Index

Note: Page numbers followed by "*n*" indicate footnotes.

Accessibility, 3, 5, 39, 48, 50, 95, 97, 128, 162, 164, 187, 190, 192, 195, 205
Accidents, 173
Accountability, 21
  barriers, 31–32
  scenarios used in interviews, 26–27
Accountability regimes, 22
  current, 28–30
  future, 30–31
Administrative instruments, 6
Affordances, 9–10
Australia, 11, 92, 96, 106, 114–115, 195, 210
Australian transport agencies, 113–114
Authority/authorities, 2–3, 8, 10, 23, 32–33, 142, 149, 155, 156–158, 163
Automated vehicles, 38
  CLDs, 40–41, 45–50
  costs, 39
  driverless vehicles, 38–39
  effects, 41–42
  literature search, 39–40
  sustainability goals, 39
Automation, 11, 37–40, 49, 58, 158
Autonomous vehicles (AVs), 76, 92–93, 97, 149, 188, 190
  pilot schemes to test, 198
  and public transport in rural areas, 193–196

'Backcasting' techniques, 95
Behaviour, 6
Bemelmans-Videc, 8
Betamax/VHS, 112
Bird, 170–171, 173
BMW, 204
Breng flex, 193

Capping of fleet sizes, 178
Car-free zones, 3
Carpooling, 191–192
Car-sharing, 2, 91, 192, 210
Carbon-free transport, 187
Causal loop diagrams (CLDs), 38, 40–41, 45–46
  analysis, 47–48
  as collaboration tool, 50
  components, 40
  reflections from sustainability perspective, 49–50
  reflections on needs for policies, 48–49
Change, 5, 20, 60, 63, 115, 140, 143–144, 146, 180, 188, 217
Charges and fees, 179
Citizen, 131
Citizen assembly, 219
Citizen participation, 203–213
Climate crisis, 3–4, 214
Co-design of regulation, 116
Co-production of regulation, 116
Collaboration, 130–131
  necessity for, 126–128
Combined Authorities, 23–24, 30
Committee on Climate Change (CCC), 140
Competition, 30, 32, 49, 58, 61, 105, 113, 116, 129, 159, 173–174, 177, 190, 210
Complex networks, 38

Complexity, 22, 31–34, 63, 76, 91, 95–96, 111, 122, 126, 197
Compulsory data sharing, 179
Congestion, 205
Connected and autonomous vehicles (CAVs), 59
Contracts, 30, 107, 110, 114, 126, 157, 178
Cost[s], 39
  coverage, 190
Customers, 31, 91, 128, 209, 217, 220

Daimler, 204
Danish model, 196
Data, 90–91
Data management
  regulations, 157, 163
  rules for, 160
Decision making, 23, 60, 94, 128, 147, 207, 214
Degree of urbanisation classification (DEGURBA), 188
Delegation of MLG, 63–64
Deliberation, 205, 215
Demand Responsive Transport (DRT), 189, 190, 195
Democracy, 131, 207, 218–219
Democratic processes, 11, 113
Demography, 91–92
Digital data, 162
Digital technology, 203–204
Digitalisation, 219
Digitalised data, 156
Dockless, 20, 25, 28–29, 31, 64, 169–170, 176–178, 181
Drive Sweden, 123, 125, 127
Driverless
  taxi, 41–42
  technology, 49
  vehicles, 38–39, 42
DRS, 90, 92–93

Economic policy measure, 188
Economic theory, 48
Electric vehicle technologies (EV technologies), 90
ElectriCity, 125
Electric scooter (E-scooters), 176–177, 210
  policy instruments and regulatory tools, 177–180
  regulation, 172–177
  shared dockless, 172
Elite, 217–218
Employees and competencies, 157–158, 161
Employees and skills, 164
England, local transport governance in, 22–25
Equity, 67
Existing infrastructure, 157–158, 161, 164
Experiments, 120, 122, 124, 127–128, 130–131, 208
Experimental governance, 120
  collaboration, 130–131
  learning by ‘doing’, 124–126, 129–130
  necessity for collaboration, 126–128
  need for exceptional solutions, 128–129
  need for extraordinary solutions, 122–124
  as policy instrument, 122
  policy instrumentation perspective on, 121–122
Expert knowledge, 11, 218
External costs of transport, 173
Externalities, 173
  argument, 115
Extraordinary problem, 128
Extraordinary solutions, 131–132
  need for, 122–124

