Aashtiani, H. 371
Abdel-Aty, M. 435
Abraham, J. 218
Abrantes, P. 242, 276, 279
Abreu e Silva, J. 387
accessibility role 53–66
accessibility definition 53
congestion issues 56, 57, 58, 62
cost–benefit analysis (CBA) 56, 57, 60, 61, 64
cycling inclusion 63, 64
heritage and urban development 295, 296, 301, 302–5, 311–12
ICT and accessibility 61
infrastructure-based measures and complex network analysis 56, 57, 58, 59, 64
location-based measures 55, 56–7, 59, 64
logsum model 57, 59, 60, 64
person-based measures 57, 58, 59
planning culture effects 64
policy plans and accessibility impacts 60–61, 64
social exclusion factors 61–2
and spatial interaction models 56
temporal component 55, 56–7, 59, 64	ravel cost indicator 56, 57, 60
vehicle automation and transport system performance 509, 510–11
adaptive cruise control (ACC) 499–500, 501, 504–5; see also vehicle automation and transport system performance
Aditjandra, P.T. 106–29
advanced traveller information systems (ATIS) 435, 436–7; see also traffic and mobility management
Agbelie, B. 409
ageing population considerations 71–3, 79, 380, 441, 454–7, 458
air pollution, see emissions
Akçelik, R. 344
Aldaihani, M. 455
Aldred, R. 165–79
Alessandrini, A. 506
Algers, S. 49
Allen, J. 109, 112, 113, 114, 117, 123
Alonso, W. 232, 233, 510
alternative fuel types 118–19, 221–2; see also traffic and mobility management; urban freight distribution
Altshuler, A. 409, 416
Aly, M. 511
Ambrosino, G. 456
Anable, J. 394
Anand, N. 380
Anas, A. 247, 249
Anderson, S. 111
Ando, N. 376
Anlezark, A. 482
Antoniotti, M. 504
Appleyard, D. 326–7
apps 86, 88, 90, 99–100, 463–4; see also information technology and social media
Arem, B. van 498–516
Arentze, T. 433
Arnaout, G. 505
Arndt, R. 257, 259
Arnott, R. 149, 248, 471
Asensio, J. 433
Ashford, N. 455
Austin, J.M. 82–105
Australia
bus lanes and signal priority 488
car use, declining 77
community transport 459
environmental issues 210, 221, 222
functional road classification 321–3
larger capacity vehicles, development of 220
legal actions in infrastructure management sector 422
Melbourne institutional framework 188, 191
National Smart Management Motorways Programme 432
road traffic accidents 213, 214
social exclusion risk 212
suburbanization 28
Sydney projects 256, 267–9, 416, 434–5
traffic management guidelines 330–33, 335–6
transportation roles in economy 231
Victorian Transport Integration Act 184
workplace parking levies 155
Austria, Go-Box toll 248
automated highway systems (AHS) 501; see also vehicle automation and transport system performance
automation, vehicle, see vehicle automation and transport system performance
Axhausen, K. 445
Baber, J. 506
Bagley, M. 387, 391, 394
Bagloee, S.A. 355–74
Ballantyne, E. 113
Banister, D. 53, 71, 107, 166, 202, 321, 326, 385, 509
Barr, J. 482
Barrett, S. 77
Bartholomew, K. 387
Barton, H. 324, 328
Basso, L. 237–8, 358, 360
Batel, S. 424
Bates, J. 145, 150, 158, 440
Beck, M.J. 407–31
Begg, D. 502
Behrends, S. 111
Bekken, J. 462
Belgium, built environment and travel behaviour, see built environment and travel behaviour
Bell, M. 130, 136, 140, 356
Bell, W. 455
Ben-Akiva, M. 236, 398, 443
Benzarti, E. 380
Berechman, J. 237
Berechman, Y. 244
Bertels, S. 380
Bertolini, L. 64
Betancur, J.J. 15–35
Bhat, C. 236, 387
Bhusiri, N. 379
Bianconi, M. 107
Bickerstaff, K. 165–6
Bigazzi, A. 246, 249
bikes, see cycling
biofuels 221, 222
Biswas, A. 409
Blais, M. 380
Bliemer, M.C.J. 1–12, 249, 355–74, 432–51
Boarnet, M. 387
Bohte, W. 390–91
Bonsall, P. 438
Bose, A. 506
boulevards and integration 324–5, 334; see also place-making
Bowling, A. 71
Bowling, S. 505
Bowman, J. 49
Bradley, M. 49
Brain, P. 205–6
Brake, J. 457, 458
Braysy, O. 379
Bregman, S. 168
Bristow, A.L. 274–90, 278
Brooke, S. 149
Brousseau, E. 255, 258, 259, 265
Brown, J. 441
Browne, M. 109, 112, 113, 114, 119, 120, 376
Brownell, C. 508
brownfield sites 76, 312–13, 315, 316
Brownstone, D. 246, 276
Brueckner, J. 233
Bruegmann, R. 32, 76
Brundtland report 110–11, 202, 385
Buchanan, C. 107, 325, 326
Budd, L. 145–61
built environment and travel behaviour 385–404
active transport, see cycling; walking
built environment definition 386–7
density, diversity and accessibility, relationship between 389–90, 398
land use and transport interaction studies 386–8
mobility attitudes 392–4
neighbourhood density and car ownership 395–7
public transport attitudes 393–4
residential self-selection effects 387, 390–94, 397, 398–401
spatial influences of built environment 387, 398, 401
transport demand 387, 395–7
Bunting, M. 471
bus lanes, see high-occupancy vehicle (HOV) lanes
Busse, H. 170–71, 174
Button, K. 123, 248, 249
Calthrop, E. 248
Calvert, S. 504, 505
Campbell, M. 36, 40, 41
Canada
New Building Canada Plan (NBCP) 191, 192
suburban growth 28
Vancouver institutional framework 181, 182, 183, 184, 188–90, 194
Cantarelli, C. 282
capacity
improvements, and vehicle automation 501–2
network capacity reliability 136–7, 138, 139–40
road capacity expansion problems 356
transportation capacity adjustment 236–7
utilization of freight transport 219–20
car ownership
car as comfortable transport mode 397
car-oriented development problems and
urban freight distribution 107–8
demographics 73–8, 167, 172
motorization rate 146–7, 149
parking, see parking
see also vehicle headings
car-pooling 100, 437, 438–9, 465–7
Caragliu, A. 83
Carnaby, B. 106–29
Carrion, C. 60
Caschili, S. 56
Cassidy, M. 360, 437
Cassir, C. 130
Cate, M. 443
Cebollada, A. 385
Ceder, A. 356, 358, 360
Cervero, R. 78, 180, 193, 204, 215, 216, 386, 387, 390, 471
Chaib-draa, B. 505
Chan, N. 465
Chatman, D. 387
Chen, M. 512
Cherrett, T. 117, 121, 348
Chester, M. 145
Chia, D. 455–6
Chin, A. 122
Chiou, S. 356
Chisholm-Smith, G. 486
Choay, F. 17
Chorus, C. 435
Chu, X. 246
Chung, D. 254–73
Church, A. 385
City Beautiful 21–2
city logistics 375–84
definition 375–6
future trends 380–81
green management certificate program 376
history 376–7
ICT application 375–6
