



COUNCIL OF SUPPLY CHAIN MANAGEMENT PROFESSIONALS

# THE DEFINITIVE GUIDE TO INVENTORY MANAGEMENT

Principles and Strategies for the  
Efficient Flow of Inventory across  
the Supply Chain

Council of Supply Chain Management Professionals and

**Matthew A. Waller**  
**Terry L. Esper**

# **THE DEFINITIVE GUIDE TO INVENTORY MANAGEMENT**

# **Definitive Guide to Inventory Management, The: Principles and Strategies for the Efficient Flow of Inventory across the Supply Chain**

## **Table of Contents**

### **Contents**

#### **Chapter 1 Introduction to Inventory**

What Is Inventory?

The Role of Inventory in Supply Chain Management

Why Inventory Is Such an Important Metric for Supply Chain Management

Overview of the Book

Endnotes

#### **Chapter 2 Inventory Management Fundamentals**

Types of Inventory

Inventory Costs

Endnotes

#### **Chapter 3 Inventory Control**

Uncertainty in Inventory Processes

Inventory Replenishment Processes.

Demand During Lead Time

Expected Units Out Per Replenishment Cycle

Total Annual Cost as a Function of Order Quantity

Quantity Discounts

# **Table of Contents**

Endnotes

## **Chapter 4 The Link Between Inventory Management and Forecasting**

Uncertainty in Demand and Forecasting

Time Series Methods

Causal Models

Endnotes

## **Chapter 5 Discrete Event Simulation of Inventory Processes**

Understand the Inventory Replenishment Process

Randomness in Demand

Inventory Simulation in Excel

Endnotes

## **Chapter 6 Additional Inventory Management Processes and Concepts**

Multi-Item Inventory Management

Multi-Echelon Inventory Management

The Newsvendor Model

Censored Distributions

ABC Inventory Classification

Material Requirements Planning

Distribution Requirements Planning

Aggregate Inventory Control: Inventory Throughput Functions

Storage of Inventory

Inventory Record Management

Implementation Challenges and Challenging the Incumbent

# **Table of Contents**

Process

Endnotes

## **Chapter 7 Managing Supply Chain Inventory Flows**

Component Risk Pooling

Bullwhip

Inventory Postponement

Merge-in-Transit

Vendor Managed Inventory

Consignment

Reverse Consignment

Collaborative Planning, Forecasting, and Replenishment

Push Versus Pull

Channel Separation

Inventory Placement Optimization

The Global Supply Chain Impact

Retail and Consumer Products Inventory Management

Endnotes

## **Chapter 8 Inventory Performance Measurement**

Trade-Off Analysis

Types of Measures

4-V Model

Measurement Systems and Frameworks

Management by Exception

Measurement Dashboards

Endnotes

Index

# **Table of Contents**