



The Voice of Leasing and Automotive Rental in Europe

# Relevance of GEAR 2030 for the leasing industry

Mátraháza | 9 November 2017

# Basics

- High-level Commission organized stakeholder group that will debate the main challenges for the automotive industry in the next 15 years and will make recommendations to reinforce the competitiveness of the European automotive value chain.
- GEAR 2030 focuses on
  - the adaptation of the value chain to new global challenges
  - clean and efficient vehicles uptake
  - automated and connected vehicles
- 2 year process



High Level Group on the  
Competitiveness and Sustainable  
Growth of the Automotive Industry  
in the European Union  
  
FINAL REPORT – 2017  
06 GROW – Internal Market, Industry,  
Entrepreneurship and SMEs

# Structure

## GEAR 2030

<i>Working group (WG) rapporteur</i>	Project Team (PT)	Application Chairmanship	PT rapporteur	Participating organizations & MS
<b>WG 1 on value chain</b>				
France	PT 1-Global landscape	Renault-Nissan	EC	ACEA (BMW, JLR, Daimler, VW), AIC, EUROBAT (Exide, FIAMM), EGEA, FIGIEFA, FIA, CZ, BEUC, UK tbc, ERTICO (Bosch, ICCS, CERTH, Leeds), CoR, AT, CLEPA(GKN, Octotelematics, Plasticomnium, Bosch); DE, FR, T&E, CECRA, CLIMA, IndustriAll; AECC, EESC, ACEM, ETRMA (Continental, GY)
	PT2-Zero-emission vehicles	ACEA +T&E	EC	ACEA (Daimler, Renault, PSA, FCA, VW, JLR), EUROBAT, BE, UK, DE, FR,BEUC,FIA ,ERTICO (CERTH), CoR, CLEPA(GKN, Plasticomnium, Bosch), AT, T&E, CECRA, CLIMA, IndustriAll, AECC, ACEM, ETRMA (GY)
	PT3-Value chain adaptation	FIA + AIC	EC	ACEA (PSA, Renault, JLR, VW), EGEA, EUROBAT, FIGIEFA (XE consultancy),UK, FIA, CZ, CLEPA (Bosch), CoR, AT, T&E, CECRA, DE, IndustriAll, AECC, EESC, ACEM, ETRMA (Continental, GY)
	PT4-Human capital	Jaguar Land Rover	EC	ACEA (BMW, VW), AIC, UK, CoR, AT, CECRA, CLEPA, EUROBAT, DE, IndustriAll, ETRMA (Continental), ACEM

# Structure

<i>WG 2 on connected cars</i>				
<i>Germany + Netherlands</i>	<i>PT1-Regulatory issues</i>	<i>ACEA/ERTICO</i>	<i>EC</i>	ACEA, ACEA (Hyundai, PSA, Ford, Daimler, VW, Renault-Nissan, VCC, JLR, TME), ERTICO, FIGIEFA, UK, FIA, AT, ES, ERTICO (TomTom, Bosch, TFL, HERE, ICCS, CERTH), CLEPA (Knorr-Bremse, Plasticomnium, Octotelematics, ZF, Valeo, TRW, Honeywell), CECRA, ACEA, Insurance Europe, BE, NL, ETRMA (GY, Michelin, Bridgestone), ACEM, ETSC
	<i>PT2-Financing</i>	<i>Bosch/EUCAR</i>	<i>EC</i>	ACEA (VW, PSA, EUCAR, JLR), ES, UK, AT, BE, SK, NL, Infineon, ERTICO (Bosch, IDIADA, HERE, CERTH), CLEPA (Bosch, Valeo), CECRA, FIA, ETRMA (GY, Michelin, Bridgestone), ACEM
	<i>PT3- Liability issues</i>	<i>Insurance Europe</i>	<i>EC</i>	<i>(this PT may be set up later)</i>

# Global landscape





## Electrification/ Advanced ICE

### Most likely scenario

### Most preferable orientations

<b>ZEVs &amp; PHEV</b>	<u>Financial incentives</u> : purchase incentive is granted for the purchase of ZEVs <u>Non-financial incentives</u> : no access restriction for EVs Sales increase sufficiently to reach profitable volumes	
<b>EV infrastructure deployment/ batterie range</b>	<u>Private infrastructure</u> : obligation for newly-built multi-family residential to build few charging points + incentives <u>Public accessible infrastructure</u> : Private and public/private initiatives	➤ An adequate regulatory framework should be set up to allow every households to benefit from a charging point in its residential area.
<b>Penetration ZEVs &amp; PHEV</b>	25-30%	
<b>Conventional advanced vehicles</b>	More stringent regulation, banned in some urban areas based on emissions performance	
<b>EV / ICE TCO equal</b>	Autonomy 600 km with infrastructure 150 kw	
<b>ZEV market shares in the EU vs the rest of the world</b>	EU is growing / others keep at the same level <b>OR</b> The other regions are growing faster than the EU	➤ Adequate conditions should be set up to boost ZEV market share growth in the EU at faster pace compared to other regions.
<b>Batteries production for European demand</b>	Leaders are not European but part of the production is located in Europe	➤ Europe battery production in Europe should be developed and supported so that most of the production is located on the EU territory
<b>Traction battery other businesses</b>	Sales from recycled components compensate the cost of recycling operations and business of battery reuse – second life begins	➤ All types of batteries should be taken into account when developing new businesses related to batteries
<b>Public fleets exemplariness</b>	ZEVs in public fleets: low binding targets	➤ Public authorities should take the opportunity to lead by example by setting up high binding targets for ZEVs in public fleets



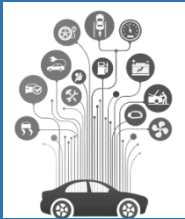
## Digitalization and new business environment

### Most likely scenario

<b>Mobility as a service</b>	Integration of all modes of transport + on-demand ridesourcing into « MaaS » products in 15% of EU population
<b>Passengers car-sharing / car ownership</b>	30% shared vehicles in urban areas / 5% in non-urban areas car ownership = 60%
<b>Possibility to personalize a vehicle</b>	Consumers can choose between various combinations of mechanical and electronical components of the vehicle
<b>Connectivity and digitalisation</b>	60% of all cars (new registrations) are fully connected (consumer convenience, after sales, mobility as a service, home, health)
<b>Access to data &amp; new business environment</b>	Regulated direct access to a wider set of data Alternative digital services possible
<b>Car online sale</b>	New vehicles purchases : 20% Second-hand vehicles purchases: 50%
<b>Infrastructure</b>	Deployment of road-side-units on most parts of the road networks

### Most preferable orientations

- With time, 50% of the EU population should benefit from « Mobility as a service » products where all modes of transport are integrated
- In the future, 60% of vehicles used in urban areas and 10% used in non urban areas should be shared vehicles.
- The continuous transformation of cars into a smart connected living space, providing a wide range of digital services should be supported



## Connected & Automated driving

### Most likely scenario

### Most preferable orientations

#### AD (L4) deployment

10-20% of new vehicles

#### Public incentives

EU research incentives are used for the development of AV technologies  
Exemption from registration tax and VAT

- Ambitious incentives such as a full package of exemption from registration tax, VAT and toll charges. Favoring the development of advanced AV technology would exempt the public sector from granting public incentives

#### Infrastructure

Infrastructures development in motorways' infrastructure.

