Contents

| Pro Ac Ho Pla | Foreword Xiii Preface Xiv Acknowledgements Xvi How to use this book Xix Plan of the book XXi | | |
|------------------------|--|---|----------|
| | art (| One INTRODUCTION | |
| 1 | Log | jistics and the supply chain | 3 |
| | _ | oduction | 3 |
| | 1.1 | Logistics and the supply chain | 4 |
| | | 1.1.1 Definitions and concepts | 6 |
| | | 1.1.2 Supply chain: structure and tiering | 8 |
| | 1.2 | Material and information flow | 12 |
| | | 1.2.1 Material flow | 12 |
| | | 1.2.2 Information flow | 14 |
| | 1.3 | Competing through logistics | 15 |
| | | 1.3.1 Competitive advantage | 16 |
| | | 1.3.2 Order winners and order qualifiers | 21 |
| | 1.4 | 9 | 23 |
| | | 1.4.1 Defining 'strategy' | 23 |
| | | 1.4.2 Aligning strategies | 25 |
| | | 1.4.3 Differentiating strategies | 27 |
| | | nmary | 28 |
| | | cussion questions | 29 29 |
| | | erences | 30 |
| | Sug | ggested further reading | 30 |
| 2 | Put | tting the end-customer first | 31 |
| | | roduction | 31 |
| | 2.1 | | 32 |
| | | 2.1.1 Rising customer expectations | 33 |
| | | 2.1.2 The information revolution | 33 |
| | 2.2 | Segmentation | 34 |
| | 2.3 | | 42 |
| | | • | |

| | | 2.3.1 Customer loyalty | 43 |
|---|------|--|----|
| | | 2.3.2 Value disciplines | 44 |
| | | 2.3.3 Customer relationship management (CRM) | 45 |
| | 2.4 | | 48 |
| | | 2.4.1 Stage 1: Identify order winners and qualifiers by segments | 48 |
| | | 2.4.2 Stage 2: Prioritise order winners for each segment | 49 |
| | | 2.4.3 Stage 3: Identify gaps, reinforce strengths and plug | |
| | | weaknesses | 50 |
| | | 2.4.4 Using marketing segments to set logistics priorities | 50 |
| | Sum | mary | 51 |
| | | ussion questions | 52 |
| | | rences | 56 |
| | | pested further reading | 57 |
| 2 | Valı | ue and logistics costs | 59 |
| , | | • | 59 |
| | | duction Where does value come from? | 60 |
| | 3.1 | 3.1.1 Return on investment (ROI) | 60 |
| | | 3.1.2 Financial ratios and ROI drivers | 63 |
| | 2.2 | How can logistics costs be represented? | 65 |
| | 3.2 | 3.2.1 Fixed/variable | 65 |
| | | 3.2.2 Direct/indirect | 69 |
| | | 3.2.3 Engineered/discretionary | 72 |
| | 2 2 | Activity-based costing (ABC) | 74 |
| | 3.3 | 3.3.1 ABC example | 76 |
| | | 3.3.2 Cost time profile (CTP) | 77 |
| | 3.4 | A balanced measurement portfolio | 78 |
| | 3.4 | 3.4.1 Balanced measures | 79 |
| | | 3.4.2 Supply chain management and the balanced scorecard | 80 |
| | 3.5 | (0.00) | 81 |
| | | nmary | 84 |
| | | cussion questions | 85 |
| | | erences | 86 |
| | | gested further reading | 86 |
| | | | |
| | Part | Two LEVERAGING LOGISTICS OPERATIONS | |
| 4 | . Ma | naging logistics internationally | 89 |
| • | | oduction | 89 |
| | 4.1 | Drivers and logistics implications of internationalisation | 92 |
| | 4.1 | 4.1.1 Logistical implications of internationalisation | 93 |
| | | 4.1.2 Time to market | 95 |
| | | 4.1.3 Global consolidation | 95 |
| | | 4.1.4 Risk in international logistics | 98 |
| | | | |

| 4.2 | | endency towards internationalisation | 99 |
|---|---|---|--|
| | 1.2.1 | | 99 |
| | 4.2.2 | 9 | 100 |
| 4.3 | The cl | | 106 |
| | 4.3.1 | | 106 |
| | 4.3.2 | | 106 |
| | 4.3.3 | | 106 |
| | 4.3.4 | | 107 |
| | 4.3.5 | | 108 |
| 4.4 | Organ | | 110 |
| | | | 111 |
| | | | 111 |
| | 4.4.3 | | 112 |
| 4.5 | Manag | | 119 |
| | 4.5.1 | Immediate risk readiness | 119 |
| | 4.5.2 | Structural risk readiness | 121 |
| Sum | mary | | 121 |
| Disc | ussion o | uestions | 122 |
| Refe | rences | | 122 |
| Sug | gested f | urther reading | 123 |
| | | | 125 |
| | | | |
| Intro | duction | | 125 |
| Intro | | i le of time in competitive advantage | 125 126 |
| | The ro 5.1.1 | le of time in competitive advantage Time-based competition: definitions and concepts | |