inland waterways for urban freight 380
modelling techniques 379–80
planning and management of urban freight
transport 377–8
public–private partnerships 376, 377
urban distribution centres (UDC) 113–14, 379
urban freight distribution 109, 111, 112
vehicle routing and scheduling problem with
time windows (VRPTW) models 379
see also transport planning
clean vehicle initiatives 118–19; see also urban
freight distribution
clearways 443–4
clustering and planning 206, 215–16, 217, 223–4, 225
Cole, S. 236
Comi, A. 379
community transport 457–9
compact cities 212, 215–17
congestion issues 56, 57, 58, 62, 343–5, 498–9
charging schemes, see tolls
and environmental concerns 108–9, 110, 115, 116, 118–19, 122–3, 207, 225
and network design problem (NDP), see
network design problem (NDP) and
congestion
contracts, public–private partnerships 254, 255–67, 269
Correia, G. Homem de Almeida 498–516
Cosgrove, D. 471
cost effectiveness
accessibility role 56, 57, 60, 61, 64
demand-responsive transport (DRT) services
454, 455, 459, 463–4
infrastructure appraisal 240, 274, 281–4, 285, 286
location choices and vehicle automation 501, 502–3, 510–11
overruns, mega-infrastructure decisions 411, 412, 414, 422–3
parking 147–8, 158
tolls 122–3, 244–8, 254, 266–9, 356
transaction costs and risk-sharing in public–
private partnerships 256, 258–9, 262–7
see also transport economics and pricing
Cox, W. 28
Crainic, T. 124, 379
Crane, M. 215
Crane, R. 387
Currie, G. 73, 471–97
Curtis, C. 321–37
cycling 63, 64, 328, 394, 395, 396, 397, 398–401
bicycle schemes 218, 441–2
heritage and urban development 295–7, 298, 299, 313, 317
policy and media, see stakeholders, politics,
and media
sustainable future policy 217–18, 223–4, 225
WHO health economic assessment tools
(HEAT) 277
see also walking
Dablanc, L. 109, 112
Daganzo, C. 437, 444
Daly, A. 49, 341
Dantzig, G. 41
Davis, B. 415
Handbook on transport and urban planning in the developed world

Davison, L. 453
Day, A. 146
De Cea, J. 344
De Jong, G. 57, 242, 276, 377, 379
De Koster, M. 111, 115
De la Escalera, J. 511
De Lara, M. 247
De Montis, A. 56
De Palma, A. 246, 248, 249, 257, 266
De Vos, A. 504–5
Deakin, E. 466
Decker, K. 305
Delbosc, A. 73
‘delivery and servicing plan’ (DSP) scheme 117–18; see also urban freight distribution
Delucchi, M. 238, 240, 244, 249, 279
demand, see travel demand management
demographic development changes 69–81
ageing population 71–3, 79
car ownership 73–8, 167, 172
population growth 69–70
and public transport 70, 72, 76, 77
rail transport investment 77
spatial location of travel demand 76–8
total travel demand 74–8
travel and demographics, relationship between 39, 41, 43, 46
density, diversity and accessibility, relationship between 389–90, 398
D’Este, G. 139
Deutschman, H. 43
developing countries 210, 213–14
Dial, R. 44–5
dial-a-ride schemes 454–6, 458; see also flexible transport management
Dickens, R. 280
Dieleman, F. 387
Dijkstra, L. 217
Dizain, D. 380
Dollery, B. 409
Downs, A. 471
Dresner, K. 511
Driscoll, P. 282
driverless cars 85, 499, 512
Du, Z. 137
Ducker, K. 438
Duin, J. 376, 379–80
Dupuy, R. 326
Dupuit, J. 231, 238
dynamic route information panels (DRIP) 443; see also traffic and mobility management
e-commerce and home delivery 120–21; see also urban freight distribution
Eby, D. 72
economics and pricing, see transport economics and pricing
Ehmke, J. 379
El-Gohary, N. 424
electric vehicles (EVs) 118–19, 221, 222
Ellison, R. 119
Emele, C. 456
Engwicht, D. 326
Enoch, M. 452
environmental issues 267–8, 394
congestion 108–9, 110, 115, 116, 118–19, 122–3, 207, 225
green management certificate program 376
parking 149
sustainable development 31, 208–11, 215–16, 220–23, 225
waste management and sustainable reverse logistics 116–17
weather, see weather
Ernst, J. 482
Eugensson, A. 501
Europe
air pollution 166, 210–11, 280, 281
ECOSTARS scheme 118
European Spatial Development Perspective 32
first automated multistorey car park, Leicester 154
Healthy Urban Plans 32
Improving Connectivity and Mobility
Access (ICMA) project 458–9
intelligent transport systems (ITS) action plan 85
mandatory infrastructure charges for heavy vehicles proposal 210–11
Sustainable Urban Mobility Plans (SUMPS) 31–2
Transport White Paper 210–11
see also individual countries
Evans, S. 48
Eveborn, P. 380
Ewing, R. 193, 215, 216, 387
Fagnant, D. 501, 502, 508, 513
Fahle, T. 380
Fairbank, S. 87
Fansler, D. 233
Farahani, R. 356
Farsi, M. 237
F.A.S.T. (Flexible Agent-based Simulator Michiel Bliemer, Corinne Mulley and Claudine J. Moutou - 9781783471393 Downloaded from Elgar Online at 03/01/2019 06:09:36AM via free access
Index 521

of Traffic) model 505; see also vehicle
avtontion and transport system
performance
Feitelson, E. 499
Feremans, C. 355
Ferguson, D. 511
Ferguson, E. 438
Fernández, J. 344
Figliozi, M. 246, 249
Fioretto, M. 118
Flachsbart, P. 482
Flaemig, H. 114
flexible transport management 452–70
carpooling 100, 437, 438–9, 465–7
community transport 457–9
demand-responsive transport (DRT) services
452–4, 455, 459, 463–4
dial-a-ride schemes 454–6, 458
HOV lanes, see high-occupancy vehicle
(HOV) lanes
specialist transport services (STS) for elderly
and disabled 454–7, 458
taxi and private hire 459–65
Flint, J. 109
Florian, M. 48
Floudas, C. 364
Flyvbjerg, B. 410–11, 412, 413, 414, 416, 421,
422, 423
forecasting accuracy, transport planning
345–7, 352
Forkenbrock, D. 244
Fosgerau, M. 142, 248
France 17, 20, 113, 231
Fraser, G. 248
Fraser, R. 102
Fratar growth factor model 36, 40, 43; see also
urban transport planning history
Freemium business model 90; see also
information technology (ICT) and social
media
freight distribution, see urban freight
distribution
Freund, P. 171
Frick, K. 409
Friedman, J. 31
Fritsch, J. 511
Fujii, S. 441
Fujita, M. 234, 247
Furness, Z. 441
Furth, P. 482
future challenges 50, 143–4, 199, 347, 351,
380–81, 415, 419–20, 422–3, 492–3
information technology and social media
102–3