- The development of infrastructure allowing connected & automated driving should aim at covering all parts of paved road's network.

#### Financial investment of authorities /Cities in infrastructures

Clear involvement 50/50

- A total involvement authorities /cities in infrastructures in the development of infrastructure would boost connected & automated driving

#### Interoperability V2X

Agreement between various car manufacturers on interoperability

- Full cooperation should be maintained to provide full interoperability between automated vehicles

#### Legal certainty for AD

Legal framework at European level for liability with cross-border solutions

#### Consumers acceptance

< 40% of drivers can imagine letting an autopilot steer their car

- Efforts should be made to favor a high/100% consumer's acceptance of connected & automated driving





## New players

### Most likely scenario

**Most common traditional automakers' future business model**

Manufacturing of vehicles and delivering mobility solutions

**New BMs related to Connectivity**

Data-driven opportunities for new products and services, dominated by technology giants

**Key market for the European automotive industry**

Manufacturing

**New BMs related to Automated Driving**

Current players own a greater portion of the market value

**Where is the highest added value captured?**

Current players based outside Europe

### Most preferable orientations

- Data-driven opportunities for new products and services provided by car manufacturers should be supported
- Manufacturing will remain a key market for the European automotive industry but other parts of the value chain should not be let aside



# Advanced manufacturing

## Most likely scenario

New materials (Iso perimeter)	Use of new materials resulting in 20% decrease in weight.
Robotisation	<50% <b>OR</b> 75%
3D printing	Mostly for spare parts. Current actors and new players share the market
Digitalization of manufacturing	Rationalization of the production leads to a 20% decrease in production costs Decrease of defects: -20%
Economies of Scale	Minor economies of scale due to low level of AV market uptake

## Most preferable orientations

- Research on new materials should be enhanced in order to support further waste reduction
- An increase in the robotisation share of the production will allow innovative production and favor advanced manufacturing
- 3D printing should be focused on spare parts, allowing current actors and new players to share the markets
- Constant investment in the digitalization of manufacturing will lead to a much better rationalization of the production. This would potentially allow a reduction cost of 30 to 50% and a decrease of defects of 50 to 75%
- New development in advanced manufacturing technologies would allow large economies of scale due to high level of AV market uptake

# Concrete results

# Re-defining the industry

- **Car rental**
  - **Traditional car rental**
  - **Car sharing:** Station based or free floating on demand mobility service provided to consumers or businesses by a professional service provider which **manages and keeps the vehicles**. The service is often subscription based and tends to be used for short periods of time and distances.
  - **Peer 2 Peer** The principal role of the peer-to-peer car sharing operator is to provide an online marketplace to connect vehicle-owners with prospective vehicle-renters.
- **Ridesharing, Carpooling** the shared usage of a private vehicle within two or more persons, which have to do the same route. The aim is not to make a profit, but share the costs of the car trip.
- **Ridesharing, Platforms** the “on demand” ridesharing, which is a commercial service similar to a taxi where the vehicles are driven by privates and are booked online tough an app which localizes both the driver and the private. The driver offers the service for a compensation.

# Vehicle connectivity

- “ is a **game changer** for the entire automotive value chain. Higher connectivity will trigger the emergence of a new demand for connected services such as those related to consumer convenience, insurance, aftersales, fleet management or health. Higher connectivity of vehicles will also generate large amounts of **new data**. This will need to be taken into account as appropriate policy and legal solutions are found for the problems of vehicle integrity, security, road safety and liability. These will support the emergence of new business models and it is likely that this will include provision for direct, safe and secure access to a wide set of vehicle data for the provision of connected services. At the same time, more and more customers are buying automotive-related products on the Internet.”

# Vehicle connectivity

- *the EU will need to ensure safe and secure **access to transport and vehicle data**, taking into account the principles set out in the Communication on Building a European Data Economy<sup>44</sup> on data location as well as the guiding principles laid down in the C-ITS platform report<sup>45</sup> namely; data provision based on consent, fair and undistorted competition, data privacy and data protection, tamper-proof access and liability, data economy. Transport and vehicle data will change the way vehicles are operated and serviced today.” In addition “access to data from the vehicles (but also public transport data, car sharing data, etc.) will change the way services are proposed to customers within the privacy boundaries of the General Data Protection Regulation and will enable all actors of the value chain to develop new services and business models and to create additional value for users and society.”*

# Vehicle connectivity

- *“The European Commission would need to consider how to ensure an effective stakeholder dialogue on issues related to data. It is essential that this process is underpinned by the industry and service providers guaranteeing fair access, storage and sharing of vehicle data. Consumers must have control of their personal data.”*

# Leasing as an engine for fleet renewal

## ➤ Clean Vehicles Directive

- Scope to be adjusted “particularly in view of extension to vehicles rented, leased or hire-purchased and in view of extension to certain transport-relevant services.”
- Separate scope extension of the scope to private operators providing public services.



# Leasing as an engine for fleet renewal

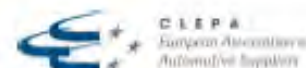
- New guidelines on financial incentives for purchasing energy efficient vehicles
  - *“the level of incentive both additional purchase costs and total cost of ownership should be considered along with avoiding big threshold effects particularly for zero emission capable vehicles”.* Most importantly, the guidelines also state that *“incentives should apply to both company and fleet purchasers and private buyers.”*

