



## **Mobility as a Service in a multimodal European cross-border Corridor (MyCorridor)**

### **Deliverable 8.11**

### **Report on activities of liaison with MaaS Alliance**

Carlo Giro, Samson Tsegay and Ted Zotos  
(IRU Projects)



<b>MyCorridor</b>	<b>D8.11</b>
<b>Dissemination level:</b>	<b>PU</b>
<b>Work package:</b>	<b>WP8: Dissemination, Exploitation and Policy Issues</b>
<b>Lead beneficiary:</b>	<b>Carlo Giro, Samson Tsegay, Ted Zotos (IRU)</b>
<b>Other beneficiaries involved:</b>	<b>Athanasios Salamanis (CERTH/ITI), Jeremy Godley (OC), Marie-Claire Smith (OC), David Golightly (UNEW)</b>
<b>Date due to EC:</b>	<b>30/11/2020 - M42</b>
<b>Date of Delivery to EC:</b>	<b>19/11/2020</b>
<b>Status (F: final; D: draft; RD: revised draft):</b>	<b>F</b>
<b>File Name:</b>	<b>MyCorridor_D8.11_Report on activities of liaison with MaaS Alliance_Final</b>
<b>Version:</b>	<b>Final</b>

## Document history

Version No.	Date	Details
0.1	10/03/2020	1 <sup>st</sup> draft version, provided by IRU including the skeleton and the methodology of the Deliverable
0.2	13/03/2020	2 <sup>nd</sup> draft version, inclusion of content related to MaaS Alliance
0.3	24/03/2020	3 <sup>rd</sup> draft version, inclusion of content related to MyCorridor
0.4	14/04/2020	4 <sup>th</sup> draft version, inclusion of liaison activities between MyCorridor and MaaS Alliance
0.5	18/04/2020	5 <sup>th</sup> draft version, inclusion of information related to the Cluster meetings
0.6	22/04/2020	6 <sup>th</sup> draft version, inclusion of joint events between MyCorridor and MaaS Alliance
0.7	04/05/2020	7 <sup>th</sup> draft version, inclusion of additional information related to the liaison activities between MyCorridor and MaaS Alliance
0.8	05/05/2020	8 <sup>th</sup> draft version, inclusion of conclusion and recommendations
0.9	07/05/2020	9 <sup>th</sup> draft version, inclusion of Table 1 and Table 2, added references
1.0	22/10/2020	10 <sup>th</sup> draft version – OC's input to Chapter 3.5 and Chapter 3.6

Version No.	Date	Details
1.1	02/11/2020	11 <sup>th</sup> revised draft version – final version before peer-reviewing
Final	19/11/2020	Final version after peer review towards submission

## Reviewers List

Name	Company
Gino Franco	External expert
Laura Cocone	SWARCO Mizar, MyCorridor Quality Assurance Manager
Gennaro Ciccarelli	TTS Italia
Marie-Claire Smith	Osborne Clarke

*This project is co-funded by the European Union under the Horizon 2020 Research and Innovation Programme. The content of this document reflects solely the views of its authors. The European Commission is not liable for any use that may be made of the information contained therein.*

*The members of the MyCorridor project Consortium shall have no liability for damages of any kind including, without limitation, direct, special, indirect, or consequential damages that may result from the use of these materials.*

*This deliverable is a draft document subject to revision until formal approval by the European Commission.*

**The MyCorridor project consortium consists of:**

No.	Name	Short name	Country
1	NEWCASTLE UNIVERSITY	UNEW	UK
2	ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS	CERTH	EL
3	OSBORNE CLARKE LLP	OC LLP	UK
4	WINGS ICT SOLUTIONS INFORMATION & COMMUNICATION TECHNOLOGIES EPE	Wings ICT	EL
5	SWARCO MIZAR SRL	SWARCO MIZAR	IT
6	SWARCO HELLAS SYSTIMATA KYKLOFORIAS ANONYMI ETAIREIA	SWARCO Hellas	EL
7	CHAPS SPOL SRO	CHAPS	CZ
8	HACON INGENIEURGESELLSCHAFT MBH	HACON	DE
9	MAP TRAFFIC MANAGEMENT BV	MAPtm	NL
10	VIVA WALLET HOLDINGS - SOFTWARE DEVELOPMENT SA	VivaWallet	EL
11	AMCO OLOKLIROMENA SYSTIMATA YPSILIS TECHNOLOGIAS ANONYMI VIOMICHANIKI KAI EMPORIKI ETAIRIA	AMCO	EL
12	TOMTOM DEVELOPMENT GERMANY GMBH	TOMTOM	DE
13	ROMA SERVIZI PER LA MOBILITA SRL	RSM	IT
14	TTS Italia	TTS	IT
15	PANEPISTIMIO PATRON	UPAT	EL
16	IRU PROJECTS ASBL	IRU	BE
17	SALZBURG RESEARCH FORSCHUNGSGESELLSCHAFT M.B.H.	SFRG	AT

# Table of contents

<b>Table of contents .....</b>	<b>6</b>
<b>List of figures .....</b>	<b>8</b>
<b>List of tables .....</b>	<b>9</b>
<b>Abbreviations List .....</b>	<b>9</b>
<b>Executive summary .....</b>	<b>10</b>
<b>1 Introduction .....</b>	<b>11</b>
1.1 Purpose of the document .....	11
1.2 Intended audience .....	11
1.3 Interrelations .....	11
<b>2 MaaS Alliance .....</b>	<b>13</b>
2.1 Mission .....	13
2.2 Structure .....	13
2.2.1 Members .....	13
2.2.2 Plenary meetings .....	19
2.2.3 Working Groups .....	19
2.3 Content produced by the MaaS Alliance .....	21
<b>3 Liaison activities between MyCorridor and the MaaS Alliance .....</b>	<b>22</b>
3.1 MaaS and MyCorridor .....	22
3.2 Users and Rules Working Group .....	22
3.3 Governance and Business Models Working Group .....	25
3.4 Technology and Standards Working Group .....	26
3.5 MyCorridor Pan European Workshops .....	29
3.5.1 MyCorridor 1 <sup>st</sup> Pan European Workshop .....	29
3.5.2 MyCorridor 2 <sup>nd</sup> Pan European Workshop .....	30
3.5.3 MyCorridor 3 <sup>rd</sup> Pan European Workshop .....	32
3.6 Cluster Meetings .....	34
3.6.1 Cluster Meeting in London, United Kingdom .....	34
3.6.2 Cluster Meeting in Rome, Italy .....	35
3.6.3 Cluster Meeting in Brussels, Belgium .....	38
3.7 Further collaboration (Events, workshops and interviews) .....	43
3.7.1 MaaS Alliance Plenary Meeting .....	43
3.7.2 IRU Stakeholders Forum on Data .....	43
3.7.3 8 <sup>th</sup> IRU International Taxi Forum .....	44
3.7.4 MyCorridor interview to the MaaS Alliance .....	45
3.7.5 External Workshops .....	46

<b>4</b>	<b>Conclusion and Recommendations .....</b>	<b>49</b>
	<b>References .....</b>	<b>50</b>

## List of figures

Figure 1: Geographical distribution of MaaS Alliance members.....	19
Figure 2: Interrelations between the three MaaS Alliance Working Groups.....	21
Figure 3: Vision paper of the MaaS Alliance providing Recommendations on a User-Centric Approach for MaaS.....	23
Figure 4: MaaS Alliance Vision Paper on Passenger Rights in Multimodal Transport.....	24
Figure 5: Cooperation with MaaS Alliance and TM2.0 Platform.....	25
Figure 6: Workshop on MaaS and Multi-Modal Mobility & Traffic Management.....	26
Figure 7: MyCorridor payment form.....	27
Figure 8: MyCorridor confirm payment.....	28
Figure 9: MyCorridor brochure highlighting the link with the MaaS Alliance and use of the MaaS API.....	28
Figure 10: Summary of the content presented by MyCorridor during the MaaS Alliance's Technology and Standards Working Group meeting.....	29
Figure 11: MaaS Alliance providing a summary of the outcomes of the MyCorridor 1 <sup>st</sup> Pan European Workshop in London, United Kingdom.....	30
Figure 12: MaaS Alliance advertising the MyCorridor 2 <sup>nd</sup> Pan European Workshop in Rome, Italy.....	31
Figure 13: Participants at the MyCorridor 2 <sup>nd</sup> Pan European Workshop in Rome, Italy.....	32
Figure 14: MaaS Alliance advertising the MyCorridor 3 <sup>rd</sup> Pan European Workshop.....	33
Figure 15: MaaS Alliance presenting during the MyCorridor 3 <sup>rd</sup> Pan European Workshop.....	34
Figure 16: Participants of the of the MyCorridor cluster meeting in London, United Kingdom.....	35
Figure 17: MyCorridor system architecture presented in the MyCorridor cluster meeting in Rome, Italy.....	36
Figure 18: MyCorridor MaaS&Go scenario dataflow presented in the MyCorridor cluster meeting in Rome, Italy.....	37
Figure 19: MyCorridor MaaSPacks scenario data flow presented in the MyCorridor cluster meeting in Rome, Italy.....	37
Figure 20: Participants of the MyCorridor cluster meeting in Rome, Italy.....	38
Figure 21: MaaS Alliance API and collaboration between MyCorridor, IMOVE and MaaS4EU.....	38
Figure 22: Participants of the cluster meeting organised by the MaaS Alliance in Brussels, Belgium.....	39
Figure 23: Technology and Standards Working Group vision for a MaaS harmonised API.....	40
Figure 24: MaaS Alliance Basic architecture of integration of services.....	40
Figure 25: Project key technical products (1).....	41
Figure 26: Project key technical products (2).....	42
Figure 27: Screenshot of the MyCorridor app.....	42
Figure 28: Agenda of the MaaS Alliance Plenary Meeting held on 5 October 2020.....	43
Figure 29: Launch of the IRU Stakeholders Forum on Data.....	44
Figure 30: MyCorridor at the 8 <sup>th</sup> IRU International Taxi Forum.....	45
Figure 31: MyCorridor interview to the MaaS Alliance.....	46
Figure 32: Joint MaaS Alliance and IRU Workshop on MaaS held in September 2017.....	47
Figure 33: POLIS workshop on Mobility as a Service: What's the role of cities and regions?.....	48



## List of tables

Table 1: List of MaaS Alliance members .....	13
Table 2: List of MaaS Alliance partners.....	18

## Abbreviations List

Abbreviation	Definition
ACEA	European Automobile Manufacturers Association
APIs	Application Programming Interface
CER	Community of European Railway and Infrastructure Companies
D	Deliverable
EC	European Commission
EP	European Parliament
EPF	European Passengers' Federation
ESC	European Shippers' Council
EU	European Union
FIA	Federation Internationale de l'Automobile
IRU	International Road Transport Union
IT	Information Technology
ITS	Intelligent Transport Systems
MaaS	Mobility as a Service
POI	Point of Interest
TM	Traffic Management
UI	User Interface
UITP	International Association of Public Transport
WP	Work Package

## Executive summary

The Deliverable D8.11 “Report on activities of liaison with MaaS Alliance” serves as a descriptive document outlining the overall liaison activities that were conducted throughout the duration of the project between MyCorridor and the MaaS Alliance.

**Chapter 1** introduces the purpose of this document, the anticipated interrelations and the target audience. **Chapter 2** describes the activities of the MaaS Alliance and outlines its mission and structure. The chapter gives an overview of the members of the MaaS Alliance while also describing its structure and working groups. **Chapter 3** explains the interaction between MyCorridor and the MaaS Alliance. This is described by looking into the various joint activities organised by MyCorridor and the MaaS Alliance which include the organisation of cluster meetings, workshops and publications.

The Deliverable concludes in **Chapter 4** with a summary of the overarching aspects of the Deliverable as well as outlining recommendations for future topics to further investigate. In addition, the recommendations identify existing barriers which call for increased cooperation between the stakeholders in the MaaS ecosystem.

Liaison activities between MyCorridor and the MaaS Alliance served to form an important partnership which paves the way for future collaboration. Numerous opportunities presented themselves in the form of jointly organised workshops and collaborative work on numerous topics related to MaaS. This led to the development of joint technical reports and the creation of a single MaaS API logo which will be used to promote the work that MyCorridor, IMOVE, MaaS4EU and the MaaS Alliance have conducted thus far. Overall, MyCorridor and MaaS Alliance proved that it is possible to work together in order to advance MaaS at national, regional and international level.

# 1 Introduction

## 1.1 Purpose of the document

This Deliverable is prepared in the context of WP8: “Dissemination, Exploitation and Policy Issues” and aims to summarise the relationship between MyCorridor and the MaaS Alliance (<https://maas-alliance.eu/>) throughout the duration of the project. MyCorridor serves the MaaS Alliance in providing a concrete example of how MaaS can be implemented by interfacing different transport operators and their mobility services into a single mobility service and be tested at cross-border level. Therefore, the liaison activities that were undertaken by IRU Projects and the MaaS Alliance facilitated the exchange of best practices and perform knowledge-sharing activities that could further promote MaaS in general. Moreover, the liaison activities supported the MaaS Alliance in achieving its long range goal of creating the foundation for a common approach to MaaS. This also includes unlocking the economies of scale needed for a successful implementation and take-up of MaaS in Europe and beyond.

## 1.2 Intended audience

The nature of this Deliverable is public, meaning that it will be (upon approval by the EC) available through the website of the project (<http://www.mycorridor.eu/project-library/>). Considering the various policy, business, legal and technical aspects that this Deliverable touches upon, the following intended audience are:

- Internally to the project:
  - MyCorridor partners responsible for the integration of mobility services (APIs) in the MyCorridor App (WP4).
  - MyCorridor partners working on the business modelling and legal aspects of the project (WP7).
  - MyCorridor partners involved in the dissemination and exploitation activities of the project (WP8).
- Externally to the project:
  - Technology, content and service providers as well as transport operators that are interested in learning more on how to make their services more attractive to users and what are the priorities set by the MaaS community.
  - Policymakers, such as the European Commission (EC) and European Parliament (EP) that aim to promote greener solutions related to personal mobility solutions (European Green Deal).
  - Transportation authorities interested in applying MaaS schemes at city or regional level.