| | The ro 5.1.1 5.1.2 | le of time in competitive advantage Time-based competition: definitions and concepts Time-based initiatives | 126 |
| | The ro 5.1.1 5.1.2 5.1.3 | le of time in competitive advantage Time-based competition: definitions and concepts Time-based initiatives Time-based opportunities to add value | 126 126 |
| | The ro 5.1.1 5.1.2 5.1.3 | le of time in competitive advantage Time-based competition: definitions and concepts Time-based initiatives Time-based opportunities to add value | 126 126 127 |
| 5.1 | The ro 5.1.1 5.1.2 5.1.3 5.1.4 5.1.5 | le of time in competitive advantage Time-based competition: definitions and concepts Time-based initiatives Time-based opportunities to add value Time-based opportunities to reduce cost Limitations to time-based approaches | 126 126 127 127 |
| 5.1 | The ro 5.1.1 5.1.2 5.1.3 5.1.4 5.1.5 P:D rate | le of time in competitive advantage Time-based competition: definitions and concepts Time-based initiatives Time-based opportunities to add value Time-based opportunities to reduce cost | 126 126 127 127 130 |
| 5.1 | The ro 5.1.1 5.1.2 5.1.3 5.1.4 5.1.5 P:D rate 5.2.1 | le of time in competitive advantage Time-based competition: definitions and concepts Time-based initiatives Time-based opportunities to add value Time-based opportunities to reduce cost Limitations to time-based approaches tios and differences Using time as a performance measure | 126 126 127 127 130 132 |
| 5.1 | The ro 5.1.1 5.1.2 5.1.3 5.1.4 5.1.5 P:D rat 5.2.1 5.2.2 | Time-based competitive advantage Time-based initiatives Time-based opportunities to add value Time-based opportunities to reduce cost Limitations to time-based approaches tios and differences Using time as a performance measure Using time to measure supply pipeline performance | 126 126 127 127 130 132 132 |
| 5.1 | The ro 5.1.1 5.1.2 5.1.3 5.1.4 5.1.5 P:D rat 5.2.1 5.2.2 5.2.3 | Time-based competitives Time-based initiatives Time-based opportunities to add value Time-based opportunities to reduce cost Limitations to time-based approaches tios and differences Using time as a performance measure Using time to measure supply pipeline performance Consequences when P-time is greater than D-time | 126 126 127 127 130 132 132 |
| 5.1 | The ro 5.1.1 5.1.2 5.1.3 5.1.4 5.1.5 P:D rat 5.2.1 5.2.2 5.2.3 Time-b | Time-based competitives Time-based initiatives Time-based opportunities to add value Time-based opportunities to reduce cost Limitations to time-based approaches tios and differences Using time as a performance measure Using time to measure supply pipeline performance Consequences when P-time is greater than D-time based process mapping | 126 126 127 127 130 132 132 133 134 |
| 5.1 | The ro 5.1.1 5.1.2 5.1.3 5.1.4 5.1.5 P:D rat 5.2.1 5.2.2 5.2.3 Time-b 5.3.1 | Time-based competitives Time-based initiatives Time-based opportunities to add value Time-based opportunities to reduce cost Limitations to time-based approaches tios and differences Using time as a performance measure Using time to measure supply pipeline performance Consequences when P-time is greater than D-time based process mapping Stage 1: Create a task force | 126 126 127 127 130 132 132 133 134 136 |
| 5.1 | The ro 5.1.1 5.1.2 5.1.3 5.1.4 5.1.5 P:D rat 5.2.1 5.2.2 5.2.3 Time-b 5.3.1 5.3.2 | Time-based competitive advantage Time-based initiatives Time-based opportunities to add value Time-based opportunities to reduce cost Limitations to time-based approaches tios and differences Using time as a performance measure Using time to measure supply pipeline performance Consequences when P-time is greater than D-time based process mapping Stage 1: Create a task force Stage 2: Select the process to map | 126 127 127 130 132 132 133 134 136 139 |