# New EIB workstream



*The EU bank*

# New cooperation with European Climate Foundation / BEUC



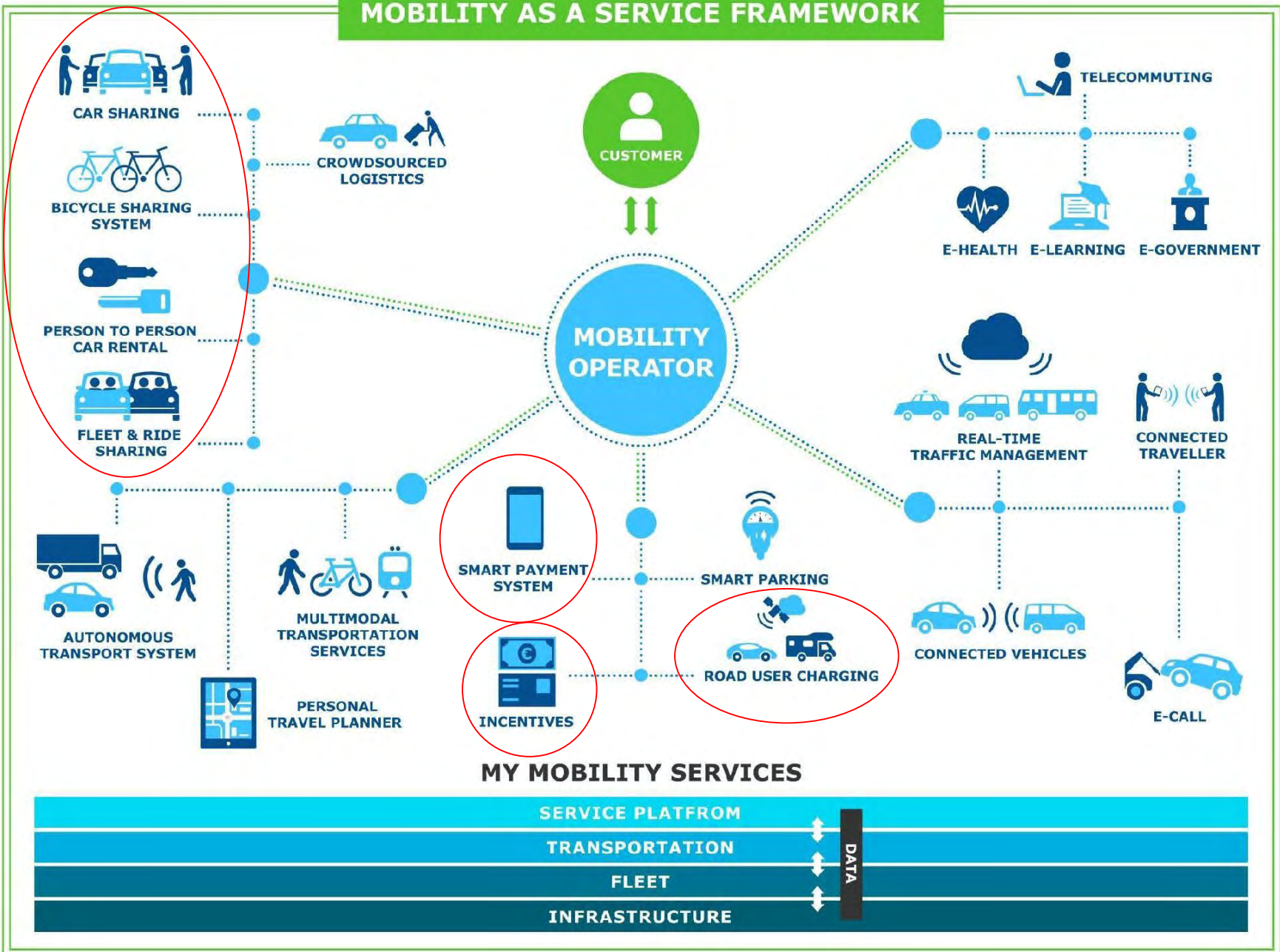
# New legal framework

- Regarding new business models, *“the EU needs to encourage a level-playing field for **new economy business models** whilst at the same time ensuring a level playing field for all mobility service providers. To this end, guidance should be provided to clarify that these new economic actors operate within the evolving legal framework **subject to the same rules as incumbent operators.**”*

# Mobility as a Service

- Mobility as a Service” (MaaS) offer, regarding which it is stated that the EU needs to “**facilitate the deployment of mobility as a service (MaaS) in Europe**. MaaS safeguards mobility, whilst making the most efficient use of existing assets (private cars, fleet, public transport). It fosters co-modality and increase convenience for users. Furthermore, the development of adequate IT MaaS tools could be an interesting product to export for the European industry.”

# MOBILITY AS A SERVICE FRAMEWORK





# Members



International Road Union



KAPSCH



LEASEUROPE



Maas Global Oy



Maas Scotland



Milano City



Northamptonshire County Council



Open Transport



Pluservice



Provincie-Noord-Brabant



PTV Group



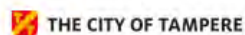
Royal Automobile Club of Catalunya



Siemens



SKEDGO – Smart transport and scheduling apps



THE CITY OF TAMPERE



Transport Systems Catapult



UBER



West Midlands Combined Authority

# Members



ARC Europe Group



ATM – Barcelona Metropolitan Transport Authority



Basque Country Mobility and Logistics Cluster



Bip & Drive



Brisa – Transport infrastructure



CECRA



CITY OF COPENHAGEN



City of Helsinki



City of Vienna – Municipal Department 18



Cubic Transportation



EasyMile



Enterprise Holdings



ERTICO – Intelligent Transport Systems Europe



European Automobile Manufacturers Association



Fédération Internationale de l'Automobile



Finnish Ministry of Transport and Communications



Finnish Transport Agency



Finnish Transport Safety Agency



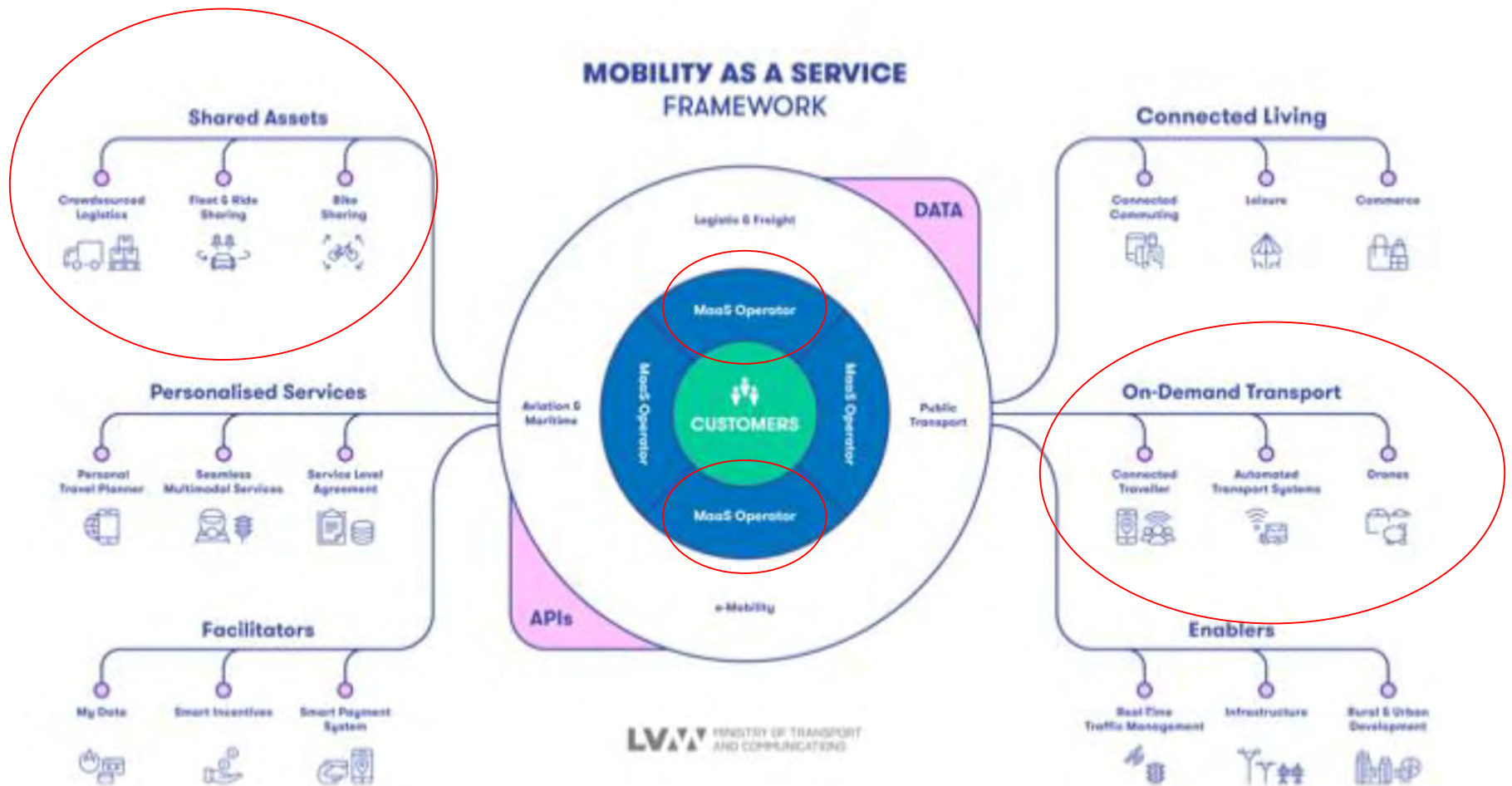
Growth Corridor



Hamburger Hochbahn



# Framework



### Registration

- Grants access to all individual mobility services included in the offering
- Should only be completed once

