

Mobility as a Service

Can it be even better than owning a car?

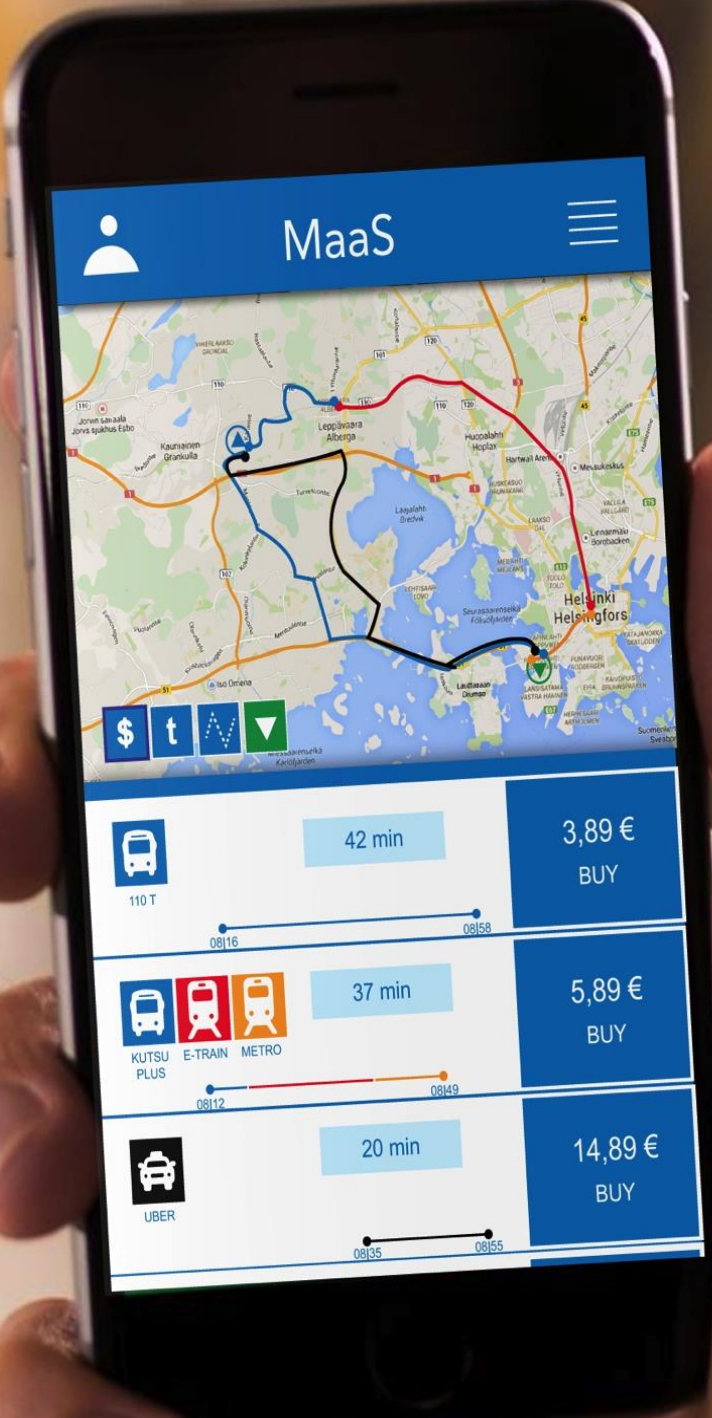
SAMPO HIETANEN

CEO MaaS Ltd

SAMI SAHALA

Forum Virium Helsinki

WHAT IF ALL TRANSPORTATION WAS CONVERGED...



... AND TAILORED
TO YOUR NEED AS
MONTHLY
PACKAGES

CONFIGURE YOUR PACKAGE



Helsinki

Unlimited

U B E R

Global

120 km



Intercity

6 Journeys

COST
(per month)

358 €
BUY



Mobility as a Service is the *Netflix* of transportation

15 minutes package for 135 €/ month:

- 15 minutes from call to pick up with no more than 15 minutes delay compared to driving.
- No parking hassle

Pay as you're moved:

- Bike and segway service included
- 20 cents per minute in vehicles with others in
- 30 cents per minute for a nice car
- 50 cents per minute for a personal driver
- Only vehicles that use renewable energy

Business world package for 800 €/month:

- 5 minutes pickup in all EU
- Black car status everywhere
- Working conditions guaranteed

Family package for 1 200 €/month:

- Enough space and child seats guaranteed
- Always traceable and safe trips for kids
- Includes one long family trip every month
- Home delivery included

Cup of tea guarantee

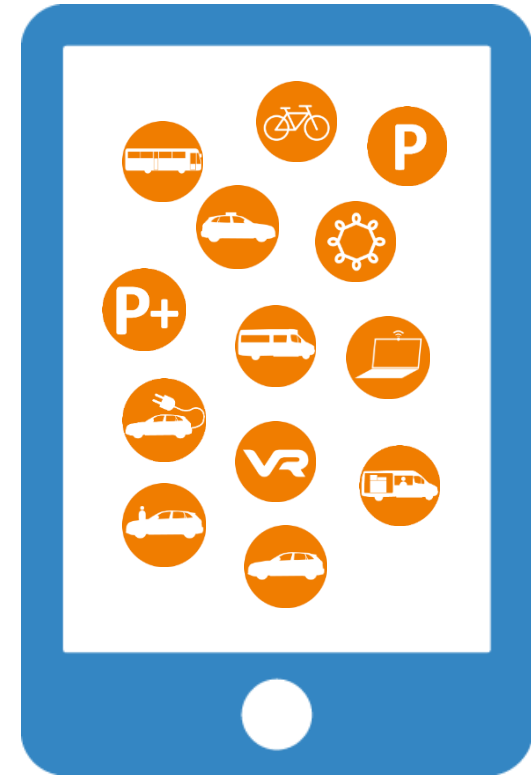
- All your rides combined
- Morning tea included
- Tinder extension for a great weekend
- Movember special rides



It's all about Service Level Agreement (SLA)



It's easy.



We make it easier.

As a customer you make a contract with one commercial operator, who provides you all the services chosen by you. Terms of contract may vary, and are up to you and your operator to negotiate

Mobility as a Service

Introducing a new player: "Mobility operator"

Hiihijalanjälki
Carbon footprint

18:34



From 2006 fast forward to June 2014



anki/a1402893992753

HS

OSASTOT ▾ UUTISET HSTV SÄÄ PÄIVÄN LEHTI

Tilaa Hesari

Tulevaisuuden Helsingissä ei omisteta autoa

KAUPUNKI 17.6.2014 2:00 Päivitetty: 17.6.2014 6:01

Majja Aalto HELSINGIN SANOMAT

RIO GANDARA HS



And within just a couple of months:

TOWARDS INTELLIGENT MOBILITY

Better use of space

A!
Aalto University
School of Engineering

Sonja Heikkilä

Mobility as a Service
– A Proposal for Action for the Public Administration

Case Helsinki

Thesis submitted for examination for the degree of Master of Science in Technology.

Espoo 28.04.2014
Supervisor: Professor Eric Bruun
Instructors: Ville Lehmuskoski, Sampo Hietanen

The 18 Most Innovative Cities On Earth



FACEBOOK



LINKEDIN



TWITTER



GOOGLE+



PRINT



EMAIL



Helsinki makes the list for a super innovative transit system – one that will soon have "a real-time marketplace for customers to choose among transport providers and piece together the fastest or cheapest way of getting where they need to go."