## 1.3 Interrelations

The work associated with the current Deliverable is cross-cutting to the project in the sense that aims to reflect on the work being done in several activities of the project and create the appropriate interface per each with the MaaS Alliance.

More specifically, the Deliverable reports back on the activities of the MaaS Alliance Technology and Standards Working Group which aims to identify booking, ticketing and payment APIs; as such it is more concretely related with WP3: “One stop shop implementation & modules” and WP5: “Personalised, context-aware and inclusive UI’s”. The second interrelation this Deliverable has is with WP7: “Business models, incentives and legal issues”. Relevant topics such as market access, data, and multimodal

passenger rights are directly investigated in the MaaS Alliance Users and Rules and Governance and Business Models Working Groups. Lastly, WP8 sees concrete interrelations with its activities concentrating on legal and regulatory barriers and incentives and promotion schemes. This is demonstrated by the liaison activities that were conducted between the project and the MaaS Alliance Working Group on Users and Rules.

## 2 MaaS Alliance

### 2.1 Mission

The MaaS Alliance is a public-private partnership, creating the foundations for a common approach to MaaS, unlocking the economies of scale needed for successful implementation and take-up of MaaS in Europe and beyond (<https://maas-alliance.eu/>). The Alliance was formally established on 3 June 2016 in Brussels, Belgium by the following founding members: the Finnish Ministry of Transport; ERTICO – ITS Europe; ACEA; IRU; FIA; Cubic; MaaS Global; RACC; Siemens; Xerox; and an additional eight representatives from public authorities, transport companies and organisations. The goal of the MaaS Alliance is to facilitate a single, open market and full deployment of MaaS services. The MaaS Alliance work programme engages transport operators, service providers and users in three Working Groups, addressing issues around MaaS single market development, user needs, regulatory challenges and technology.

### 2.2 Structure

The MaaS Alliance's structure is composed by the Board of Directors, Secretariat, Members and Partners. The President of the MaaS Alliance is Jacob Bangsgaard (CEO – ERTICO), the Secretary General is Piia Karjalainen (Senior Manager – ERTICO).

#### 2.2.1 Members

The MaaS Alliance's membership is composed of a variety of stakeholders in the transport sector, namely, public authorities, transport associations, start-ups, system integrators and service providers. Currently, MaaS Alliance has 105 members spread out across Europe, North America, Asia and Oceania. The current members of the MaaS Alliance can be found in Table 1. In addition to Members, the MaaS Alliance also has Partners which are summarised in Table 2 below. Partners of the MaaS Alliance can attend plenary meetings and working group meetings, however, do not have any voting power.

**Table 1: List of MaaS Alliance members.**

List of members	Website
5T	<a href="http://www.5t.torino.it/">http://www.5t.torino.it/</a>
Aalto University	<a href="https://www.aalto.fi/fi">https://www.aalto.fi/fi</a>
Australian Capital Territory Government	<a href="https://www.act.gov.au/">https://www.act.gov.au/</a>
ALD Automotive	<a href="https://www.aldautomotive.com/">https://www.aldautomotive.com/</a>
Allianz	<a href="https://www.allianz.com/en.html">https://www.allianz.com/en.html</a>
Alstom	<a href="http://www.alstom.com/">http://www.alstom.com/</a>

List of members	Website
ARC Europe Group	<a href="http://www.arceuropegroup.com/">http://www.arceuropegroup.com/</a>
Arval	<a href="https://www.arval.com/en">https://www.arval.com/en</a>
ATM – Barcelona Metropolitan Transport Authority	<a href="http://www.atm.cat/web/index_en.php">http://www.atm.cat/web/index_en.php</a>
Bartle	<a href="http://www.bartle.fr/">http://www.bartle.fr/</a>
Basque Country Mobility and Logistics Cluster	<a href="http://www.mlcluster.com/?lang=en">http://www.mlcluster.com/?lang=en</a>
Belgian Ministry of Mobility and Transport	<a href="https://mobilit.belgium.be/">https://mobilit.belgium.be/</a>
Bip & Drive	<a href="http://www.bipdrive.com/">http://www.bipdrive.com/</a>
BODE	<a href="https://www.schaltbau-bode.com/">https://www.schaltbau-bode.com/</a>
Brisa – Transport infrastructure	<a href="http://www.brisa.pt/en/">http://www.brisa.pt/en/</a>
Brose	<a href="http://www.brose.com/">http://www.brose.com/</a>
Capital Region of Denmark	<a href="https://www.regionh.dk/english/Pages/default.aspx">https://www.regionh.dk/english/Pages/default.aspx</a>
Car Rental Gateway	<a href="https://www.carrentalgateway.com/">https://www.carrentalgateway.com/</a>
City of Antwerp	<a href="https://www.antwerpen.be/">https://www.antwerpen.be/</a>
City of Copenhagen	<a href="http://international.kk.dk/">http://international.kk.dk/</a>
City of Helsinki	<a href="https://forumvirium.fi/en/">https://forumvirium.fi/en/</a>
City of Vienna – Municipal Department 18	<a href="https://www.wien.gv.at/english/urbandevelopment/">https://www.wien.gv.at/english/urbandevelopment/</a>
CityWay	<a href="https://cityway.io/">https://cityway.io/</a>
CIVINETY CY-EL	<a href="http://civitas.eu/civinet/civinet-greece-cyprus">http://civitas.eu/civinet/civinet-greece-cyprus</a>
Connected Places Catapult	<a href="https://cp.catapult.org.uk/">https://cp.catapult.org.uk/</a>

List of members	Website
Connekt	<a href="https://www.connekt.nl/home/">https://www.connekt.nl/home/</a>
Contra Costa Transport Authority	<a href="http://www.cubic.com/Transportation">http://www.cubic.com/Transportation</a>
Cubic Transportation	<a href="http://www.cubic.com/Transportation">http://www.cubic.com/Transportation</a>
Cycling Industries Europe	<a href="https://cyclingindustries.com/">https://cyclingindustries.com/</a>
De Lijn	<a href="https://www.delijn.be/">https://www.delijn.be/</a>
Dutch Ministry of Infrastructure and Water Management	<a href="https://www.government.nl/ministries/ministry-of-infrastructure-and-water-management">https://www.government.nl/ministries/ministry-of-infrastructure-and-water-management</a>
East Japan Railway Company	<a href="https://www.jreast.co.jp/e/">https://www.jreast.co.jp/e/</a>
Emirates Transport	<a href="https://www.et.gov.ae/Pages/default.aspx">https://www.et.gov.ae/Pages/default.aspx</a>
EMT Madrid	<a href="http://www.emtmadrid.es/">http://www.emtmadrid.es/</a>
Engie	<a href="https://www.engie.com/">https://www.engie.com/</a>
Enterprise Holdings	<a href="https://www.enterpriseholdings.com/en/index.html">https://www.enterpriseholdings.com/en/index.html</a>
ERTICO	<a href="http://ertico.com/">http://ertico.com/</a>
Europcar Mobility Group	<a href="https://europcar-mobility-group.com/en/">https://europcar-mobility-group.com/en/</a>
European Automobile Manufacturers Association	<a href="http://www.acea.be/">http://www.acea.be/</a>
European GNSS (Global Navigation Satellite System) Agency	<a href="https://www.gsa.europa.eu/">https://www.gsa.europa.eu/</a>
Eurostar	<a href="https://www.eurostar.com/be-en">https://www.eurostar.com/be-en</a>
Federation Internationale de l'Automobile	<a href="http://www.fiaregion1.com/">http://www.fiaregion1.com/</a>
Finnish Ministry of Transport and Communications	<a href="https://www.lvm.fi/en/home">https://www.lvm.fi/en/home</a>

List of members	Website
Fluidtime	<a href="https://www.fluidtime.com/en/">https://www.fluidtime.com/en/</a>
Growth Corridor Finland	<a href="https://suomenkasvukaytava.fi/">https://suomenkasvukaytava.fi/</a>
GZ Metropolia	<a href="http://gzmetropolia.pl/">http://gzmetropolia.pl/</a>
Hamburger Hochban	<a href="https://www.hochbahn.de/">https://www.hochbahn.de/</a>
Hertfordshire County Council	<a href="https://www.hertfordshire.gov.uk/home.aspx">https://www.hertfordshire.gov.uk/home.aspx</a>
ICCS	<a href="http://i-sense.iccs.gr/">http://i-sense.iccs.gr/</a>
INFO SUPPORT	<a href="https://www.infosupport.com/">https://www.infosupport.com/</a>
International Road Transport Union (IRU)	<a href="http://www.iru.org">www.iru.org</a>
Irdeto	<a href="https://irdeto.com/">https://irdeto.com/</a>
Japan Ministry of Land, Infrastructure, Transport and Tourism	<a href="http://www.mlit.go.jp/en/index.html">http://www.mlit.go.jp/en/index.html</a>
JCoMaaS	<a href="https://www.jcomaas.org/">https://www.jcomaas.org/</a>
Kent County Council	<a href="https://www.kent.gov.uk/">https://www.kent.gov.uk/</a>
Kisio Digital	<a href="http://www.kisio.org/">http://www.kisio.org/</a>
KPMG International	<a href="https://home.kpmg/xx/en/home.html">https://home.kpmg/xx/en/home.html</a>
Kyyti Group	<a href="https://www.kyyti.com/">https://www.kyyti.com/</a>
LEASERUOPE	<a href="http://www.leaseurope.org/">http://www.leaseurope.org/</a>
LG CNS	<a href="http://www.lgcns.com/LGCNS.GHP.Main/Etc/SiteMain">http://www.lgcns.com/LGCNS.GHP.Main/Etc/SiteMain</a>
MaaS Global Oy	<a href="http://www.maas.global/">http://www.maas.global/</a>
Met Office	<a href="https://mtc.ca.gov/">https://mtc.ca.gov/</a>
Metropolitan Transportation Commission	<a href="https://mtc.ca.gov/">https://mtc.ca.gov/</a>



List of members	Website
Milano City	<a href="https://www.comune.milano.it/wps/portal/ist/it">https://www.comune.milano.it/wps/portal/ist/it</a>
MOIA Ridesharing	<a href="https://www.moia.io/en">https://www.moia.io/en</a>
Northamptonshire County Council	<a href="http://www.northamptonshire.gov.uk/en/Pages/HomePage.aspx">http://www.northamptonshire.gov.uk/en/Pages/HomePage.aspx</a>
Oregon Department of Transportation	<a href="https://www.oregon.gov/odot/Pages/index.aspx">https://www.oregon.gov/odot/Pages/index.aspx</a>
Oxfordshire County Council	<a href="https://www.oxfordshire.gov.uk/">https://www.oxfordshire.gov.uk/</a>
P&V Group	<a href="https://www.pvgroup.be/">https://www.pvgroup.be/</a>
PayiQ	<a href="https://payiq.net/">https://payiq.net/</a>
Pluservice	<a href="http://www.pluservice.net/en/">http://www.pluservice.net/en/</a>
Provincie-Noord-Brabant	<a href="https://www.brabant.nl/">https://www.brabant.nl/</a>
PTV Group	<a href="http://www.ptvgroup.com/en/">http://www.ptvgroup.com/en/</a>
Region Varmland	<a href="https://regionvarmland.se/">https://regionvarmland.se/</a>
Renfe	<a href="http://www.renfe.com/">http://www.renfe.com/</a>
routeRANK	<a href="https://business.routerank.com/">https://business.routerank.com/</a>
Royal Automobile Club of Catalunya	<a href="https://www.racc.es/home">https://www.racc.es/home</a>
Royal Dutch Transport	<a href="https://www.knv.nl/">https://www.knv.nl/</a>
Siemens	<a href="https://www.siemens.com/global/en/home.html">https://www.siemens.com/global/en/home.html</a>
SKEDGO	<a href="https://skedgo.com/en/">https://skedgo.com/en/</a>
Skipr	<a href="https://www.skipr.co/">https://www.skipr.co/</a>
Smart Dublin	<a href="https://smartdublin.ie/">https://smartdublin.ie/</a>
Sony	<a href="https://www.sony.net/">https://www.sony.net/</a>
Swiss Federal Office of Transport	<a href="https://www.bav.admin.ch/bav/en/home.html">https://www.bav.admin.ch/bav/en/home.html</a>

List of members	Website
Swiss Re	<a href="https://www.swissre.com/">https://www.swissre.com/</a>
SYSTRA	<a href="https://www.systra.com/en/">https://www.systra.com/en/</a>
The City of Tampere	<a href="http://www.tampere.fi/en/index.html">http://www.tampere.fi/en/index.html</a>
TIS	<a href="http://www.tis.pt/">http://www.tis.pt/</a>
Traficom	<a href="https://www.lvm.fi/-/viestintavirasto-ja-trafi-yhdistyvat-liikenne-ja-viestintavirastoksi-liikennevirastosta-tulee-vaylavirasto-987823">https://www.lvm.fi/-/viestintavirasto-ja-trafi-yhdistyvat-liikenne-ja-viestintavirastoksi-liikennevirastosta-tulee-vaylavirasto-987823</a>
Transdev	<a href="https://www.transdev.com/en/">https://www.transdev.com/en/</a>
Transport for Greater Manchester	<a href="https://www.tfgm.com/">https://www.tfgm.com/</a>
TVV lippu	<a href="http://www.lmj.fi/">http://www.lmj.fi/</a>
UBER	<a href="https://www.uber.com/">https://www.uber.com/</a>
Urban Transport Group	<a href="http://www.urbantransportgroup.org/">http://www.urbantransportgroup.org/</a>
Verkeiersverbond (Communaute des Transport)	<a href="https://www.mobiliteit.lu/verkeiersverbond/verkeiersverbond-cest-quoi">https://www.mobiliteit.lu/verkeiersverbond/verkeiersverbond-cest-quoi</a>
Via	<a href="https://ridewithvia.com/">https://ridewithvia.com/</a>
Volpe National Transportation Systems Center	<a href="https://www.volpe.dot.gov/">https://www.volpe.dot.gov/</a>
Wemovo	<a href="https://www.wemovo.com/">https://www.wemovo.com/</a>
West Midlands Combined Authority	<a href="http://www.westmidlandscombinedauthority.org.uk/">http://www.westmidlandscombinedauthority.org.uk/</a>
ZF Group	<a href="https://www.zf.com/mobile/en/homepage/homepage.html">https://www.zf.com/mobile/en/homepage/homepage.html</a>

**Table 2: List of MaaS Alliance partners.**

List of partners	Website
Chalmers University of Technology	<a href="https://www.chalmers.se/en">https://www.chalmers.se/en</a>
COMTRADE Digital Services	<a href="https://comtradedigital.com/">https://comtradedigital.com/</a>
FISITA	<a href="https://www.fisita.com/">https://www.fisita.com/</a>

List of partners	Website
Intelligent Transport Systems United Kingdom	<a href="https://its-uk.org.uk/">https://its-uk.org.uk/</a>
ITS America	<a href="https://itsa.org/">https://itsa.org/</a>
SAE International	<a href="https://www.sae.org/">https://www.sae.org/</a>
Transport Evolution Institute	<a href="https://teiet.org/">https://teiet.org/</a>
TravelSpirit Foundation	<a href="https://travelspirit.foundation/">https://travelspirit.foundation/</a>
University College London	<a href="https://www.ucl.ac.uk/">https://www.ucl.ac.uk/</a>



**Figure 1: Geographical distribution of MaaS Alliance members.**

## 2.2.2 Plenary meetings

Since its creation, the MaaS Alliance hosted a total of 14 plenary meetings across Europe. The MaaS Alliance organises 2-4 plenary meetings per year. The purpose of these meetings is to gather the MaaS community and discuss topics that are relevant to MaaS. Topics that were discussed during past plenary meetings include ticketing, environmental performance of MaaS, standardisation, and national initiatives.