### Journey Planning

- Provides a listing of the service offering
- Combines optimal use of transport modes based on selected criteria (e.g. price, time, convenience)

### Booking

- The end-user makes a decision on the service that he/she intends to purchase
- The MaaS operator issues the necessary travel documents to the end user
- The MaaS operator informs the service providers of the transaction so that they can book the required capacity

### Payment

- Can be executed as a pay-as-you-go scheme or e.g. as a monthly subscription to a customised mobility bundle
- Takes care of the financial transaction with the end-user and the revenue-sharing between the MaaS operator and the service providers involved in the service delivery
- Takes care of penalties or other considerations in the financial transaction
- Payment and invoicing should be transferable also to a B2B environment, as a substantial part of travellers may, in fact, be using multi-modal transport solutions paid for by the employer





### Journey

- The MaaS operator ensures that the service is delivered seamlessly and provides the end-user with information on possible delays, changes in routing or other relevant information
- While changes may be caused by delays of the service providers, typically the MaaS operator is responsible for the customer support and interaction

# Geographically differentiated

Cities	<ul style="list-style-type: none"><li>• Objectives: reduce the use of private cars (causing problems related to congestion, parking and emissions and air quality)</li><li>• Based on: existing public transport, extended with rental and shared cars and bikes etc</li></ul>
Suburban areas	<ul style="list-style-type: none"><li>• Objectives: No need for a second car, first mile &amp; last mile accessibility</li><li>• Based on: park &amp; ride services, on-demand transport and other services connecting suburban to city transport services</li></ul>
Rural areas	<ul style="list-style-type: none"><li>• Objectives: increase efficiency, maintain sufficient service level, improve accessibility</li><li>• Based on: demand-responsive transport, taxis, buses and connections to long-haul transport, car-pooling; parcel deliveries, library services, grocery &amp; medicine distribution as add-on services</li></ul>
Long-haul transport	<ul style="list-style-type: none"><li>• Objectives: offer easy all-in-one packages</li><li>• Based on: long-haul transport services (incl. aviation), ride-sharing; accommodation, event tickets as add-ons</li></ul>

# End user differentiated

Accounts	Corporate / Institutional / Organisational	Group (affinity or other)	Family	Individual
				
Users	Employees	Members	Family members	Individual
Usage	<p>Employment -related mobility</p> <p>Mobility access and price may vary depending on level within the corporation / organization</p>	<p>Personal mobility</p> <p>Mobility access and price will vary depending on package purchased by member</p>	<p>Personal mobility</p> <p>Mobility access and price will vary depending on package purchased by family</p>	<p>Personal mobility</p> <p>Mobility access and price will vary depending on package purchased by individual</p>

# Preconditions

Single market	User perspectives	Legal and regulation	Technology & standards
<p>The ecosystem should be open for varied service providers to establish their business</p> <ul style="list-style-type: none"> <li>- no exclusivity to any operator,</li> <li>- no vendor or operator lock-ins</li> </ul>	<p>MaaS is a user-centric, customer-centric, market-centric proposition within a societally grounded context</p>	<p>The optimal legal environment for MaaS enables cooperation and sharing</p>	<p>MaaS relies on interoperability of IT systems and openness of interfaces</p>
<p>MaaS development requires open APIs</p>	<p>MaaS should be the best value proposition for users</p>	<p>Legislation designed for conventional transport systems (transport modes provided and consumed separately) can unintentionally work against multimodal service provision and MaaS</p>	<p>The ecosystem, especially its IT systems, need to provide flexibility and adaptability to new types of user and customer requirements</p>
<p>Appropriate data management is a priority</p>	<p>MaaS should be the best value proposition for innovators, industry, enterprises and government leaders</p>	<p>Clear environmental policy targets may be beneficial to MaaS</p>	<p>It is not possible to define a complete IT architecture and system preconditions for MaaS at this stage</p>
<p>Regulatory framework to provide legal certainty to public and private stakeholders</p>	<p>Need to explicitly define certain MaaS service user rights, e.g. in the form of "Bills of Rights"</p>	<p>Regulatory measures to facilitate openness and exchange of data are needed</p>	<p>The viable solutions will only emerge via pilots and trials</p>
<p>Regulatory framework needed to ensure technical rules are widely applied</p>		<p>Public sector activities like taxation and procurements may have significant impact</p>	<p>A high quality and reliability of the data being exchanged is an imperative requirement for successful MaaS</p>

# Access to data (LE authored section)

- Better access to travel planning data is, however, not sufficient. In order to make seamless multi-modal transport a reality, it is imperative that third parties can establish a secure real-time data-connection to the vehicles in their fleets. Without the ability of mobility operators (apart from the manufacturers) to know what is going on with vehicles at any given point in time, **MaaS will fail to materialize as the necessary preconditions for a fair and competitive marketplace will simply not exist.**



# Access to data (LE authored section)

## Single Market for MaaS

- An open market for MaaS operators and service providers to establish their business
- Fair market conditions
- A right of access to MaaS marketplaces for transport operators & mobility service providers
- Open but secure and safe APIs
- Real-time secure access to in-vehicle data for mobility operators
- Clearly defined & secured ownership of data
- Possibilities to create scaling services
- Entitlement for all citizens to MaaS services that meet their accessibility needs
- Seamless roaming for MaaS service customers travelling anywhere in Europe and/or globally
- The ability to offer one-way cross border travel solutions
- A framework for European/global compatibility and interoperability


**Why should you care?**








# End goal

- **The Mobility as a Service sector is expected to grow to a business worth over one trillion euro by 2030.** All over Europe, MaaS initiatives are planned or starting up and the MaaS Alliance helps these to cooperate through a shared work programme engaging service providers, transport operators, public authorities and users in order to create a vital and interoperable MaaS ecosystem to fulfil high expectations.


# OEM – Metropole monopolies



PARIS

 THE SERVICE
  SUBSCRIPTION
  STATIONS MAP
  CALL BACK
  PERSONAL AREA

[Our commitment](#)
[How does it work?](#)
[Stations map](#)
[Individuals](#)
[Navigo](#)
[Companies](#)
[FAQ](#)




SIMPLE  
PRACTICAL

ECO-FRIENDLY  
ECONOMICAL

NAVIGO

CARTE NAVIGO

ESSAIS GRATUITS



Essayez moi !

JEUDI  
SAMEDI

16H30  
19h00

CENTRE D'ACCUEIL AUTOLIB'

20 QUAI DE LA MÉGISSERIE  
75001 - PARIS

UTILIB'


DES QUESTIONS ?