Feedback loop, 190
Financial instruments, 6
First- and last-mile problem, 192

5G technology, 49
FlexDanmark, 196
Freight transport, 42
Fungibility, 142
Future accountability
  positions, 30
  regimes, 30–31

Gaming and tactics of policy making, 63–64
Generalised travel costs, 39
Geofencing, 177–178
Geographic variation, 92
Goals, 2–3, 5, 7, 20–21, 34, 39, 43, 48, 51, 63, 66, 124, 128–129, 141, 149, 175, 205–206
Gothenburg, 109, 125, 195
Governable, 217, 220
Governance (*see also* Multi-level governance (MLG)), 153–154, 217–220
  demand for, 154
  local transport governance in England, 22–25
  need for, 2–3
  and policies, 49
Governance powers, 23–24, 69
Governance structures, 11, 62, 147
Governing capacity, 154–155, 209
  analytical approach, 155–156
  categorisations of current policy instruments, 156–158
  operationalisation of four NATO resources, 158
  of regulations for traffic, drivers and vehicles, 160
  in smart mobility futures, 158–164
Government activity, 142
Greater London Authority, 23*n*1
Greater Manchester Combined Authority, 24
Group Model Building, 40–41

Hands-off approach, 176–177
Hierarchy, 63
Hood and Margetts, 142–143, 155–156
Howlett, 4, 8, 141–145, 149, 204

Inclusion, 67
Individualism, 155, 158–159
Induced demand, 93–94
Information and communication technology (ICT), 188, 190, 195
  and public transport in rural areas, 192–193
Information asymmetries, 67
Informative instruments, 6
Infrastructure investments, 157, 160, 163
Innovation, 219
Innovation journey, 218
Innovation policy, 149, 208, 218
Inputs, 90–91
Institutions, 23, 58–63, 65–67, 154, 218–219
Integration, 31, 34, 62, 147–148, 178, 192–193, 197, 208
Intelligent transport systems (ITS), 156
International academic collaborations, 116
International Transport Forum (ITF), 2, 177–178, 190
Interoperability, 197
Interviews, 24–25

Knowledge technology, 97
KOMPIS, 127

Laissez-faire approach, 180
Land use and planning, 160
Land-use policy, 7
Lascoumes, P, 8–10, 120–121, 131
Le Galés, P, 8–10, 120–121, 131
Learning, 29, 120, 124, 126, 130, 149, 180, 210
Learning by ‘doing’, 124–126, 129–130
Legislation in Norway, 171
Legitimacy, 8, 11, 60, 62–63, 70, 76, 121, 179, 206–207, 219
Littering, 175

Living labs, 124
Local accountability arrangements, 21–22
Local transport governance in England, 22–25
Location, 93–94
Low carbon mobility, 140

'Map mash-up' workshops, 95
Marginal cost, 39
  of cars and road freight vehicles, 47
  of road transport, 50–51
Market, 159
Market failure, 173–175
Meta-instrument, 9
Metropolitan Strategic Authorities, 147–148
Micromobility, 169–170
  E-scooter regulation, 172–177
  policy instruments and regulatory tools, 177–180
Milton Keynes Council (MKC), 29
Minimising regulatory barriers, 177
Mobike, 28
Mobility as a Service (MaaS), 2, 20, 59, 64, 106, 126, 129, 140, 146, 148, 217
  MaaS Global, 28
  MaaS-solution, 130
Mobility Data Specification (MDS), 179
Mobility management, 6
Mobility service, 91, 120, 162, 209–210
Modal shares, 93
Model design, 90–91
Modelling, 2, 40, 76–78, 90–91, 94–96, 193, 195, 207
Monopolies, 19, 106–107, 109, 114–116
Multi-level governance (MLG) (*see also* Governance), 58–62
  (dis)advantages, 62
  case study policy instruments, 67–70
  delegation, gaming and tactics of policy making, 63–64
  new policy instruments 'test' MLG arrangements, 64–67
Multi-purpose institutions, 61
Multi-stakeholder context, 11
Municipality, 130
Mutual dialogue in social networks, 156, 162