## 2.2.3 Working Groups

### 2.2.3.1 Users and Rules Working Group

The Users and Rules Working Group addresses issues related to user needs and regulatory challenges. This Working Group is led by Laura Lassila, Traficom and has set up several Task forces looking into the following topics:

- Environmental performance of MaaS
- Monitoring of regulatory initiatives
- User-centric MaaS
- Insurance innovations

- Ticketing
- Mobility Data Management.

#### **2.2.3.2 Governance and Business Models Working Group**

The Governance and Business Models Working Group looks at issues related to Innovative business models, including data sharing. This Working Group is led by Marko Javornik, Voyego and has set up several Task forces looking into the following topics:

- Future MaaS
- MaaS of the Month
- Tools for cities (SUMPs, KPIs, ...)
- MaaS and Traffic Management
- Market playbook (code of conduct)
- Ticketing.

#### **2.2.3.3 Technology and Standards Working Group**

The Technology and Standards Working Group's focus areas are Interfaces & APIs, interoperability, and integration of added value services, standardisation and harmonisation. This Working Group is led by Ferdinand Burgersdijk, Omega Consultancy starting from 15 June 2020.

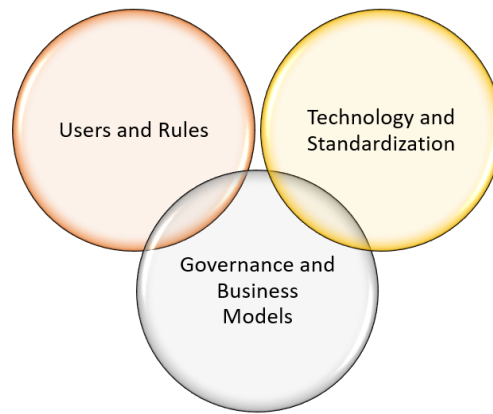
The goal of the Technology and Standards Working Group are the following:

- Identify the (API) requirements for transport providers to integrate in a MaaS framework
- Identify the (API) requirements for service providers to integrate in a MaaS framework
- Implement an evaluation procedure for accepting new contributions
- Not-so much reinvent the wheel but look at what's on the market and integrate in a harmonised MaaS API
- Create test frameworks to support the evaluation process
- Drive the standardisation of the harmonised MaaS API.

In addition, this Working Group has set up Task forces to investigate a variety of topics. These include:

- API Task force
  - Multi-Modal Route Planning
  - Booking API
  - Payment API
- Standardisation Task force
- API Prototype Development Task force
- Technical Communication Task force.

## MaaS Workgroups



**Figure 2: Interrelations between the three MaaS Alliance Working Groups.**

### 2.3 Content produced by the MaaS Alliance

Since its creation in 2015, the MaaS Alliance keeps all of its relevant documentation under the MaaS Alliance toolkit subsection in the Library section (<https://maas-alliance.eu/library/>). The publications that are present in this subsection reflect the work of the MaaS Alliance members in each of the Working Groups. This work is coordinated by the MaaS Alliance Secretariat which ensures that the input provided by MaaS Alliance members are incorporated and reflected in the final version of the documents.

The MaaS Alliance produces biannual general newsletters that are published under the MaaS Alliance News subsection. These public newsletters given an overview of the current activities of the MaaS Alliance and what initiatives are taking place across Europe.

In addition, the MaaS Alliance website has a Media Room section that is divided into Alliance news (<https://maas-alliance.eu/maas-news/>) and Partner news (<https://maas-alliance.eu/maas-news/partner-news/>). The Alliance news section highlights the main achievements and outlines the activities of the MaaS Alliance while the Partner news section offers an opportunity to the general public to know more about the Partners of the MaaS Alliance are working on.

Moreover, there are several other subsections that include other relevant MaaS projects, existing MaaS solution providers, press clippings in which MaaS was mentioned and a list of affiliated publications explaining how different countries are approaching MaaS.

## 3 Liaison activities between MyCorridor and the MaaS Alliance

### 3.1 MaaS and MyCorridor

MaaS is defined by MaaS Alliance as the integration of various forms of transport services into a single mobility service accessible on demand. The key concept of MaaS is to place end-users (be it travellers or goods) at the very centre of transport service, in order to provide them with tailor-made mobility solutions that originate from their individual needs. This concept means that a bundle of personalised, flexible, up-to-date travel service options will be available to end users to ensure easy access to the most appropriate transport mode or service. As such, the default relation between MyCorridor and the MaaS Alliance concept is relevant due to MyCorridor's overall objective to achieve sustainable travel in urban and interurban areas and across borders by replacing private vehicle ownership by private vehicle use.

Among the founding members and active participant of the MaaS Alliance, IRU Projects has been the link between MyCorridor and the MaaS Alliance Working Groups and events, fostering cooperation and exchange of best practices. IRU Projects monitors the work of the three MaaS Alliance Working Groups and is actively following the work of the Users and Rules Working Group and Technology and Standards Working Group. In addition, IRU Projects aims to bring forward the voice of the industry (passenger transport – buses, coaches and taxis) and to help define the APIs for taxi and bus services.

### 3.2 Users and Rules Working Group

IRU Projects is engaged in the Users and Rules Working Group and provided input to several MaaS Alliance publications. The MaaS Alliance publications to which IRU Projects gave input to be included have been the MaaS Alliance Vision paper on Passenger Rights in Multimodal Transport (<https://maas-alliance.eu/wp-content/uploads/sites/7/2018/09/Vision-Paper-on-Multimodal-Passenger-rights-240918-FINAL.pdf>) published in September 2018 and the MaaS Alliance Vision paper on User-Centric Approach for MaaS (<https://maas-alliance.eu/wp-content/uploads/sites/7/2019/04/Recommendations-on-a-User-Centric-Approach-for-MaaS-FINAL-180419.pdf>) published in April 2019.

IRU Projects ensured that the work carried out in MyCorridor was further reflected in these two publications. In particular, the activities carried out by WP1 and WP7 of the project were used to further advance the work of MyCorridor within the MaaS Alliance. For example, relevant regulation applicable to MaaS was highlighted as well as the environmental and socially responsible behaviour that MaaS can promote. A full list of the MaaS Alliance publications are further listed on the MaaS Alliance's website (<https://maas-alliance.eu/library/>).

Overall, in this Working Group, IRU Projects provided input on a variety of topics which include MaaS-related trends in regulation at national and EU level, multimodal passenger rights, user acceptance and data security. The work carried out in this Working Group, in convergence with the experience gained in MyCorridor led IRU to develop its own position paper on MaaS (<https://www.iru.org/system/files/IRU%20Position%20Paper%20on%20MaaS.pdf>). In addition to providing input to policy papers, IRU Projects attended numerous physical meetings of the Users and Rules Working Group during the MaaS Alliance Plenaries.

The *MaaS Alliance Vision paper on User-Centric Approach for MaaS* offers recommendations and potential paths to encourage user-centric mobility services and systems. This publication aims towards improving the level of user experience, widening applicability of MaaS services and more inclusive, sustainable and vital mobility ecosystems and economies. Furthermore, this document aims to map out some key user experience factors in order to facilitate the fulfilment of satisfaction of the users and to address them through market-based offerings. IRU Projects provided input throughout the entire document, identifying services that transport service providers could provide to the user. Overall, considering the multitude of stakeholders involved in the drafting of this document, the recommendations put forth are a valuable tool for policymakers.



April 2019

## Recommendations on a User-Centric Approach for MaaS

Vision paper of the MaaS Alliance

Users & Rules Working Group

---

### WHAT IS MaaS?

**MaaS is the integration of various forms of transport services into a single mobility service, accessible on demand.** For the user, MaaS offers added value through the use of a single application to provide access to mobility, with a single payment channel instead of multiple ticketing and payment operations. To meet a customer's request, a MaaS operator facilitates a diverse menu of transport options, be they public transport, ride-, car- or bike-sharing, taxi, car rental or lease, or a combination thereof. A successful MaaS service also brings new business models and ways to organise and operate the various transport options, with advantages including access to improved user and demand information and new opportunities to serve unmet demand for transport operators. The aim of MaaS is to be the best value proposition for its users, providing an alternative to the private use of the car that may be as convenient, more sustainable, and even cheaper while contributing to the achievement of societal and environmental goals.

---

This document, drafted by the MaaS Alliance and its members, offers recommendations describing promising evolution paths for user-centric mobility services and systems. The document aims to inspire the wide variety of actors working in the field of MaaS and related initiatives to aim towards ever-improving levels of user experience, widening applicability of MaaS services and more inclusive, sustainable and vital mobility ecosystems and economies. Furthermore, the aim of this document is to map out some key user experience factors in order to facilitate the fulfilment of satisfaction of the users and to address them through market-based offerings.

**Figure 3: Vision paper of the MaaS Alliance providing Recommendations on a User-Centric Approach for MaaS.**



## Passenger Rights in Multimodal Transport - MaaS Alliance Vision Paper

### WHAT IS MaaS?

**MaaS is the integration of various forms of transport services into a single mobility service accessible on demand.**

For the user, MaaS offers added value through the use of a single application to provide access to mobility, with a single payment channel instead of multiple ticketing and payment operations. To meet a customer's request, a MaaS operator facilitates a diverse menu of transport options, be they public transport, ride-, car- or bike-sharing, taxi, car rental or lease, or a combination thereof. A successful MaaS service also brings new business models and ways to organise and operate the various transport options, with advantages including access to improved user and demand information and new opportunities to serve unmet demand for transport operators. The aim of MaaS is to be the best value proposition for its users, providing an alternative to the private use of the car that may be as convenient, more sustainable, and even cheaper.

### EXECUTIVE SUMMARY

The legal framework of the current passenger rights in travel chains is uncertain amongst both service providers and passengers. The MaaS Alliance urges that before new legislative measures, the development of the whole transport sector, including multimodal and cross-border travel chains, should be closely followed and the applicability of the general consumer protection laws carefully examined. Exchange of **Industry best practices and self-regulation** should be promoted and supported. Whilst the current legislative framework with emerging services and markets is creating uncertainty in passengers and service providers, soft law measures should be considered.

Soft law measures could include gathering together existing legislation and describing the responsibilities and liabilities of the different actors especially with regard to information of changes in the travel chain and re-routing; rights and services to people with special needs in connecting points; as well as the role of digital platforms especially in relation to the Package Travel Directive.

The MaaS Alliance emphasises that the liability and passenger rights framework should be designed from the end-user perspective. A user-centric approach, combined with close cooperation with the private sector, can create the most efficient preconditions for the development of both passenger rights and a more innovative market environment.