sustainability, see sustainable future policy
Gaber, I. 167
Galloway, P. 416
garden cities 19–20
Gardner, B. 387
Gärtringer, T. 202, 432
Garreau, J. 20
Garrick, N. 145, 148
Gasiorek, M. 283
Gasser, T. 499, 500
Gehl, J. 326, 328
Gendreau, M. 379
gentrification 18, 30, 31, 217
Germany 21, 25, 107, 114, 210, 231, 248, 459
Geroliminis, N. 358, 360
Getz, M. 32
Geurs, K. 53–66, 387, 509, 510
Ghoseiri, K. 438
Gilbert, G. 460
Giuliano, G. 237
Givoni, M. 122
Gjersoe, N. 167
Glachant, J. 255
Glaeser, E. 70, 107, 108, 234
global infrastructure hub suggestion 421; see also
mega-infrastructure decisions
Goh, K. 478, 482, 488
Golbuff, L. 168, 172–3, 177
Golias, J. 158
Gomez-Ibanez, J. 238
Gonzalez-Feliu, J. 112, 121, 377, 379
Goodwin, P. 63, 74, 167, 326
Gordon, N. 92
Gouy, M. 506
government role
institutional planning frameworks 182,
183–4, 188, 191–3
traffic control 434, 436, 437, 440–41
GPS (Global Positioning System) development
86, 89
Graham, D. 205, 283
Greaves, S. 202–28
Green, J. 72
Guasch, J. 256
Gubins, S. 247
Guler, S. 360
Guo, J. 387
Gwee, T. 205
Hadas, Y. 360
Hakim, S. 116
Hall, P. 24, 106, 107, 412
Hallé, S. 505
Handy, S. 218, 386, 387
Hansen, R. 189, 191
Hansen, W. 56, 510
hard shoulder running 447; see also traffic and mobility management
Harris, B. 26
Hart, O. 254, 260, 261, 263–4
Headicar, P. 70
Hegyi, A. 445
Hemily, B. 476
Hemmelmayr, V. 379
Hensher, D.A. 210, 212, 214, 242, 243, 249, 254–73, 275
heritage and urban development 293–320
access management 295, 296, 301, 302–5, 311–12
car parking 302–3, 307, 308–9, 313
cycling 295–7, 298, 299, 313, 317
goods delivery 303–5, 308, 309, 310
infrastructure upgrades 314–17
pedestrianization 294–5, 296, 297, 301, 303, 308, 313, 316
private sector investment 307, 309
public transport 297–300, 301, 302, 303, 308, 309–11, 313, 314
rail-based public transport 309–11, 314–17, 318, 319
shared space 300–306
spatial limitations 293, 294
town centres or city districts 307–12
transport planning and urban redevelopment 306–19
see also transport planning
Hesse, M. 109, 123
Heydecker, B. 344
high-occupancy vehicle (HOV) lanes 218–19, 358, 360, 437–8, 443, 466
right of way (ROW) for urban public transport 472–3, 477, 478, 479, 480, 481–3, 488, 490
see also segregation and traffic function
high-technology industry clusters 206, 215–16; see also sustainable future policy
Hill, D. 44
Hillman, M. 169
Ho, H. 140
Hobbs, B. 415, 418
Holguin-Veras, J. 111, 115, 122, 379, 380
home driveways, hiring for parking 100
Hoogendoorn, R. 498–516
Hotelling, H. 238
Hounsell, N. 448, 489
household trip rate models 43, 48; see also urban transport planning history
Huang, H. 48
Hull, A. 64
Hung, R. 439
Hunt, J. 218, 511
Hutchinson, B. 376
Ieromonachou, P. 122
Iida, Y. 130, 135–6
incentive agreements 259, 260, 261, 436
Inci, E. 248
incident management 213–14, 447–8
industrial zones (brownfield sites) 76, 312–13, 315, 316
Inflated Travel Time proposal 372; see also network design problem (NDP) and congestion
information provision 111–12, 420–22, 425, 435
information technology (ICT) 61, 158–9, 220, 375–6
information technology (ICT) and social media 82–105
access media 87–9
apps 86, 88, 90, 99–100, 463–4
Facebook and Twitter 91, 93–6, 97, 99, 101, 102
Foursquare 96–7
Freemium business model 90
future challenges 102–3
GPS (Global Positioning System)
development 86, 89
intelligently directed transport 83
mobile devices 87, 88–9, 91, 94, 96, 100
‘Mobility as a Service’ package 101
new transport delivery markets 100–101
parking guidance and information systems (PGIs) 151, 158–9
photo and video-sharing sites 98
public transport planning 85, 90
ride-share (carpool) systems 100
‘smart city’ 83–6, 102
‘smart vehicles’ and driverless cars 85, 499, 512
social media influence 168, 172, 175
social media services 90–102
weather disruption reports 101
infrastructure appraisal 274–90
agglomeration effects 282–3
air pollution effects and costs 279–81, 285
business travel time values 275–6
complex network analysis 56, 57, 58, 59, 64
cost–benefit analysis (SCBA) 240, 274, 281–4, 285, 286
environmental impacts 278–81, 285, 286
future challenges 281–4
heritage and urban development 314–17
highway construction impact 25–6
imperfect competition effects 283
labour supply impacts 283
noise pollution 278–9, 285
non-market impacts 275–81
non-use benefits 284
optimism bias 282
revealed preference (RP) approach to
business travel time 275, 276
safety and health issues 276–7, 285
stated preference (RP) approach 275–6,
278–9
sustainable future policy 204–5
traffic and mobility management 433–6
UK High Speed rail link (HS2) case study
284–6
see also mega-infrastructure decisions
inland waterways for urban freight 380; see
also city logistics
institutional planning frameworks 180–201
bottom-up approaches 183, 188–90, 193–5,
197–9
design criteria 194–8
design influences 181–6
future challenges 199
government type and levels, effects of 182,
183–4, 188, 191–3
integration importance 180–81, 187–8, 190,
194–6
jurisdictional responsibility for cities
186–91
policy goals 181–4, 184–6, 186, 194–5
risk-sharing in public–private partnerships
264–5
top-down approaches 183, 188, 191–3,
194–5, 197–8
triple bottom-line goals 183–4, 197
integration importance 180–81, 187–8, 190,
194–6, 326–34, 335
Ioannou, P. 506
Islam, D.M.Z. 106–29
Ison, S. 145–61
Italy 120, 463
Jacobs, A. 324, 325, 327
Jacobs, J. 27, 106, 107, 193
Jaller, M. 111
Japan 28, 231, 376
Jivraj, S. 71
Johnson, D. 284
Johnson, P. 210
Joksimovic, D. 356
Jones, E. 325, 328
Jones, P. 73, 74, 75, 437
Jorge, D. 507
Kachroo, P. 447
Kala, R. 504, 511
Kaliba, C. 412
Kalliomaki, A. 457
Kalmanje, S. 249
Kamakate, F. 220
Kanañani, A. 235, 236
Kardes, I. 418, 427
Karström, A. 142
Kassof, H. 43
Kato, H. 242
Kawamura, K. 231–53
Keep, M. 169
Kenworthy, J. 509
Kesting, A. 505
Kim, M. 57
King, R. 476
Kirby, R. 455
Kitamura, R. 398, 441
Kivleniece, I. 254, 260, 266
Klein, B. 263
Klemenschitz, R. 293–320
Knight, F. 238
Kockelman, K. 247, 249, 386, 387, 390, 501,