'National' policy responsibility, 61
Network
  capacity assumptions, 92–93
  management, 64
New public policy instruments, 120
Nimble government, 113
Nimble private sector, 106
Nodality, 142, 155–156, 158, 162
  competition for, 159
Nodality, Authority, Treasure and Organisation (NATO), 142, 156–158

Objectives, 2–4, 76, 95, 107, 113, 124, 149, 173, 177, 181, 205
Open Mobility Foundation, 182
'Open-minded' governance structures, 147
Organization/organisation, 142, 155, 157–158
Organisational change, 196–197
Oslo, 114, 170, 172–173, 181

Parlance policy instruments, 142
Participant selection, 24–25
Participatory workshops, 95
Partnership(s), 30, 32, 110, 112–114, 127, 181
Passenger transport, 41–42
Passenger Transport Authority (PTA), 172
Pedestrianisation, 3
Penalties, 179
Person-kilometres travelled (PKT), 41
'Physical' policy instrument, 5
Pilot schemes, 180
  to test AVs, 198
Planning, 75–102
Planning support tools (PSTs), 76

approach, 77–78
data, inputs, and model design, 90–91
geographic variation, 92
limitations of PSTs to policy-makers, 90
mobility type definitions, 72
modal shares and impact on public transport, 93
network capacity assumptions, 92–93
publications reviewed by geography and mode, 73–89
roles in shaping 'smart' urban futures, 94–96
smart mobility 'knowledge', 90
smart mobility knowledge and limitations of modelling analyses, 72, 90
transport demand, location, and induced demand, 93–94
trip purpose and demography, 91–92
typical organisation of transport planning project, 77
Planning system, 112
Policy, 141–143, 207
alignment, 58, 207
capacity, 154
instrumentation perspective on experimental governance, 121–122
policy making, gaming and tactics of, 63–64
taxonomy, 141
Policy acceptance, 206–207
Policy action, 61
Policy change, 140
catalysts for, 143–144
Policy instruments, 3–5, 141–143, 208–211
background literature on impacts and needs, 41–43, 45
case study, 67–70
cost-effectiveness, 8
development, 206–208
experimental governance as, 122–131
knowledge production, 8–9
limits of, 9–10
need for, 205–206
new policy instruments 'test' MLG arrangements, 64–67
research on, 7–8
smart mobility as, 146–149
transport sector goals, 43–44
used to govern transport, 5–7
Policy-makers, limitations of PSTs to, 90
Policymaking, 60, 207
Policy moment, 63, 66–67, 207
Policy package, 10
Pragmatic approach, 8–9
Pragmatism, 111
Political institution, 219
Pricing, 67–69
Private actors, 116
Private Hire Vehicles (PHVs), 28
Private sector perspectives, 109–114
Proactive governance, 146
Process values, 121
Proportionality principle, 177
Public
actors, 116, 120
good, 106, 112
policy principles, 20
sector perspectives, 108–109
space, 174
Public transport, PSTs impact on, 93
Public Transport Authority (PTA), 193
Public transport in rural areas (*see also* Urban transport systems)
AVs and, 193–196
challenges and solutions, 190–192
ICT and, 192–193
need for, 189–190
organisational changes and removal of regulatory barriers, 196–197
pilot schemes to test AVs, 198

policy suggestions for new solutions, 196
user-centred design, 197–198
Public values, 4, 120–121, 128–130, 207, 209