1 | Page

**Figure 4: MaaS Alliance Vision Paper on Passenger Rights in Multimodal Transport.**

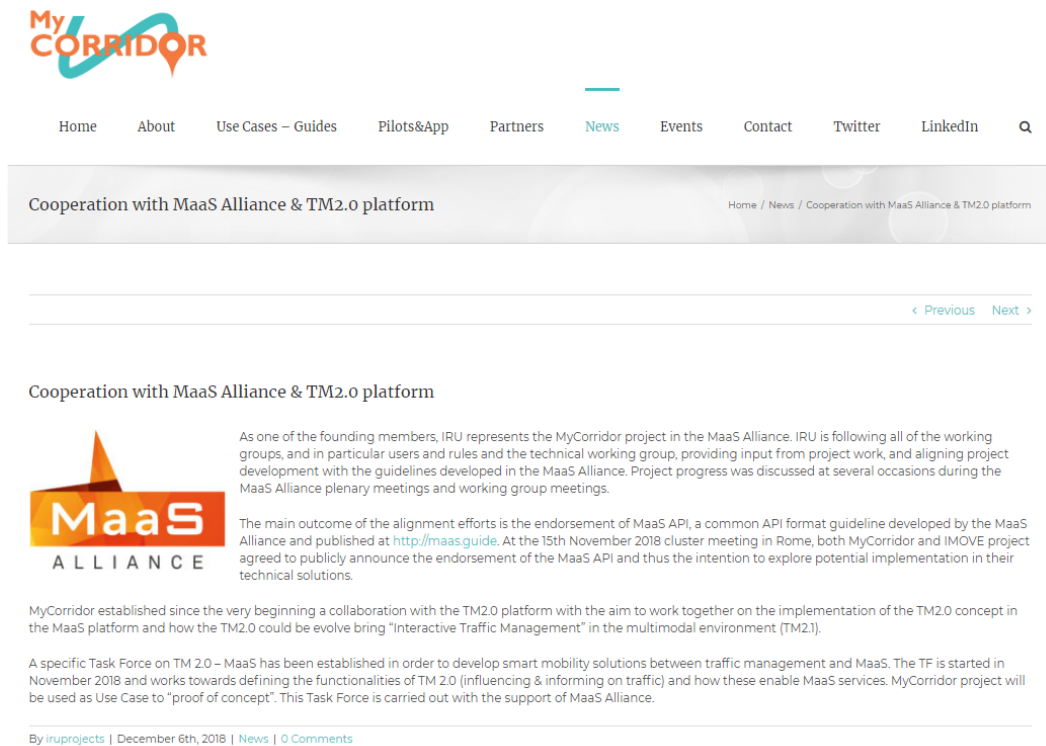
The *MaaS Alliance Vision paper on Passenger Rights in Multimodal Transport* encourages policymakers to take into consideration multimodality and cross-border travel chains before advancing legislative measures. Key elements of the paper include recommendations to develop multimodal passenger rights by self-regulative measures by the market and soft law, identification of legislation that hinders the emergence of multimodal mobility services, sharing best practices and coordinating efforts to promote multimodal mobility services and overview of liability and passenger rights frameworks which should be designed from the user's perspective. IRU Projects elaborated on the current state of play for passenger rights in multimodal transport in EU regulations. The overview is useful to understand where the EU stands on MaaS and what existing regulations are currently applicable.



### 3.3 Governance and Business Models Working Group

SWARCO and TomTom, members of the MyCorridor Consortium, advanced the bridging of the Traffic Management (TM) and MaaS worlds via TM2.0 platform, a sister organisation of the MaaS Alliance. A specific Task Force on TM 2.0 – MaaS was promoted by MyCorridor and established in order to boost the development of smart mobility solutions between traffic management and MaaS. The Task Force started in November 2018 and works towards defining the functionalities of TM 2.0 (influencing & informing on traffic) and how these enable MaaS services. Moreover, the Task Force is using MyCorridor project as main reference point and cooperates with the MaaS Alliance platform as a joint working group. Each platform maintains its own work team and Chairs, reporting each to their own steering bodies, but the working teams are working in cooperation, and deliver a common report as main output.

MyCorridor is used as a Use Case to “proof of concept”. Several activities have been carried out thus far, which include sessions at ITS European and World Congresses, the organisation of workshops and presenting joint academic papers (<http://www.mycorridor.eu/wp-content/uploads/2018/12/Final-Paper-ITSWC2018-MyCorridor-Paper-ID-EU-TP1596.pdf>). For example, the role of TM2.0 and its evolution into TM2.1 was presented during MyCorridor’s 2<sup>nd</sup> Pan European Workshop in Rome. Recently, a workshop focusing on Multimodal Mobility Management was jointly organised by TM2.0 and the MaaS Alliance in February 2020. As a result of this workshop, TM2.0 and MaaS Alliance published a report focusing on Multimodal Mobility Management (<https://tm20.org/wp-content/uploads/2020/10/TM-2.0-MaaS-Alliance-report-for-Task-Force-on-Multimodal-mobility-final....-4.pdf>).



**Figure 5: Cooperation with MaaS Alliance and TM2.0 Platform.**

In terms of publications, a final report (<http://tm20.org/wp-content/uploads/sites/8/2019/08/TM2.0-TF MaaS Final Report v3.0.pdf>) was published in June 2019 by the MaaS Task force of TM2.0. The report specifically mentioned the work being carried out in the MaaS Alliance and MyCorridor, along with the other MaaS projects.



ERTICO - ITS Europe  
Avenue Louise 326, 1050 Brussels, Belgium  
T +32 2 400 07 00 | [info@mail.ertico.com](mailto:info@mail.ertico.com) | [www.ertico.com](http://www.ertico.com)



**Workshop hosted by ERTICO Innovation Platform,  
TM 2.0 & the MaaS Alliance:**

### **MaaS and Multi-Modal Mobility & Traffic Management**

**19 February 2020, 9:30 – 16:30**

ERTICO – ITS Europe  
Blue Tower  
Avenue Louise, 326  
B-1050 Brussels

The workshop concerns the integration of Traffic Management (TM) and Mobility as a Service (MaaS) into a single operational framework with the purpose of delivering Multi-modal Mobility Management and Services, mainly in the Urban Environment.

Multi-modal Mobility is able to help City Authorities optimise Traffic Management by facilitating the more efficient use of the available capacity of the different transport modes. As a result, the combination of TM 2.0 and MaaS can improve road network efficiency. In this context, MaaS can be a tool to regulate traffic flows, respond on the road network's bottlenecks and handle sudden incidents in real time as well as to planning TM measures in advance.

The workshop aims at defining and adding to the work of the TF on Multimodality in which members from both the TM 2.0 Innovation Platform and the MaaS Alliance are participating this year.

**Figure 6: Workshop on MaaS and Multi-Modal Mobility & Traffic Management.**

## **3.4 Technology and Standards Working Group**

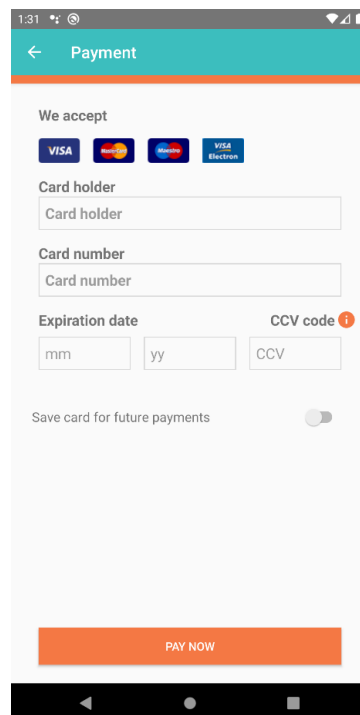
IRU Projects is also engaged in the Technical and Standards Working Group and provided input at numerous meetings of the Working Group, giving the perspective of commercial road transport operators. IRU Projects is in constant dialogue with this Working Group considering the importance of interfaces, APIs, interoperability, integration of added value services, standardisation & harmonisation.

IRU Projects works closely with the API Task force, especially in identifying solutions for common APIs and collecting knowledge in the form of API proposals, project results and domain expertise. This Task force also looks into multimodal route planning, booking, payment and ticketing. Moreover, other Task forces are directly consulted. These include the Standardisation Task force, the API Prototype Development Task force and the Technical Communication Task force. The work of each of these Task forces are related to what MyCorridor is aiming towards, namely, common APIs to be used optimally.

Moreover, the collaboration between IRU Projects and the Technology and Standards Working Group led to the cooperation between MyCorridor, IMOVE (<https://www.imove-project.eu/>), Maas4EU

(<http://www.maas4eu.eu/>) and the Maas Alliance to explore common standard for digital mobility services (<https://maas-alliance.eu/eu-projects-explore-common-standard-for-digital-mobility-services/>). As part of this collaboration, the three EU-funded projects shared insights and knowledge by reporting back what has been achieved during their own piloting activities. The main outcome of this alignment is the endorsement of MaaS API, a common API format guided by the MaaS Alliance and published at <http://maas.guide>. As a result of this achievement, the MaaS Alliance API logo was finalised and presented. The aim of this is to ensure that a single, harmonised and interoperable API will attract transport and shared services to embrace MaaS. MyCorridor followed the implementation guidelines of MaaS Alliance.

More specifically, the MyCorridor MaaS API exposes an endpoint for retrieving door-to-door trips, as suggested by the MaaS Alliance Guidebook. In particular, in the request parameters, the starting and ending points of the trip are defined as latitude-longitude pairs, whereas the preferred travel modes are passed as a list of strings. Additionally, the date and time of the trip can be defined, and if they do not, the current date and time are used. Moreover, the MyCorridor MaaS API returns one or more trips based on the selected transportation modes. Each trip has its own departure and arrival date-time pairs and is composed of a number of segments (steps). For every segment, the starting and ending date-time are provided, as well as the transportation mode for the specific segment. Furthermore, as proposed in the MaaS Alliance Guidebook, the MyCorridor MaaS API exposes an endpoint for retrieving points of interest (POIs). Requests on that endpoint include the latitude and longitude coordinates of the location around which POIs should be returned, the search radius in meters and the categories of the preferred POIs. In the context of MyCorridor project, POIs are characterised as added value services and they are related to food, museums, weather, and live-music events. In addition, the MyCorridor Payment Module was designed and implemented based on the suggestions of the MaaS Alliance Guidebook. Specifically, the payment process takes place electronically and it is totally transparent to the user. After the user fills in his/her personal details in the form, the user is not prompted for further information and the payment process is usually completed with one time password (OTP) SMS or similar bank authentication messaging procedures which is sent to the user's mobile device.



**Figure 7: MyCorridor payment form.**

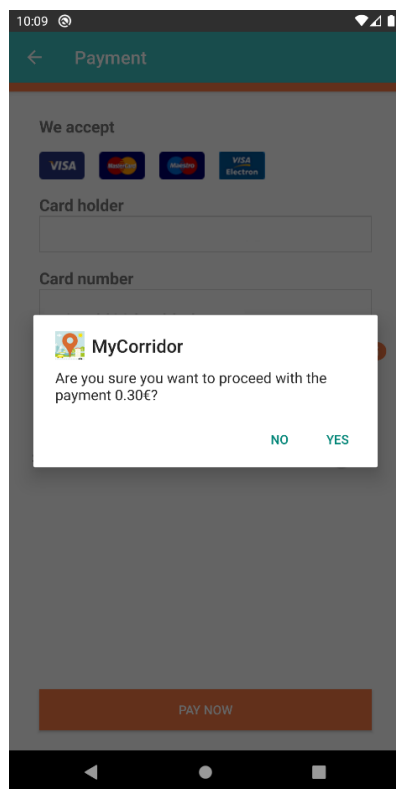


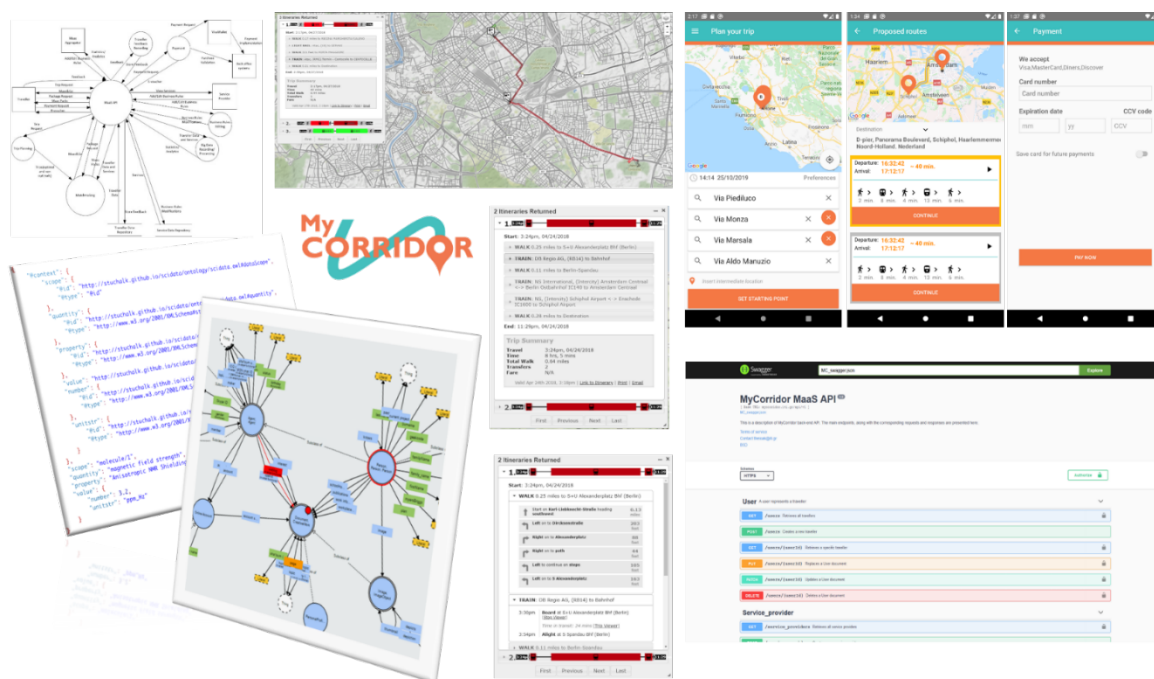
Figure 8: MyCorridor confirm payment.



Figure 9: MyCorridor brochure highlighting the link with the MaaS Alliance and use of the MaaS API.

On 21 September 2020, the MaaS Alliance's Technology and Standards Working Group held a meeting on the technical aspects of MaaS. Given IRU's liaison activities with MaaS Alliance, CERTH was invited to

present on behalf of MyCorridor the technical work conducted in the context of the project. Athanasios Salamanis (CERTH) presented the MyCorridor data modelling approach and the technical products developed in the project. MyCorridor's data models used for representing the transportation services were of great interest to the meeting's participants. The Hybrid Trip-planner, the Matchmaking Module and the mobile apps, were recognised as significant technological components and the lessons learned during their implementation were deemed of significant support to the Working Group's activities related to the technical standardisation of the MaaS ecosystem.