502, 508, 513
Koglin, T. 156, 158, 440
Kohler, U. 376
Kornhauser, A. 508
Korzhenevych, A. 244
Kostyniuk, L. 433
Kotsialis, A. 445
Kraila, M. 220
Kristensen, J. 432
Krizek, K. 387
Kuhnminhof, T. 73, 74
Kullman, B. 376
Kunstler, J. 32
Kurauchi, F. 130–44
Kwon, J. 437
Lai, H. 494
Laird, J. 284
Lam, W. 48
Lambert, L. 444
land-use planning 39, 41, 147–8, 212, 215–17,
223–4, 247, 325, 386–8
Lane, R. 43
Larwin, T. 471
Lave, R. 455
Laws, R. 453
Le Corbusier 19, 20, 106
Le Vine, S. 73, 74, 75
Lefebvre, H. 27, 29
Lehmann, S. 109
Leibling, D. 145, 150, 158
light rail systems 473, 476, 477, 479, 490–92; see also railways

Mackey, P. 276, 277, 281, 283
McKinnon, A. 109, 111, 116, 124, 377
McLeod, F. 121
Mageean, J. 452, 454
Magnanti, T. 356
Maibach, M. 209, 210, 211, 224, 240, 244
Marchetti, C. 509
Margolin, J. 438
Marinov, M. 114, 117
Marrotoli, R. 71
Marsden, G. 145, 154
Marshall, S. 432
Marshall, W. 145
Martin, B. 37
Martin, E. 507
Martin, G. 171
Martínez, F. 511
Martínez, L. 508
Mason, M. 256
Masters, J. 448
Mathias, R. 455
May, A. 246
Maynard, A. 72
media involvement, see information technology (ICT) and social media; stakeholders, politics, and media

Meeke, S. 155, 156
Mees, P. 70
mega-infrastructure decisions 407–31
community consultation 424–5
cost-effectiveness issues 411, 412, 414, 422–3
demand for mega-projects 409–10, 411, 422–3
front-end loading (FEL) planning stage 416–17
future-proofing concerns 415, 419–20, 422–3
global infrastructure hub suggestion 421
information dissemination 420–22, 425
infrastructure significance history 407–9
planning and design 416–18
private sector accountability 422
project failures, reasons for 410–26
public consultation 423–5
public sector accountability 421–2
relationship management 423–6
risk management 418–20
stakeholder management 419, 424, 425–6
technology change effects 408, 415
weather patterns, effects of changing 415
see also infrastructure appraisal

Melo, P. 205, 283
Melo, S. 377
Ménard, C. 263, 264, 265
Meng, Q. 356
Menge, J. 120
Merrow, E. 410, 412, 413, 416
Mesbah, M. 358, 359, 360, 363, 494
Metz, D. 69–81, 174, 448
Meyburg, A. 37, 39, 40, 45
Meyer, M. 236
Midgley, P. 441
Mieszkowski, P. 233
Milakis, D. 498–516
Millard-Ball, A. 74
Miller, E. 236
Miller, R. 415, 416, 417, 418
mixed integer non-linear programming (MINLP) problem, see network design problem (NDP) and congestion
mixed logit (ML) model 341, 342; see also transport planning
multi-storey car parks 147, 152, 153–4; see also parking
Multiple logit (MNL) model 341, 342; see also transport planning
Motorway ramp metering 445–7; see also traffic and mobility management
motorway shockwave effects 505
Moutou, C.J. 1–12
Muller, P. 509
Muller, T. 482
Mulley, C. 1–12, 452, 457, 459, 460, 488
multinomial logit (MNL) model 341, 342; see also urban development history
Mokhtarian, P. 385, 387, 391, 394
Molnar, L. 72
Moore, E. 41, 44
motorization rate (vehicle numbers per head of population) 146–7, 149
motorway ramp metering 445–7; see also traffic and mobility management
motorway shockwave effects 505
Moutou, C.J. 1–12
Muller, P. 509
Muller, T. 482
Mulley, C. 1–12, 452, 457, 459, 460, 488
multinomial logit (MNL) model 341, 342; see also transport planning
multistorey car parks 147, 152, 153–4; see also parking
Muñuzuri, J. 112
Muth, R. 233, 234, 510
Næss, P. 166, 387
Nagurney, A. 371
Nash, A. 489
natural gas as fuels 221, 222
neighbourhood effects
  built environment and travel behaviour 392, 395–7
  clustering and planning 216, 217, 223–4, 225
  institutional planning frameworks 193–4, 197–8
Nellthorp, J. 278
Nelson, D. 355
Nelson, J.D. 241, 452–70
Nemoto, T. 376, 380
Netherlands 58, 115, 231
  ABC location policy 326, 327
  bicycle hire 441–2
  demand-responsive transport services 456
  'shared streets' movement 328–9
taxi licensing 462
woonerf principle 329–30, 332
network accessibility role 56, 57, 58, 59, 64
network capacity reliability 136–7, 138, 139–40
network design problem (NDP) and congestion 355–74
bi-level programming problem 356, 358–9, 363–4
discrete NDP (DNDP) 357, 358, 359
HOV, see high-occupancy vehicles (HOV) lanes
Inflated Travel Time proposal 372
mixed integer non-linear programming (MINLP) problem 358–9, 363–73
road capacity expansion problems 356
transit lanes design problem (TLD) formulation 360–63
eb demands management (TDM) 355
Neutens, T. 57
new towns 18, 21
new urbanism 31–2
New Zealand 28, 462
Newman, P. 509
Nguyen, S. 48
Nicholas, R. 146, 149–50
Nicholson, A. 134, 137
Nicolaisen, M. 282
Nielsen, G. 492
Nilles, J. 433, 439
Nimmo, M. 102
noise pollution 211, 212, 221, 299, 302, 304
Noland, R. 466
Nordbakke, S. 72
Norway 122
Nuzzolo, A. 379
OECD 376–7, 409
Ogden, K. 123, 376
Omae, M. 511
on-road public transport management 471–97
  challenges 471–2, 473–8, 488, 489–90
  future development and state-of-the-art approach 492–3
  light rail systems 473, 476, 477, 479, 490–92
  on-road public transport definitions 472–3
  passenger facilities and safety 473, 477, 478
  peak period problem 475–6, 479
  public transport facilitation 490–92
  public transport priority measures 478–90, 494–5
reliability concerns and traffic delays 474–5, 482–3
right of way (ROW) for urban public transport
transport 472–3, 477, 478, 479, 480, 481–3, 488, 490
road design measures 479–81
traffic signal priority measures 479–81, 482, 483–5, 488, 489, 490
vehicle access and utilization 473, 475, 476, 477, 493
one-way streets and cycling 296, 299
opportunism, public–private partnerships 256, 258, 261, 262–3, 265, 266, 268
Ortúzar, J. de Dios 338–54
Ory, D. 385
Österle, I. 113
Östh, J. 57
O’Sullivan, M. 256
Owen, C. 171, 172, 173
Ozbay, K. 447
Paez, A. 71
Papageorgiou, M. 434, 445, 446
Papamichail, I. 446
Parida, P. 409
Parkhurst, G. 155, 156
parking 145–61
cost effectiveness 147–8, 158, 248
development 149–55
environmental impact 149
heritage and urban development 302–3, 307, 308–9, 313
home driveways, hiring 100
land take costs 147–8