| 5.1 | The ro 5.1.1 5.1.2 5.1.3 5.1.4 5.1.5 P:D rat 5.2.1 5.2.2 5.2.3 Time-t 5.3.1 5.3.2 5.3.3 | Time-based competitive advantage Time-based initiatives Time-based opportunities to add value Time-based opportunities to reduce cost Limitations to time-based approaches tios and differences Using time as a performance measure Using time to measure supply pipeline performance Consequences when P-time is greater than D-time based process mapping Stage 1: Create a task force Stage 2: Select the process to map Stage 3: Collect data | 126 127 127 130 132 132 133 134 136 139 140 |
| 5.1 | The ro 5.1.1 5.1.2 5.1.3 5.1.4 5.1.5 P:D rat 5.2.1 5.2.2 5.2.3 Time-t 5.3.1 5.3.2 5.3.3 5.3.4 | Time-based competitive advantage Time-based initiatives Time-based opportunities to add value Time-based opportunities to reduce cost Limitations to time-based approaches tios and differences Using time as a performance measure Using time to measure supply pipeline performance Consequences when P-time is greater than D-time based process mapping Stage 1: Create a task force Stage 2: Select the process to map Stage 3: Collect data Stage 4: Flow chart the process | 126 127 127 130 132 132 133 134 136 139 140 140 |
| 5.1 | The ro 5.1.1 5.1.2 5.1.3 5.1.4 5.1.5 P:D rat 5.2.1 5.2.2 5.2.3 Time-t 5.3.1 5.3.2 5.3.3 | Time-based competitive advantage Time-based initiatives Time-based opportunities to add value Time-based opportunities to reduce cost Limitations to time-based approaches tios and differences Using time as a performance measure Using time to measure supply pipeline performance Consequences when P-time is greater than D-time based process mapping Stage 1: Create a task force Stage 2: Select the process to map Stage 3: Collect data Stage 4: Flow chart the process Stage 5: Distinguish between value-adding and | 126 126 127 127 130 132 133 134 136 139 140 140 141 |
| 5.1 | The ro 5.1.1 5.1.2 5.1.3 5.1.4 5.1.5 P:D rat 5.2.1 5.2.2 5.2.3 Time-t 5.3.1 5.3.2 5.3.3 5.3.4 5.3.5 | Time-based competitive advantage Time-based initiatives Time-based opportunities to add value Time-based opportunities to reduce cost Limitations to time-based approaches tios and differences Using time as a performance measure Using time to measure supply pipeline performance Consequences when P-time is greater than D-time based process mapping Stage 1: Create a task force Stage 2: Select the process to map Stage 3: Collect data Stage 4: Flow chart the process Stage 5: Distinguish between value-adding and non-value-adding time | 126 126 127 127 130 132 133 134 136 139 140 140 141 |
| 5.1 | The ro 5.1.1 5.1.2 5.1.3 5.1.4 5.1.5 P:D rat 5.2.1 5.2.2 5.2.3 Time-t 5.3.1 5.3.2 5.3.3 5.3.4 5.3.5 5.3.6 | Time-based competitive advantage Time-based initiatives Time-based opportunities to add value Time-based opportunities to reduce cost Limitations to time-based approaches tios and differences Using time as a performance measure Using time to measure supply pipeline performance Consequences when P-time is greater than D-time based process mapping Stage 1: Create a task force Stage 2: Select the process to map Stage 3: Collect data Stage 4: Flow chart the process Stage 5: Distinguish between value-adding and non-value-adding time Stage 6: Construct the time-based process map | 126 127 127 130 132 133 134 136 139 140 140 141 |
| 5.15.25.3 | The ro 5.1.1 5.1.2 5.1.3 5.1.4 5.1.5 P:D rat 5.2.1 5.2.2 5.2.3 Time-t 5.3.1 5.3.2 5.3.3 5.3.4 5.3.5 5.3.6 5.3.7 | Time-based competitive advantage Time-based competition: definitions and concepts Time-based initiatives Time-based opportunities to add value Time-based opportunities to reduce cost Limitations to time-based approaches tios and differences Using time as a performance measure Using time to measure supply pipeline performance Consequences when P-time is greater than D-time based process mapping Stage 1: Create a task force Stage 2: Select the process to map Stage 3: Collect data Stage 4: Flow chart the process Stage 5: Distinguish between value-adding and non-value-adding time Stage 6: Construct the time-based process map Stage 7: Solution generation | 126 127 127 130 132 133 134 136 139 140 141 141 141 |
