

Index

Table of Contents

Table of Contents i

List of Figures v

Executive summary 1

1 Introduction to micromobility 3

 1.1 Introduction 3

 1.1.1 Passenger cars in use by region 4

 1.1.2 New passenger car registration trends 6

 1.1.3 Bicycle and scooter usage 9

 1.1.4 Shared mobility services 10

 1.2 Market trends 12

 1.2.1 Peak car use and car ownership 12

 1.2.2 The sharing economy 13

 1.3 Overview of micromobility services 13

 1.3.1 Bikesharing services 14

 1.3.2 Scootersharing services 16

 1.3.3 Operational models 17

 1.4 Micromobility services worldwide 18

 1.4.1 Micromobility in Europe 19

 1.4.2 Micromobility in North America 20

 1.4.3 Micromobility in Asia-Pacific 21

 1.4.4 Overview of micromobility service providers 23

 1.4.5 Business models 27

 1.5 Micromobility telematics infrastructure 29

 1.5.1 Vehicle segment 30

 1.5.2 Tracking segment 32

 1.5.3 Network segment 33

 1.5.4 Service segment 34

2 Market forecasts and trends 37

2.1	Bikesharing market forecasts	38
2.1.1	Bikesharing in the EU28+EFTA	40
2.1.2	Bikesharing in North America	41
2.1.3	Bikesharing in Rest of World	43
2.1.4	Bikesharing technology vendor market shares	44
2.2	Scootersharing market forecasts	46
2.2.1	The global scootersharing market	48
2.2.2	Scootersharing service providers	49
2.3	Regulatory environment	50
2.4	Market trends and industry observations	55
2.4.1	Micromobility is becoming increasingly integrated with other mobility services	55
2.4.2	Micromobility and public transport ecosystems to converge	56
2.4.3	Cities will embrace various types of micromobility	56
2.4.4	Micromobility operators to develop and use more ruggedized vehicles.....	57
2.4.5	Micromobility becomes a popular means to reduce corporate mobility costs ..	57
3	Company profiles and strategies.....	59
3.1	Specialist bikesharing companies.....	60
3.1.1	Anywheel.....	62
3.1.2	Call a Bike by DB Connect.....	62
3.1.3	Clear Channel.....	63
3.1.4	CycleHop (HOPR)	64
3.1.5	Docomo Cycle.....	65
3.1.6	Donkey Republic	65
3.1.7	GoBee	67
3.1.8	Hellobike.....	67
3.1.9	JCDecaux (Cyclocity)	68
3.1.10	JUMP Bikes (Social Bicycles)	71
3.1.11	Lime	73
3.1.12	Mobike.....	75
3.1.13	Motivate	77
3.1.14	Nextbike.....	78
3.1.15	oBike.....	80

3.1.16 Ofo..... 80

3.1.17 VBikes..... 82

3.1.18 Yulu..... 82

3.1.19 Zagster 82

3.2 Specialist scootersharing companies 84

3.2.1 Bird 86

3.2.2 Blinkee.city 88

3.2.3 CityScoot..... 88

3.2.4 Coup..... 89

3.2.5 ECooltra..... 90

3.2.6 Emmy 92

3.2.7 Felyx 93

3.2.8 Muving..... 93

3.2.9 Poppy 94

3.2.10 Popscoot 94

3.2.11 Revel..... 95

3.2.12 Scoot Networks 95

3.2.13 Scooty 96

3.2.14 Skip 96

3.2.15 Spin 98

3.3 Technology vendors..... 98

3.3.1 8D Technologies 100

3.3.2 Bewegen Technologies..... 101

3.3.3 Conneqtech..... 101

3.3.4 Comodule..... 103

3.3.5 DropBike (Drop Mobility)..... 103

3.3.6 INVERS..... 104

3.3.7 Joyride Technologies..... 106

3.3.8 Mobilock..... 106

3.3.9 Omni..... 107

3.3.10 Omoove (Octo Telematics) 108

3.3.11 Sensefields..... 109

3.3.12 PBSC Urban Solutions 109

3.3.13 SharingOS 112

3.3.14 Sitael 113

3.3.15 Smoove 114

3.3.16 Vulog 116

3.3.17 Youon Bike Technologies 117

Glossary 119

Index

List of Figures

Figure 1.1: Car parc by region (World 2009–2015)	5
Figure 1.2: Passenger car parc density by region (World 2015).....	6
Figure 1.3: New car registration data (World 2010–2017).....	7
Figure 1.4: Top 10 countries by new passenger car and light truck registrations (2017).....	8
Figure 1.5: Top 10 countries by new motorcycle and moped registrations (2017)	10
Figure 1.6: Example of bicycle design used in bikesharing schemes	15
Figure 1.7: Examples of vehicles used in scootersharing services	16
Figure 1.8: Bike and scootersharing fleet size and availability (World 2013–2017)	19
Figure 1.9: Micromobility service providers by industry background	24
Figure 1.10: Micromobility telematics system overview	30
Figure 1.11: On-board computer and QR code reader	31
Figure 2.1: Micromobility fleet by service (World 2017–2023).....	37
Figure 2.2: Bikesharing fleet by operational model (World 2017–2023)	39
Figure 2.3: Bikesharing stations by region (World 2017–2023)	40
Figure 2.4: Bikesharing fleet and stations (EU28+EFTA 2017–2023).....	41
Figure 2.5: Bikesharing fleet and stations (North America 2017–2023)	42
Figure 2.6: Bikesharing fleet and stations (ROW 2017–2022)	44
Figure 2.7: Leading bikesharing technology vendors (World Q4-2017)	46
Figure 2.8: Scootersharing fleet by vehicle type (World 2017–2023).....	47
Figure 2.9: Scootersharing fleet by vehicle type (World 2017–2023).....	48
Figure 2.10: Leading stand up scootersharing providers (World Q3-2018).....	49
Figure 2.11: Leading traditional scootersharing operators (World Q3-2018).....	50
Figure 3.1: Bikesharing service providers (World Q4-2018).....	61
Figure 3.2: JCDecaux station in Lyon with an adjacent digital display	70
Figure 3.3: JUMP electric pedal-assisted bike	72
Figure 3.4: Mobike Classic	76
Figure 3.5: Scootersharing service providers (World Q4-2018).....	85
Figure 3.6: Bird Scooter specifications.....	87
Figure 3.7: Skip scooter.....	97

Figure 3.8: Micromobility technology vendors (2018) 99

Figure 3.9: Scootersharing telematics device from INVERS 105

Figure 3.10: Bikesharing station from PBSC Urban Solutions 110

Figure 3.11: In-vehicle hardware from Vulog 116