Helsinki ranked #3 in innovation by citie.org

CITIE

FRAMEWORK

DIAGNOSTIC TOOL

STORIES

2015 RESULTS

CONNECT

ABOUT

TOP 5 PERFORMING CITIES

1. NEW YORK CITY

2. LONDON

3. HELSINKI

4. BARCELONA

5. AMSTERDAM

“Helsinki’s vision of mobility on demand, a fully integrated public and private transport ‘one click’ solution, carries the scale of ambition you would more typically expect from a tech start-up and is defining mobility as a service agenda globally”



What it would take for cities to eliminate the need to own a car

Finland's Capital Plans on Making Private-Car Ownership Obsolete in 10 Years

SCIENCE

Finland's Capital Plans on Making Private-Car Ownership Obsolete in 10 Years

Melissa Heikkilä

Are you ready for the rest of v...

Finland's

Series: Cities in motion

Helsinki's ambitious plan to make car ownership pointless in 10 years

Finland's capital hopes a 'mobility on demand' system that integrates all forms of shared and public transport in a single payment network could essentially render private cars obsolete

• Should we ban cars in city centres?

Adam Greenfield
theguardian.com, Thursday 10 July 2014 15.20 BST
Jump to comments (176)



APP FOR THAT. PHOTOGRAPHER: OLIVIER MORIN/AFP/GETTY IMAGES

A 4-year-old transport engineer is about to free her city from car ownership

ROB WILE AUG. 4, 2014, 7:32 AM 96,810 65

By now it's become clear that ordinary people in other countries do a lot of things better than other countries. They have the smallest gender gaps, among the highest test scores, and the lowest levels of inequality.

Now, they're set to rub their transportation superiority on our faces. Finland's capital, Helsinki, is about to launch a program that could virtually eliminate car ownership and give its residents the ability to plot an on-demand commute from their phones.

It's mostly the vision of Sonja Heikkilä, a 24-year-old Helsinki transportation engineer.



Sonja Heikkilä.

SOLD !

Understand, Restrict or Embrace ?



Urban mobility, rethought ... Helsinki, F...
The Finnish capital has announced transport network into a comprehensive "demand" system by 2025 – one that would have any reason to own a

Helsinki aims to transcend conventional people to purchase mobility in real time. The hope is to furnish riders with well-coordinated that it becomes

Finland's largest city wants to replace cars with apps

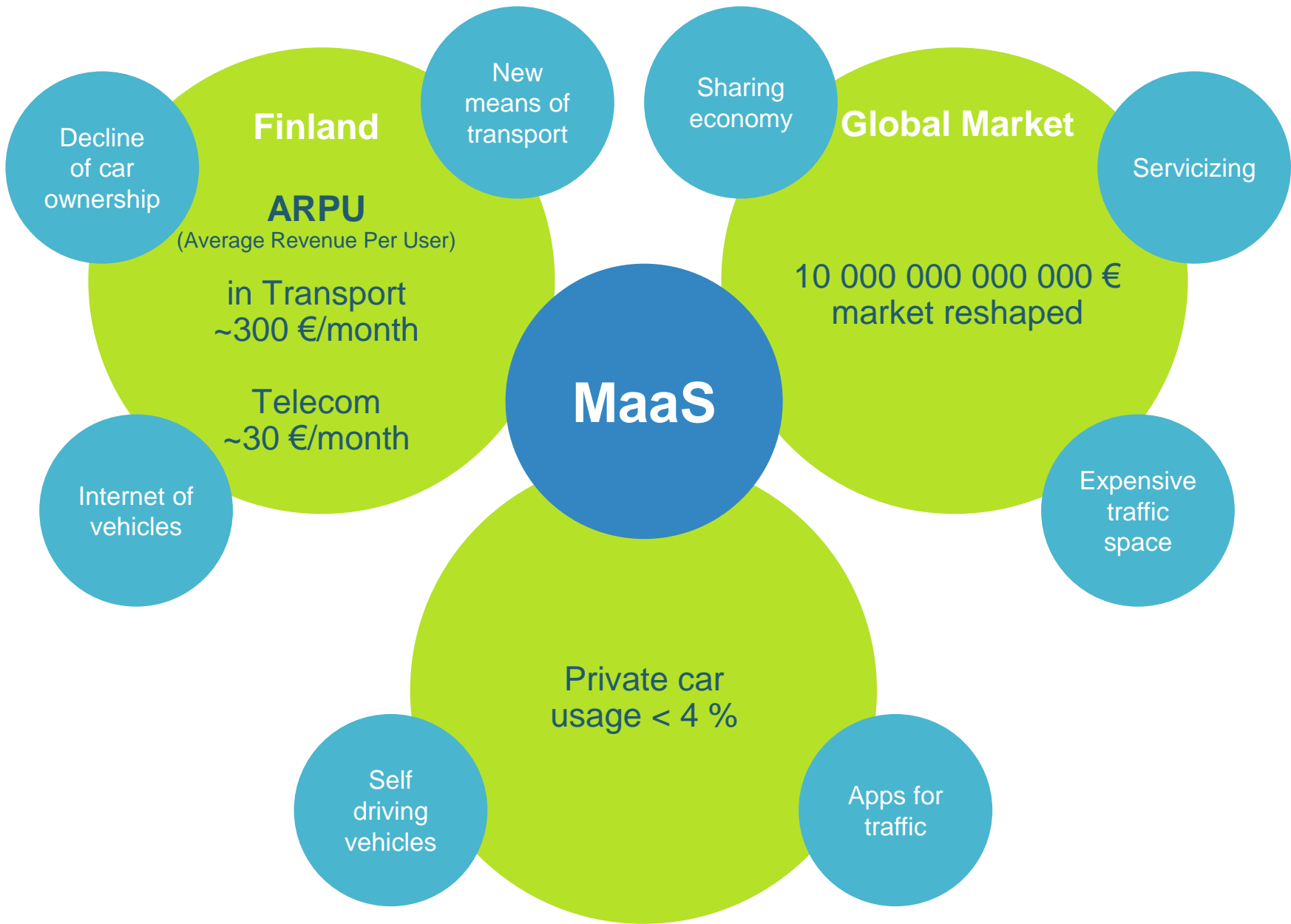
New system would integrate all the city's public transit and rideshares into one

By Carl Franzen on July 14, 2014 09:37 pm





TRANSPORTATION IS CHANGING TO CONSUMER BUSINESS



Helsinki♥MaaS

City's perspective



OECD's International Transport Forum



Urban Mobility: System Upgrade

Why

What we did

What we found

Fleet size

	Scenario – 24 hours	Fleet size
	Baseline (% of baseline fleet)	203,000
 TaxiBot Ride-sharing	No high capacity public transport (commercial, subway, BRT, LRT)	25,917 12.8%
	High capacity transport (commercial, subway, BRT, LRT)	21,120 10.4%
 AutoVot Car-sharing	No high capacity public transport (commercial, subway, BRT, LRT)	46,249 22.8%
	High capacity transport (commercial, subway, BRT, LRT)	34,082 16.8%

