



ADVANCING  
PUBLIC  
TRANSPORT

# UNLOCKING SCALABILITY OF MAAS IN EUROPEAN CITIES

Supported by



Local Host



INDIA

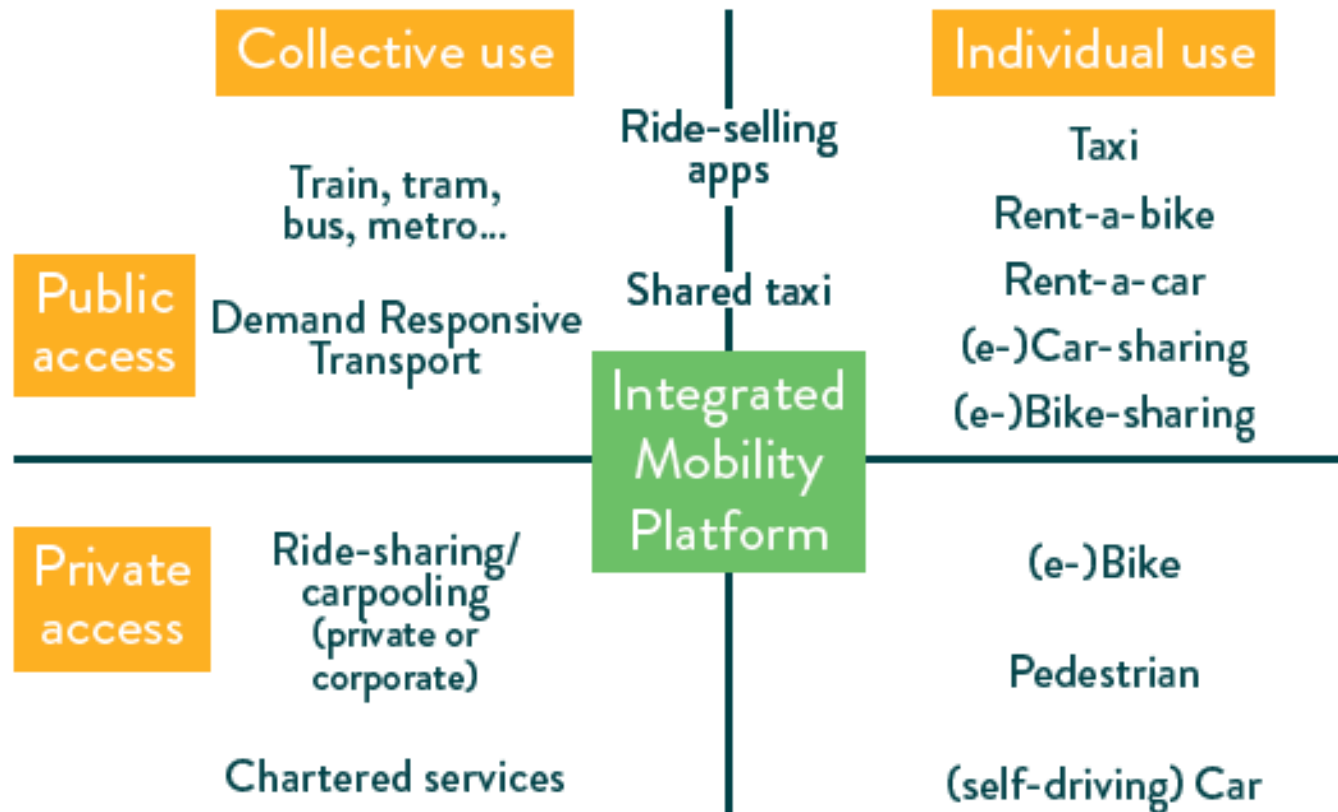