PROFESSIONNELS

## COMMENT ÇA MARCHE ? LAISSEZ NOUS VOUS GUIDER

**01 SIGN UP**

FIND OUT WHAT RATES ARE AVAILABLE




For Individuals

For Businesses

**02 RESERVE**


RESERVE YOUR VEHICLE OR YOUR PARKING SPACE



How do I make a reservation?

**03 RENT**


RENT FROM AN AUTOLIB STATION



>Swipe your badge  
>Unlock the vehicle  
>Unhook the cable

View available vehicles in real time


**04 DRIVE**



>Use the GPS  
>Book your parking space from the vehicle  
>Contact Autolib assistance, available 24/7



What are the advantages?

**05 PARK**



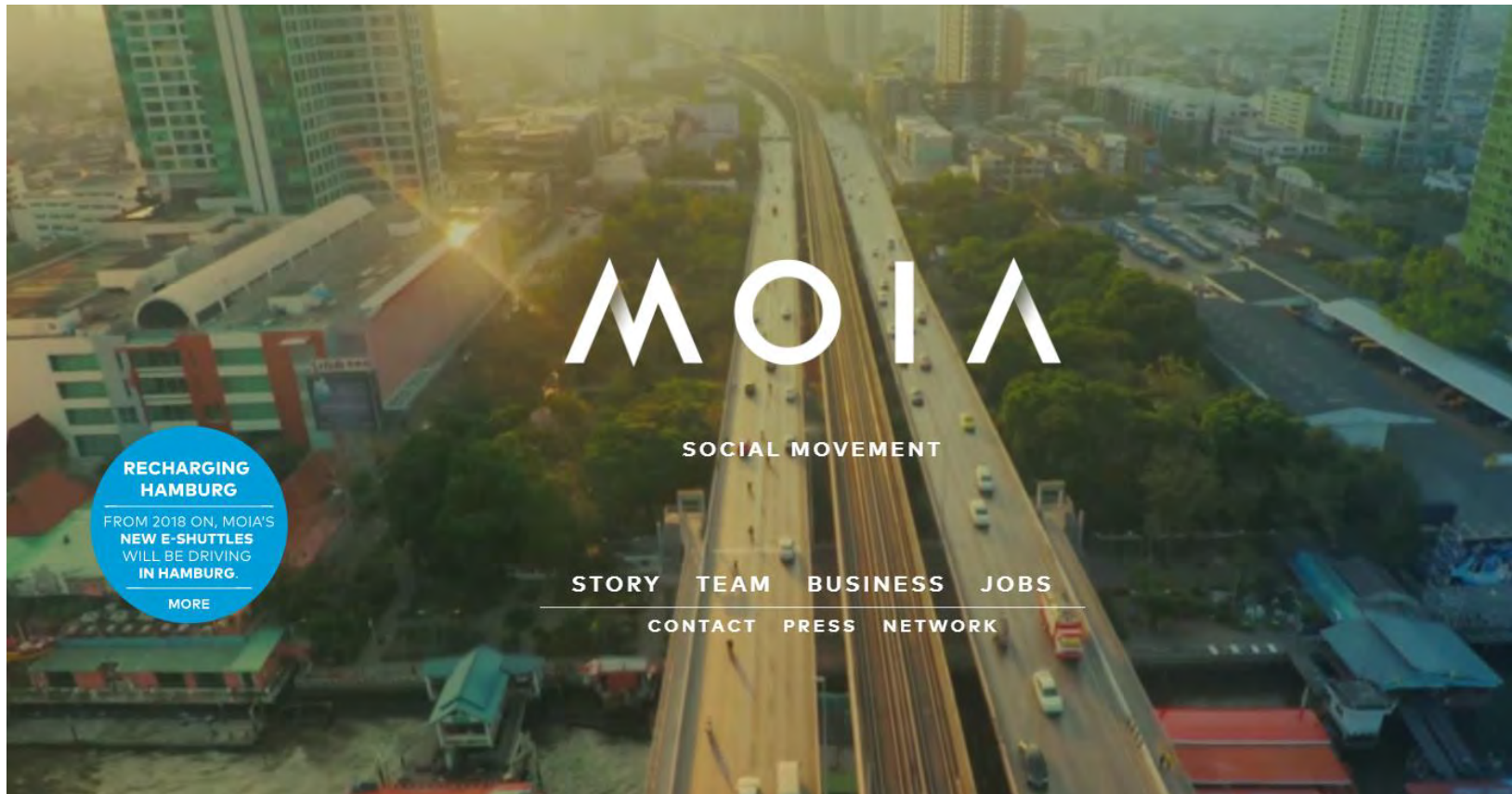
>Swipe your badge  
>Hook up and lock the vehicle  
>Receive SMS confirmation

View available parking spaces in real time

PARIS

# All inclusive service package





# Volvo to test self-driving cars on London's roads next year

Swedish carmaker plans to run driverless vehicles on public roads starting with small number of semi-autonomous cars in 2017



This article is 1 year old

125 59

**Gwyn Topham** Transport correspondent

[@GwynTopham](#)

Wednesday 27 April 2016 00.01 BST



**A woman in Volvo's self-driving car.** The company will place up to 100 fully autonomous vehicles on the capital's roads in 2018. Photograph: Volvo

Volvo is set to run self-driving versions of its family 4x4s on roads around [London](#) next year as the motor industry's trial of autonomous vehicles accelerates.

While self-driving pods and shuttles were already due to [operate on pavements in Greenwich and Milton Keynes](#) this summer, the Swedish carmaker is planning to test autonomous vehicles on public roads in the capital from 2017.



European  
Automobile  
Manufacturers  
Association



CLEPA  
European Association of  
Automotive Suppliers



Mobile World Congress, Barcelona  
27 February 2017

## **Connected and automated driving**

### **EATA presents deployment roadmap, submits proposal for EU-wide project**

The European Automotive Telecom Alliance (EATA) today presented the next steps to make connected and automated driving a reality. During a roundtable discussion chaired by European Commission Vice-President Andrus Ansip and in the presence of Commissioner Günther H. Oettinger, the telecoms and automotive industries reported the latest technology developments and the corresponding societal and economic benefits for European citizens.

In this context, EATA presented a deployment roadmap for connected and automated driving, including its pilot projects and its on-going regulatory dialogue. The Alliance also announced that it has submitted a proposal for funding from the Connecting Europe Facility, aimed at ensuring a speedy development of connected and automated driving across Europe. By leveraging the latest technologies, the EU can deliver smarter, safer and cleaner transport and strengthen its competitiveness on the global stage. To support this, the Alliance has also signed a Memorandum of Understanding with the 5G Automotive Association (5GAA).