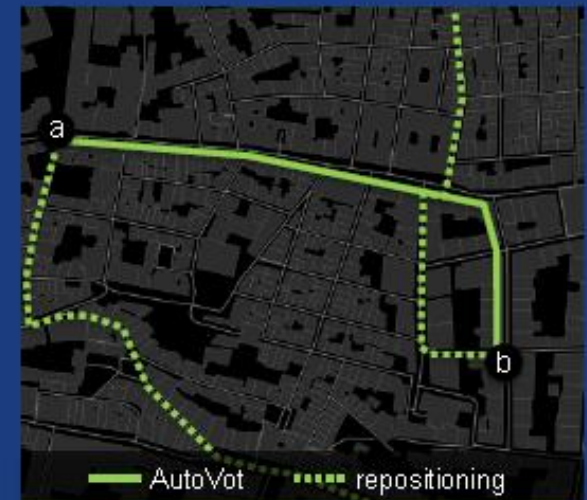
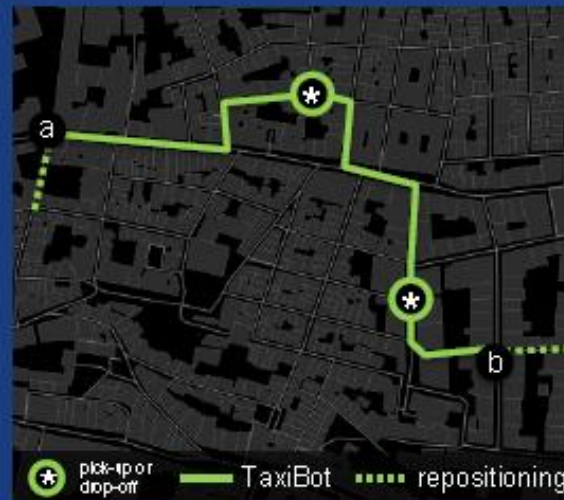
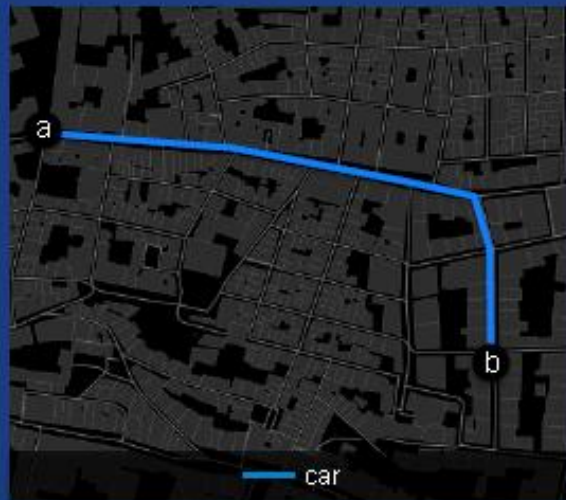


number of vehicles
required to provide
the same trips as
before:

10%

OECD's International Transport Forum

Urban Mobility: System Upgrade



TaxiBots and AutoVots will travel more than today's cars

+6%

more kilometres travelled due to transfers from buses, pick-ups, drop-offs and re-positioning

+44%

more kilometres travelled due to transfers from buses and re-positioning

Decrease need to own a car
by ensuring plethora of
alternatives

and making it as easy as
possible to use them



MOBILITY AS A SERVICE FRAMEWORK



MY MOBILITY SERVICES

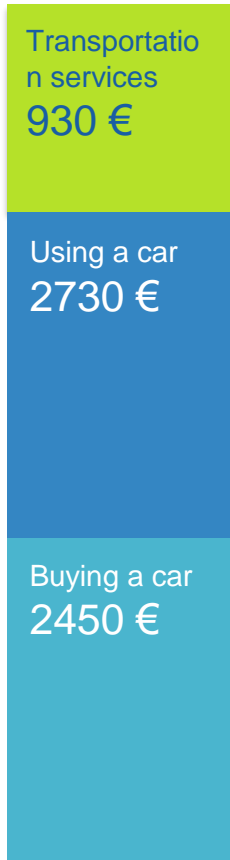




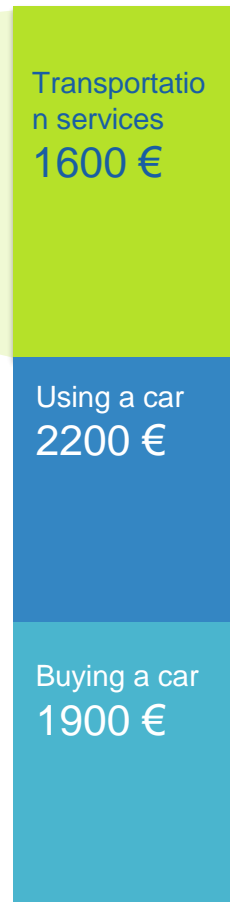
MaaS as a business

Market opportunity: Savings in car expenditure

Spending on transportation per family 2012

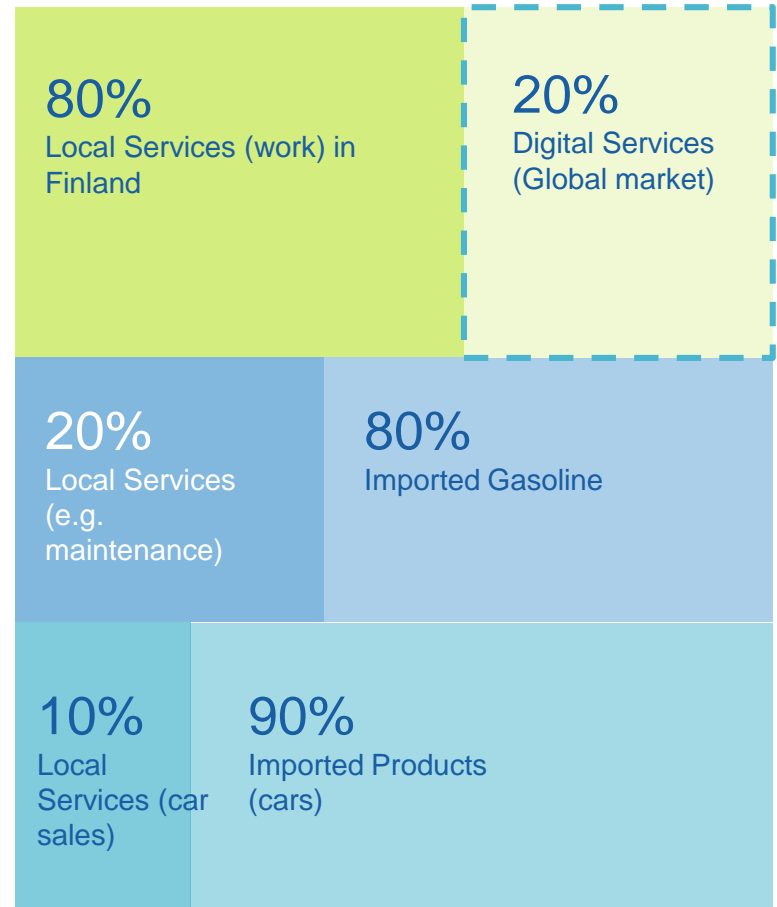


Spending on transportation per family 2020



+ 56%

Breakdown of bought products and services



Transport systems will become consumer business



THE FOCUS IS HERE



ALL FUNDING DIRECTLY
FROM END USERS

SERVICE PROVIDERS (INTERNATIONAL BRANDS)

- Combinations for target groups
- Different packages for targeted groups
- Clearing for transportation, networks and services

**Mobility as
a Service, MaaS**

TRANSPORTATION PROVIDERS (INTERNATIONAL BRANDS)

- Vehicles, public transport, rentals, parking, taxis, ride shares, car shares etc.