**Figure 10: Summary of the content presented by MyCorridor during the MaaS Alliance's Technology and Standards Working Group meeting.**

## 3.5 MyCorridor Pan European Workshops

MyCorridor and the MaaS Alliance jointly cooperated throughout the organisation of the MyCorridor Pan-European Workshops. This cooperation was reflected by having the MaaS Alliance advertise the workshops on its website and by inviting representatives from the MaaS Alliance to attend and speak. The following subchapters give an overview of what was discussed and identify the key outcomes of the MyCorridor Pan-European Workshops.

### 3.5.1 MyCorridor 1<sup>st</sup> Pan European Workshop

The MyCorridor 1<sup>st</sup> Pan European Workshop was hosted by the MyCorridor Consortium Partner Osborne Clarke LLP and was held on 9 February 2018 at Osborne Clarke's office in London, United Kingdom. (<https://maas-alliance.eu/maas-focus-point-first-mycorridor-project-workshop/>).

The following presentations were given:

- *Mobility as a Service (MaaS): where we are and where we are heading* by Christopher Irwin, Member of European Passengers' Federation (EPF) Council



- *MaaS: a legal perspective* by Jeremy Godley, Associate Director in the transport team at Osborne Clarke LLP and Marie-Claire Smith in the digital services and data protection team at Osborne Clarke
- *MyCorridor Project: the vision & the approach* by Maria Gkemou, CERTH/HIT
- *How to make a difference* – interactive session by Evangelos Bekiaris, CERTH/HIT

The Workshop had over 50 participants attending from various backgrounds, which included (among others) Osborne Clarke's clients from the transport, mobility and IT/software industries.

A collaborative event was additionally hosted by Osborne Clarke in its London office, the day before the Workshop, which brought together the MyCorridor, MaaS4EU and I-MOVE project partners to discuss developments in MaaS and in each of the research projects more specifically.

Osborne Clarke contributed to the delivery of the marketing materials for the London Workshop, promoted the event, and published an article about the MyCorridor Workshop (<https://www.osborneclarke.com/insights/what-was-covered-in-mycorridors-first-mobility-as-a-service-maas-workshop-event-summary/>), following the event. A full report of the Workshop's outcomes can be found on MyCorridor's website: <http://www.mycorridor.eu/2018/02/first-london-workshop-identifies-trust-as-key-to-maas-success/>.



**Figure 11: MaaS Alliance providing a summary of the outcomes of the MyCorridor 1<sup>st</sup> Pan European Workshop in London, United Kingdom.**

### 3.5.2 MyCorridor 2<sup>nd</sup> Pan European Workshop

The MyCorridor 2<sup>nd</sup> Pan European Workshop was held on 16 November 2018 in Rome, Italy (<https://maas-alliance.eu/join-the-maas-alliance-at-the-mycorridor-workshop-in-november/>).

The following presentations were given:

- *TM & MaaS – Moving one step further* by Laura Cocone, SWARCO MIZAR
- *MaaS role in sharing mobility* by Sandro Bartolucci, RSM
- *Update on legal issues in MaaS: Competition law and case studies* by Jeremy Godley and Marie-Claire Smith, Osborne Clarke
- *MyCorridor one-stop-shop & interactive discussion* by Athanasios Salamanis, CERTH/ITI and Kostas Kalogirou, CERTH/HIT
- *Interactive business model session* by Vassilis Mizaras, SWARCO Hellas & Oktay Türetken
- *Joining MyCorridor* (Maria Gkemou, CERTH/HIT).

The Workshop had 20 external participants (see Figure 13) attend from industry (transport and mobility service providers), research, authorities and associations. The MaaS Alliance participated to this workshop and advertised the event on their own website (see Figure 12). A full report of the Workshop can be found on MyCorridor's website: <http://www.mycorridor.eu/2018/11/second-mycorridor-workshop-in-rome-maas-for-transport-service-providers/>.



The screenshot shows the MaaS Alliance website header with navigation links: MAAS, THE ALLIANCE, MEDIA ROOM, LIBRARY, JOIN, and CONTACT. The main heading reads "Join the MaaS Alliance at the My Corridor Workshop in November". The text below states: "In the context of the MyCorridor EU-funded project, the project consortium is developing a MaaS solution that will be piloted cross-border between Greece, Italy, Austria, Czech Republic, Germany and The Netherlands. The project collaborates with the MaaS Alliance in creating a MaaS API, on which you are also very welcome to contribute in order to facilitate your integrations with various transport providers." It further mentions: "On 16th November the Consortium is organising in Rome a workshop dedicated to mobility service providers. Preliminary agenda and registration are available here."

**Figure 12: MaaS Alliance advertising the MyCorridor 2nd Pan European Workshop in Rome, Italy.**



**Figure 13: Participants at the MyCorridor 2<sup>nd</sup> Pan European Workshop in Rome, Italy.**

### 3.5.3 MyCorridor 3<sup>rd</sup> Pan European Workshop

The MyCorridor 3<sup>rd</sup> Pan European Workshop was held virtually on 27 October 2020, also supported and promoted by the MaaS Alliance: <https://maas-alliance.eu/event/3rd-european-mycorridor-workshop/>. Due to COVID-19, the MyCorridor 3<sup>rd</sup> Pan European Workshop was hosted virtually and took place later than originally planned. The Workshop consisted of three sessions:

Session 1: MaaS in Europe – future challenges and opportunities

- *MaaS in the Netherlands* by Eric Mink, Ministry of Infrastructure and Water Management, the Netherlands
- *European challenges and opportunities of MaaS* by Sagar Singamsetty, IRU
- *Achieving roaming, scalable MaaS* by Piia Kajalainen, MaaS Alliance
- *MaaS from the operator's point of view* by Sonila Metushi, KNV – Royal Dutch Transport Federation.

Session 2: Lessons learned and experiences from the three MaaS projects (MyCorridor, IMOVE and MaaS4EU)

- *MyCorridor* by Katerina Toulou, CERTH/HIT & Kostas Kalogirou CERTH/HIT and Tom Meinders, MAPtm
- *IMOVE* by Alessandro Barisone, algoWatt
- *MaaS4EU* by Akrivi Kioussi, Intrasoft.

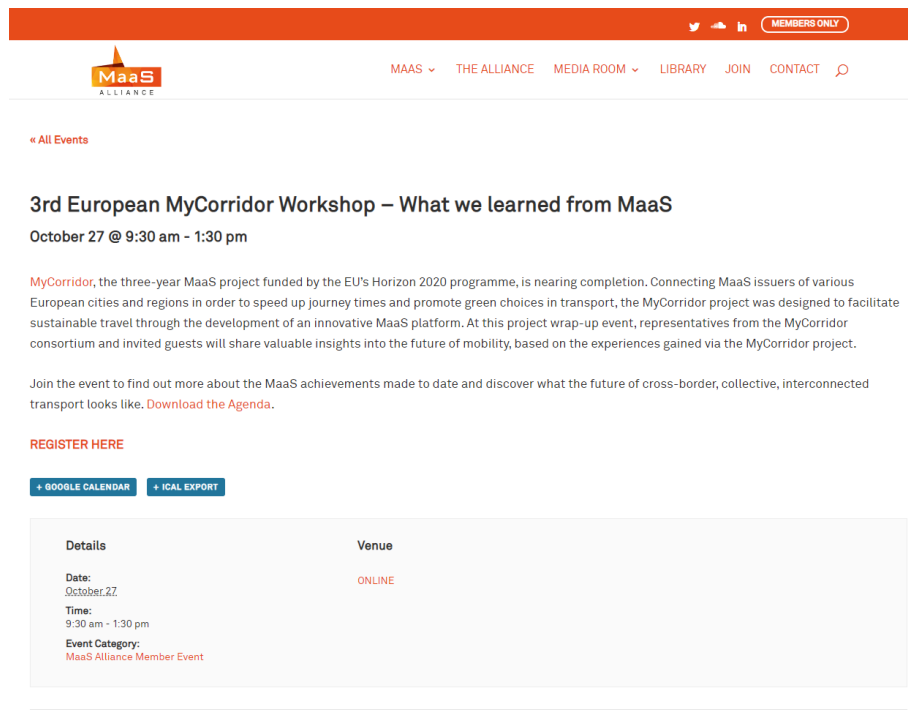
Session 3: Interactive session organised by MyCorridor

- Quantitative impacts achieved in the different project pilot sites.
- Results summary of additional qualitative impacts from other stakeholder groups.
- Insights on future deployment recommendations coming from other local stakeholder consultations (covering a range of business-related, regulatory, policy-related issues).



- This included discussion on the future of cross-border MaaS including the implications of living in a post-COVID19 world.

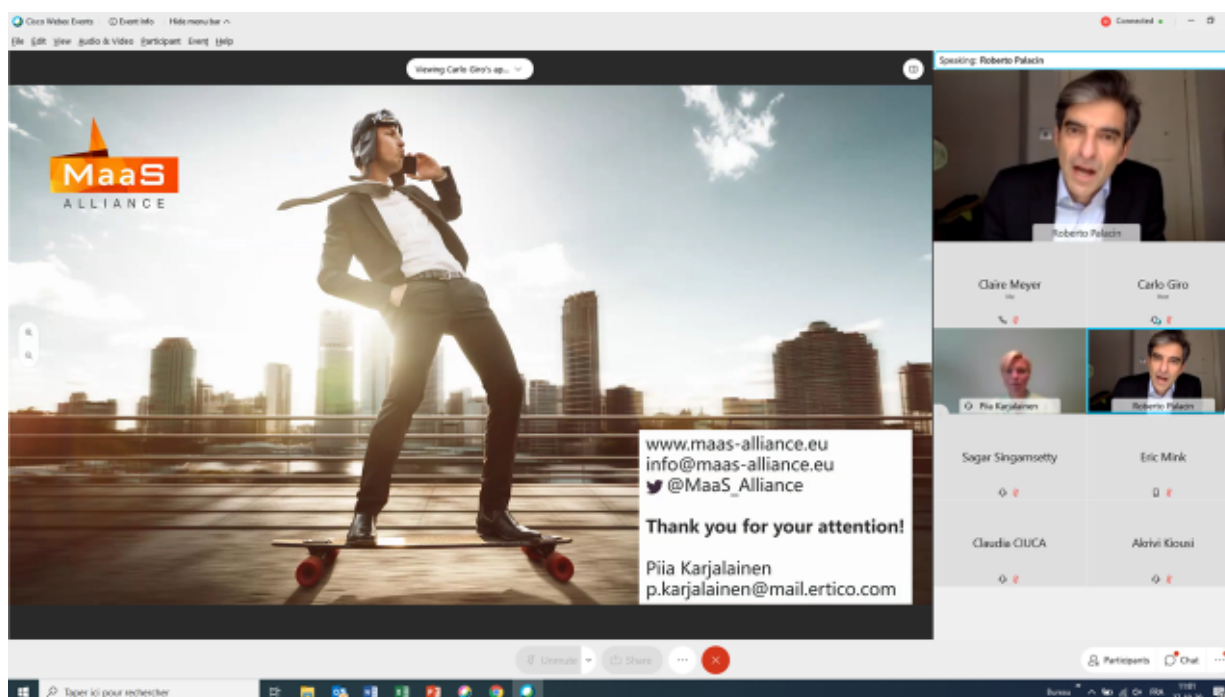
The Workshop had 72 participants attending which included transport associations, research institutes, universities, authorities, mobility service providers and consultancies focused on mobility. The MaaS Alliance was invited to present (see Figure 15) in Session 1: *MaaS in Europe – future challenges and opportunities* and gave an overview of its activities performed in 2020. A full report of the Workshop can be found on MyCorridor's website: <http://www.mycorridor.eu/2020/11/third-and-final-mycorridor-workshop-what-we-learned-from-maas/>.



The screenshot shows the MaaS Alliance website with a navigation bar including links for MAAS, THE ALLIANCE, MEDIA ROOM, LIBRARY, JOIN, and CONTACT. The main content area features a section for the "3rd European MyCorridor Workshop – What we learned from MaaS" scheduled for October 27 from 9:30 am to 1:30 pm. The text describes the MyCorridor project as a three-year MaaS project funded by the EU's Horizon 2020 programme, aimed at connecting MaaS issues of various European cities and regions to speed up journey times and promote green choices in transport. It mentions that representatives from the MyCorridor consortium and invited guests will share insights into the future of mobility. A "REGISTER HERE" link is provided, along with buttons for "GOOGLE CALENDAR" and "ICAL EXPORT". A table below provides details about the event:

Details	Venue
<b>Date:</b> October 27	ONLINE
<b>Time:</b> 9:30 am - 1:30 pm	
<b>Event Category:</b> MaaS Alliance Member Event	

**Figure 14: MaaS Alliance advertising the MyCorridor 3<sup>rd</sup> Pan European Workshop.**



**Figure 15: MaaS Alliance presenting during the MyCorridor 3<sup>rd</sup> Pan European Workshop.**

## 3.6 Cluster Meetings

Throughout the duration of MyCorridor, several cluster meetings were organised to share best practices related to MaaS. In February 2018, MyCorridor organised its first cluster meeting in London, United Kingdom before its 1<sup>st</sup> Pan European Workshop. In November 2018, MyCorridor hosted a cluster meeting in Rome, Italy before the MyCorridor 2<sup>nd</sup> Pan European Workshop. Moreover, in November 2019, the MaaS Alliance initiated a cluster meeting between several MaaS projects. The following subchapter elaborates on the key achievements of these cluster meetings.