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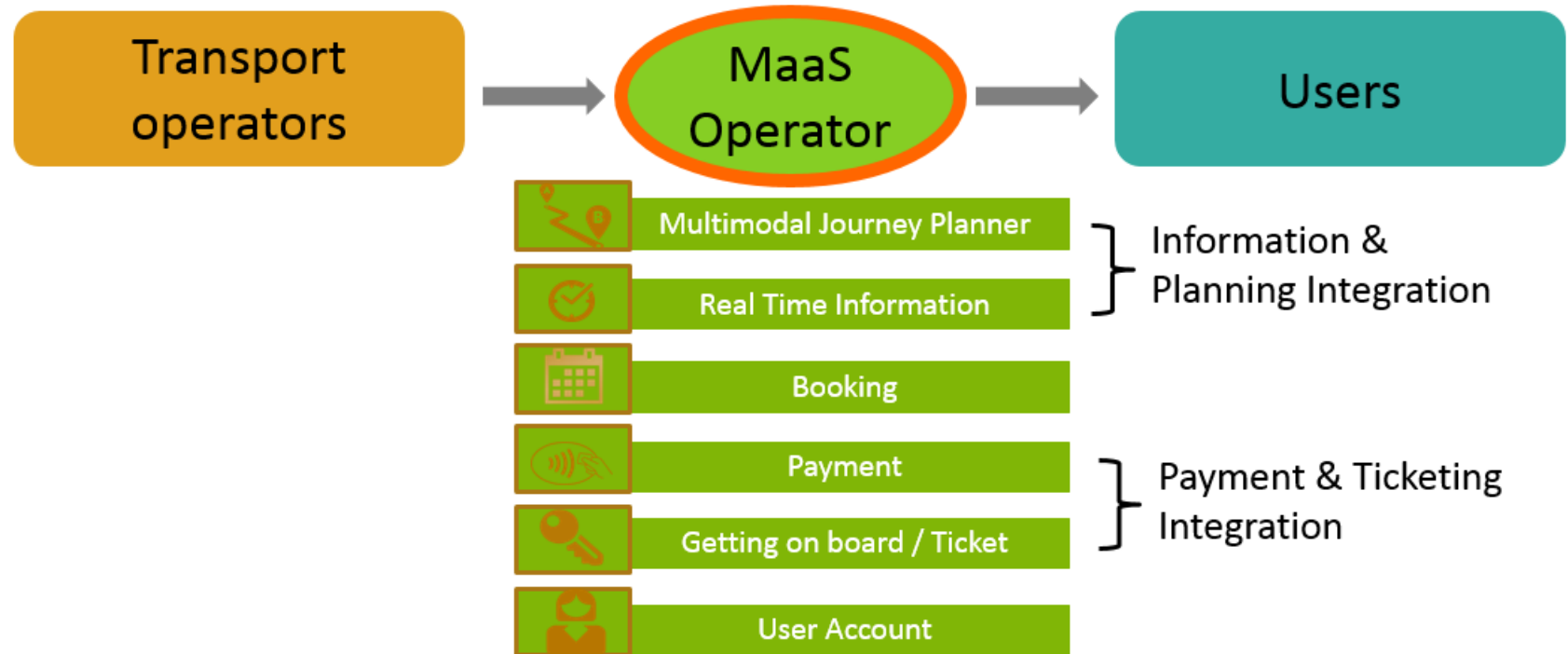
**UITP – DIMTS Bus Seminar**  
11-12 May 2018, Delhi

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# WHAT IS MAAS?