# EATA Members

- Autoliv
- BMW Group
- Bosch
- Continental
- DAF Trucks
- Daimler
- Delphi
- Denso
- Deutsche Telekom
- Ericsson
- Eurofiber
- Fiat Chrysler Automobiles
- Ford of Europe
- Hella
- Huawei
- Hyundai Motor Europe
- Iveco
- Jaguar Land Rover
- KPN
- MAN Truck & Bus
- Nokia
- Opel Group
- Orange
- Play
- Post Luxembourg
- Proximus
- PSA Group
- Renault Group
- Scania
- Telefonica
- Telenor
- Toyota Motor Europe
- Valeo
- Vodafone
- Volkswagen Group
- Volvo Cars
- Volvo Group

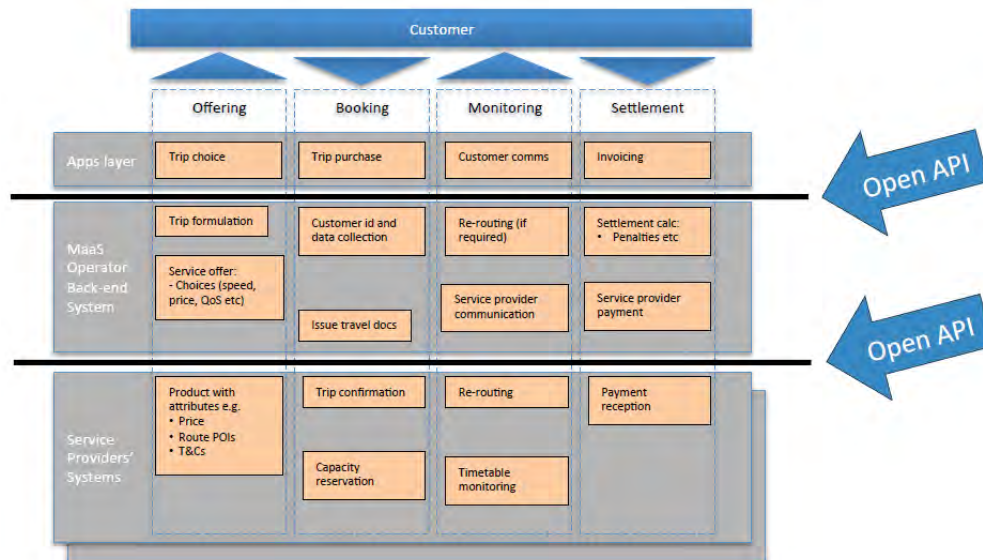
# **How do automotive rental and leasing fit in?**



# MaaS in Tampere



## Seeking Agreement by Leading Ecosystem Providers



The company logos mentioned are only for descriptive purpose.  
Based on Frost & Sullivan & Tekes & University of Tampere material



