred during the Christmas peak season. The Reflect.com/Procter & Gamble (P&G) story talks about challenges of mass customization and how innovative solutions leveraged the power of a rapidly emerging e-channel. The U.S. Coast Guard's story describes

the response to a natural disaster, demonstrating the power of flexible asset allocation, planning, training, and execution. The Kryptonite story describes the company's rapid recovery from a horrific event that caused a product demand collapse and widespread loss of consumer confidence in the Kryptonite brand. The story of Watsco Inc. shows how a distributor, driven by environmental regulation, reacted to a highly volatile period of demand during product transitions. The United Nations Joint Logistics Center (UNJLC) story shows how a global organization can improvise and adopt relief efforts in an emergency, reconfiguring available resources to meet extreme global challenges. Finally, we will discuss emerging technologies and innovative software solutions that allow companies to be more flexible and more agile, thus offering real options to take advantage of stretch opportunities.

In addition to these real examples, we will take the reader on a fictitious journey of a CEO, Max Zen, and his company, Gizmo Inc. The Max Zen story is the narrative of a company that was rocked by many different events, was able to adopt and overcome unexpected challenges, and leveraged FAR to not only succeed but grow exponentially.

Finally, we provide a chapter on how to structure supply chains to capitalize on stretch opportunities, that is, to build FAR into a supply chain. We will end with a checklist that managers can use to ensure that the right questions are asked in developing supply chains so that the ability to "surge" at profitable opportunities is nourished.

What's New?

Fact: Efficient planning and superior execution based on clear objectives is the way companies operate best. For many companies, the planning process is carefully orchestrated: Objectives are set, budgets are negotiated, resources are allocated, and then it's up to the organization to execute. But what happens when the unexpected occurs? Say an event throws the status quo into turmoil. What if business declines by 40% in 1 month or demand spikes by 50% in just a few months? Suppose a natural disaster happens or a new technology emerges that creates a significant but unplanned opportunity? We call these events "stretch opportunities." This book focuses on orchestrating supply chain opportunities that enable such stretch goals to be attained, efficiently.

Extraordinary Times

We live in extraordinary times. In fact, the 21st century will—not might—bring *unprecedented change* to the way we live. This change will be more radical than all the advances combined in human history. Case in point: Take a simple laptop. An 18-year-old now has more computing processing power at his or her fingertips than our entire nation had about 40 years ago. We are making incredible advances in science, medicine, and technology.

But, of course, change brings enormous challenges. The *speed of change is difficult to comprehend* and impossible to control. Just think: A third of the planet's population is still living on less than \$5 per day.

What does the future hold for these emerging global markets? There is only one common denominator in our lives: big changes. Here are a few specific changes that will affect supply chains: significant shifts in product volumes and customer preferences, global industry shifts that affect manufacturers and distributors, environmental regulations, government-sponsored bailouts, new technologies that revolutionize products, mass customization, catastrophic climate effects, and wild economic swings. What do all of these drivers of change have in common?

Recent News Factoids

Before you begin this journey, here are a few facts: Production volumes dropped by 60% from January 2008 to January 2009 in the U.S. auto industry. The cost to ship a container from South China to Europe dropped from \$4,000 in 2008 to close to zero in 2009. Over 50% of the toy exporters in China disappeared, and an estimated 70,000 factories were shuttered and over 20 million people left unemployed as a result in 2009. When demand shifts these days, the shift is significant: a 60% drop in global demand for a retail hardware products company; a drop in revenues to 10% of normal for a media company; an upswing of 30% for a beauty products company; a merger between a software and a (primarily) hardware company with significantly different cultures; and disappearing airlines, banks, and retailers. Imagine the impact of these changes worldwide. Clearly the world of physical goods flow and order flow can expect to be hit by such wild capacity and demand shifts repeatedly.

Supply Chain Stretch Opportunities

In every case we researched for this book, there was a short window of opportunity in which a company was able to attain a significant advantage. Because these events are inevitable, the key question becomes, how should a company position itself to capitalize on such stretch opportunities?