### 3.6.1 Cluster Meeting in London, United Kingdom

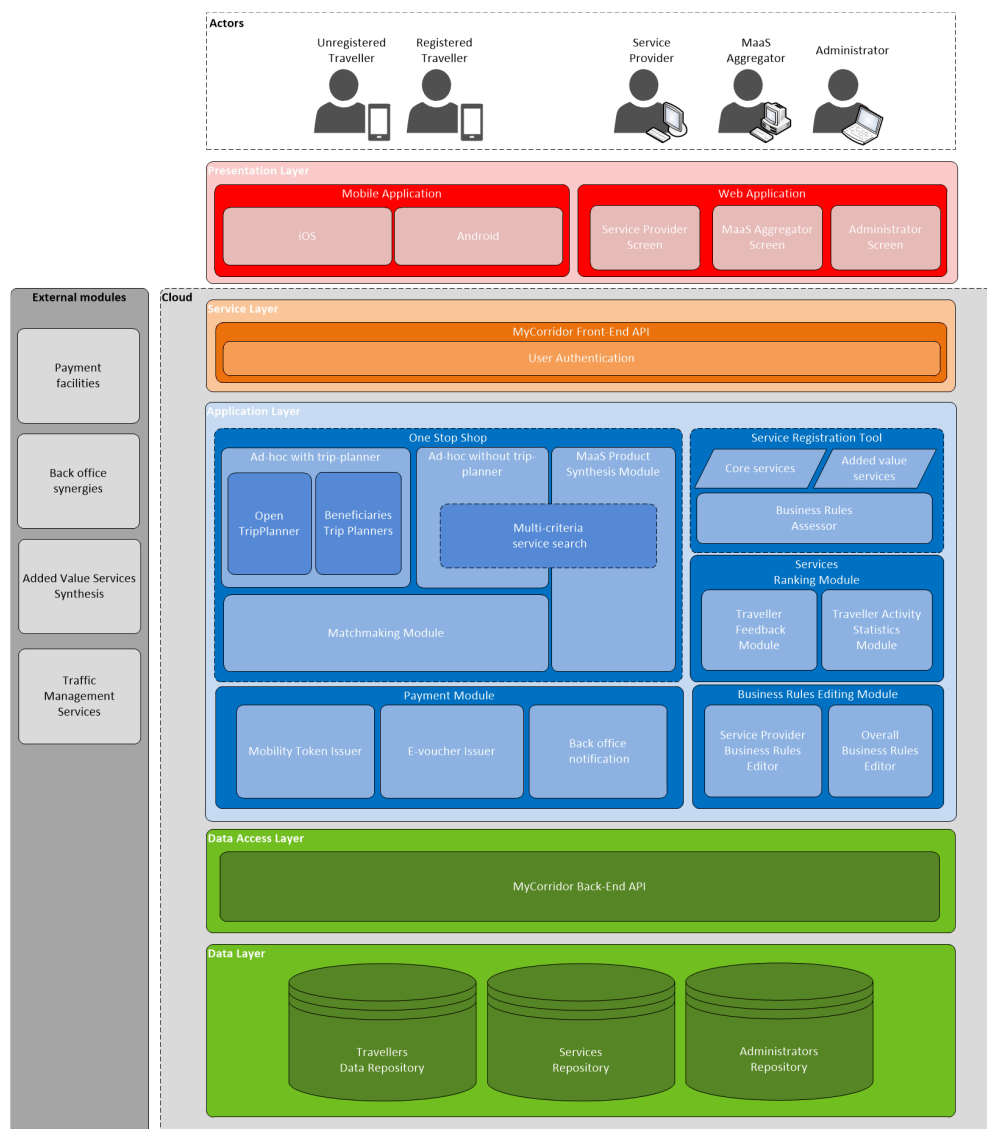
On 8 February 2018, MyCorridor organised a collaborative meeting with MaaS4EU and I-MOVE, hosted by Osborne Clarke in their London office. During this meeting, the project partners explored opportunities for synergies and agreed to align on certain communication and dissemination activities, while also exploring the potential cooperation in other MaaS-related fields. The project partners also discussed key commercial and legal issues impacting MaaS, such as access to data, ticketing and potential policy frameworks. The cluster meeting in London paved the way for the second cluster meeting in Rome in which a common MaaS API was agreed. This, in turn, was endorsed by the MaaS Alliance with its logo being used to promote it.



**Figure 16: Participants of the of the MyCorridor cluster meeting in London, United Kingdom.**

### **3.6.2 Cluster Meeting in Rome, Italy**

On 15 November 2018, MyCorridor organised a cluster meeting in Rome, Italy in which both MyCorridor and IMOVE agreed to publicly announce the endorsement of the MaaS API and thus the intention to explore potential implementation in their technical solutions. During this meeting, UNEW, CErTH/HIT, CErTH/ITI and SWARCO Hellas participated on behalf of MyCorridor. Moreover, Softeco and Fit Consulting participated on behalf of IMOVE. Stakeholders of the two projects had the chance to demonstrate technical architectures of the platforms that have been implemented, and provide several technical details. In particular, CErTH/ITI presented the designed architecture (Figure 17) of the MyCorridor MaaS platform and described the functionalities and the implementation details of its main modules namely, the MyCorridor Services Registration Tool, the MyCorridor Trip Planner, MyCorridor Matchmaking Module, the MyCorridor Back-end (MaaS) API, the MyCorridor Business Rules Editor, the MyCorridor Big data Management Module, the Travellers' Feedback Module and the MyCorridor Payment Module. Additionally, CErTH/ITI described the dataflow of the two main MaaS scenarios implemented by the MyCorridor MaaS platform, namely the MaaS&Go (Figure 18) and the MaaSPacks (Figure 19). As a result, partners representing MyCorridor and IMOVE agreed to collaborate in terms of exchanging technical deliverables.



**Figure 17: MyCorridor system architecture presented in the MyCorridor cluster meeting in Rome, Italy.**

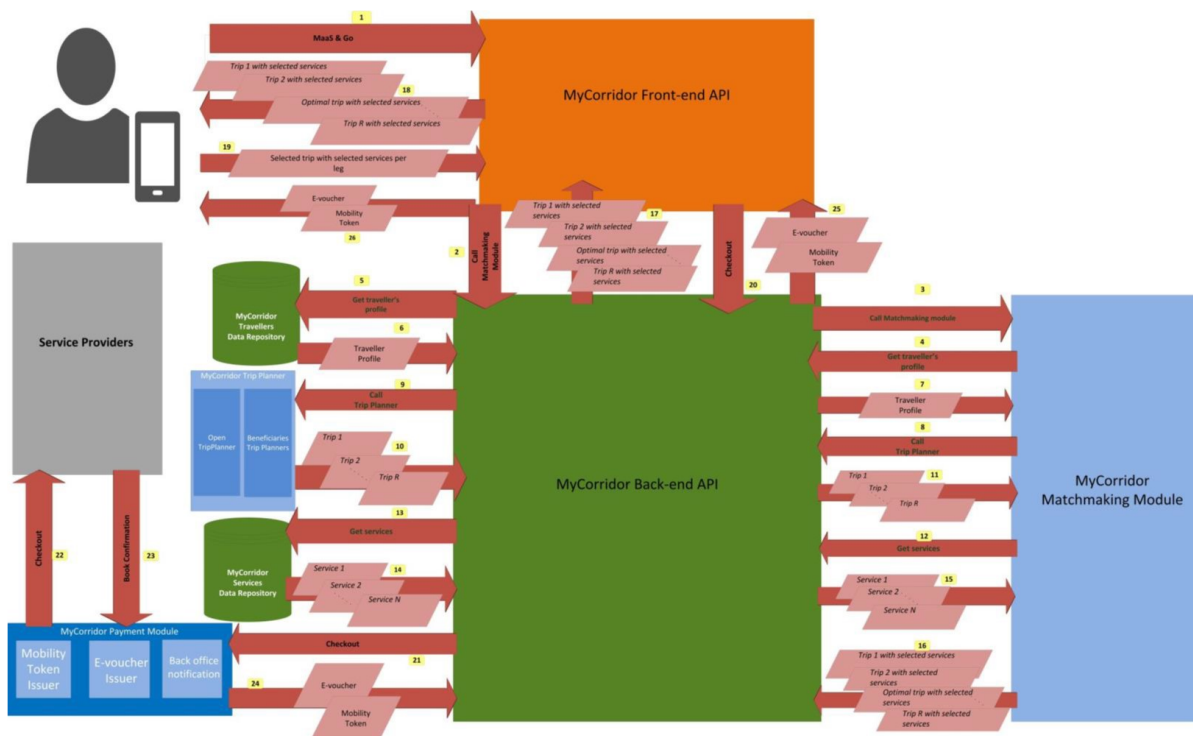


Figure 18: MyCorridor MaaS&Go scenario dataflow presented in the MyCorridor cluster meeting in Rome, Italy.

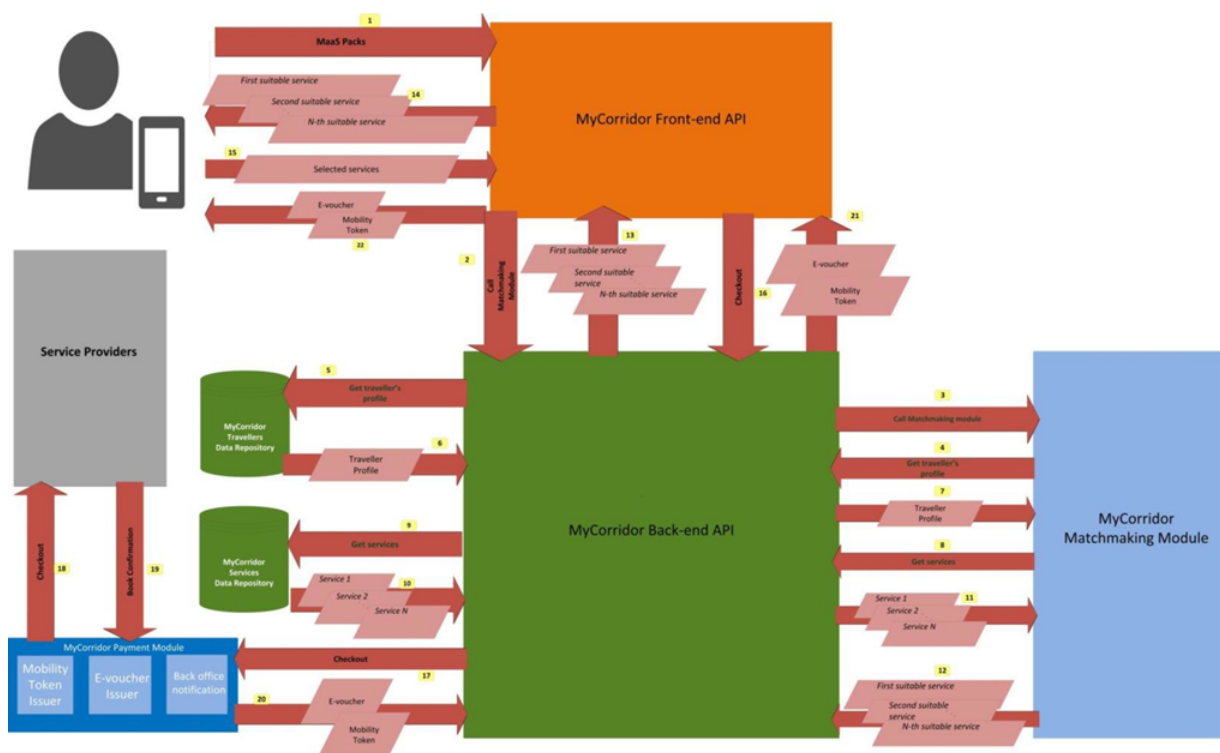
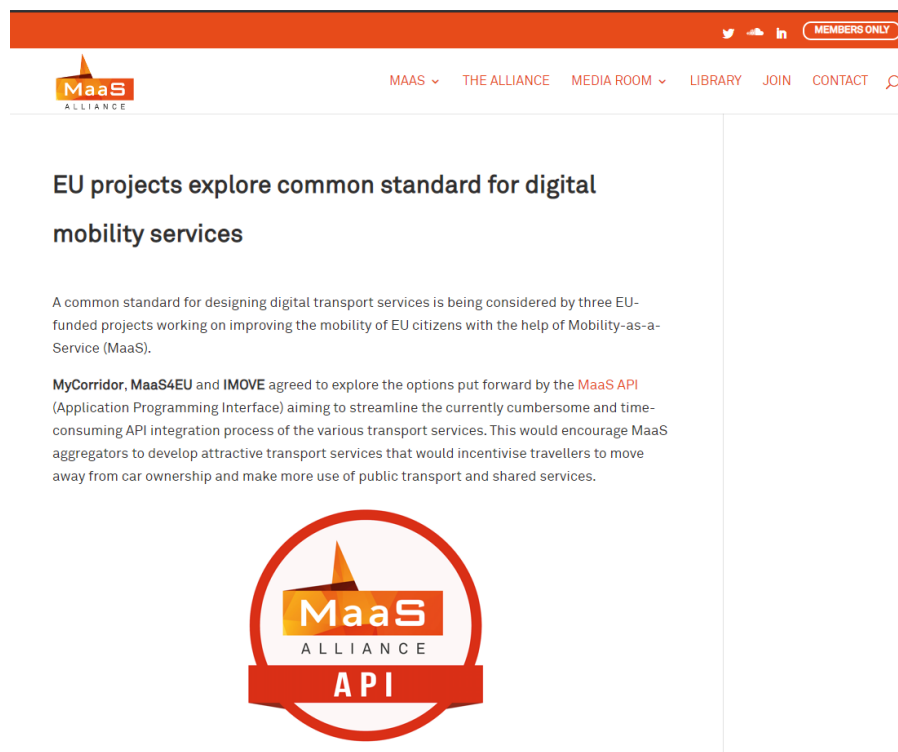


Figure 19: MyCorridor MaaS Packs scenario data flow presented in the MyCorridor cluster meeting in Rome, Italy.





**Figure 20: Participants of the MyCorridor cluster meeting in Rome, Italy.**



**Figure 21: MaaS Alliance API and collaboration between MyCorridor, IMOVE and MaaS4EU.**

### 3.6.3 Cluster Meeting in Brussels, Belgium

On 7 November 2019, upon the invitation of the MaaS Alliance, project partners from MyCorridor and IMOVE were invited to a cluster meeting to share best practices and lessons learned. Representatives

from Shift2Rail were also invited to present their work related to MaaS. In order to achieve a wide deployment of MaaS services, the main objectives were defined as the following:

- Understand the goals and results of IMOVE, MaaS4EU and MyCorridor.
- Identify those results which are of interest to MaaS Alliance in general and to the Technology and Standards Working Group.
- Initiate work on a common approach to MaaS.
- Help to maintain project results after projects are finished.



