

CONTENTS

Introduction 1

01 Introduction to inventory management 7

Introduction 7

Inventory and inventory management 9

The three pillars of inventory management 12

Inventory planning pyramid 18

Management of inventory in business systems 22

The cost of inventory and the ability to react to change 27

Inventory management in the supply chain 30

Inventory management in the extended supply chain and the 'Beer Game' 31

Five milestones 33

Summary 34

References 35

02 Business systems and business 36

Introduction 36

The business 36

Business system development 42

The building blocks of MRPI, MRPII and ERP 47

ERP implementation and management 70

Summary 77

References 78

You do the maths 80

03 Inventory balancing and control 92

Introduction 92

Process, organization and technology (POT) 94

Lean and Just in Time (JIT) 96

Inventory balancing 104

Inventory control 110

Extending beyond your company 129

- Summary 140
- Tools and techniques discussed in this chapter 141
- References 142
- You do the maths 143

- 04 The complexity of inventory management within business systems 153**
 - Introduction 153
 - Inventory planning at its simplest 154
 - Complexity in managing inventory in MRPI *and* MRPII 165
 - Measuring success 175
 - Summary 179
 - Tools and techniques discussed in this chapter 180
 - References 180
 - You do the maths 181

- 05 Stack and flow inventories 193**
 - Introduction 193
 - Optimization of stack and flow inventories 195
 - Inventory flow 203
 - Financial planning: strategic, tactical and operational 218
 - Summary 229
 - Tools and techniques discussed in this chapter 230
 - References 230
 - You do the maths 230

- 06 Traditional thinking in inventory optimization 236**
 - Introduction 236
 - Inventory saw-tooth 237
 - Determining the order size 238
 - Protecting against supply and demand issues 247
 - Normal distribution and Poisson distribution 248
 - Normal distributions roles in safety stock 249
 - Parts classification 261
 - Using Pareto to plan inventory using cycle and safety stock 265
 - Developing a plan that will succeed 274
 - Summary 279
 - Tools and techniques discussed in this chapter 280

References 281
You do the maths 281

07 k-curve methodology 285

Introduction 285
History of *k*-curve 287
Generating a *k*-curve 290
Why is it so useful? 301
Creating a composite curve 306
Testing the different options for inventory classes 314
Summary 319
Tools and techniques discussed in this chapter 320
References 321
You do the maths 321

08 The practical application of *k*-curve 326

Introduction 326
Understand your current inventory position:
 how much have I got? 329
Determine the business targets that relate to inventory:
 what do I have to achieve? 345
Creating inventory plan: how difficult will this be and what must
 I do? 351
Implement the plan: what actions must I do to achieve the
 plan? 368
Summary 379
Tools and techniques discussed in this chapter 380
References 380

09 Case study examples of *k*-curve planning approach 381

Introduction 381
Exchange curve/*k*-curve case studies 382
Summary of case studies and lessons learnt 390
Software applications 392
Amis-delta 393
Parameter alignment tools and techniques 394
Summary 397
Tools and techniques discussed in this chapter 397
References 398

10	Review, summary and what to do next	399
	Introduction	399
	The three pillars of inventory management	400
	Four steps to inventory heaven	406
	Five milestones	408
	The business systems MRP and ERP	415
	Impact of new technology on the future of inventory management	417
	Toolbox review	418
	Summary	420
	References	421
	<i>Appendix A</i>	422
	<i>Appendix B</i>	428
	<i>Appendix C</i>	432
	<i>Useful websites</i>	436
	<i>Index</i>	437