R&D efforts, 6–7, 160, 163
Reactive organisation with decreased capacity, 161
Real life environment, 132
Realitylab Göteborg, 125
Reflexive governance, 149
Reflexivity, 149–150, 209
Regulation, 109, 170, 172–177, 181
Regulations for land use and planning, 157
Regulations for traffic, 157
Regulatory impact assessment (RIA), 177
Regulatory barrier, 177, 181, 196–198
Regulatory sandboxes, 180–181
Research, 6, 8, 91, 108, 126
Ride-hailing, 114–115, 210–211
Ridesharing, 64, 66, 69–70, 91, 93, 210–211
Rist, Ray C., 8
Ruled, 210–214
Rulers, 210–214
Rural areas, 187–198
Road investments, need for, 160
Roadspace allocation, 69–70

Scope and structure of state, 157–158, 161, 164
Shared mobility
breakthrough of, 161–164
solutions, 1–2
Sharing economy, 155, 161–164
Smart mobility, 2, 57–58, 119–120, 140, 153, 208–211
accountability barriers, 31–32
benefits and risks, 20–21
current accountability regimes, 28–30
developments in England, 25, 28
as exogenous shock, 144–146
future accountability regimes, 30–31
implementation, 64
knowledge, 90
knowledge and limitations of modelling analyses, 72, 89
and local accountability arrangements, 21–22
local transport governance in England, 22–25
participant selection and interviews, 24–25
policies need to be aligned, 69–70
as policy instrument(s) for endogenous change, 146–149
prevalence, 59
for taxation, 68
transition, 21, 59, 65, 68
uncertainty, 28–30
Smart mobility providers, 21–22, 24, 29–34, 210–211
Smart movement, 131
Snowballing, 39–40
Societal goals, 175–176
Subsidies, 157, 161, 163, 174
Substantive values, 121
Supra-national regulation, 59
Stockholm, 125, 195
Sustainability, 129
Sustainability goals, 39
Sustainability transition, 12, 218
Sustainable Development Goals (SDGs), 3, 38
Sustainable mobility, 4–5, 10, 20, 126, 128
Sustainable society, 12, 218, 220
Sweden, 40, 48, 120–131, 155, 187–191, 206
Swedish Transport Administration, 43, 43*n*2, 48
Symbolic, 131, 156, 210
System Dynamics and Causal Loop Diagram, 11, 38
System dynamics, 38, 40

Target group, 5, 8–10, 206–207, 209, 217–218
Taxes and fees, 157
Testbed(s), 123–125, 210–211
Testing in real life situations, 130
Tomelilla innovation week, 127
Traffic congestion, 128
Transparency, 11, 121, 128–130, 132
Transport (*see also* Urban transport systems), 58
  demand, 93–94
  demand models, 94
  freight, 42
  functions, 23
  passenger, 41–42
  policy objectives, 157
  system, 158–159
  taxation, 67–69
  transport planning project, typical organisation of, 77
Transport governance, England, 22–24
Transport for Greater Manchester (TfGM), 24, 28, 30, 32
Transport for London (TfL), 149
Transport for West Midlands (TfWM), 24, 28, 30
Treasure, 142, 155, 157–158
Trip purpose, 91–92
Trust, 42, 48, 181, 206–207

Uncertainty, 28–30
Ungovernability, 154
Unilateral state communication, 162, 162
Urban Living Labs (ULLs), 124
Urban transport systems (*see also* Public transport in rural areas), 106–107
  market forces, 115–116
  platform technologies, 114–115
  private sector perspectives, 109–114
  public sector perspectives, 108–109
  research approach, 108
User groups, 41, 48, 70
User-centred design, 197–198

Value of Travel Time (VTT), 41, 47, 49–50, 91
Vehicle-kilometre travelled (VKT), 39, 41, 50, 205
Vehicles and drivers, 157
Viable Cities, 127
Volunteer-based transport, 192
Vinnova, 123

West Midlands Combined Authority, 24
West Midlands, 32
West Yorkshire Combined Authority (WYCA), 24
'Wicked' problems in policy documents, 122–123, 128
Window of opportunity, 2, 33, 182, 205

Yellow vests, 188, 192, 206

Zuboff, 203, 208, 215