management 156–8, 440–41, 443, 445
multistorey 147, 152, 153–4
off-street and on-street 150–53, 157–8
park and ride 155–6
parking guidance and information systems (PGIs) 151, 158–9
parking meters 151, 152, 158
private non-residential 154–5
regulation 157
residential 150–51
service parking 155–6
Workplace Parking Levy (WPL), UK 154–5
Parry, I. 210
Parsons, M. 89
Parsons, W. 183
Partyka, J. 90
Pattinson, W. 116
Pavone, M. 508
peak periods 37, 442, 475–6, 479
Pearce, R. 180–201
Pearman, A. 123
pedestrianization 294–5, 296, 297, 301, 303, 308, 313, 316, 334–5
Personal Rapid Transit (PRT) system 506; see also vehicle automation and transport system performance
Phonphitakchai, T. 453, 456
Pick, G. 43
Pierce, G. 159
Pigou, A. 238, 244–5
pilot studies, importance of 353; see also transport planning
Pinjari, A. 236, 387
Pipes, L. 506
place-making 321–37
boulevards and integration 324–5, 334
integration and place function 326–34, 335
‘level of service’ (LoS) measure 323
nomenclature variations 327–8
pedestrianization 294–5, 296, 297, 301, 303, 308, 313, 316, 334–5
railway locations at expense of space 324
roads and streets, distinction between 327–8
‘shared streets’ or ‘nude streets’ movement 328–9, 330
sustainable transport focus 326
traffic function and segregation 321–5
traffic management guidelines 330–33, 335–6
transit-oriented development (TOD) 326
transport as means to an end theory 323–4
planning, see infrastructure appraisal; transport planning
Polak, J. 437, 445
policy measures 115, 380
institutional planning frameworks 181–4, 184–6, 186, 194–5
and media, see stakeholders, politics, and media
sustainable future policy 215–25
see also regulation
Potvin, J. 379
poverty issues, urban development history 27–8
Prato, G. 433
Preston, J. 385
Priemus, H. 412, 416
private sector involvement 18–19, 22, 23, 307, 309, 422; see also public–private partnerships
productivity growth, sustainable future policy 204–6
protests, social activism 168, 172, 266
Prynn, J. 148
public involvement 165–7, 166, 174, 222, 423–5
public sector involvement 266, 421–2; see also public–private partnerships
public transport 43–5, 393–4
ageing population considerations 71–3, 79, 380, 441, 454–6, 458
and demographic development changes 70, 72, 76, 77
heritage and urban development 297–300, 301, 302, 303, 308, 309–11, 313, 314
and information technology (ICT), see information technology (ICT) and social media
on-road management, see on-road public transport management
sustainable future policy 217–18, 223–4, 225
public–private partnerships 376, 377
risk-sharing, see risk-sharing in public–private partnerships
Pucher, J. 214, 217
Puentes, R. 74
Qian, Z. 248
Quak, H. 111, 115
Quarmby, D. 44
Quelin, B. 254, 260, 266
Quinet, E. 240, 243, 244, 249
Qureshi, A. 379
Raco, M. 109
railways
light rail systems 473, 476, 477, 479, 490–92
urban freight 380
Rajé, F. 385
Rand Corporation approach 351; see also transport planning
random utility theory 341, 345; see also transport planning
Rapkin, C. 39, 386
Ravada, C. 85
Recker, W. 433
Reggiani, A. 56, 242
regulation 157, 209–10, 457, 461, 462–3, 465, 490; see also policy measures
reliability and robustness of transport systems 130–44
critical link and node identification 139–40, 144
definitions 130
demand and supply interaction 143
economic evaluation 140–42
future directions 143–4
mathematical programming with equilibrium constraints (MPEC) 137, 140
measures of 131–8
network capacity reliability 136–7, 138, 139–40
public transport management 474–5, 482–3
travel time reliability 131–2, 140, 140–42, 143
reputation and trust effects, public–private partnerships 263–4, 269
residential self-selection effects 387, 390–94, 397, 398–401; see also built environment and travel behaviour
reversible lanes 444; see also traffic and mobility management
Richardson, A. 348
right of way (ROW) for urban public transport 472–3, 477, 478, 479, 480, 481–3, 488, 490; see also high-occupancy vehicle (HOV) lanes
‘ripple effect’ model 501–2; see also vehicle automation and transport system performance
risk management 348–9, 418–20
risk-sharing in public–private partnerships 254–73
contracts 255–67
environmental uncertainties 267–8
future research 270
government lock-in and hold-up situations 263–4, 265, 266, 268
human factors in contract negotiation 256, 257, 259, 261
incentive agreements 259, 260, 261
incomplete contract theory 254, 260–61, 263–4, 269
infrastructure delivery problems and failures 255–6
institutional effect 264–5
opportunism 256, 258, 261, 262–3, 265, 266, 268
ownership rights 261
procurement contracts and moral hazard 259
reporting requirements, need for 269
reputation and trust effects of collaboration 263–4, 269
social activism susceptibility 266
stakeholders’ involvement 256, 257, 259
toll road contracts 254, 266–9
transaction costs 256, 258–9, 262–7
uncertainty and asset specificity 263–7, 269
Rissel, C. 170, 171
Ritsema van Eck, J. 57, 58
Rivera-Santos, M. 254, 257, 260, 261, 266
road congestion, see congestion issues
road pricing 167, 224, 225
tolls 122–3, 244–8, 254, 266–9, 356
road traffic accidents 213–14
roads
  mobility management, see traffic and mobility management
on-road public transport management, see on-road public transport management
urban freight distribution, see urban freight distribution
roads and streets, distinction between 327–8
Roberts, P. 376
Robinson, D. 218
Robinson, N. 168
Roeser, S. 66
Roorda, M. 236
Rosenbloom, S. 471
Rossi, T. 49
Rouge, L. 108
Rowse, J. 149
Rufín, C. 254, 257, 260, 261, 266
Ruiter, E. 40
Ruske, W. 376
Rutherford, T. 169
Rye, T. 156, 158, 440
Ryley, T. 167
Saelens, B. 218
safety 392, 473, 477, 478
road traffic accidents 213–14
St. Jacques, K. 482
Salomon, I. 385, 398, 499
Sammer, G. 309
Santos, G. 122, 248
Samson, I. 49
Sarvi, M. 355–74, 487
Sassen, S. 31
Savage, I. 237
Schadea, M. 220
Schaefler, K. 326
Schafer, A. 74
Schexnayder, C. 412
Schipper, L. 74, 110, 220
Schmidt, R. 36, 40