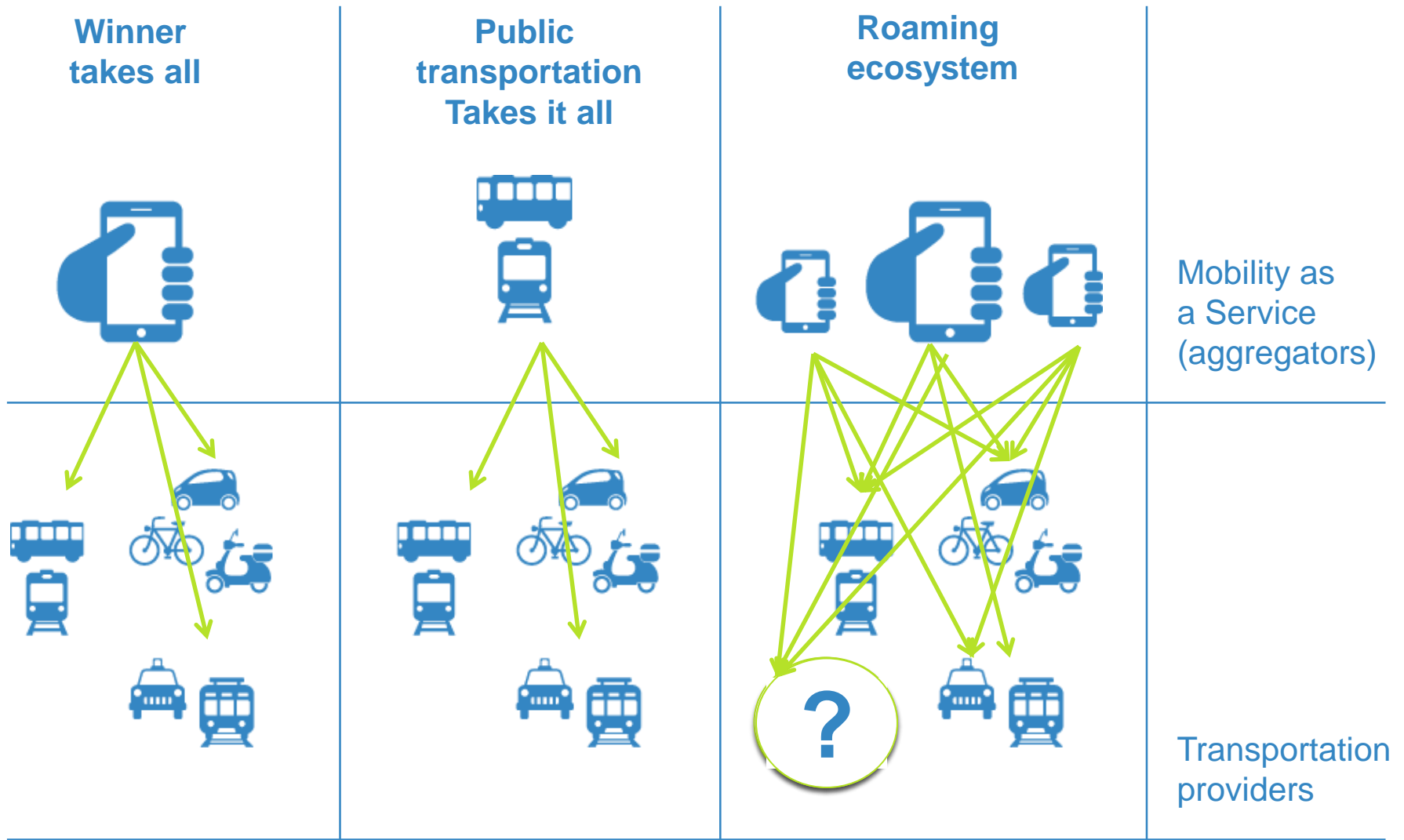
**Transport as
a Service, TaaS**

NETWORK PROVIDERS

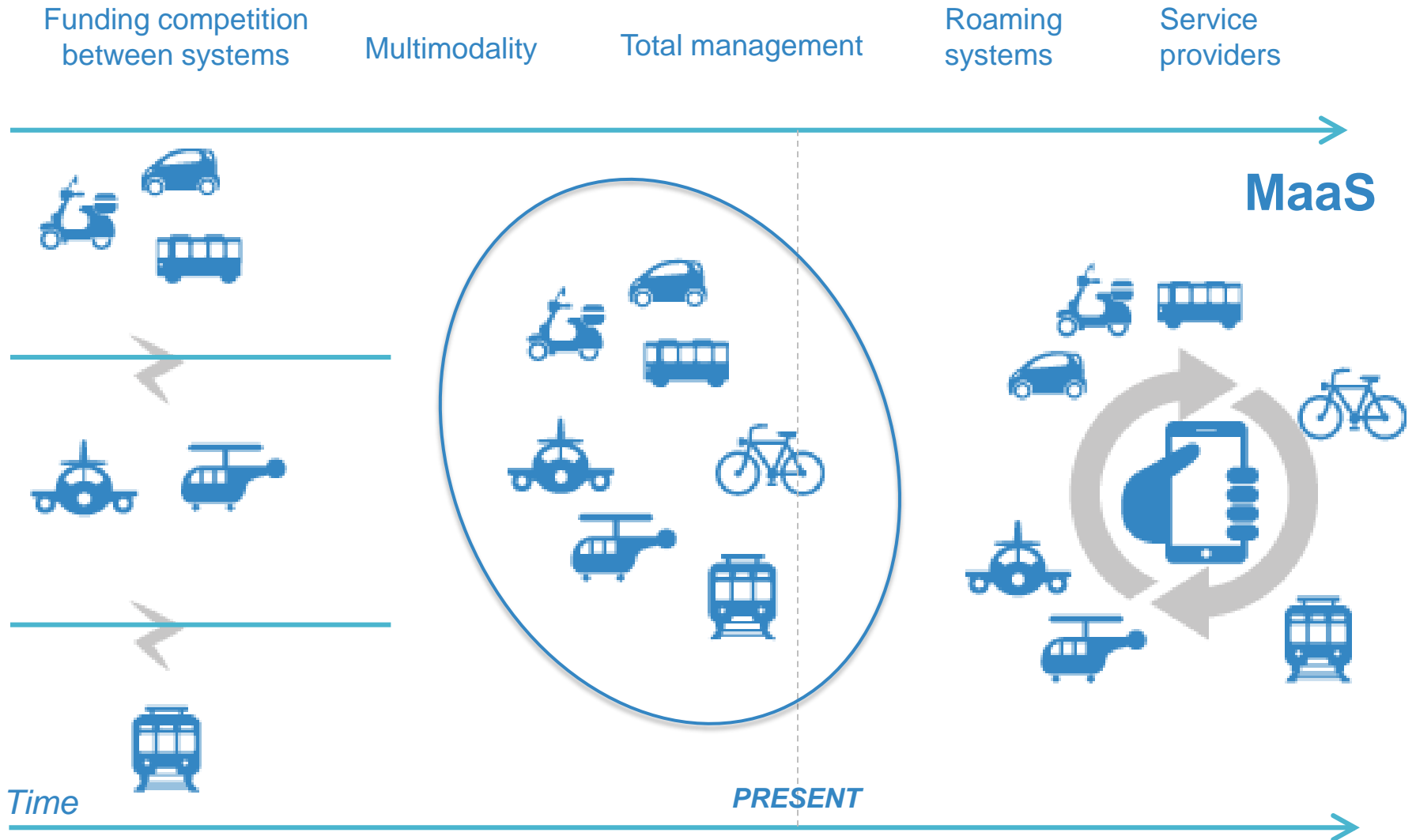
- Planning, investments, maintenance

**Infrastructure as
a Service, IaaS**

Three ways for markets to evolve



From silos to roaming



The European Mobility as a Service Alliance

Working to create a seamless, demand-based travel experience

Launched at the 2015 ITS World Congress in Bordeaux

Press Release

The European Mobility-as-a-Service Alliance has been launched

20 European organisations join forces to establish the first Mobility as a Service (MaaS) Alliance. This new initiative will work towards a truly European and common approach to MaaS through public and private stakeholder cooperation, providing the basis for the economy of scale needed for a successful implementation in Europe.

