

CONTENTS

<i>About This Book</i>	<i>xi</i>
1. Inventory as Both a Tangible and an Intangible Object	1
Introduction	1
Inventory—Who Needs It?	1
Inventory Costs	2
The Purpose of Inventory	3
Types of Stock	4
Tracking the Paper Life	9
Electronic Data Interchange	14
Recap	15
Review Questions	16
2. Inventory as Money	19
Introduction	19
Accounting for Inventories	19
How Inventory Is Valued	20
Inventory on the Balance Sheet	22
Inventory on the Income Statement	23
Ratio Analyses and What They Mean	27
Obsolete Stock	31
Why You Have Been Told Not to Dispose of It	32

Problems with Convincing Decision Makers	
That “It’s Gotta Go”	32
Arguments in Favor of Disposing of	
Dead Stock	34
Methods of Disposal	38
Carrying Cost And Purchasing	40
Recap	41
Review Questions	41
3. Physical Location and Control of Inventory	43
Introduction	43
Common Locator Systems	44
Memory Systems	47
Basic Concept—Memory Systems	47
Impact on Physical Space—Memory Systems	48
Pros—Memory Systems	48
Cons—Memory Systems	49
Fixed Location Systems	49
Basic Concept—Fixed Location Systems	49
Impact on Physical Space—Fixed	
Location Systems	49
Pros—Fixed Location Systems	53
Cons—Fixed Location Systems	55
Zoning Systems	57
Basic Concept—Zoning Systems	57
Impact on Physical Space—Zoning Systems	58
Pros—Zoning Systems	59
Cons—Zoning Systems	59
Random Location Systems	60
Basic Concept—Random Location Systems	60
Impact on Physical Space—Random	
Location Systems	60
Pros—Random Location Systems	62
Cons—Random Location Systems	62
Combination Systems	62
Basic Concept—Combination Systems	62
Common Item Placement Theories	65
Inventory Stratification	65

A-B-C Categorization	66
What the Matrix Shows	67
Creating the Matrix	69
Utilizing an SKU's Unloading/ Loading Ratio	72
Family Grouping	73
Pros—Family Grouping	74
Cons—Family Grouping	74
Using Inventory Stratification and Family Grouping Together	75
Special Considerations	75
Location Addresses and SKU Identifiers	76
Significance	76
Keys to Effectively Tying Together SKUs and Location Addresses	78
Clearly Mark Items with a SKU Identifier; Clearly Mark Items with a Unit of Measure	78
Clearly Mark Location Addresses On Bins/Slots/Shelves/Racks/ Floor Locations/Drawers	80
Tie SKU Numbers and Location Addresses Together	81
Update Product Moves	84
Recap	86
Review Questions	87
4. The Basics of Bar Coding	89
Introduction	89
Elements of a Bar Code Symbol	93
Structure of a Generic Bar Code Symbol	94
Quiet Zone	94
Start and Stop Characters	94
Data Characters	94
“X” Dimension	95
Symbolologies—Bar Coding Structural Rules	95
Discrete and Continuous Symbolologies	96
Symbology Summary	96

Popular Symbolologies Found in the Inventory World	97
Universal Product Code/European Numbering System	98
Code 39	98
Code 128	100
What Symbology Is Right for Your Organization?	101
Scanning Basics	101
Printing Basics	103
Bar Code Applications	105
Examples of Using Bar Codes	108
Recap	112
Review Questions	112
5. Planning and Replenishment Concepts	115
Introduction	115
Replenishment Costs	115
Inventory Types	121
Independent Demand Inventory	122
Order-Point Formulae	122
A Simple Min-Max Inventory System	123
Economic Order Quantity Formula	127
How To Set Up An EOQ Worksheet In Microsoft® Excel®	129
Dependent Demand Inventory	130
Materials Requirements Planning	130
MRP Elements	131
Just-In-Time (JIT) Inventory Systems	137
Implementing JIT	140
Inventory Objectives	142
Recap	143
Review Questions	143
6. Why Inventory Systems Fail and How To Fix Them	147
Introduction	147
Inventory System Failures—Example Case	149

Discussion of Example Case	154
Metrics	165
Inventory Record Accuracy	166
Test Counting	166
Tolerances	166
Impact of Tolerances on Adjustments	170
Fill Rates	170
Tools with Which to Uncover	
System Dysfunctions	172
Run Charts	173
Flow Charts	173
Logic Charts	175
Variance Reports	175
Cycle Counting	176
Annual Inventories	176
Cycle Counting	177
Cycle Count Methodologies	177
Control Group Cycle Counting Method	179
Control Group Procedure	180
Location Audit Cycle Counting Method	181
Random Selection Cycle Counting Method	184
Diminishing Population Cycle	
Counting Method	184
Product Categories Cycle Counting Method	185
Single Criteria	186
Using the Diminishing Population Technique	
with Product Categories	187
A-B-C Analysis Cycle Counting Method	188
Step-by-Step Implementation of the	
A-B-C Cycle Counting Method	188
Determining the A-B-C Count Frequency	189
Determine How Many Items from Each Category	
Will Be Counted Each Day	191
When to Count	192
Who Should Count	193
Recap	193
Review Questions	194

7. Protecting Inventory	197
Introduction	197
Legal Duties	199
The Plan	199
Preparation	200
Natural Emergencies	200
Technological Emergencies	200
Incited Emergencies	201
Planning Team	201
The Assessment	202
Theft	205
Types Of Theft Threats	205
Assessing The Threat	206
Countering The Threats	207
Crime Prevention Through Environmental	
Design (CPTED)	207
Collusion Theft	210
Background Checks	212
Recap	216
Review Questions	217
 <i>Appendix A—Inventory</i>	 <i>219</i>
<i>Appendix B—Formulae</i>	<i>227</i>
<i>Bibliography</i>	<i>235</i>
<i>Index</i>	<i>237</i>