

Transport Trends and Economics 2018–2019

Mobility as a Service

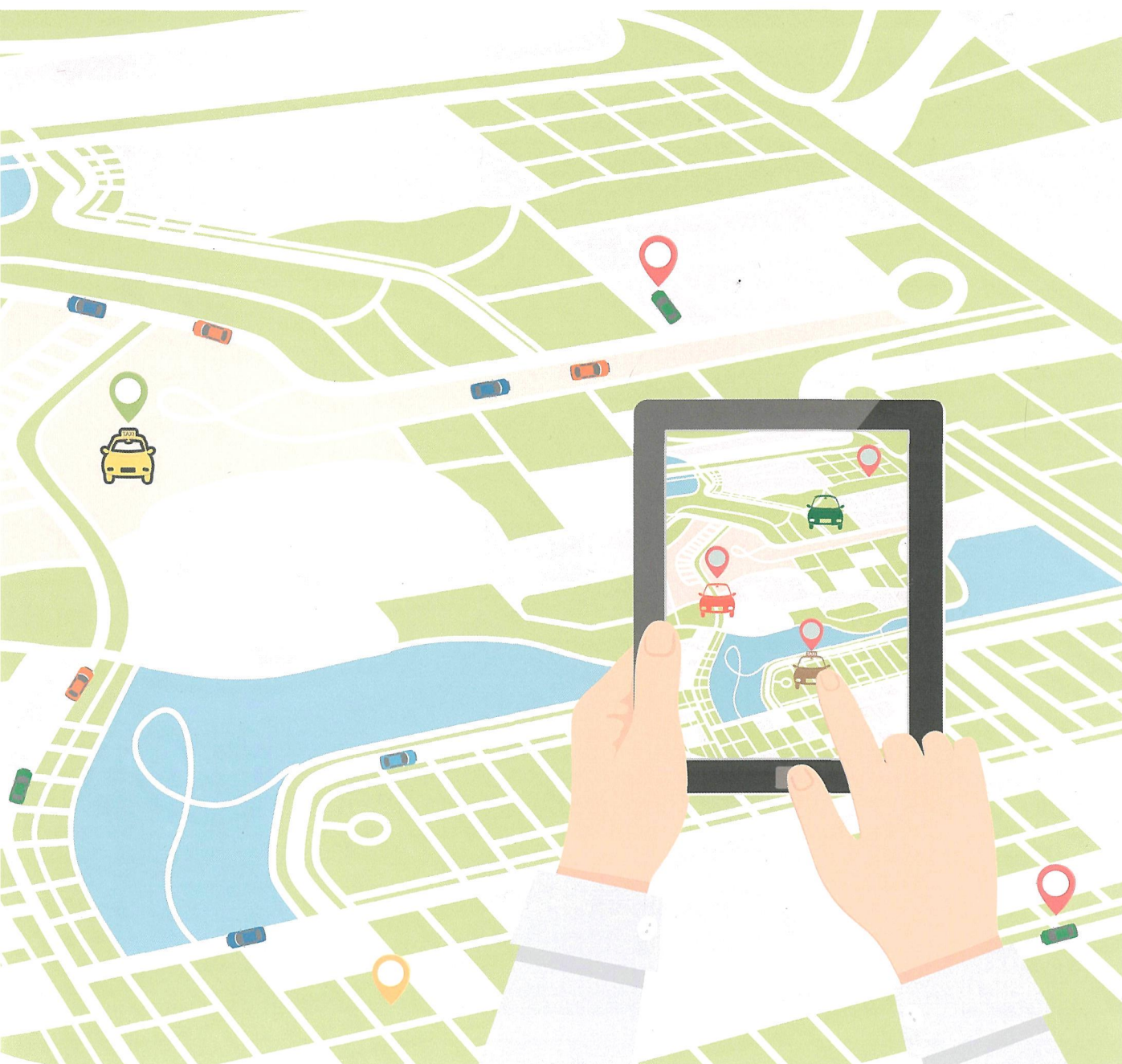


TABLE OF CONTENTS

CHAPTER 1 MOBILITY AS A SERVICE: CONCEPT, OBJECTIVES, ACTORS, MODELS AND DEVELOPMENT	9
1.1 Introduction.....	9
1.2 Definitions.....	9
1.3 MaaS objectives and Target Groups.....	10
1.4 MaaS typology.....	10
1.5 Understanding the MaaS innovation.....	11
1.6 MaaS actors, enablers and challenges.....	12
CHAPTER 2 DIGITAL ENABLERS OF MOBILITY AS A SERVICE	14
2.1 Digital mobility platform and its functionalities.....	14
2.1.1 Information and availability	15
2.1.2 Routing.....	17
2.1.3 Booking, ticketing and payment.....	17
2.1.4 Reporting.....	19
2.2 Advantages from a MaaS platform.....	20
2.3 Case studies.....	21
2.3.1 Stockholm.....	21
2.3.2 Aarhus.....	23
CHAPTER 3 CAR-SHARING	25
3.1 Car-sharing development.....	25
3.2 Car-sharing models.....	26
3.3 Car-sharing business case.....	27
3.4 Good practices and case studies.....	28
3.5 Challenges and trends.....	29
3.5.1 Trends.....	29
3.5.2 Challenges.....	31
3.6 Car-sharing and MaaS.....	31
CHAPTER 4 BIKE-SHARING	32
4.1 Bike-sharing systems.....	32
4.2 Bike-sharing models & business cases.....	33
4.3 Benefits, challenges and trends.....	34
4.4 Bike-sharing and MaaS.....	38
CHAPTER 5 MAAS COST, RISK AND REVENUE CHALLENGES	40
5.1 Business models, assumed risks and the revenue challenge.....	40
5.2 Lessons learned from existing MaaS applications.....	43
5.3 Lessons learned on bundling services and goods from other sectors.....	45
5.4 The Revenue Allocation Challenge.....	45
5.4.1 Demand.....	46
5.4.2 Revenues.....	46
5.4.3 Seeking the breakeven point.....	47
5.5 Addressing the revenue allocation challenge.....	48

CHAPTER 6 MAAS INFRASTRUCTURE CHALLENGES	50
6.1 Role of transport infrastructure, transport infrastructure providers and business model.....	50
6.2 The transport infrastructure providers value proposition.....	51
6.3 Impact of MaaS.....	51