Schneider, C. 107, 108
Schneider, M. 40
Schoettle, B. 73
Schofer, J. 455
Schwanen, T. 71, 72, 387
Sclar, E. 326
segregation and traffic function 321–5; see also high-occupancy vehicle (HOV) lanes
Shaheen, S. 218, 441, 465
shared space 300–306, 328–9, 330
shared vehicles, carpooling 100, 437, 438–9, 465–7
Sheffi, Y. 136, 137
Shiftan, Y. 49
Shimamoto, H. 376, 379
Shires, J. 242, 276
Shladover, S. 501
Shockwave effects 445, 505
Shoup, D. 148, 149, 158, 159, 445
Silberg, G. 501
Silver, J. 39
Simmonds, D. 511
Simmons, P. 409
Singapore 122, 248
Sinnette, J. 422
Sivak, M. 73
Skellern, M. 255
Small, K. 140, 142, 237, 242, 246, 248, 249, 276, 471
'smart city' 83–6, 102
'smart vehicles' and driverless cars 85, 499, 512
Smith, B. 233
Smith, H. 482
social activism 168, 172, 266
social exclusion factors 61–2, 211–13, 225
social issues, sustainable future policy 211–15
social media, and ICT, see information technology (ICT) and social media
Solomon, M. 379
Sonstelie, J. 234
spatial clustering policy 206, 215–16
spatial influences of built environment 387, 398, 401
spatial level impact, vehicle automation 509–12
spatial limitations, heritage and urban development 293, 294
spatial location of travel demand 76–8
specialist transport services (STS) for elderly and disabled 454–7, 458
Speck, J. 217
Spence, N. 57
Spieser, K. 508
Spies, H. 362
Spinney, J. 166, 169
Split Cycle Offset Optimization Technique (SCOOT) 435; see also traffic and mobility management
Stacey, D. 422
Stahl, A. 455
stakeholder involvement and freight partnerships 112–13
mega-infrastructure decisions 419, 424, 425–6
risk-sharing in public–private partnerships 256, 257, 259
transport planning 351–2
urban development history 18, 19, 27
stakeholders, politics, and media 165–79
  cycling policy, UK 168–76
  lobby groups 166
  public participation in transport policy 165–7
  road pricing and media presentation 167
  social media influence 168, 172, 175
  social trends in transport use 167, 172
  sustainable transport measures 166, 174
  transport protests 168, 172, 266
Stanková, K. 356
Stanley, J. 77, 180–228
Stathopoulos, A. 325
Stephenson, G. 325
Stokes, G. 71
Storkey, A. 101
Stowers, J. 39
Suarez, R. 32
suburbanization impact 18, 19, 26, 27, 28, 73–4, 76, 233, 234
Sun, X. 364
sustainability 110–12, 116–17, 166, 174, 326, 385
sustainable future policy 202–28
  alternative fuel and vehicle technologies 221–2
  capacity utilization of freight transport 219–20
  clustering and planning 206, 215–16, 217, 223–4, 225
  congestion problems 207, 225
  cycling, walking and public transport, mode shift to 217–18, 223–4, 225
  developing countries 210, 213–14
  economic issues 204–8, 221
  energy security 207–8, 221–2, 225
  environmental issues 208–11, 215–16, 220–23, 225
  financial instruments to facilitate changes 222–3
  high-occupancy vehicles (HOV), priority for 218–19
  infrastructure deterioration 204–5
  land use for compact cities 212, 215–17
  noise pollution 211, 212, 221, 299, 302, 304
  policy directions 215–25
  productivity growth 204–6
  public transport service, base level suggestions 223
  road traffic accidents 213–14
  road-pricing reform 224, 225
  social issues 211–15, 225
sustainability definition 202
  travel mobility opportunities, increasing 223–5
  vehicle kilometres of travel (VKT) as indicator 204, 209, 213, 215–16, 220, 221
  vehicle utilization improvement 218–20, 225
Sweden 122, 214, 231, 248, 455
Switzerland 190, 247, 489
Sylvia, R. 489
Tan, J. 233
Taniguchi, E. 111–12, 123, 375–84
Tavasszy, L. 371
taxation 260, 441
taxi and private hire 459–65; see also flexible transport management
Taylor, M. 139
Te Brömmerstroet, M. 64
technology effects, mega-infrastructure decisions 408, 412, 413–14, 415
technology ICT, see information technology (ICT)
Teo, J. 379–80
Tepe, D. 166
Tewdwr-Jones, M. 106, 107
Thill, J. 48, 57
Thompson, R. 116, 376, 377, 380
Tian, L. 249
Tibbalds, F. 326, 328
Tideman, M. 505
Timmermans, H. 433
tolls 122–3, 244–8, 254, 266–9, 356
Tomer, A. 74
Tortajada, C. 409
Townsend, A. 503
traffic delays 474–5, 482–3, 488
traffic function and segregation 321–5
traffic management 442–8; see also traffic and mobility management
traffic management guidelines 330–33, 335–6
traffic and mobility management 432–51
  advanced traveller information systems (ATIS) 435, 436–7
  bicycle schemes 441–2
  car-pooling 437, 438–9
  clearways 443–4
  dedicated lanes 437–8, 443
  dynamic route information panels (DRIP) 443
  flexible working hours 435, 439–40
  government role in traffic control 434, 436, 437, 440–41
  hard shoulder running 447
HOVs, see high-occupancy vehicle (HOV) lanes
incident management 213–14, 447–8
mobility management 436–42
motorway ramp metering 445–7
parking management 440–41, 443, 445
reversible lanes 444
shockwave effects 445, 505
Split Cycle Offset Optimization Technique (SCOOT) 435
traffic control methods 434–5
traffic management 442–8
travel demand and infrastructure supply 433–6
variable message signs (VMS) 435, 437, 444–5, 447
traffic signal priority measures 479–81, 482, 483–5, 488, 489, 490
traffic-flow efficiency effects 503–4, 505
transit lanes design problem (TLD), see network design problem (NDP) and congestion
transport economics and pricing 231–53
infrastructure costing problems 240
land use and bid-rent model 232, 233–4
land use, monocentric model (central business district (CBD)) 232–4, 247
marginal social cost pricing (congestion pricing) 244–8
parking charges 248
tolls 245, 247–8
transport pricing 244–8
transport pricing, optimum price 246–8
transportation capacity adjustment 236–7
travel behavioral theory and travel demand 234–6
travel costs 237–40
travel costs, measurement methods 240–44
see also cost effectiveness
transport planning 338–54
‘average day’ representation 348
congestion and link between travel time (delay) and flow 343–5
discrete choice models 341–2, 345
forecasting accuracy 346–7, 352
hierarchical or nested logit (NL) model 341–2, 345