The key concept behind MaaS is to put the users, both travelers and goods, at the core of transport services, offering them tailor made mobility solutions based on their individual needs. This means that, for the first time, easy access to the most appropriate transport mode or service will be included in a bundle of flexible travel service options for end users.

The MaaS Alliance builds upon the momentum and drive achieved during the last European ITS Congress in 2014 hosted by Helsinki, where MaaS received political support from the Finnish government. "MaaS is a new approach to changing mobility markets. It relies on existing and developing transport services and has huge chance for global scaling", says the father of the concept Samuli Hietanen, CEO of ITS Finland.

According to Rasmus Lindholm, ERTICO's Director of Communications and Partnerships Development: "MaaS has the potential to fundamentally change the behavior of people in and beyond cities, hence it is regarded as the biggest paradigm change in transport since affordable cars came into the market".

Founding Partners of the Mobility as a Service Alliance include Aalborg University, AustriaTech, Ericsson, ERTICO – ITS Europe, Federation International de l'Automobile (FIA) Region I, Finnish Ministry of Transport and Communications, Helsinki Business Hub, IRU, Connekt, ITS Finland, ITS Sweden, ITS Ukraine, MOBINET, National Mobile Payment Plc. (Hungary), Swedish Ministry of Enterprise and Innovation, Finnish Funding Agency for Innovation (Tekes), Transport for London, Vinnova, University of Tampere and Xerox.

"Bundling services to simplify access to mobility is a key step to ensure the best use of all modes of transport. FIA Region I call upon the transport community to develop and combine these services based on the public's concrete needs. In the FIA, we believe mobility must be safe, sustainable, accessible and affordable for all", says Jacob Bangsgaard Director General FIA Region I.



**MaaS Ltd to revolutionize the
global transportation market.**

**And will be the World's first
mobility operator.**

MaaS.FI

Introducing the world's first mobility operator

We want to:

- Give you back **90 minutes** to your day
- Make sure you have **freedom of movement**
- Take away the pain of 'how do I get there'
- Make sure you're not a polluter

“Helsinki’s vision of mobility on demand, a fully integrated public and private transport ‘one click’ solution, carries the scale of ambition you would typically expect from a tech start-up and is defining mobility as a service agenda globally”

User profile – segment sizes in Helsinki Region

THE TOURIST



	Daily	Yearly
Max Users	1000 - 4000	15m + (trips)
ARPU	10-20€	20-40€

THE URBAN SINGLE



	Daily	Yearly
Max Users	50 000	11m (trips)
ARPU	5-50€	500-100k€

THE LONG DISTANCE COMMUTER



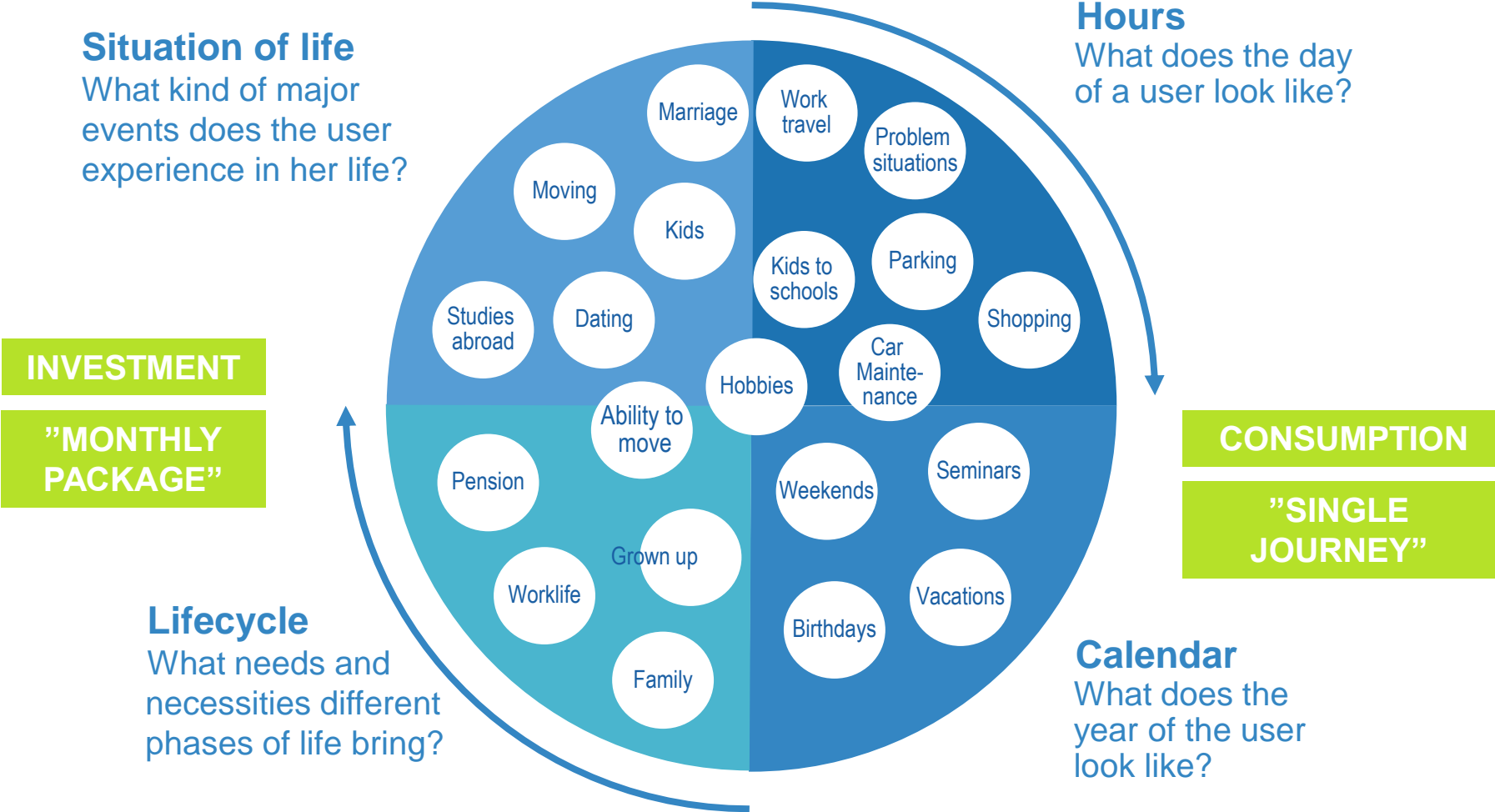
	Daily	Yearly
Max Users	85 000	13m (trips)
ARPU	10-60e	1k-120k€

THE SUBURBAN FAMILY



	Daily	Yearly
Max Users	140 000 (families)	30m + (trips)
ARPU	15-70€	3k-150k€

View to mobility and user experience in designing the future services



Initial service descriptions

THREE TYPES OF PRODUCTS FOR CUSTOMERS

SINGLE JOURNEY CUSTOMERS

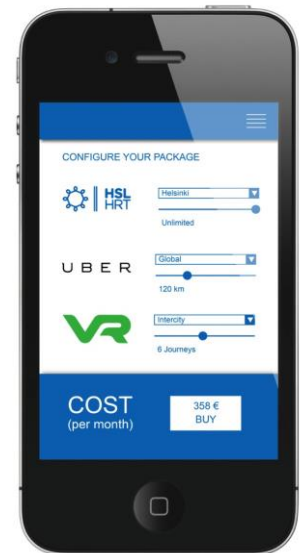
- Customer buys door-to-door transport with zero commitment
- Mobility app to combine all transport services - the fastest way to destination
- Customers receive journey through single window and payment
- Bonus program rewarding frequent use
- Reporting and separate accounts for private and company use
- Ease of use also in trips that are not ordered – Just start your journey with your account that is connected to credit card