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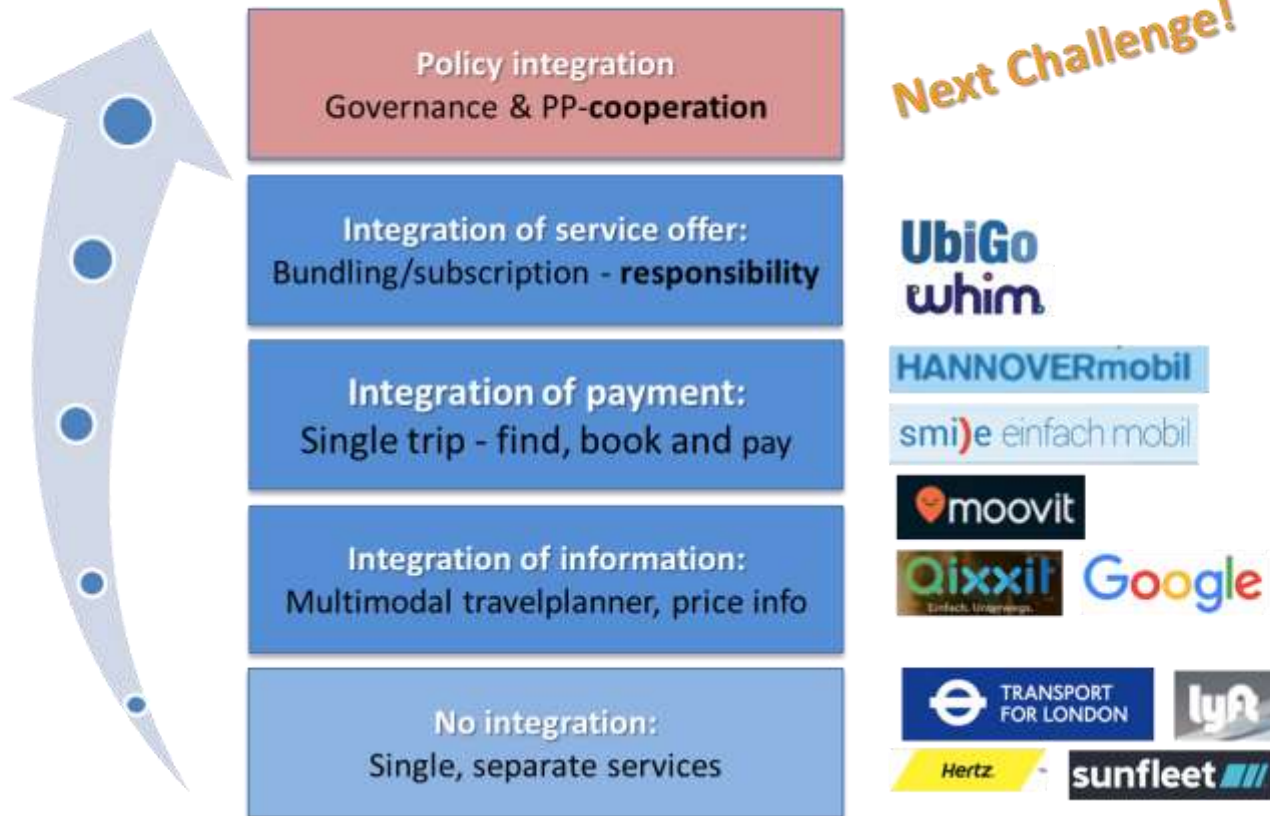
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# LEVELS OF INTEGRATION

## Levels of integration

**UbiGo**

Source URBAN MOBILITY

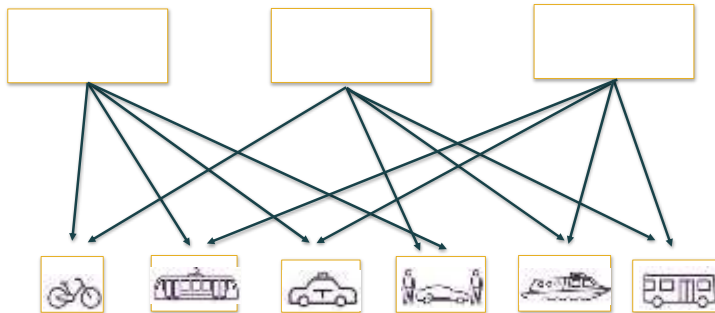


# ECOSYSTEM 'MODELS'

(RÖHRLEEF 2017)

