

CONTENTS

About the editors xi

About the contributors xiii

Foreword xxiii

PART ONE Setting the scene 1

01 Introduction to urban logistics 3

Michael Browne, Sönke Behrends and Johan Woxenius

Introduction 3

Significantly growing interest in urban logistics and freight
transport systems 5

The complexity and heterogeneity of urban logistics activities 8

Can contextual urban freight research results be transferred to
other cities? 11

The implications of technology innovation 12

Outline for the book 13

References 16

02 Metropolitan economies and the generation of freight and service activity: an international perspective 19

*José Holguín-Veras, Diana G Ramírez-Ríos, Trilce Encarnación,
Jesús González-Feliu, Elise Caspersen, Carlos Rivera-González,
Carlos A González-Calderón and Renato da Silva Lima*

Introduction 19

Metropolitan areas selected for the analyses 21

Data and models 26

Metropolitan economies 30

Freight and service intensive sectors 33

Freight and service activity 39

Conclusions 47

References 48

03 Urban logistics: the regional dimension 52

Genevieve Giuliano

Introduction 52

How trade affects cities 53

Managing trade related freight and its impacts 63

Conclusions 76

References 77

04 Urban planning policies for logistics facilities: a comparison between US metropolitan areas and the Paris region 82

Nicolas Raimbault, Adeline Heitz and Laetitia Dabanc

Introduction 82

Planning logistics buildings and freight activities in US metropolitan areas 83

Planning logistics facilities and freight activities in the Paris region 87

Public development of logistics sites: freight villages and urban logistics experimentations 90

Context-based governance of logistics land uses and warehousing development 97

Conclusions 103

References 105

Notes 107

05 The dualism of urban freight distribution: city vs suburban logistics 109

Sönke Behrends and Jean-Paul Rodrigue

Introduction 109

Placing city and suburban logistics in their context 110

Factors of divergence between city logistics and suburban logistics 118

Conclusions 120

Acknowledgements 121

References 121

06 Port cities and urban logistics 124

Michael Browne and Johan Woxenius

Introduction 124

Port–city development stages and the port–city interface 125

Traffic and land use issues arising from the port–city interface	127
Developments influencing the port–city interface	129
The case of Gothenburg	132
Conclusions	134
References	135

PART TWO Urban logistics diversity 139

07	The logistics of parcel delivery: current operations and challenges facing the UK market	141
	<i>Julian Allen, Tom Cherrett, Maja Piecyk and Marzena Piotrowska</i>	
	Introduction	141
	The size of the UK parcel market	143
	Sectors in the UK parcel market	143
	Players in the UK parcel delivery market	145
	Challenges facing the UK parcel market	147
	Parcel carrier operations	151
	Initiatives to reduce the transport and environmental impacts of parcel delivery operations in urban areas	160
	Conclusions	161
	Acknowledgements	163
	References	163
08	E-commerce trends and implications for urban logistics	167
	<i>Laetitia Dablanç</i>	
	Introduction	167
	Data on e-commerce urban freight flows	168
	Growing urban regions, consumers and e-commerce	172
	Inefficiencies, profitability and logistics solutions for the ‘last mile’	175
	Innovations, e-commerce and urban freight	179
	On-demand ‘instant deliveries’ and food apps	182
	E-commerce and urban warehousing	187
	Conclusions	190
	References	191
	Notes	194

09 Food and urban logistics: a fast-changing sector with significant policy and business implications 196

Eleonora Morganti

Introduction 196

The complex links between food distribution and urban logistics 197

Distribution nodes and food hubs 200

Raising sustainability levels for urban food logistics 203

Online food ordering and new delivery practices 206

Conclusions 207

References 208

10 Consolidation centres in construction logistics 210

Greger Lundesjö

Introduction 210

The resources, functionality and operation of a CCC 213

The benefits of using a CCC 219

Types of CCC 224

Locating a CCC 226

Case study summary: Bart's Hospital Phase 2 227

Conclusions 228

References 229

11 The socio-economic benefits of off-peak hour distribution: the case of Stockholm 231

*Sönke Behrends, Iván Sánchez-Díaz and Anna Pernestål
Brenden*

Introduction 231

Off-peak hour distribution projects: background
and experiences 232

Case study: evaluating an OPHD pilot project in Stockholm 235

Results 245

Conclusions 250

Acknowledgements 251

References 251

PART THREE Making change happen 255

12 Stakeholder engagement and partnerships for improved urban logistics 257

Michael Browne, Alena Brettmo and Maria Lindholm

Introduction 257

Stakeholder engagement 259

Freight partnerships 261

Stakeholder engagement through business improvement districts 268

Other engagement initiatives that can be considered 269

Conclusions 271

References 272

13 Multi-actor multi-criteria analysis as a tool to involve urban logistics stakeholders 274

Cathy Macharis, Bram Kin and Philippe Lebeau

Introduction 274

Methodology 276

Applications 279

Conclusions 286

References 288

14 Off-hour deliveries: the importance of outreach and proper planning 293

Jeffrey Wojtowicz, Shama Campbell and José Holguín-Veras

Introduction 293

Background to off-hour deliveries and the role of outreach 295

Approach to outreach and appropriate outreach strategies 296

Public agency perspective on outreach and incentives 305

Lessons learned 306

Conclusions 308

References 310

Note 311

15 The procurement process: a key to improved urban logistics efficiency 312

Olof Moen

Introduction 312

Trends in urban freight 313

Business model innovation in urban freight 315

Methodology: action research as agent of change 317

Case study 1: municipal co-distribution of goods 318

Case study 2: the five-step model 322

Conclusions 329

References 331

16 Future developments in modelling and information 336

Eiichi Taniguchi and Russell G Thompson

Introduction 336

Financial modelling 337

ITS, ICT, the IOT, big data and AI 340

Infrastructure and land use 342

Traffic management 345

Evaluation and multi-agent models 349

Network design challenges 350

Conclusions 352

References 352

Index 357