HYBRID CUSTOMERS

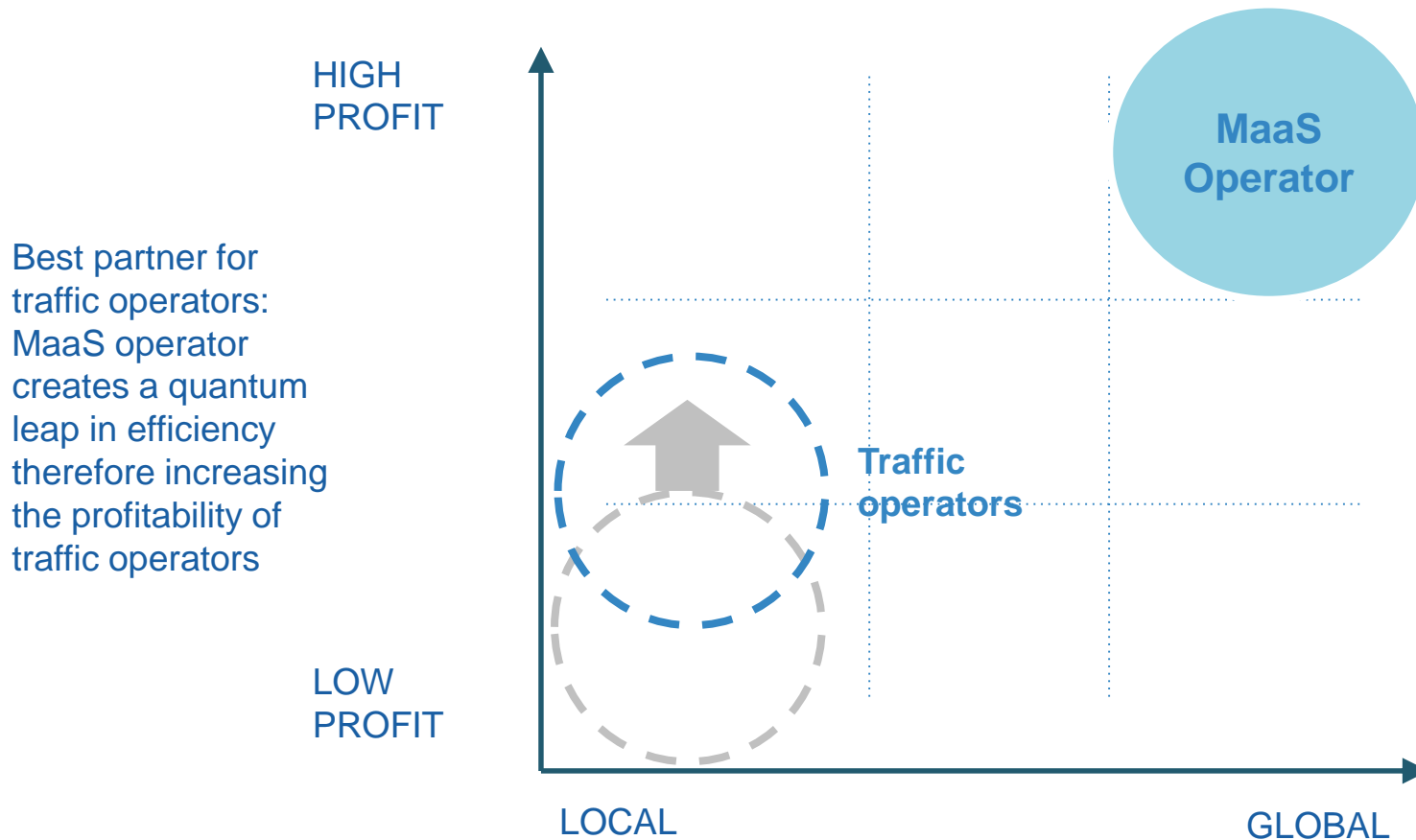
- Customers include their own car in the service
- Customers buy bonus packages to assist their transport needs
- Car may be bought and financed through operator or separately
- Packages can also be paid by sharing rides or car

MOBILITY PACKAGE CUSTOMERS

- Operator takes care of all transport needs as a service
- Packages contain enough of different transport services, enough journeys, kilometers or all inclusive
- Simple pricing scheme for journeys exceeding the package
- Packages contain bonus features like morning latte or Tesla weekend and are more affordable than when bought separately



The operator business model strives for scalable digital global business

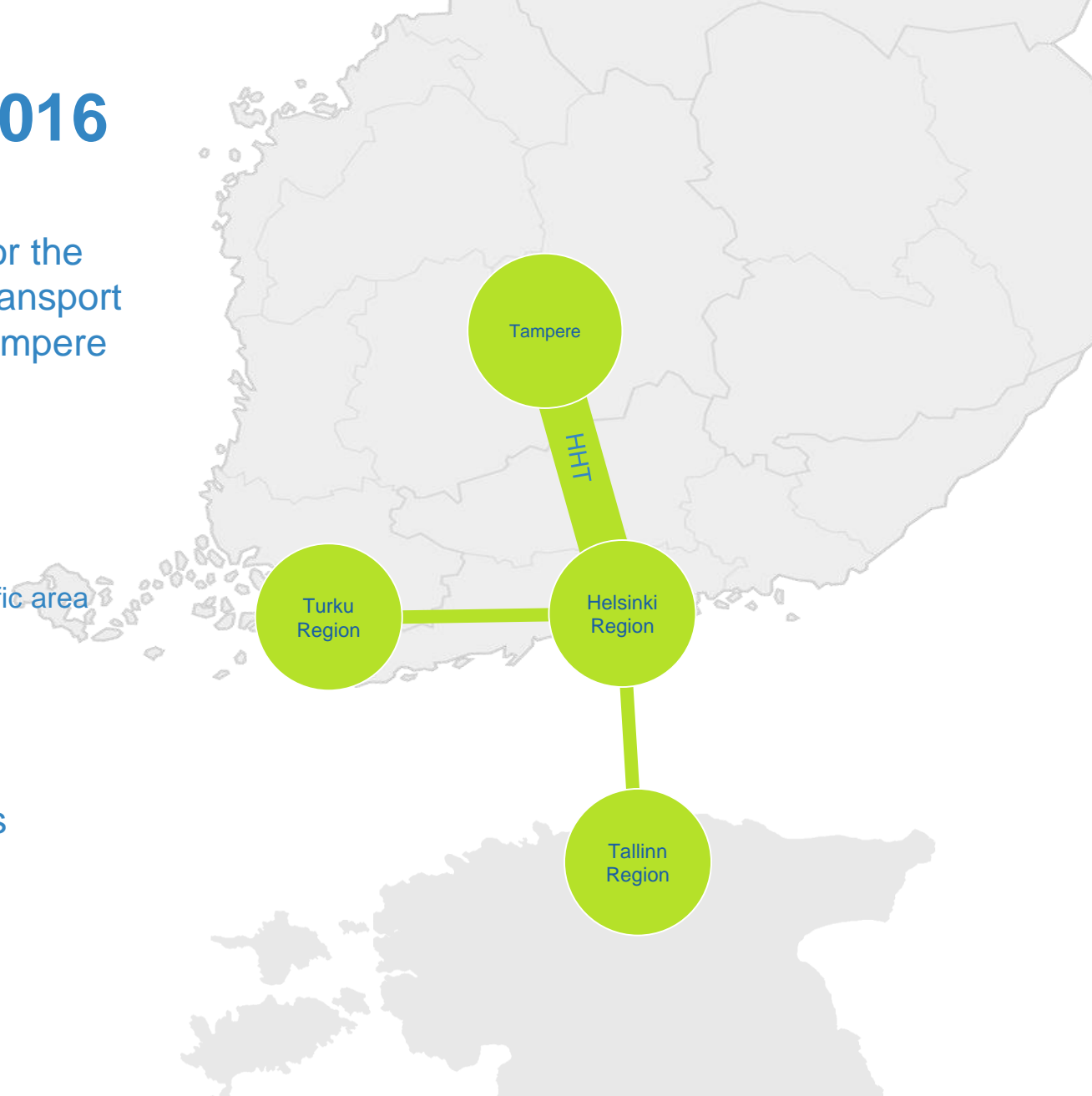


First phase 2016

The intended test area for the MVP includes four key transport areas Helsinki, Turku, Tampere and Tallinn:

- HHT Growth Corridor
- Helsinki Region (HSL Traffic area)
- Turku and Turku region traffic area (9 municipalities)
- Tampere
- Tallinn

Looking for 2 other areas



It scales because the components are already there -- and growing

Rio de Janeiro



Vienna



Sydney



MaaS Ltd. Plan for going global

**Business plan with
24 organisations**
2015 Q1-Q2

**Call for interested
partners**
12/2014

**Three areas with
open MVP**
2016

Going Global
2018-2020



**Seed round for
Minimum Viable
Product (MVP)**
2015 Q3-Q4

5-10 Areas live
2017

Helsinki♥MaaS

City's enabling actions



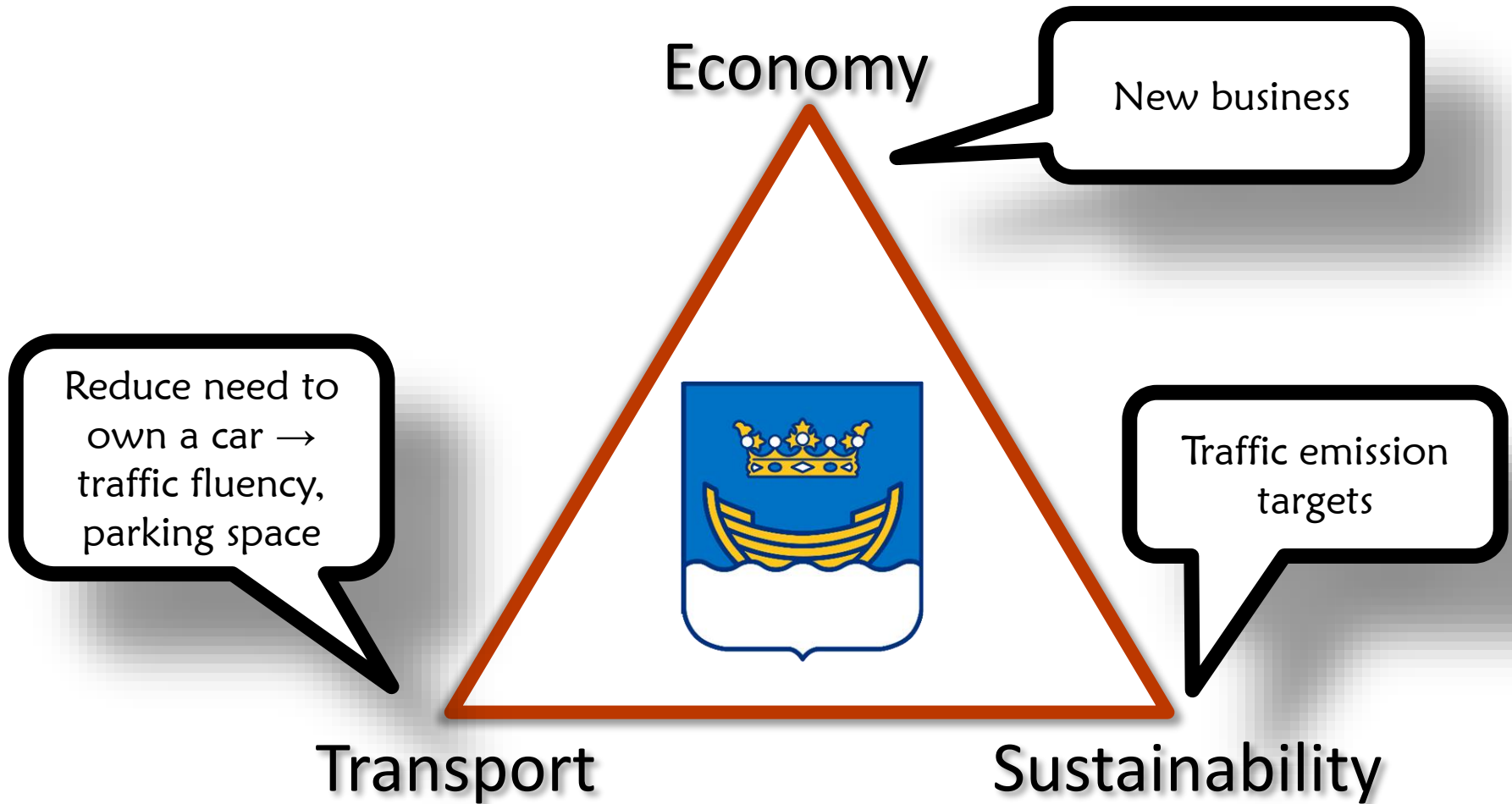
Our train of thought

- New mindset
 - What is MaaS ? Public transport ? Private business similar to travel agency ? Or a taxi central ?
 - We don't need to own and control everything !
 - Focus on results, what in the end actually needs to happen ?
 - What kind of roadmap could lead there ?
 - What can city do to make that happen OR **help** that happen
- **City as an enabler !**