Netflix CEO Reed Hastings talks about staying flexible to survive and grow. He claims that the company was named Netflix because it was not clear how long DVDs would be the medium and when movies through the Internet would be a reality. He also claims that it was unclear to Netflix how competitive a threat Blockbuster (which invested more than \$500 million over 4 years) would be. But he too claims that the best one can do is build an organization that can offer the potential to seize opportunities as they arise.

There are *opportunities amid change*. A *Fortune* magazine interview with Jeff Immelt and A. J. Lafley—CEOs of General Electric and P&G, respectively—discusses how each of them plans to add \$16 billion and \$6 billion, respectively, in new revenues each year to their companies.¹ They described innovation, new markets, new products, and new approaches to deliver products as key capabilities to deliver this growth. A *Business Week* article reports that 65 of the top 100 company CEOs expect dramatic changes in their companies in the next 5 years. What kind of changes? How large? When should we expect them? How can we plan and prepare? These are challenges faced by managers across companies. Successful companies seize the opportunity.²

Witness the growth in volume at Craftmaster, a furniture company that has grabbed new customers, merged with weak competitors, and capitalized on flexible execution to thrive. Shipping companies adjusted their cruising speed to trade off fuel costs for delivery lead times and lowered their operating costs by more than \$1 billion to become competitive. Companies increased their use of information technology tools to reduce physical travel and monitoring. Even the federal government managed to eliminate over \$100 million in costs within 90 days. Companies are busy grabbing new customers, merging, streamlining, and building the muscle to compete.

The Concept of FAR

How a company can manage such volatility—strategic thinking and tactical examples of how best to prepare for such events—is the focus of this book. The management guru Jim Collins, interviewed in *Fortune*, discusses how companies survive in turbulent times. He starts by stating that the last 50 years of the last century was remarkable for its stability by any standards of history. His recommendation? “In times of great uncertainty, you have to have moorings. You need to preserve them over time.”³ We agree but would like to be more specific.

Our suggestion is that these moorings have to be embedded in a strategy that enables companies to expand or contract with the times. We will start with six business cases, each of which involved significant business shifts, and then introduce three key management concepts: *flexibility*, *agility*, and *real options (FAR)*. We will show how the management of operations in each of these companies can be interpreted as the successful use of FAR. Our approach—FAR—provides a stretch capability like a rubber band. By structuring a company to take advantage of new growth and new products and by exercising real options, a new dynamic emerges.

Our Book

Our goal in this book is to describe some *heroic successes* and outline how to nurture, prepare, and execute in such contexts. In this book, we will tell you stories of how real companies were able to adapt to large and unexpected changes and succeed. We will help today’s business leaders position their respective organizations to meet stretch goals and take advantage of unexpected opportunities. We will not only help you ask the right questions but give you the framework to get the best answers for you and your company.

We believe that in almost every instance (positive or negative) there are opportunities for significant growth that will be available, albeit over small windows of time. Although early detection of such opportunities will clearly help, it’s not always possible. The real option to act lies in your company’s operations, information systems, and organizational culture. The ability to reconfigure and adjust these three pillars

in a timely manner is the key to capitalizing on stretch opportunities. This is our main message.

Business Cases

In our book, you will find several unique stories illustrating how companies have orchestrated stretch opportunities. In each of these companies, a wide range of fleeting opportunities were generated, driven by unexpected events or unexpected market conditions. The Amazon.com story describes a significant growth opportunity in the early days of e-commerce that occurred during the Christmas peak season. The Reflect.com/P&G story talks about the challenges of mass customization and how innovative solutions leveraged the power of the rapidly emerging e-channel. The U.S. Coast Guard's story dissects their response to a natural disaster, demonstrating the power of flexible asset allocation, planning, training, and execution. The Kryptonite story describes the company's rapid recovery from a horrific event that caused a product demand collapse and widespread loss of consumer confidence in the Kryptonite brand. The regulation-driven stretch story of Watsco Inc. shows how a distributor reacted to a highly volatile period of demand during product transitions driven by environmental regulation. The United Nations Joint Logistics Center (UNJLC) story shows how a global organization improvised and adopted relief efforts in an emergency, reconfiguring available resources to meet extreme global challenges. The story of Crocs shows how the company capitalized on a fashion trend to build a company. The FreeFlow story provides alternatives to deal with inventory mismatches caused by demand shortfalls. Finally, we will discuss emerging technologies and innovative software solutions from SAP and Shipwire that allow companies to be more flexible and more agile, thus offering real options to take advantage of stretch opportunities.