high level model 340–45
master plan design 338–9
mixed logit (ML) model 341, 342
model interpretation requirements 346, 350
model specification 348–9
model system design stages 349–50
multinomial logit (MNL) model 341, 342
over fitting risk 348–9
pilot studies, importance of 353
Rand Corporation approach 351
random utility theory 341, 345
strategic transport plan design 351–2
traffic dynamics models 344–5
transport system equilibrium 344, 346
uncertainty about future scenarios 347, 351
see also city logistics; heritage and urban development; urban transport planning history
transport protests and media coverage 168, 172, 266
transport system performance and vehicle automation, see vehicle automation and transport system performance
Trautsamwieser, A. 380
tourism, travel and built environment, see travel and built environment
travel cost effects, see cost effectiveness
travel demand management 74–8, 355, 432, 433–6
demand-responsive transport (DRT) services 452–4, 455, 459, 463–4
tunnel and air quality 210
Ubaka, I. 356
Udomsri, R. 511
UK
Buchanan Report on urban traffic management 107
City Deals 192–3
Climate Change Act 281
community transport 457–9
cycling policy 168–76
demand-responsive transport (DRT) services 453, 456, 457–9
first multistorey car parks 153, 154
Fleet Operator Recognition Scheme (FORS) 117–18
garden cities 19–20
Glasgow, Future Cities Demonstrator grant 86, 102
Greater Plan of London (1944) 22
‘Green Logistics’ project 112–13
Heathrow ‘urban consolidation centre’ (UCC) 114
Home Zones 330
Housing Acts 25
London Bus Rapid Transit system 77, 78
London car use 76–7
London Congestion Charge 122, 167, 245, 247
Index 531

London ‘delivery and servicing plan’ (DSP) scheme 117–18
London FREVUE project 119–20
London institutional framework 190
London, most expensive parking space 148
London rail transport investment 77
London Traffic Survey (1960s) 37–8, 40
London Underground Metronet 256
National Travel Survey (2013) 74, 75
New Towns Act 21
noise pollution evaluation 279
taxi licensing 462–3
Town Planning Act 25
Town Planning Review 23
transhipment centres 113
transport industry and social media use 92–3, 94–6, 97
transportation roles in economy 231
university planning programs and courses 23–4
urban arterial roads and integration practices 329, 331
Workplace Parking Levy (WPL) 154–5
UN Conference on Environment and Development 385
uncertainty
future challenges, see future challenges and risk-sharing, see risk-sharing in public–private partnerships
university planning programs and courses 23–4
‘urban consolidation centre’ (UCC) 114, 117; see also urban freight distribution
urban development and heritage, see heritage and urban development
urban development history 15–35
advocacy planning and participatory planning 27
anarcho-socialism and communism 22, 26
bourgeoisie power 16, 17
capitalism effects 18–19, 29–30
City Beautiful 21–2
city planning guides 23
Civil Rights Movements and mass mobilizations, effects of 27–8
colonialism and mercantilism 16–17
community development focus 29
diversity planning 32
economic development focus 28–9, 30–31
environmentalism and sustainable development 31
equity planning and progressive local regimes 32
founding proposals and philosophical foundations 19–23
garden cities 19–20
highway construction impact 25–6
human ecology school (School of Chicago) 22–3, 24
industrial revolution effects 17
mainstream–grassroots tension 30–32
‘model towns’ 21
modern field, institutionalization and consolidation 23–6, 27
modernism and formative period 17–19
municipal socialism 21
new towns/villages 21
new urbanism 31–2
non-governmental organizations (NGOs) involvement 29
political and socio-economic forces, effects of 25–6, 27
postmodernism and neoliberalism 29–30
poverty issues 27–8
pre-capitalist city 15
private sector involvement 18–19, 22, 23
rational planning crisis 26–9
secularization and rationality 16, 18
social change proposals 22
stakeholder involvement 18, 19, 27
‘strategic urban planning’ (SUP) 30–31
suburbanization impact 18, 19, 26, 27, 28
university planning programs and courses 23–4
urban systems theory 31
urban utopias 19
see also urban transport planning history
urban freight distribution 106–29
capacity utilization of freight transport 219–20
car-oriented development problems 107–8
clean vehicle initiatives 118–19
congestion and environmental concerns 108–9, 110, 115, 116, 118–19, 122–3, 207, 225
contemporary city planning criticisms 107–8
‘delivery and servicing plan’ (DSP) scheme 117–18
distribution logistics 109, 111, 112
electric vehicles (EVs) 118–19
freight movement restrictions 109, 113, 115
freight partnerships and sustainability 112–13
freight in urban cities 108–9
home delivery and e-commerce 120–21
information systems, need for advanced 111–12
low emission zones (LEZ) 119–20
policy implementation trials 115
receiver-led initiatives 117–18
road hierarchies and management of urban traffic 107, 116
road pricing arguments 122–3
road safety issues 116
stakeholder involvement and freight partnerships 112–13
sustainable freight (‘triple bottom line’ approach) 110–12
‘urban consolidation centre’ (UCC) 114, 117
urban distribution centres 113–14, 379
waste management and sustainable reverse logistics 116–17
urban living trends, see demographic development changes
urban transport planning history 36–52
analytical methods and theories, early 37–8, 39–42
category analysis or cross-classification analysis 43, 48
disaggregate model of mode choice 44, 48, 49
diversion curve models 44
early planning 37–42
forecast horizon 38
four-step models 43, 47–8, 49
Fratar growth factor model 36, 40, 43
future forecasting concerns 50
gravity model of trip distribution 40, 43
highway assignment process 41, 44
household trip rate models 43, 48
land use and travel, relationship between 39
land-use modelling 41
modal-split model 43–4, 48
model evolution 42–7
multi-path algorithm for traffic assignment 45