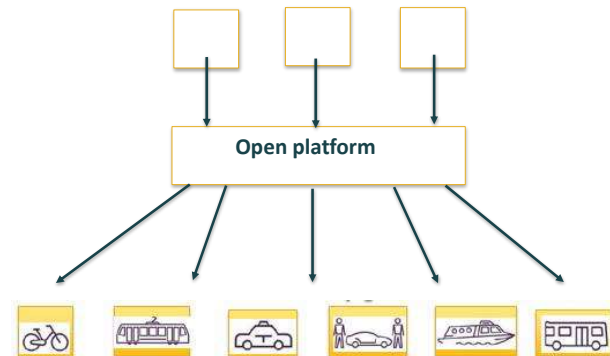
## 1. Commercial actor

- Integrators organise themselves
- Competition
- Free, unregulated market



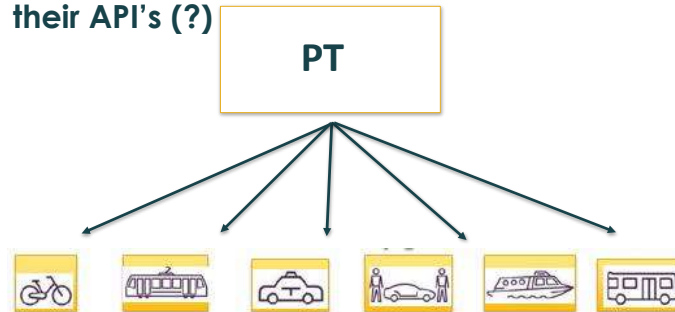
## 2. Creator of an open back-end platform

- Technical back-end platform serves as « public infrastructure »
- Competition on front-end side
- Other mobility service providers have to open up their API's



## 3. Integrator around PT

- MaaS run by Public Transport with selected mobility services
- Rules set by PT
- Other mobility service providers have to open up their API's (?)



# DEPLOYMENT IN EUROPE: IMOVE PROJECT

[www.imove-project.eu](http://www.imove-project.eu)

#H2020\_IMOVE



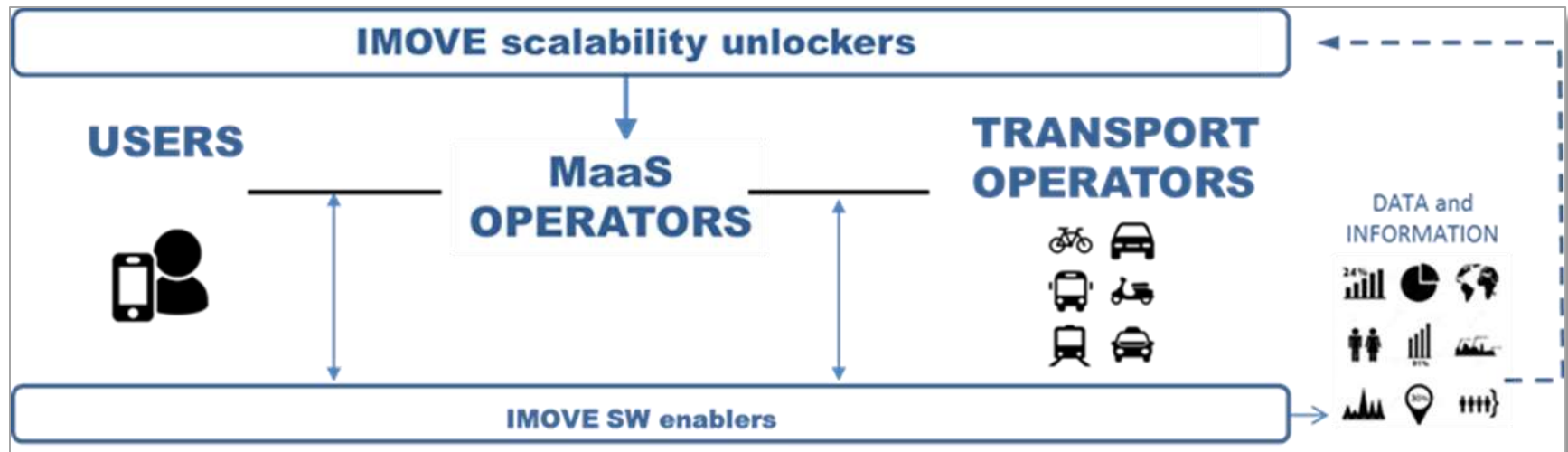
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# IMOVE – OVERALL GOAL AND APPROACH

To accelerate the deployment and unlock the scalability of MaaS schemes in Europe, paving the way for a “roaming” service for MaaS users at the European level.