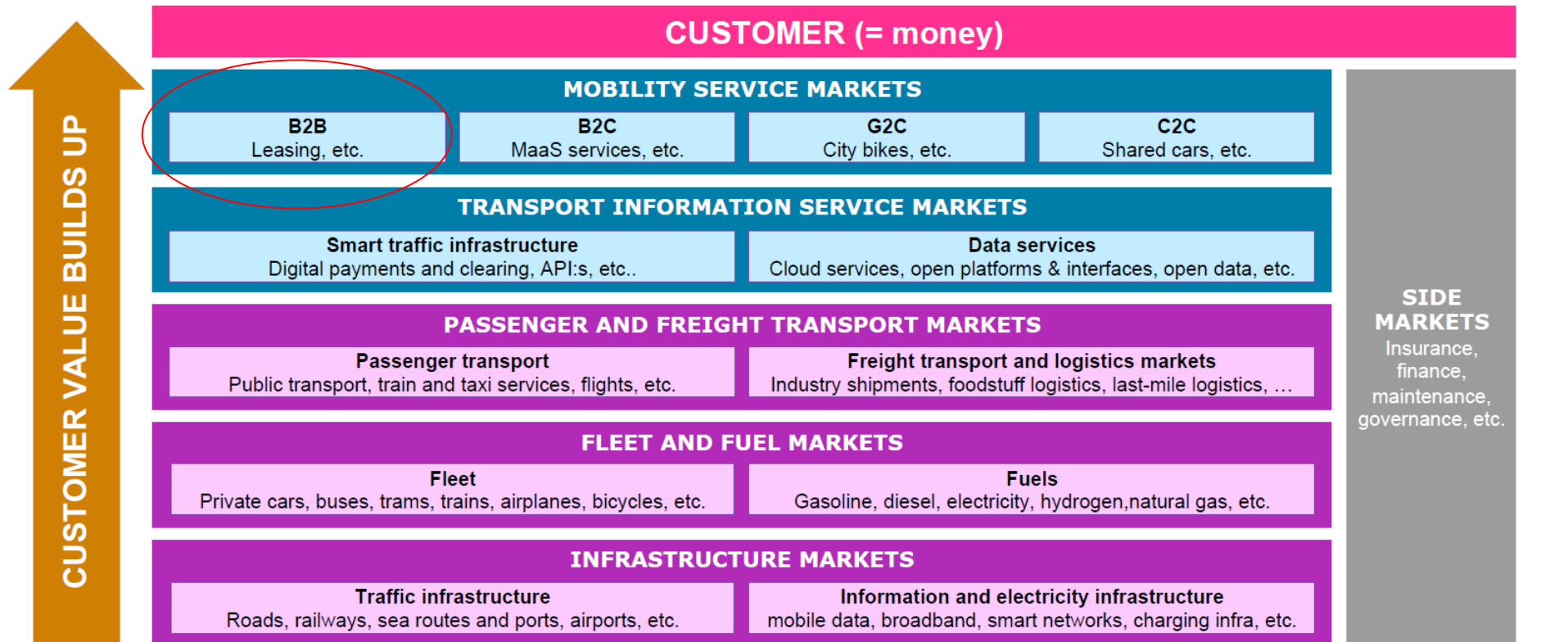
# MaaS in Tampere

Solita's vision for transport

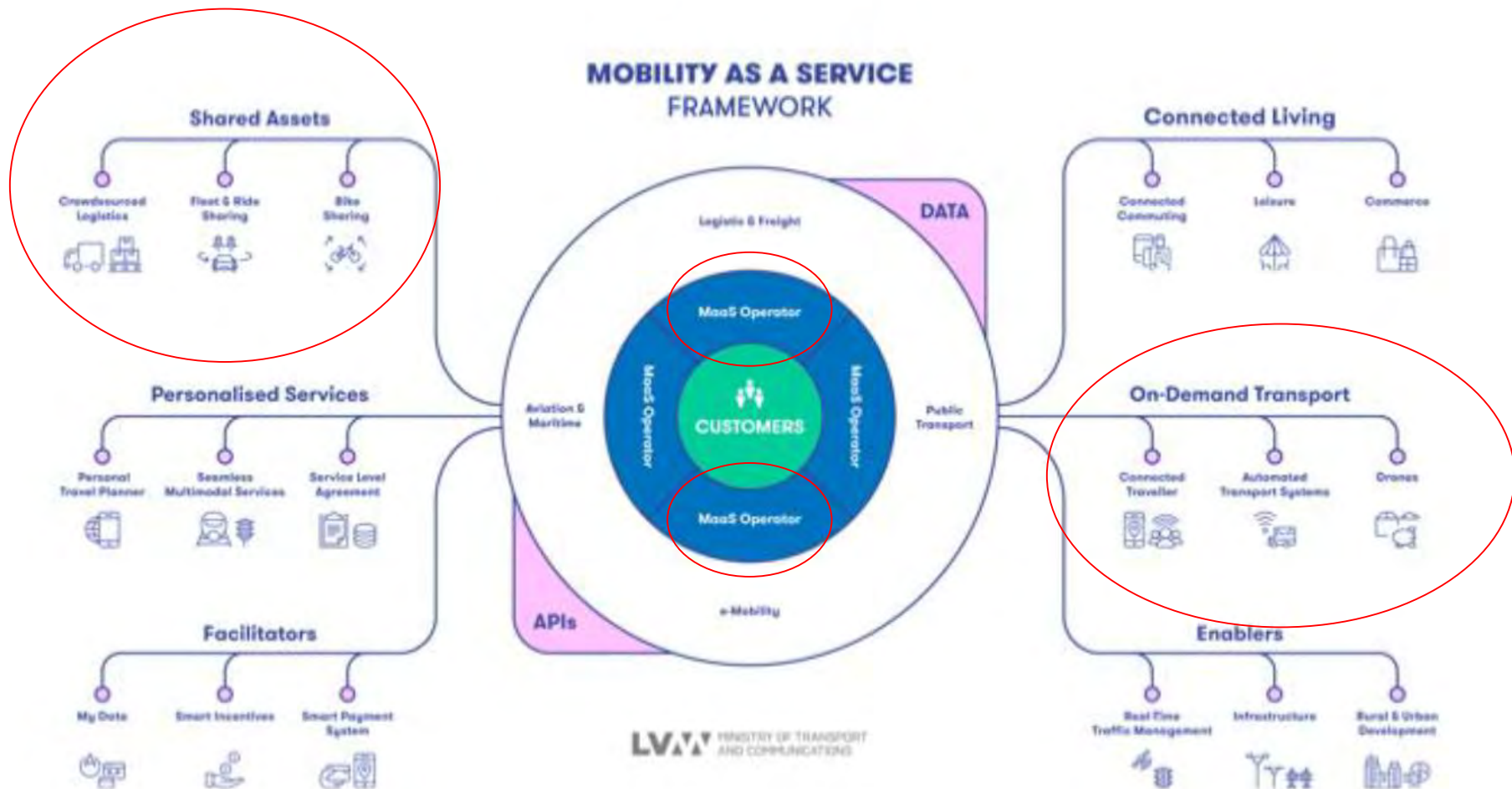
## THE NEW VALUE CHAIN OF MOBILITY MARKETS

New transport service markets enabled by digitalisation

Traditional transport markets



# Framework



# Challenges for the future

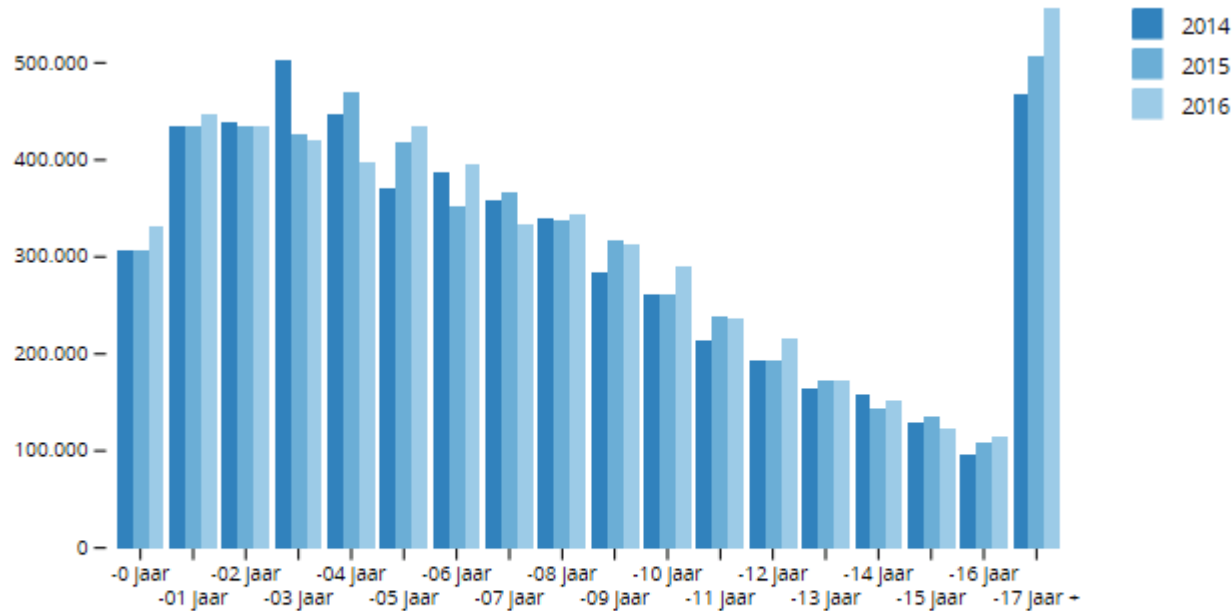
# Company cars from problem to opportunity