**Figure 22: Participants of the cluster meeting organised by the MaaS Alliance in Brussels, Belgium.**

The Technology and Standards Working Group is working on harmonising MaaS APIs in order for service providers and transport and data providers to interface one another. The following figures below show how different levels of APIs are necessary to integrate service providers seamlessly.

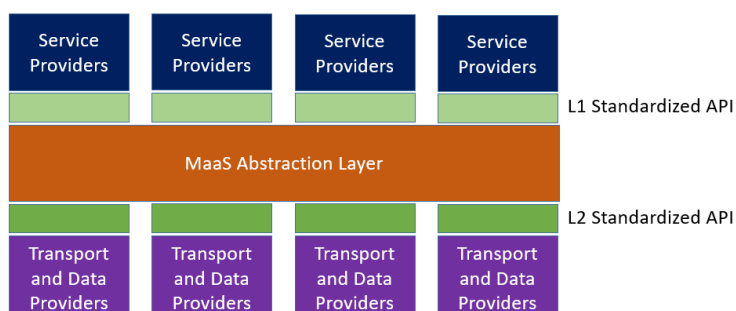
The current status of this activity is the following:

- Booking API under testing

Existing open API related to booking and payment:

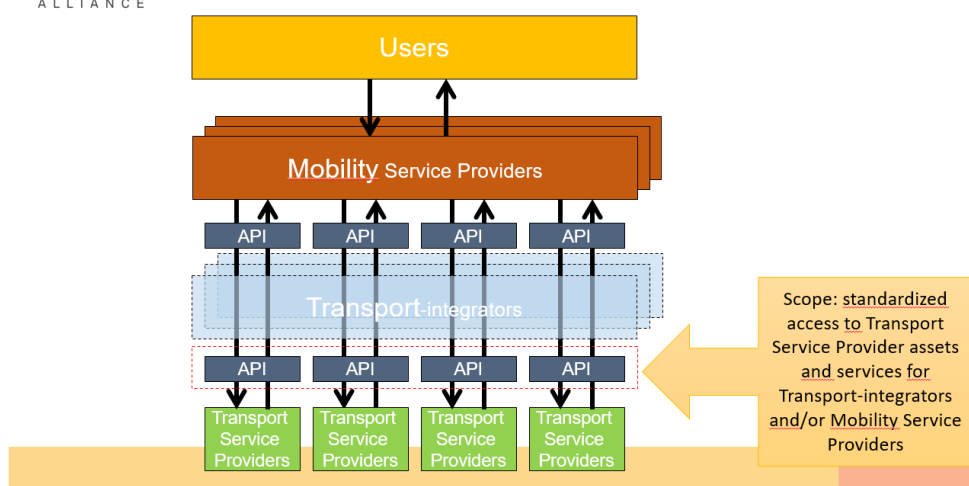
- Open Transport: <https://opentransport.com/docs/endpoints/bookings>
- MaaS Global: <https://docs.maas-api.org/>, <https://github.com/maasglobal/maas-tsp-api>
- Uber: <https://developer.uber.com/docs/riders/introduction>
- Jayride: <http://doc.jayride.com/>

## MaaS Harmonized API



**Figure 23: Technology and Standards Working Group vision for a MaaS harmonised API.**

## Basic Architecture



**Figure 24: MaaS Alliance Basic architecture of integration of services.**

The following information (see the figures below) was presented by CERTH during the cluster meeting. There are nine key technical products that derive from MyCorridor, the first one being the MyCorridor MaaS API. The development of this API was further elaborated upon during the meeting and synergies were identified with the ongoing work of the Technology and Standards Working Group.


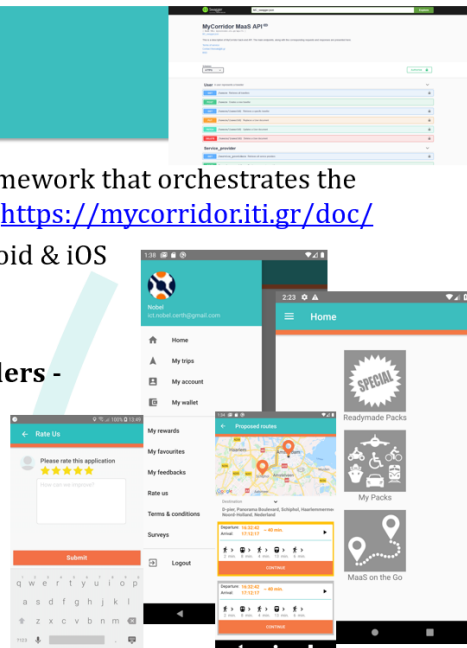
The first of the nine key technical products developed in the context of the MyCorridor project was the MyCorridor MaaS API, a RESTful API responsible for connecting the several modules of the MyCorridor ecosystem and the overall MyCorridor ecosystem with the outside world. The second technical product is the front-end mobile app, which serves as the gateway of the MyCorridor platform with the end users. The third product is the Traveller Feedback Module that is responsible for receiving and processing the



feedbacks of the end users regarding the MyCorridor platform, while the fourth product is the Service Registration Tool that is the connection gateway between the MyCorridor platform and the mobility service providers that want to register their services into the platform. The fifth product is the MaaS Aggregator Dashboard, a tool that facilitates the MyCorridor MaaS platform management by the MaaS Aggregator. The sixth key technical product is the Matchmaking Module, which is responsible for matching mobility/infomobility/TM/added-value services on the trips generated to serve the users trip requests. The seventh product is the Big Data Management Module, which is responsible for processing the usage statistics derived from the MyCorridor app, and extract useful insights for the mobility service providers. The Business Rules Implementer Module is the eighth project key technical project, and it is responsible for evaluating the conformance of the registered services business rules against the overall MyCorridor platform business rules. Finally, the ninth key technical product is the Payment Module, which is responsible for providing integrated mobile payment services from within the MyCorridor app. More details on the functionalities and technical implementations of all aforementioned key technical products can be found in D3.1 MyCorridor cloud service delivery platform, service gateway, big data management module and business rules implementer module (Confidential).

## Project key technical products

1. **MyCorridor MaaS API**; Complete RESTful framework that orchestrates the operation of the MyCorridor MaaS ecosystem, <https://mycorridor.iti.gr/doc/>
2. **Front end mobile app for travellers** in Android & iOS
3. **Traveller feedback module** embedded in the mobile app
4. **Service Registration Tool for service providers** - <https://mycorridor.iti.gr/srt/>
5. **MaaS Aggregator Dashboard** - [https://mycorridor.iti.gr/maas\\_aggregator/](https://mycorridor.iti.gr/maas_aggregator/)

**Figure 25: Project key technical products (1).**

## Project key technical products

6. **Matchmaking module** (in the back-end) for matching travelers' requests and profile to services
7. **Big data management module** (in the back-end) for the monitoring and recording of user activity in the platform
8. **Business rules implementer module** for the definition and implementation of the business policy through the MaaS Aggregator dashboard.
9. **Single Access Point for Mobility Tokens of all MaaS products purchased** - establishment of the mechanism for online issuing and redeeming of e-money vouchers ("Mobility Tokens") at every service provider; automated clearance plus mechanisms for securing the criteria and constraints of Mobility Tokens redemption.



Figure 26: Project key technical products (2).

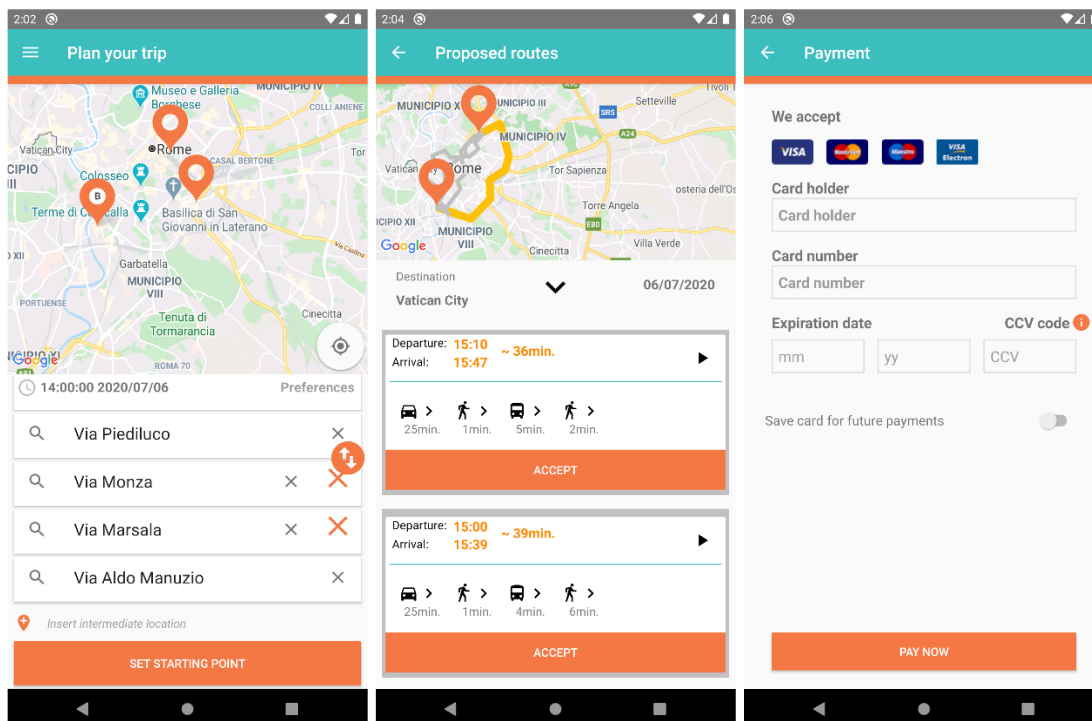


Figure 27: Screenshot of the MyCorridor app.

## 3.7 Further collaboration (Events, workshops and interviews)

### 3.7.1 MaaS Alliance Plenary Meeting

MyCorridor was invited to present during MaaS Alliance's Plenary Meeting on 5 October 2020. Dr. Roberto Palacin, University of Newcastle, participated in a panel discussion focusing on MaaS implementations and projects in Europe. The panel was moderated by Laurianne Krid, FIA Region I and the other panellists included representatives from Cycling Industries Europe, the state-owned public transport operator in Paris, RATP and the Italian consultancy firm 5T. UNEW presented an overview of the MyCorridor project, the unique contributions of the project and the latest findings from the pilots. Other presentations in the session came from Cycling Industries Europe, 5T and RATP Dev. Panel questions discussion included the most critical requirements for cross-border MaaS where UNEW emphasised the lessons learned from MyCorridor regarding robust technical coordination and the importance of reflecting legislative differences between countries.

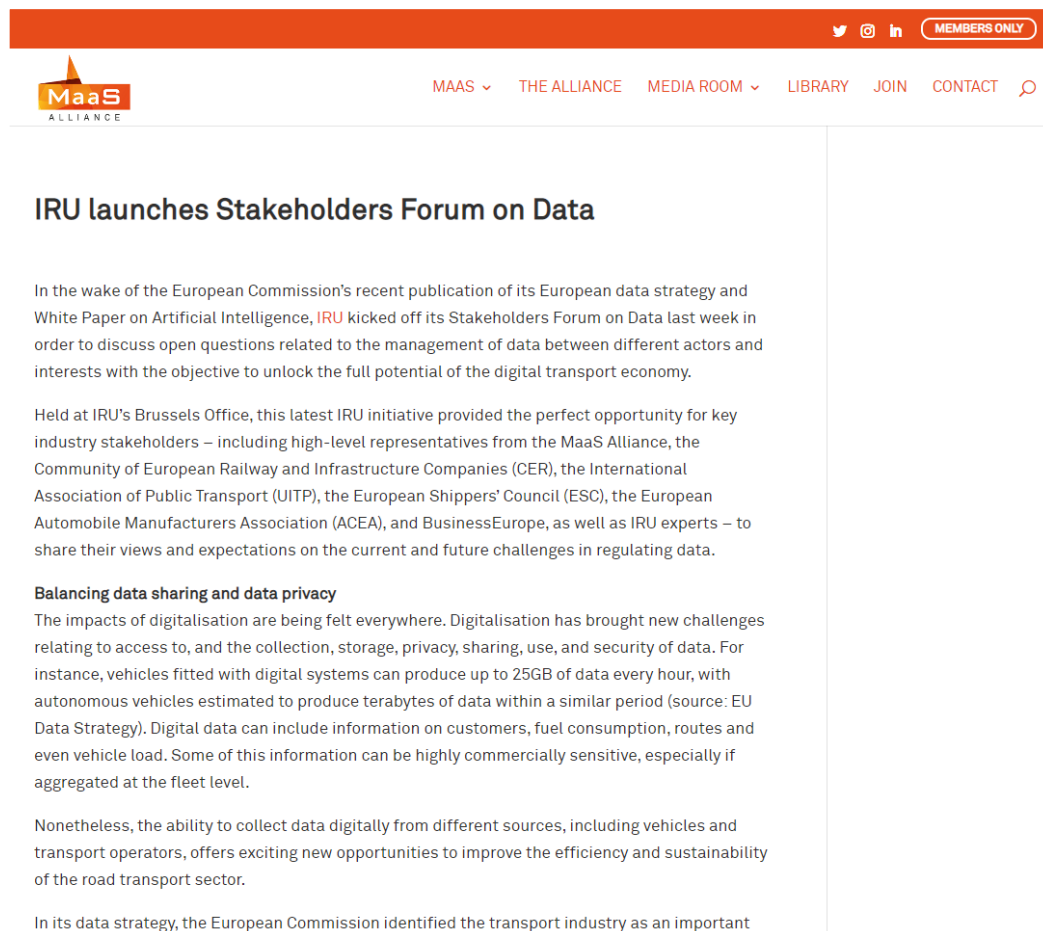


Figure 28: Agenda of the MaaS Alliance Plenary Meeting held on 5 October 2020.