| 5.1 | The ro 5.1.1 5.1.2 5.1.3 5.1.4 5.1.5 P:D rat 5.2.1 5.2.2 5.2.3 Time-t 5.3.1 5.3.2 5.3.3 5.3.4 5.3.5 5.3.6 5.3.7 | Time-based competitive advantage Time-based initiatives Time-based opportunities to add value Time-based opportunities to reduce cost Limitations to time-based approaches tios and differences Using time as a performance measure Using time to measure supply pipeline performance Consequences when P-time is greater than D-time based process mapping Stage 1: Create a task force Stage 2: Select the process to map Stage 3: Collect data Stage 4: Flow chart the process Stage 5: Distinguish between value-adding and non-value-adding time Stage 6: Construct the time-based process map | 126 127 127 130 132 132 133 134 136 139 140 140 141 141 |
| | 4.4 4.5 Sum Disc: Refe Sugg | 4.2.2 4.3 The cl 4.3.1 4.3.2 4.3.3 4.3.4 4.3.5 4.4 Organ 4.4.1 4.4.2 4.4.3 4.5 Manage 4.5.1 4.5.2 Summary Discussion of References Suggested for Managing | 4.2.1 Focused factories: from geographical to product segmentation 4.2.2 Centralised inventories 4.3 The challenge of international logistics and location 4.3.1 Extended lead time of supply 4.3.2 Extended and unreliable transit times 4.3.3 Multiple consolidation and break points 4.3.4 Multiple freight modes and cost options 4.3.5 Location analysis 4.4 Organising for international logistics 4.4.1 Layering and tiering 4.4.2 The evolving role of individual plants 4.4.3 Reconfiguration processes 4.5 Managing for risk readiness 4.5.1 Immediate risk readiness 4.5.2 Structural risk readiness Summary Discussion questions References Suggested further reading Managing the lead-time frontier |

| | | 5.4.2 | Practices to cope when P-time is greater than D-time | 148 |
|---|------|-----------|--|-----|
| | 5.5 | | nod for implementing time-based practices | 149 |
| | | 5.5.1 | Step 1: Understand your need to change | 150 |
| | | 5.5.2 | Step 2: Understand your processes | 151 |
| | | 5.5.3 | Step 3: Identify unnecessary process steps and large | |
| | | | amounts of wasted time | 151 |
| | | 5.5.4 | Step 4: Understand the causes of waste | 151 |
| | | 5.5.5 | Step 5: Change the process | 152 |
| | | 5.5.6 | Step 6: Review changes | 152 |
| | | 5.5.7 | Results | 152 |
| | 5.6 | When, | where and how? | 152 |
| | | mary | | 152 |
| | Disc | ussion q | uestions | 154 |
| | Refe | rences | | 154 |
| | Sugg | gested fo | urther reading | 154 |
| 6 | lust | -in-tim | ne and lean thinking | 155 |
| | • | duction | _ | 155 |
| | 6.1 | Just-in- | | 156 |
| | 0.1 | - | The just-in-time system | 157 |
| | | | The supply chain 'game plan' | 162 |
| | | 6.1.3 | Demand characteristics and planning approaches | 165 |
| | | 6.1.4 | IIT and material requirements planning (MRP) | 168 |
| | 6.2 | | hinking | 171 |
| | | | The seven wastes | 173 |
| | | 6.2.2 | Application of lean thinking to business processes | 174 |
| | | | Role of lean practices | 175 |
| | | 6.2.4 | | 176 |
| | | 6.2.5 | Lean product design | 176 |
| | | 6.2.6 | Lean facility design | 176 |
| | | 6.2.7 | Lean thinking summary | 176 |
| | 6.3 | Vendo | r-managed inventory (VMI) | 177 |
| | | 6.3.1 | How VMI works | 177 |
| | | 6.3.2 | Potential benefits | 178 |
| | | 6.3.3 | Potential problems in setting up a VMI system | 178 |
| | 6.4 | Quick | response | 180 |
| | | 6.4.1 | JIT/QR relationship | 180 |
| | | 6.4.2 | Role of enabling technologies | 181 |
| | Sum | ımary | | 182 |
| | | | questions | 183 |
| | Refe | rences | | 183 |
| | | | | |

| 7 T | he agile | e supply chain | 185 |
|----------------------|------------|--|------------|