# IMOVE – SCALABILITY UNLOCKERS

- **Sustainable Business Models and organisational MaaS Frameworks**
  - contracts, Terms & Conditions, etc.
- **Behaviour change strategies**
  - e.g. incentive models, rewarding schemes, gamification, etc.
- **User engagement schemes**
  - inspired by marketing and XaaS economy
- **Long-term MaaS interoperability and roaming strategies**
  - cross-MaaS, cross-borders

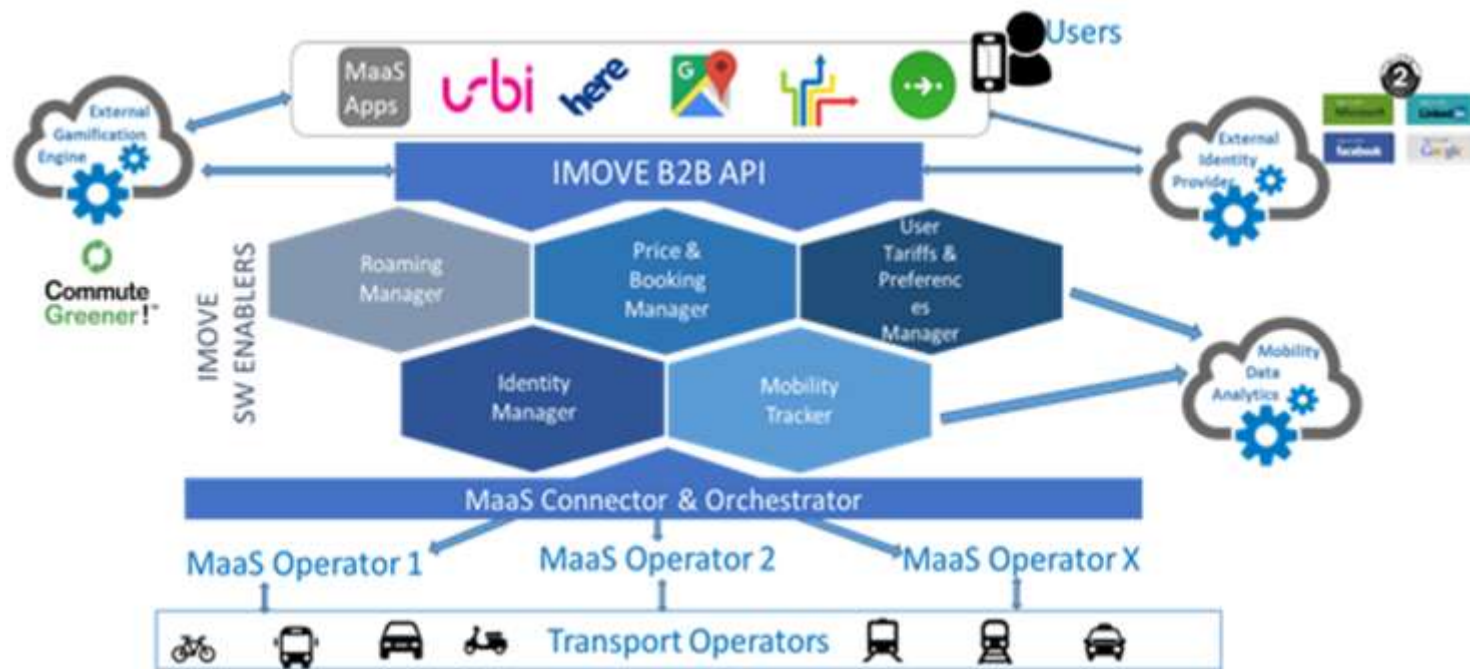




# IMOVE – SOFTWARE ENABLERS AND ARCHITECTURE

## IMOVE B2B API

- enabling (1) **interoperability with external systems** (travel planners, multimodal Apps, etc.) and (2) **application development**