6.4 Integrated Network Management.....	52
CHAPTER 7 CONCLUSIONS AND RECOMMENDATIONS	56
7.1 Conclusions.....	56
7.2 Recommendations.....	57
REFERENCES	58

LIST OF FIGURES

Figure 2.1 MaaS platform integrating mobility and service delivery to travellers.....	14
Figure 2.2 Main functionalities of a MaaS platform.....	15
Figure 2.3 Intermodal routing options with MaaS (a) within the same zone, and (b) across different zones.....	17
Figure 2.4 Reporting dashboard.....	19
Figure 2.5 The Role of MaaS providers.....	20
Figure 2.6 Screens of the B2C MaaS solution UbiGo.....	21
Figure 2.7 Backoffice of the UbiGo MaaS platform.....	22
Figure 2.8 Web client of Aarhus' mobility platform.....	23
Figure 3.1 Awareness and use of transport services.....	25
Figure 4.1 Global presence of bike sharing systems 2017.....	32
Figure 4.2 Growing ridership.....	35
Figure 4.3 Estimated economic impact from bike sharing in the European Union.....	37
Figure 5.1 Potential business models and respective risk uptake.....	40
Figure 5.2 Benefits and Risks Levels for the Broker and the Mobility Providers under payment option levels.....	41
Figure 5.3 Benefits and Risks Levels for the Coordinator and the Mobility Providers under payment options.....	42
Figure 5.4 Figurative representation of C_n	47
Figure 5.5 Decision points leading the revenue allocation challenge.....	49
Figure 6.1 Business model for Transport Infrastructure Providers.....	50
Figure 6.2 Transport Infrastructure Providers' role in data management.....	52
Figure 6.3 Integrated Network Management.....	53
Figure 6.4 Corridor management strategy as an approach of TIPs for MaaS enhancement.....	55

LIST OF TABLES

Table 2.1 Information and service availability in the MaaS platform.....	16
Table 2.2 Routing data by transport services integrated in a MaaS platform.....	16
Table 2.3 Booking processes and data in the MaaS platform.....	18
Table 5.1 MaaS initiatives reviewed.....	44