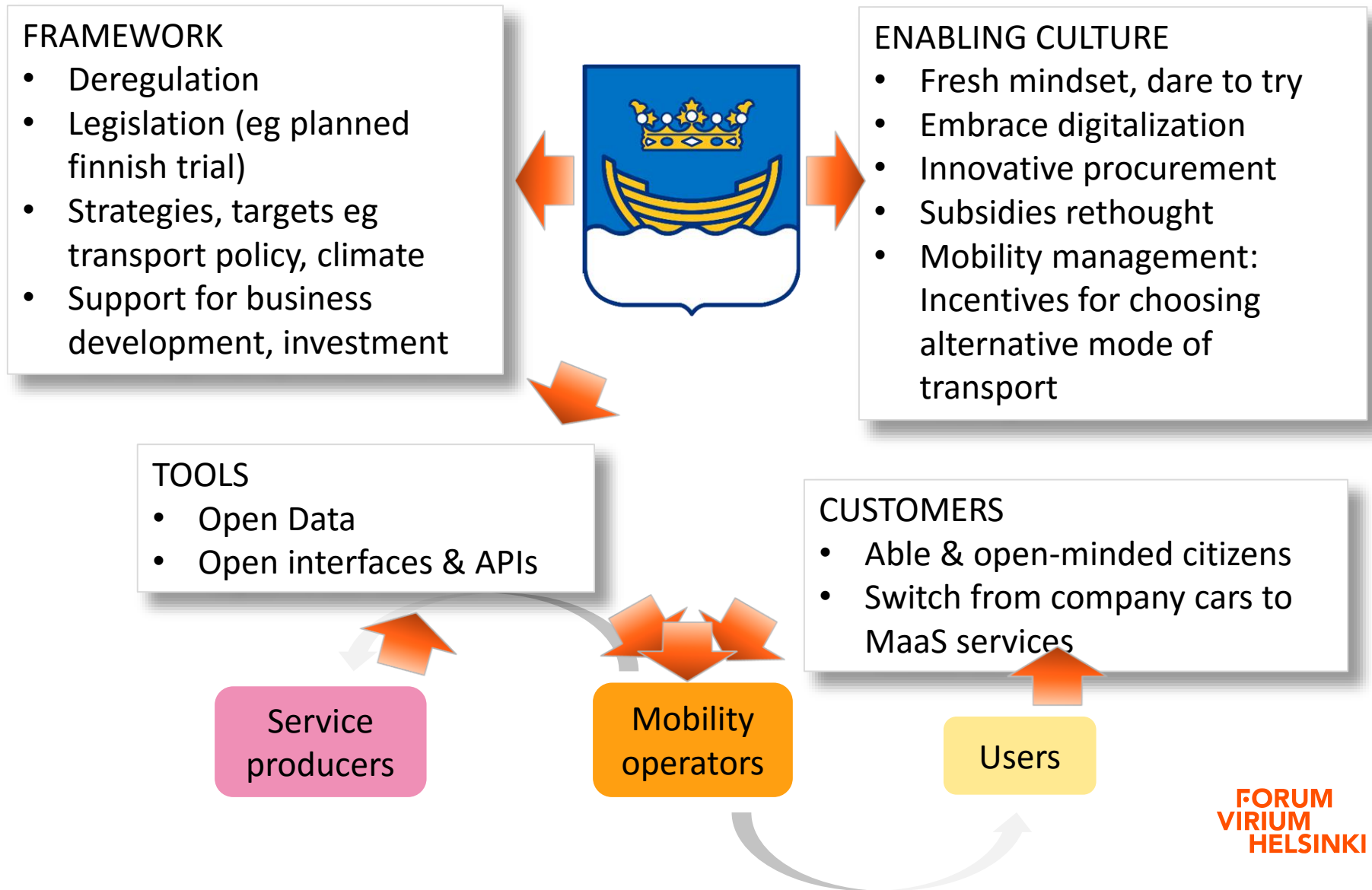
City as an enabler

- What does MaaS need to succeed and grow ?
 - Proofing the concept
 - Paying customers, a market
 - Reference cases
- Our options
 - Spend money, fund operators – NOT
 - Spend money, buy MaaS service – MAYBE
 - Current city provisioned transport via MaaS operators ?
 - Show an example by own personnel switching to MaaS ?
 - Focus on providing best possible environment for the business
- YES

For a city: intriguing opportunity and an organisational challenge



Ingredients for successful MaaS



Any lessons learned ?

- Be more flexible, maintain pace
- Wide cooperation across public sector
- Involve stakeholders outside your own peer
- Organisations not able to grasp new things that fall outside /between departments' comfort zones
- Traffic planning vs Smart Mobility = focus on infrastructure vs focus on the function

Coordination

- Manage city's actions, cooperation, R&D and communication of all MaaS activities

Legislation, regulation

- Ensure that legislation, city's own regulation, transport purchase and other administrative mechanisms develop to benefit MaaS operator business

Business support

- KPI: new mobility related business and international investment to Helsinki region

City as a platform

- Support development of open interfaces and global interoperability
- Ensure necessary infrastructure for MaaS operation is in place

Users

- Collect feedback and needs from users, support piloting of new innovative mobility services and facilitate the actions directed to MaaS users, eg campaigns

Currently, transport services are provided and subsidized separately

Purchase of transportation (incl. socially necessary transportation), public subsidization of PT

Public transport planning authorities and other transport service producers

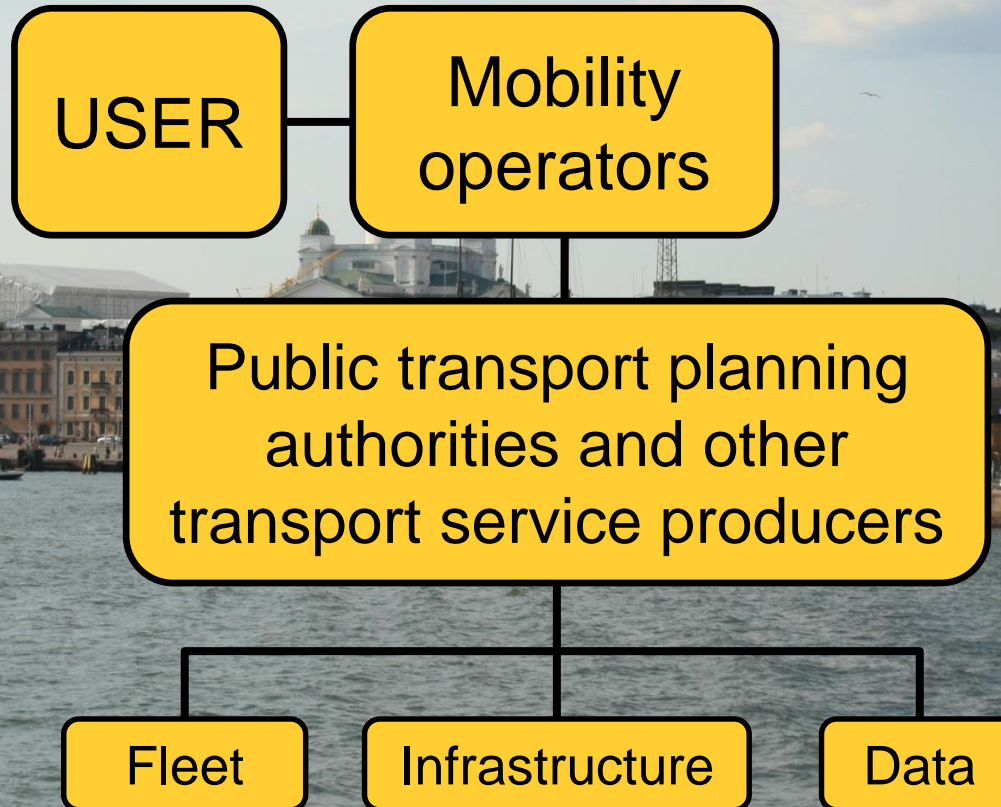
Fleet

Infrastructure

Data

In MaaS, all transport services are provided and subsidized jointly through mobility operators

Purchase of transportation (incl. socially necessary transportation), subsidization of PT



Why Cities and MaaS?

- **Transport policy goals achieved**
 - Without public spending
 - Without banning cars
- **New tools for managing transport**
 - Incentives
 - Game rules
 - Customer rights
- **But it won't happen without strong policy leadership**
- **What is needed**
 - Roaming of transport (operators accessing all transport modes)
 - Game rules (Market description, Data transfer and ownership, customer rights etc)
 - Possible incentives to end users to kick-start markets and to cover low-density areas
 - Mindshift from provider to enabler

Maas.FI

**FORUM
VIRIUM
HELSINKI**

SEE MAAS LIVE IN 2016

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Seed investors and funding

- Over 2,2 M€ in funding for Minimum viable product
- Finnish Funding Agency for Technology and Innovation Tekes
- Transdev, a French transportation giant offering land, rail and passenger transport services
- Karsan Otomotiv Sanayii and Ticaret AS, a leading car-industry family of Turkey
- Sampo Hietanen CEO and founder
- Kaj Pyyhtiä CXO and co-founder
- InMob Holdings
- Korsisaari
- Neocard
- GoSwift
- MaaS Australia
- Goodsign
- IQ Payments
- Delta Capital Force.