### 3.7.2 IRU Stakeholders Forum on Data

On 4 March 2020, IRU launched its Stakeholders Forum on Data. The objective of this Forum is to have key industry stakeholders around the table to discuss pressing issues related to data, in view of the European Commission's European Data Strategy ([https://ec.europa.eu/info/sites/info/files/communication-european-strategy-data-19feb2020\\_en.pdf](https://ec.europa.eu/info/sites/info/files/communication-european-strategy-data-19feb2020_en.pdf)) and White Paper on Artificial Intelligence (<https://ec.europa.eu/info/sites/info/files/commission->

[white-paper-artificial-intelligence-feb2020\\_en.pdf](#)). The initiative had various stakeholders attend, which included the MaaS Alliance, the Community of European Railway and Infrastructure Companies (CER), the International Association of Public Transport (UITP), the European Shippers' Council (ESC), the European Automobile Manufacturers Association (ACEA) and BusinessEurope. The launch of the Stakeholders Forum on Data marks a further step willing to be taken in order to digitalise the transport sector. MaaS is a logical concept that benefits from this discussion given the different interests represented. Moreover, as outlined in numerous MaaS Alliance papers, privacy, data security and storage is of utmost concern if users are expected to make use of MaaS. This is an issue that is also faced by transport service providers and that requires further elaboration. Transport operators are currently reluctant to share data among themselves.



**Figure 29: Launch of the IRU Stakeholders Forum on Data.**

### 3.7.3 8<sup>th</sup> IRU International Taxi Forum

MyCorridor was invited to present the project at the 8<sup>th</sup> IRU International Taxi Forum (<https://www.iru.org/what-we-do/events/8th-iru-international-taxi-forum>) held on 2 November 2018 in Cologne, Germany. The session during which the project was presented was under the theme *Taxis in the future mobility chain* and can be summarised as the following: fast-evolving technology and better connectivity are changing mobility and the customer behaviour. The aim of this debate is to explore how taxi services can best respond to these changes and how they can fit into new mobility schemes such as MaaS. On the same panel, MaaS Global and PTV Group, two MaaS Alliance Members, gave an overview of

their activities and stressed the importance of the MaaS Alliance bringing together different stakeholders in the transport sector.



**Figure 30: MyCorridor at the 8<sup>th</sup> IRU International Taxi Forum.**

### 3.7.4 MyCorridor interview to the MaaS Alliance

In order to further strengthen ties with the MaaS Alliance, MyCorridor interviewed Piia Karjalainen, the Secretary General of the MaaS Alliance (interview found online on the project's website: <http://www.mycorridor.eu/2019/08/maas-alliance-global-maas-cooperation-for-local-implementation/>). Questions such as 'What does "Mobility as a Service" look like on other continents?' or 'What are the major legislative hurdles and how will the MaaS concept change in the near future?' were answered given the experience and the perspective of the MaaS Alliance. Key takeaways include increasing trust among transport service providers, aligning EU policy to target user needs and find solutions to ticketing and integrated payment systems.





MaaS Alliance: Global MaaS cooperation for local implementation

What does "Mobility as a Service" (MaaS) look like on other continents? What are the major legislative hurdles and how will the MaaS concept change in the near future? All these questions and more are answered by our interviewee, Pii Karjalainen, Senior Manager for MaaS at ERTICO – ITS Europe, who is responsible for coordinating the MaaS Alliance, an innovation cooperation platform with almost 80 members comprising representatives of companies, research organisations, ministries, regional authorities and cities. Also MyCorridor and other European research projects are collaborating with the MaaS Alliance, which was founded in October 2015.

**Figure 31: MyCorridor interview to the MaaS Alliance.**

### 3.7.5 External Workshops

IRU Projects and MaaS Alliance have established close ties throughout the duration of MyCorridor. This is proven by the numerous workshops and collaborative efforts that have taken place and are ongoing. Below are some examples of past workshops on MaaS in which both IRU Projects and MaaS Alliance participated in. On 4 May 2017, the MaaS Alliance and IRU held a workshop (<https://maas-alliance.eu/integrated-personal-mobility-europe/>) that brought together passenger transport operators and policy makers to discuss the legal frameworks, technical standards and communication necessary to transform the personal mobility landscape. The event also provided an opportunity for stakeholders to exchange views on the challenges and trends for the future of mobility. On 19 September 2017, POLIS, the network of European cities and regions working together to develop innovative technologies and policies for local transport, organised a workshop (<https://agenda.euractiv.com/events/polis-urban-mobility-breakfast-mobility-service-whats-role-cities-and-regions-158316>) on MaaS and on the role of cities and regions. IRU and the MaaS Alliance participated and gave their own views on the topic.

## Integrated Personal Mobility for Europe


The MaaS Alliance and IRU successfully held a workshop on Mobility-as-a-Service in Brussels which focused on new mobility schemes and next steps for the deployment of integrated, personalised, on-demand urban transport across Europe.

MaaS puts the user at the core of transport services, offering a multi-modal integrated platform for tailor-made mobility solutions based on individual needs. The workshop brought together passenger transport operators and policy makers to discuss the legal frameworks, technical standards and communication necessary to transform the personal mobility landscape. The event also provided an opportunity for stakeholders to exchange views on the challenges and trends for the future of mobility. The over 80 participants between speakers and attendees of the event included ERTICO – ITS Europe, the European Commission, IRU, Comtrade, MaaS Global, the Finnish Ministry of Transport, University of Tampere, Chalmers University, Uber, First Group, POLIS, UITP, among others. The presentations are available on the [IRU website](#).

With the current diversity of regulatory and business frameworks in different European countries, the workshop will generate a set of guidelines – due to be published in June and presented at the [ITS European Congress in Strasbourg](#) – to establish next steps and a common approach across EU countries.

The MaaS Alliance, hosted and managed by ERTICO – ITS Europe, is a group of over 30 companies and organisations which works on the implementation of MaaS in Europe and beyond. The Alliance's main goal is to facilitate a single, open market and full deployment of MaaS services. With a number of MaaS initiatives and pilots already planned or underway, the MaaS Alliance will ensure a shared work programme, engaging transport operators, service providers and users to establish a common vision.


**Figure 32: Joint MaaS Alliance and IRU Workshop on MaaS held in September 2017.**



[LIST VIEW](#)  
[CALENDAR VIEW](#)  
[AGENDA PLANNER](#)  
[EURACTIV EVENTS](#)

[Climate & Environment](#)  
[Innovation & Enterprise](#)  
[Health & Consumers](#)  
[Energy Efficiency](#)

[Euro & Finance](#)  
[Social Europe](#)  
[Infosociety](#)  
[EU Treaty & Institutions](#)



## POLIS URBAN MOBILITY BREAKFAST - Mobility as a Service: What's the role of cities and regions?

POLIS

[Remind me](#)
[Printer-friendly version](#)

Date	19 Sep 2017 09:00	Section	Transport
Address	Rue du Trône 98 1050 Brussels	Event Location	Brussels
Belgium			

**Event Description**

**Mobility as a Service: What's the role of cities and regions?**

We invite to our Urban Mobility Breakfast on Tuesday 19/9 to discuss views on Mobility as a Service/MaaS while having a warm drink and a croissant.

- Tuesday 19 September 2017
- 9.00-10.30 am
- Polis office:  
Rue du Trône 98, 1050 Brussels

Polis released its new [discussion paper on MaaS](#) on 3 September 2017. It offers the perspective of Polis member cities and regions on Mobility as a Service (MaaS).

We look forward to discussing views on MaaS, in an informal setting, while having a warm drink and a croissant. A short introduction to the discussion paper will be followed by a panel debate on the most crucial aspects of MaaS. Panelists include Polis member London and IRU of the MaaS Alliance.

**Figure 33: POLIS workshop on Mobility as a Service: What's the role of cities and regions?**



## 4 Conclusion and Recommendations

Throughout the duration of the project, MyCorridor and the MaaS Alliance established and progressively strengthened their collaboration by working together on various topics such as technical MaaS standards and APIs, legal issues and traffic management's role in MaaS. The creation of the MaaS Alliance in 2015 and MyCorridor starting in May 2017 coincided in a constructive and efficient way which paved the way to a closer collaboration and shared objectives. Due to MyCorridor's cross-border element, the MaaS Alliance has repeatedly shown interest in the work that the project carried out legally, technically and regarding business models and incentive schemes. IRU bridged the project's developments to the MaaS Alliance and ensured that the results achieved were communicated efficiently. Where possible, IRU invited the MaaS Alliance to MyCorridor events, which included its three Pan European Workshops and numerous IRU internal committee meetings and public events. The results of this collaboration led to the adoption of a common standard API with the MaaS Alliance logo which was endorsed by the other two MaaS projects; IMOVE and MaaS4EU.

In general terms, numerous MaaS initiatives have been launched following the establishment of the MaaS Alliance and the launch of the three MaaS projects. Despite this surge in MaaS mobility solutions, interoperability remains an issue to be solved. One of the main objectives of the MaaS Alliance is bring together different MaaS initiatives and to define a common technical approach to facilitate a single open market and full deployment of MaaS services. From this point of view, MyCorridor played an important role in sharing lessons learned and best practices with the MaaS Alliance. Considering MyCorridor's cross-border nature, this added value helps the MaaS Alliance investigate MaaS from other points of view. Moreover, the collaboration between MyCorridor and the MaaS Alliance demonstrated that the notion of MaaS is not only about technological achievements but also about bringing the whole value chain – the authorities, transport operators, service providers, service integrators, vehicle manufacturers, map providers – together, to have MaaS operating at cross-border level.

By examining the activity in its pilot sites, MyCorridor highlights that the fundamental principle behind the deployment of MaaS is the fact that it should be user centric, customer centric and market centric. In addition, the project showed that the MaaS ecosystem design should be open and inclusive to any company or organisation who would like to take part as a user or as a service provider.

In order to achieve scalability at national and EU level several barriers remain. These include:

- Market access and integration barriers;
- Payment integration;
- Developing trust for collaboration;
- Undefined principles for data sharing, access and governance;
- Scalability;
- Lack of general knowledge and understanding about MaaS.

To address the barriers above, it is recommended that the MaaS Alliance's efforts are reinforced and that the EC should define new research topics related to MaaS to boost the mobility sector's image. Concrete steps should be taken in addressing barriers such as, for example, enabling road transport operators and other interested stakeholders to be part of MaaS operational and business-models. Moreover, MaaS was identified in the European Green Deal as a tool to decarbonise the transport sector. This should also serve to stimulate the discussion around MaaS and its role it has in promoting an environmentally friendly travel behaviour.

## References

1. Toulou, K. (2020). *Deliverable 6.1: Pilot plans framework and tools*. Retrieved from <http://www.mycorridor.eu/wp-content/uploads/2018/08/MyCorridor D6.1 Pilotplansframeworkandtool Final.pdf>
2. Graebe, A. (n.d.). Developers | Uber. Retrieved May 7, 2020, from <https://developer.uber.com/docs/riders/introduction>
3. Iiskola, A., Giro, C., Kargas, C., Falliti, E., Hofer, S., Zielinski, S., ... Signor, L. (2019). *Recommendations on a User-Centric Approach for MaaS*. Retrieved from <https://maas-alliance.eu/wp-content/uploads/sites/7/2019/04/Recommendations-on-a-User-Centric-Approach-for-MaaS-FINAL-180419.pdf>
4. IMOVE. (n.d.). IMOVE – Unlocking Large-Scale Acces. Retrieved May 7, 2020, from <https://www.imove-project.eu/>
5. IRU - International Road Transport Union. (2018, November 2). 8th IRU International Taxi Forum. Retrieved May 7, 2020, from <https://www.iru.org/what-we-do/events/8th-iru-international-taxi-forum>
6. IRU - International Road Transport Union. (2019). *IRU Position on Mobility as a Service*. Retrieved from <https://www.iru.org/system/files/IRU%20Position%20Paper%20on%20MaaS.pdf>
7. Jayride Group Ltd. (n.d.). Jayride Booking API Introduction. Retrieved May 7, 2020, from <http://doc.jayride.com/>
8. Leonard, S., Cocone, L., & Mizaras, V. (2019). *Traffic Management 2.0 –Mobility as a Service Task Force*. Retrieved from <http://tm20.org/wp-content/uploads/sites/8/2019/08/TM2.0-TF MaaS Final Report v3.0.pdf>
9. MaaS Alliance. (2018a). *Passenger Rights in Multimodal Transport- MaaS Alliance Vision Paper*. Retrieved from <https://maas-alliance.eu/wp-content/uploads/sites/7/2018/09/Vision-Paper-on-Multimodal-Passenger-rights-240918-FINAL.pdf>
10. MaaS Alliance. (2018b, July 17). MaaS Alliance Partner News. Retrieved May 7, 2020, from <https://maas-alliance.eu/maas-news/partner-news/>
11. MaaS Alliance. (2019a, November 18). MaaS Alliance Library. Retrieved May 7, 2020, from <https://maas-alliance.eu/library/>
12. MaaS Alliance. (2019b, November 18). MaaS Alliance News. Retrieved May 7, 2020, from <https://maas-alliance.eu/maas-news/>
13. MaaS Global. (n.d.). MaaS Global TSP API. Retrieved May 7, 2020, from <https://github.com/maasglobal/maas-tsp-api>
14. MaaS4EU. (n.d.). MaaS4EU – Mobility as a Service for European Union. Retrieved May 7, 2020, from <http://www.maas4eu.eu/>

15. MaaS-TSP. (n.d.). Retrieved May 7, 2020, from <https://docs.maas-api.org/>
16. MyCorridor. (n.d.). MyCorridor - Project library. Retrieved May 7, 2020, from <http://www.mycorridor.eu/project-library/>
17. Open Transport. (n.d.). Retrieved May 7, 2020, from <https://opentransport.com/docs/endpoints/bookings>