# IMOVE DATA EXCHANGE AND INTEROPERABILITY FRAMEWORK

- Identify the **opportunities** and **barriers** for **data sharing** across all MaaS actors, in the IMOVE Living Labs and beyond
- Define the necessary **interfaces** and **data translators** between MaaS actors: the **IMOVE B2B API**
- **Analyze user mobility patterns** so as to understand customer expectations, study behavior changing strategies and identify further business potential for MaaS actors

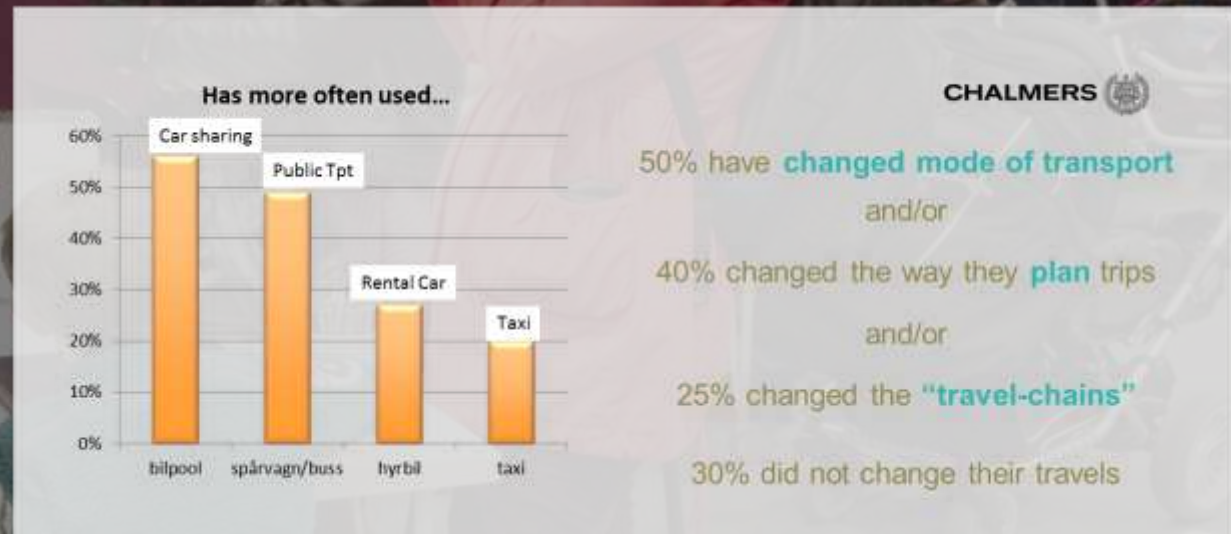
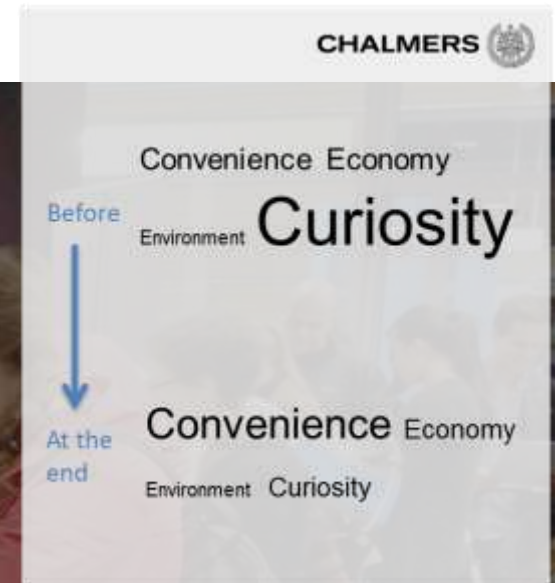