multiple trip purposes 45–6
off-peak period volumes 45–6
origin–destination surveys 39
peak period transport problem, early 37
public transport use 43–5
rail rapid transit system 44
recent developments 47–9
sequential nature of the models, problems with 47–8
three-step modelling process 37
time periods, focus on 46–7
tour-based models 48–9
travel cost effects 48
travel and demographics, relationship between 39, 41, 43, 46
‘trip’ definition 38
trip distribution estimation 41–2, 48
trip generation models 39–41, 43, 48
trip-interchange model 44
zonal totals, problems with use of 42–3
see also transport planning; urban development history
Urbanik, T. 443
US
American City Planning Institute 23
American with Disabilities Act (ADA)-complementary paratransit schemes 455–6, 459
anti-urbanism, early 18
Bureau of Public Roads (BPR) formula 36, 42
Chicago Area Transportation Study 40–41
Chicago Area Transportation System (CATS) 24
Chicago, Burnham and Bennett plan (1909) 21–2, 23
City Social reformist movement 21
colonization and urban development 17
Detroit model 24, 40
Federal Housing Administration (FHA) 25, 28
federal surface transportation programmes 191–2
first public parking facility for motor cars, Boston 150
freeway development 25, 26
functional road classification 321, 322–3
high-occupancy toll (HOT) lanes 245
Highway Capacity Manual 323
Housing Acts 25
Joint Board on Interstate Highways 25
legislative requirement for metropolitan planning organizations (MPOs) 192
MAP-21 programme (Moving Ahead for Progress in the 21st Century) 192–3
National Conference in City Planning 23
New York’s Sustainable Streets Plan 193–4
private sector involvement 18–19, 22, 23
Regional Plan of New York and its Environ (1929) 22
Regional Planning Association of America (RPAA) 22
Resettlement Administration program 21
reversible lane systems 444
San Francisco, rail rapid transit (BART) system 44
Transportation Network Companies (TNCs) 465
transportation roles in economy 231
university planning programs and courses 24
War on Poverty 27–8
utility-based measures and logsum model 57, 59, 60, 64; see also accessibility role

Van Acker, V. 385–404
Van Amelsfort, D. 442
Van Dender, K. 63, 74, 167
Van Der Heijden, R. 111–12
Van Middlesworth, M. 505
Van Noort, M. 505
Van Ommeren, J. 149, 158
Van Wee, B. 53–66, 387, 509, 510
Van Winsum, W. 505–6
Van Wolffelaar, P. 505–6
Varaiya, P. 437

variable message signs (VMS) 435, 437, 444, 445, 447; see also traffic and mobility management
vehicle access and utilization 473, 475, 476, 477, 493; see also on-road public transport management
vehicle automation and transport system performance 498–516
accessibility changes, effects of 509, 510–11
adaptive cruise control (ACC) 499–500, 501, 504–5
agent-based approach 505, 508
automated highway systems (AHS) 501
capacity improvements, effects of 501–2
deployment staging 500–501
driver assistance systems and cruise control 499–500
driving simulator use 505–6
F.A.S.T. (Flexible Agent-based Simulator of Traffic) model 505
impact assessment 503–12
intersection design possibilities 511–12
ITS Modeller 505
micro-simulation software packages, use of 504–5
motorway shockwaves and penetration rates 505
navigation ability 511–12
parking features 502, 511
partial automation 500
Personal Rapid Transit (PRT) system 506
‘ripple effect’ model 501–2
shared vehicle systems 507–8
societal implications and energy consumption 503
spatial level impact 509–12
traffic-flow efficiency effects 503–4, 505
transportation system, effects on 506–8
travel costs and location choices 501, 502–3, 510–11
travel effort, time and cost, effects on 509–10
urban congestion problems 498–9
vehicle automation definition 499–500
vehicle kilometres of travel (VKT) 204, 209, 213, 215–16, 220, 221; see also sustainable future policy
vehicle numbers per head of population (motorization rate) 146–7, 149
vehicle ownership, see car ownership
vehicle routing and scheduling problem with time windows (VRPTW) models 379; see also city logistics
vehicle utilization improvement 218–20, 225; see also sustainable future policy
Velaga, N. 452, 453
Venables, A. 283
Verhoef, E. 240, 242, 246, 247, 248, 249
Verlinde, S. 117
Verplanken, B. 387
Vickrey, W. 245, 246, 433
Victor, D. 74
Viegas, J. 494
Vigar, G. 167, 321
Ville, S. 115
Visser, J. 376
Von Cube, H. 44
Voorhees, A. 40
Vuchic, V. 323, 471, 472–3, 481–2
Wachs, M. 70, 412
Wadell, P. 511
Wagner, J. 501
Wakabayashi, H. 135–6
Walker, A. 83
Walker, G. 165–6
Walker, J. 236, 387
walking 394, 395, 396, 397, 398–401
sustainable future policy 217–18, 218, 223–4, 225
WHO health economic assessment tools (HEAT) 277

see also cycling
Wall, D. 168, 176
Walters, A. 244–5, 246
Wardman, M. 60, 242, 243, 276, 279
Wardrop, J. 136
Warwick, K. 504, 511
waste management and sustainable reverse logistics 116–17; see also environmental issues
weather
disruption reports 101
patterns, effects on mega-infrastructure decisions 415
surface flash flooding and residential parking, parking 150
see also environmental issues
Wegener, M. 511
Westerlund, Y. 455
Westhoff, D. 499, 500
Wheaton, W. 247
White, P. 479
Whitehead, T. 335
WHO (World Health Organization) 79, 211, 212, 277, 279, 280
Wickelgren, A. 265
Wijesoma, W. 511
Williams, H. 236, 341
Willumsen, L.G. 338–54
Winslott-Hiselius, L. 167
Wismans, L. 246, 356
Witlox, F. 389
Wolshon, B. 444
Wong, R. 356
Woodcock, J. 110, 111, 471
Wootton, H. 43
Workplace Parking Levy (WPL) 154–5;
see also parking
World Road Association (WRA), urban freight transport management report 377
Worsley, T. 276, 277, 281
Woudsma, C. 108
Wright, S. 452–70
Xie, X. 360
Xu, R. 247
Yang, H. 136, 356
Yang, Y. 294
Yao, J. 360
Young, A. 324, 330
Yusuf, J. 249
Zachary, S. 341
Zamparini, L. 242
Zaninotto, P. 71
Zarco-Jasso, H. 255
Zetlein, L. 443
Zhang, A. 240, 242, 244
Zhang, L. 446–7
Zhang, R. 508
Zhang, W. 247
Zhao, F. 356
Zheng, J. 482
Zheng, N. 358, 360
Zmud, J. 351
Zunder, T.H. 106–29