A Capstone Story

Recall the story in the book *The Goal* by Eli Goldratt.⁴ The book, written in the mid-1980s, continues to be used to teach operations concepts. Borrowing from the success of that book, we have created the fictitious

journey of a CEO, Max Zen, and his company, Gizmo Inc. The Max Zen story is the narrative of a company that was rocked by many different events, was able to adopt and overcome unexpected challenges, and leveraged FAR to not only succeed but grow exponentially. The Gizmo story is meant to get readers thinking about their own strategies in today's volatile world.

Concept Summary

We will frame ways to capitalize on the changes of tomorrow using the FAR concept. *Agility* of a firm refers to its ability to scale rapidly to deal with volume shifts. This requires thinking in advance about how such demand shifts will be accommodated. *Flexibility* of a firm refers to how the company will accommodate product changes. This may require that all resources used in the operations are chosen to be flexible enough to accommodate shifts. This also implies that any current operational choice may not be optimal, but performance is evaluated over a longer period. Finally, *real options* refers to how choosing the right option requires consideration of external operational factors, the most cost-effective response to variability, and the ability to execute. In short, this is a book about strategic insights into how to position a firm to execute in these uncertain times, where the unexpected is quickly becoming the norm.

Wrap Up

From books to cosmetics, from helicopters to air conditioning equipment, from bicycle locks to humanitarian logistics, and from information systems to rapid logistics, these stories are a sample of the future. Let's set off on a journey to discover companies that have faced unprecedented changes and successfully defended their turf and even thrived. We promise you a thrilling ride and the ability to ask the right questions so that your organization can adapt to the new business environment.

Is This Book for You?

Imagine your business context and reflect on the time windows of projects you have been involved with this past year. Now consider how your

company is organized and how you pull plans and resources and resolve to execute. Are the kinds of short-window projects that you faced synchronized with the plans of your company? If not, how should the entire company be adjusted to reflect the new realities? Is there a pattern to these short-window opportunities and how some excellent organizations have responded? What set of questions could top management focus on to prepare for such business environments? *If you are intrigued by how to answer these questions, read on. This is the book for you.*

Acknowledgments

This book has had a long gestation, with ideas and cases collected over many years of discussion, discovery, and experience. Moreover, over the years our book has benefited from feedback and thoughts from many colleagues, whose contributions we would like to gratefully acknowledge. Roger Stewart, director of Graduate Career Services at the Krannert School of Management, provided early feedback from his vantage point as a retired senior manager of the treasury for Proctor & Gamble. Ryan Menke, senior vice-president for supply chain from OFS Brands, was an early supporter of our concept. Mary Pilotte, managing director of the Global Supply Chain Management Initiative at Purdue University, provided feedback regarding the early chapters. Paul Johnston, head of business development at Watsco Inc., shared many insights into the heating, ventilating, and air-conditioning industry and provided the motivation to develop a case that morphed into the chapter in our book. Professor Svenja Sommer, from the École des Hautes Études Commerciales in Paris, was a coauthor on the case dealing with the seasonal energy efficiency ratio and environmental regulation. Professor Luk Van Wassenhove, from INSEAD, was a collaborator and researcher on humanitarian logistics and whose work and insights influenced the chapter on the United Nations Joint Logistics Committee. Several U.S. Coast Guard officers influenced the chapter on the U.S. Coast Guard's organization and capabilities. Damon Schechter, the chief executive officer for Shipwire, has an innovative supply chain vision that inspired the technology chapter. We would also like to acknowledge numerous industry experts from SAP, Proctor & Gamble, Amazon.com, FreeFlow, and many other companies we researched. Finally, to the students in executive MBA programs that have seen early versions of the cases and chapters, their feedback is gratefully acknowledged.