# MAAS PILOT IN GOTHENBURG

## The Gothenburg pilot 2013-2014

- 70 households paying households
- 6 months
- Flexible subscription (≈ 130€/month)
- 20 cars in storage
- 0 drop outs
- >12 000 bookings/transactions

- **Mostly normal**
- **Curios and quite demanding**  
= early adopters



# MAAS AND PUBLIC TRANSPORT

## WHAT ROLE FOR PUBLIC TRANSPORT ?



WienMobil

Ein Service der  
wien mobil

Local integrator



Mobility inside  
alles einfach nutzen

National  
integrator

KVV.mobil  
powered by  
Moovel



Partner

Mobility  
provider

National  
technical  
integrator



# CASE STUDY: WIENMOBIL, VIENNA – PT AS INTEGRATOR

## MOBILITY SERVICE PLATFORM = PUBLIC DIGITAL INFRASTRUCTURE

- Wiener Linien set up a subsidiary: Upstream next level mobility GmbH
- Upstream runs a multimodal mobility service platform:
  - it unites publicly available transport offers (and potentially corporate fleets) into tailor-made services
  - it offers a **central digital access** to the whole world of urban mobility

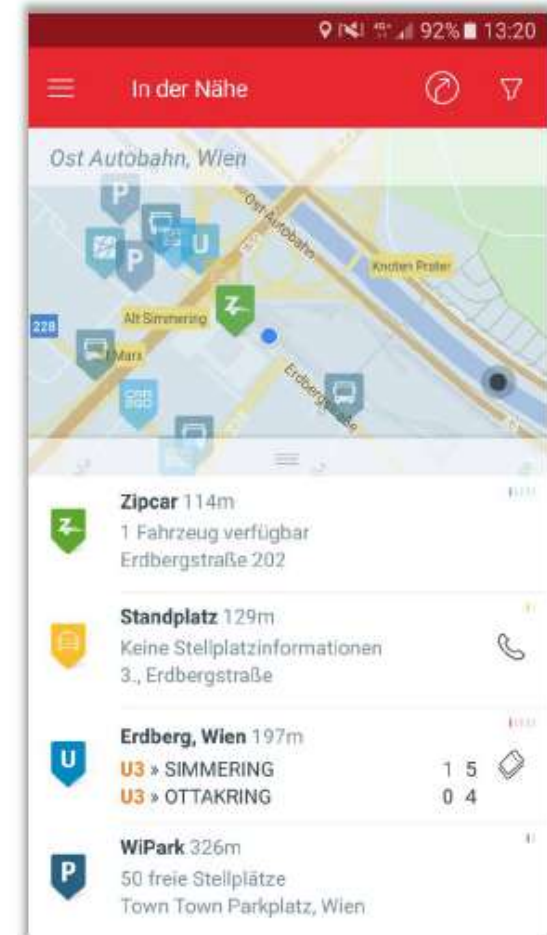


# What is WienMobil ?

- **Digital Service for Wiener Linien Customers**
- **Combination of public transport and additional mobility service offers**
- **Unified Customer Service for:**
  - Registration & User Data Management
  - Management of Mobility Profile
  - Multimodal Information & Routing
  - Ticketing, Booking & Reservation
  - En Route Navigation

## Customer benefits:

- Additional options of mobility in Vienna apart from private cars are more transparent.
- Easier use of additional mobility forms.
- simply being mobil