# The opportunity

- Scale
- Lifecycle

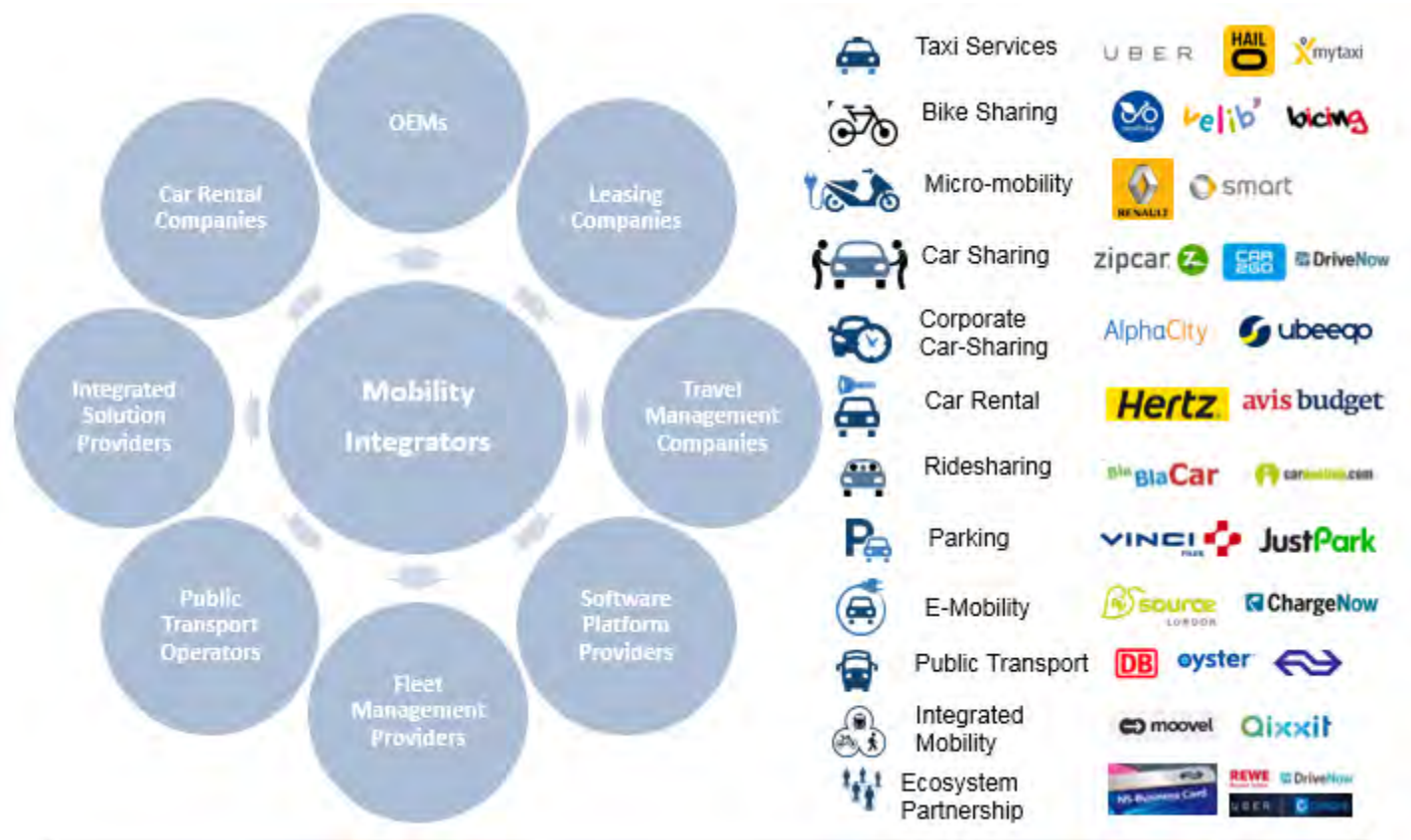
→ Impact<sup>2</sup>



Belgium: Avg age private car: 8y → Lease car: 2y

Belgium: Avg CO<sup>2</sup> new private car: 123 gr → Lease car: 109 gr

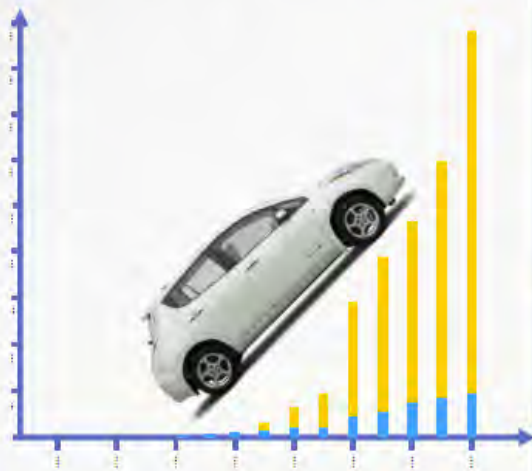
# Fragmented offering





# Boundary conditions

## Success of EV uptake



## Boundary conditions



Financial incentives

“Operational” incentives



Public Charging Infrastructure

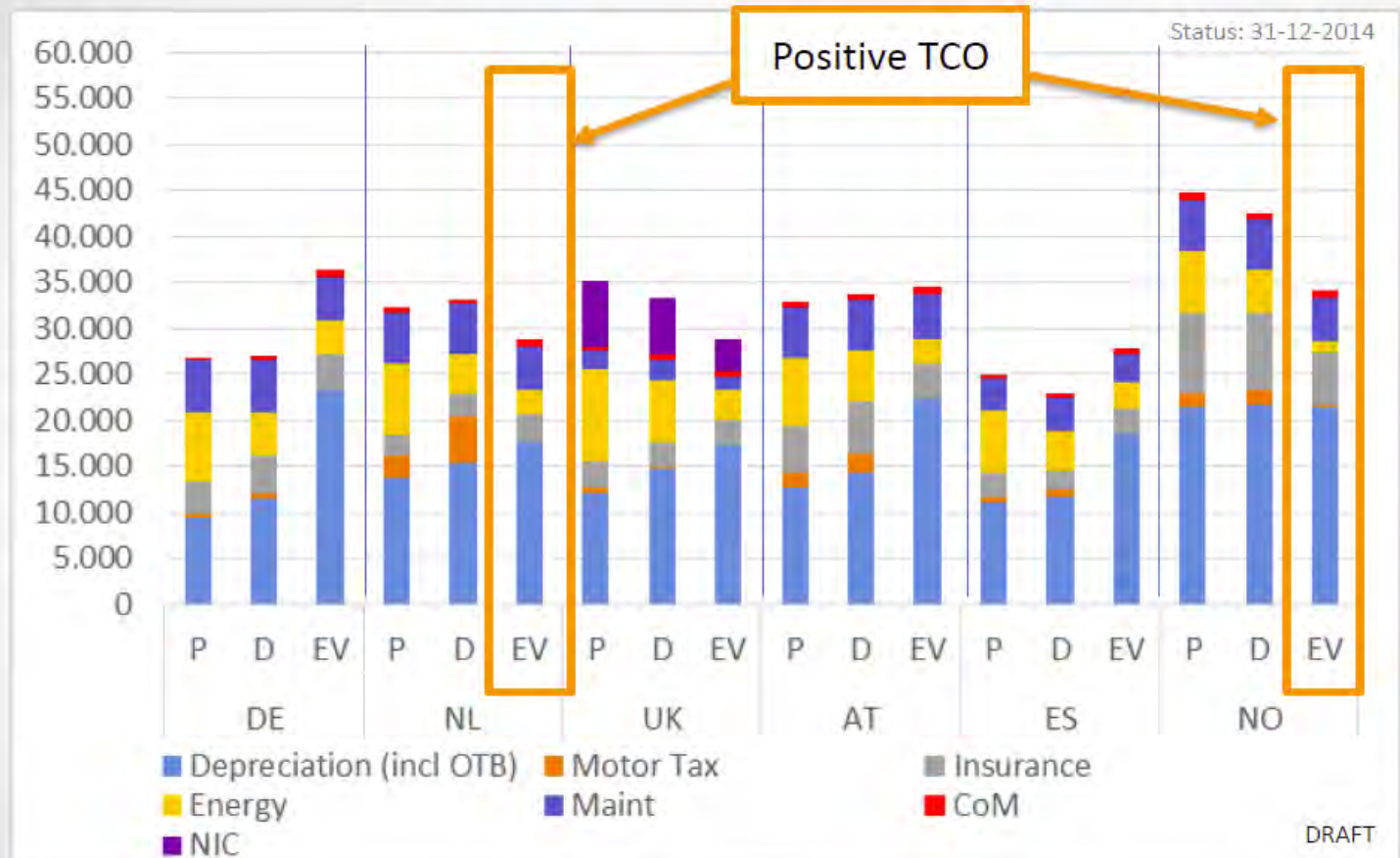
Regional / Local conditions



The analysis of the boundary conditions is focused on the **relationships** between the **success** of EV uptake and the **boundary conditions** within each country and the selected regions



# Understanding TCO



TCO costs are cumulative cost of 4 year

P: Petrol

D: Diesel

EV: Electric Vehicle

TCO: Total Cost of Ownership

OTB: One Time Benefits

Energy: petrol/diesel/electricity costs

NIC: National Insurance Contribution (social tax)

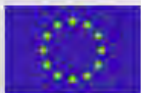
Maint: Maintenance costs

CoM: Cost of Money

ToPU: Tax on Personal Usage

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Source: ICVUE



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I-CVUE



# In a nutshell

- Only the leasing industry (captive and independent) has the ability to finance and manage shared fleets
- Policy makers have poor understanding of TCO calculations, over enthusiastic views on EVs and autonomous mobility
- Virtually no considerations have been given to fleet financing

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