Contents	Preface About the editor About the contributors Abbreviations	XV XVii XXXi	
01	Introduction: urbanisation and the planning context		
	 Xu Zhang 1.1. Introduction 1.2. Major urbanisation trends and issues 1.3. Major challenges facing urban development 1.4. Planning for future cities 1.5. Introduction to the chapters References 	1 3 20 25 28	
02	Cities in the making Jacobs Cities Solutions Abstract 2.1. Introduction		
	 2.2. Opening up to the ephemeral: the transformation of the high street 2.3. A tale of two streets 2.4. Fantastic density – fantastic diversity 2.5. Urban Form 2.0: Floating Landscapes 2.6. A crime 2.7. Mobile workspace 2.8. Car storage: emerging active spaces 2.9. Conclusions References 	38 40 43 45 47 49 51 59	
03	 The state of the art: a planning perspective Xu Zhang with Brian Burkhard Abstract 3.1. Introduction 3.2. The vehicles – connected, autonomous and electric 3.3. MaaS and the mobility ecosystem 3.4. Urban and transport planning and design 3.5. USA: the AV breeding ground and the challenges ahead References 	63 63 63 73 78 83 90	
04	The up and coming: traffic and transport in future cities Xu Zhang, Hui Li and Hao Yue Abstract	99	
	4.1. Introduction	99	

	4.3.	Traffic on the future road networks Towards in-vehicle interchange Concluding remarks nces	100 108 117 117
05	Urban networks and autonomous vehicles		119
	John F Abstra 5.1.	oct Introduction	119 119
	5.2.	Motorised vehicles and the urban road and street network	121
	5.3.	Principles for planning, design and	125
	5.4.	management Types of network and parking	130
		Conclusion	135
	Refere	nces	136
06	Car-fr	ee development: new urban and	
	rural places for people Rachel Skinner, Giles Perkins and Peter Ramsey		
	Abstra		141 142
	6.1.	What do we want for our places? From places today to places of the future	144
		The impact of CAVs on place	147
	6.4.	The impact of CAVs on people	149
	6.5.	The impact of CAVs on activities	150
	6.6.	Bringing together places, people and	
		activities: visions of a car-free future?	153
	6.7.	Integrating CAVs in place-based mobility	
		networks	164
	6.8.	How does policy adapt to CAVs in achieving	
	D (outcomes?	164
	Refere	nces	166
07	Interchanges		169
	Rachel Skinner, Giles Perkins and Peter Ramsey		
	Abstra		169
		What do we want from our interchanges?	170
		The modern definition of interchanges	171
		Considering CAV modes The potential impact of CAV con	172
	7.4.	The potential impact of CAVs on interchanges	177
	7.5.	interchanges Redefining interchanges	173 175
	7.5. 7.6.	Planning interchange in a CAV world	179
	Refere		180

08		183
	acceptance and adoption	
	Dale Harrow and Jiayu Wu	183
	Abstract 8.1. Introduction	184
	8.2. People's driverless future insights	187
	8.3. Scenarios as research tools	193
	8.4. Designing vehicles	197
	8.5. Ownership	201
	8.6. Design for driverless vehicles of the future	206
	References	217
09	Mobility as a service	219
	John McCarthy with Pan Haixiao	
	Abstract	219
	9.1. Introduction	219
	9.2. Establishing the fundamentals	221
	9.3. Enablers for MaaS	223
	9.4. Data and MaaS	227
	9.5. Sustainable approach	229
	9.6. Overall conclusion	232
	9.7. Insight from the development of bicycle	
	sharing in China	232
	References	239
10	Freight and distribution in cities	241
	Michael Bell	211
	Abstract	241
	10.1. Introduction	241
	10.2. Streetscape	243 245
	10.3. Air quality10.4. Electric vehicles	245
	10.4. Liectric verticles 10.5. Urban consolidation centres	247
	10.5. Omnichannel retail	248
	10.7. Circular economy	251
	10.7. Circular economy 10.8. Sharing economy	252
	10.9. Driverless vehicles	252
	10.10. Conclusions	253
	References	254
11	Modelling and analysis of shared autonomous	
	mobility	259
	Peter Jones and Luis Willumsen with	
	Paul Speirs, Jaume Barceló and Devrim Kara and	
	Seungjae Lee, Jooyoung Kim and Shinhae Lee	
	Abstract	259
	11.1. Introduction	259

	11.3.11.4.11.5.11.6.11.7.	The planning and analytical challenges Vehicles and services Modelling requirements Gaps in knowledge Modelling approaches Three case studies Conclusions nces	260 261 271 272 277 283 286
12	The ro	ole of the public and private sectors	287
		iraut with Yasuo Asakura and Koji Hachiyama	
	Abstra		287
	12.1.	Introduction	287
	12.2.	Regulation and the transport market	288
	12.3.	Providing seeds, complementing services	
		and leadership	293
		Urban and transport planning	295
		Social inclusion	297
	12.6.	Taxation from mobility: distance-based	
	407	charging	300
		Summary remarks	304
	12.8.	Public-private initiatives on automated	204
	Refere	driving systems in Japan	304 312
	ricicic		312
13		olution of the regulatory and legal	
			317
		m Parkhurst, Matthew Cockburn,	
	100	on Murphy and Brian Wong	247
	Abstra		317
		Introduction The qualities rate of the highway authority	317
		The evolving role of the highway authority	318
	13.5.	Evolution of laws and legal frameworks for autonomous vehicles and automated driving	325
	13 /	Evolution in the insurance sector	330
		An emerging CAV regulatory transition or	220
	13.3.	evolution?	334
	Ackno	wledgements	336
	Refere		336
	Marria		244
14	_	ating a path to an autonomous future	341
	Xu Zha 1/1 1	Introduction	341
		Principles in designing the transformation path	
		Gauging the future	343
		Barriers to transformation	345
		Starting the transformation	349

54
55
56
57
58
61

id.