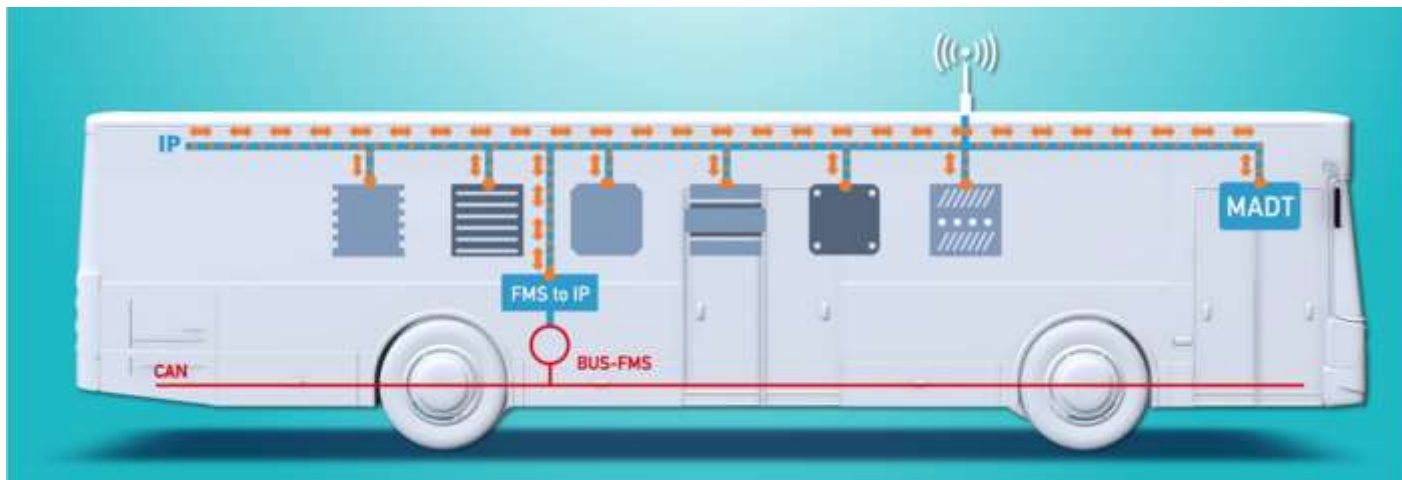


# INTEROPERABILITY IS A KEY FACTOR

[www.itxpt.org](http://www.itxpt.org)



Time and money should be invested in new and innovative applications!



*Applied standards for interoperable “plug-and-play” onboard and back-office IT-systems for public transport.*





ITxPT testbench

# Testbench



Vehicle pre-preparation

# ITxPT TECHNICAL SPECIFICATIONS



## Overview

### General information

- Standards
- Implementations
- Communication Kit
- Terminology
- FAQ
- Submit Projects and Internships

### Specifications & Guidelines

- Technical Specifications
- Deployment Guidelines
- Releases

### ITxPT label

- Catalogue
- Procedure
- Technical platform
- Test templates
- Tools

### Working groups

### Association documents

Page **Discussion**

Read

Edit

View history



## ITxPT Technical Specifications

These ITxPT technical specifications comes from EBSF project and from ITxPT Working Groups.

### S01- Installation Requirements specifications v2.0.1\_2017 **NEW!**

This page describes the installation requirements to pre-equip vehicles with compliant ITxPT Onboard Architecture and PT networks with Backoffice Architecture.

### S02- Onboard Architecture specifications v2.0\_2017 **NEW!**

This page defines the detailed specifications of ITxPT onboard architecture.

### S03- Backoffice Architecture specifications v2.0\_2017 **NEW!**

This page defines the detailed specifications of ITxPT backoffice architecture.

### S04- Over-the-air Architecture specifications v2.0\_2017 **NEW!**

This page defines the detailed specifications of ITxPT Over-the-air architecture.



# OUTLOOK

- **Local context matters**
- **MaaS = cooperation, build up the dialogue of the MaaS ecosystem**
- **Shared mobility needs to be promoted**
- **PT is the backbone of integrated urban mobility**
- **Value of Data:** data of public interest generated by MaaS should be accessible to optimise and enhance public transport & urban mobility
- **Interoperability is a key factor**

# THANK YOU!!

Guido Di Pasquale

Deputy Director Research and Innovation, UITP

[guido.dipasquale@uitp.org](mailto:guido.dipasquale@uitp.org)



@guidodipasquale



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