| In | ntroductio | n | 185 |
| 7. | .1 The c | oncept of agility | 186 |
| | 7.1.1 | Demand characteristics and supply capabilities | 188 |
| | 7.1.2 | Classifying operating environments | 195 |
| | 7.1.3 | | 196 |
| 7. | 2 Agile | practices | 200 |
| | 7.2.1 | Benefiting from variance | 200 |
| | 7.2.2 | Benefiting from short time windows | 204 |
| | 7.2.3 | Benefiting from small volumes | 208 |
| | 7.2.4 | Conclusion | 210 |
| Su | ımmary | | 210 |
| Discussion questions | | | |
| Re | eferences | | 211 212 |
| Su | iggested f | further reading | 213 |
| | | | |
| D | e me | | |
| Fai | C I firee | WORKING TOGETHER | |
| 8 In | tegrati | ng the supply chain | 217 |
| | troduction | | 217 |
| 8. | 1 Integr | ation in the supply chain | 218 |
| | 8.1.1 | Internal integration: function to function | 219 |
| | 8.1.2 | Inter-company integration: a manual approach | 220 |
| | 8.1.3 | Electronic collaboration | 221 |
| 8.2 | 2 Efficie | nt consumer response (ECR) | 224 |
| | 8.2.1 | Category management | 225 |
| | 8.2.2 | Continuous replenishment | 226 |
| | 8.2.3 | Enabling technologies | 227 |
| 8.3 | 3 Collab | orative planning, forecasting and replenishment (CPFR) | 229 |
| | 8.3.1 | Benefits of electronic collaboration | 233 |
| 8.4 | 1 Manag | ging supply chain relationships | 233 |
| | 8.4.1 | Creating closer relationships | 233 |
| | 8.4.2 | Factors in forming supply chain relationships | 234 |
| 8.5 | A fram | ework for managing the supply chain | 236 |
| | 8.5.1 | Develop a supply chain strategy | 236 |
| | 8.5.2 | Gather supply chain information | 237 |
| | 8.5.3 | Develop effective partnerships and alliances | 238 |
| | 8.5.4 | Pilot new supply chain solutions | 239 |
| | 8.5.5 | Organise for supply chain performance | 239 |
| | 8.5.6 | Develop measurement systems for supply chain | 232 |
| | | performance | 240 |
| | mmary | | 241 |
| Dis | cussion q | uestions | 242 |

| | Refe | rences | 242 |
|----|-------|--|------------|
| | Sugg | gested further reading | 243 |
| 9 | Par | tnerships in the supply chain | 245 |
| | Intro | oduction | 245 |
| | 9.1 | Choosing the right relationships | 246 |
| | 9.2 | Partnerships in the supply chain | 253 |
| | | 9.2.1 Economic justification for partnerships | 254 |
| | | 9.2.2 Advantages of partnerships | 254 |
| | | 9.2.3 Disadvantages of partnerships | 255 |
| | 9.3 | Supply base rationalisation | 255 |
| | | 9.3.1 Supplier management | 255 |
| | | 9.3.2 Lead suppliers | 256 |
| | 9.4 | Supplier networks | 256 |
| | | 9.4.1 Supplier associations | 257 |
| | | 9.4.2 Japanese <i>keiretsu</i> | 260 |
| | | 9.4.3 Italian districts | 261 |
| | 9.5 | | 264 |
| | | 9.5.1 Integrated processes | 265 |
| | | 9.5.2 Synchronous production | 265 |
| | 9.6 | | 266 |
| | | mary | 268 269 |
| | | ussion questions | 269 |
| | | rences | 270 |
| | sugg | gested further reading | 270 |
| | art' | FOUR CHANGING THE FUTURE | |
| A. | | | 272 |
| 11 | | gistics future challenge | 273 |
| | | roduction | 273 |
| | 10. | 11.2 | 275 |
| | | 10.1.1 From product to customer-based economics | 276 |
| | | 10.1.2 From supply to customer measurement | 277 |
| | | 10.1.3 From central to distributed governance | 279 |
| | | 10.1.4 From efficient to responsive supply chain design | |
| | | and operation | 280 |
| | 10. | • | 282 |
| | | 10.2.1 Organisational alignment | 282 |
| | | 10.2.2 Enabling technologies | 283 |
| | 10. | · | 293 |
| | | 10.3.1 Viability of current performance level | 294 |
| | | 10.3.2 Perceived payoff benefits from targeted performance | |
| | | 10.3.3 Belief and enthusiasm | 295 |
| | | 10.3.4 Ability to manage change | 295 |

| 10.3.5 Ability to operate in the new environment | 296 |
|--|-----|
| Summary | 299 |
| Discussion questions | 300 |
| References | 301 |
| Suggested further reading | 301 |
| Index | |