As always, we accept all errors and thank all our friends and colleagues for their insights. This book would not have been possible without them. Finally, our families have withstood hours of phone discussions, several

rewrites, and years of promises that we would be finished—and now we finally are. We hope you, the reader, enjoy the resulting book. And if you get to orchestrate stretch opportunities with your supply chain, then we would love to hear from you.

Contents

<i>Preface</i>	ix
<i>Acknowledgments</i>	xvii
Introduction: Orchestrating Supply Chain Opportunities	1
Chapter 1 Amazon.com—Orchestrating Stretch Demand: How Amazon.com Saved Christmas	5
Chapter 2 The U.S. Coast Guard—Orchestrating Stretch Response: How the U.S. Coast Guard Saved Victims of Katrina ..	11
Chapter 3 Reflect.com—Orchestrating Stretch Innovation: How Procter & Gamble Leveraged Innovation on the Internet.	17
Chapter 4 Watsco—Orchestrating Stretch Opportunities: How Watsco Navigated a Perfect Storm.	23
Chapter 5 Kryptonite Lock Company—Orchestrating Survival: How the Blogs Unlocked the Secret of Kryptonite. . .	31
Chapter 6 The United Nations Joint Logistics Center— Orchestrating Humanitarian Logistics: How the UNJLC Coordinates Relief for Victims of Global Catastrophes	35
Chapter 7 Fashion Demand Stretch—Everybody Needs a Croc: Globally Scaling a Supply Chain	43
Chapter 8 FreeFlow—Stretching the Web: How Technology Enabled Resolution of Supply Demand Mismatches ..	49
Chapter 9 Orchestrating Reconfiguration: How SAP and Shipwire Enable the Unexpected	55

Chapter 10	Building Flexibility, Agility, and Real Options Into Your Supply Chain: How Can Your Company Orchestrate Stretch Goals?	63
Chapter 11	Gizmo—A Story of Stretch: Stretching a Fictional Story of Success	69
Chapter 12	Book Summary, Conclusions, and Takeaways: A Summary of Supply Chain Stretch	87
Chapter 13	A Stretchable Supply Chain Checklist: Questions All Managers Should Ask About Their Supply Chains	93
<i>Notes</i>		95
<i>Index</i>		101

INTRODUCTION

Orchestrating Supply Chain Opportunities

Orchestrating Supply Chain Opportunities is a concept we developed after years of collective insight into the world of strategic supply chain management. While discussing our observations in preparation for a few collaborative projects, we realized that something interesting was happening to companies worldwide—something that had yet to be quantified or collected into a single body of work. We believed that it had a powerful impact on these companies that went well beyond their strategic supply chain management; it extended into their overall competitiveness and general decision making. We began to appreciate that the many successful supply chains had one thing in common: the ability to adapt to change.

Like an orchestra, a business assembles myriad individual components and crafts order from potential chaos. Both collectives make something happen: The orchestra creates beautiful music by starting with a score and performing it for the audience, and the business fashions a product or service by designing it in the lab and selling it to the consumer. In both instances, the process leading to a finished product is more involved and complex than the finished product alone would suggest. Both, in a manner of speaking, manufacture, market, and distribute the product after organizing all the individual strands, and both choreograph, on a daily basis, the inner processes and workings of the organization so goals can be attained. Orchestration for any given business organization is the rearrangement, reconfiguring, and splicing together of various components of that organization into a cohesive design and execution for the benefit of customers, suppliers, partners, employees, and so on.

Orchestrating Supply Chain Opportunities ideally should result in taking a company's performance to a new level. Suppose a company is faced with an unforeseen chain of events that presents a significant opportunity