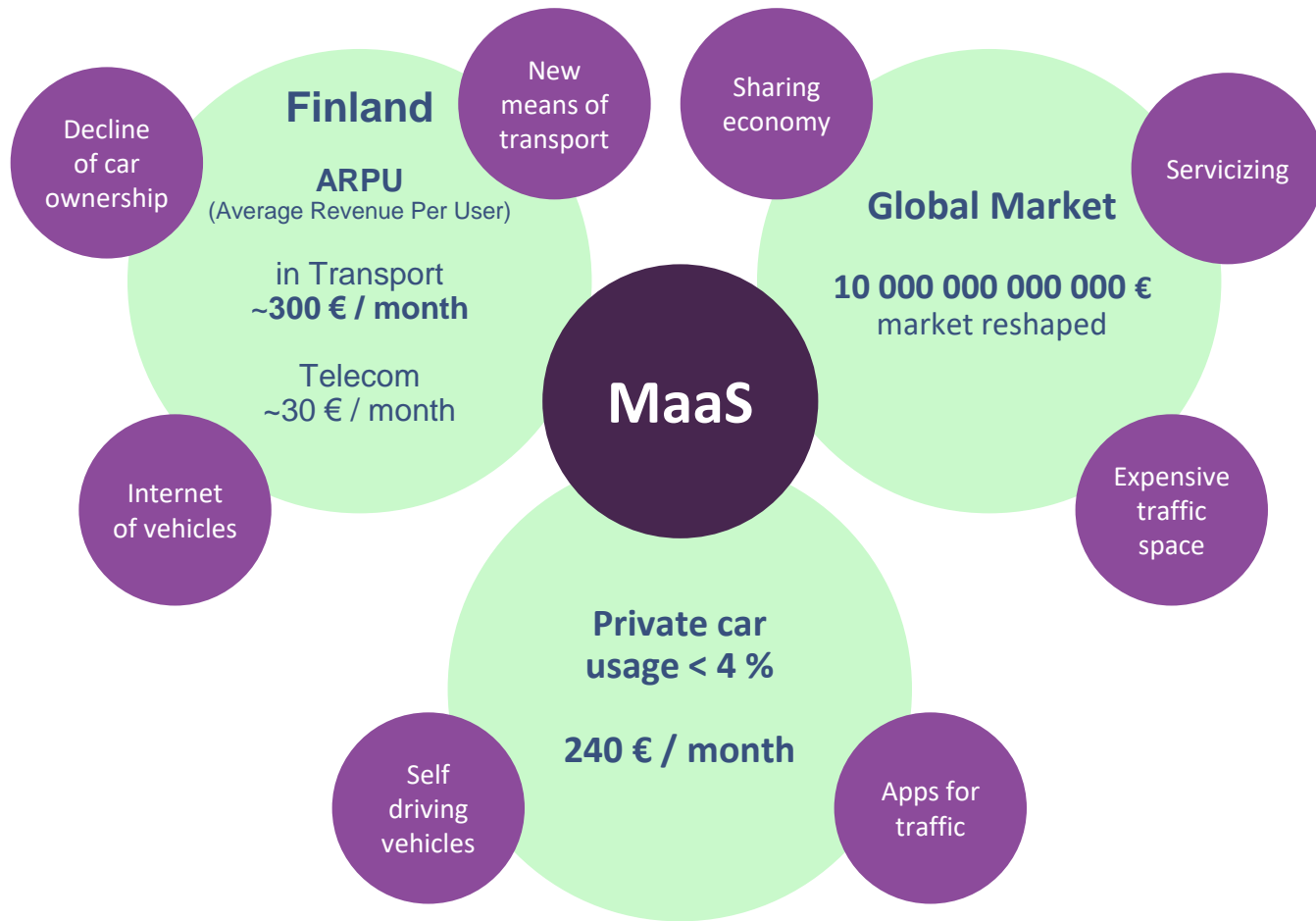


Mobility as a Service

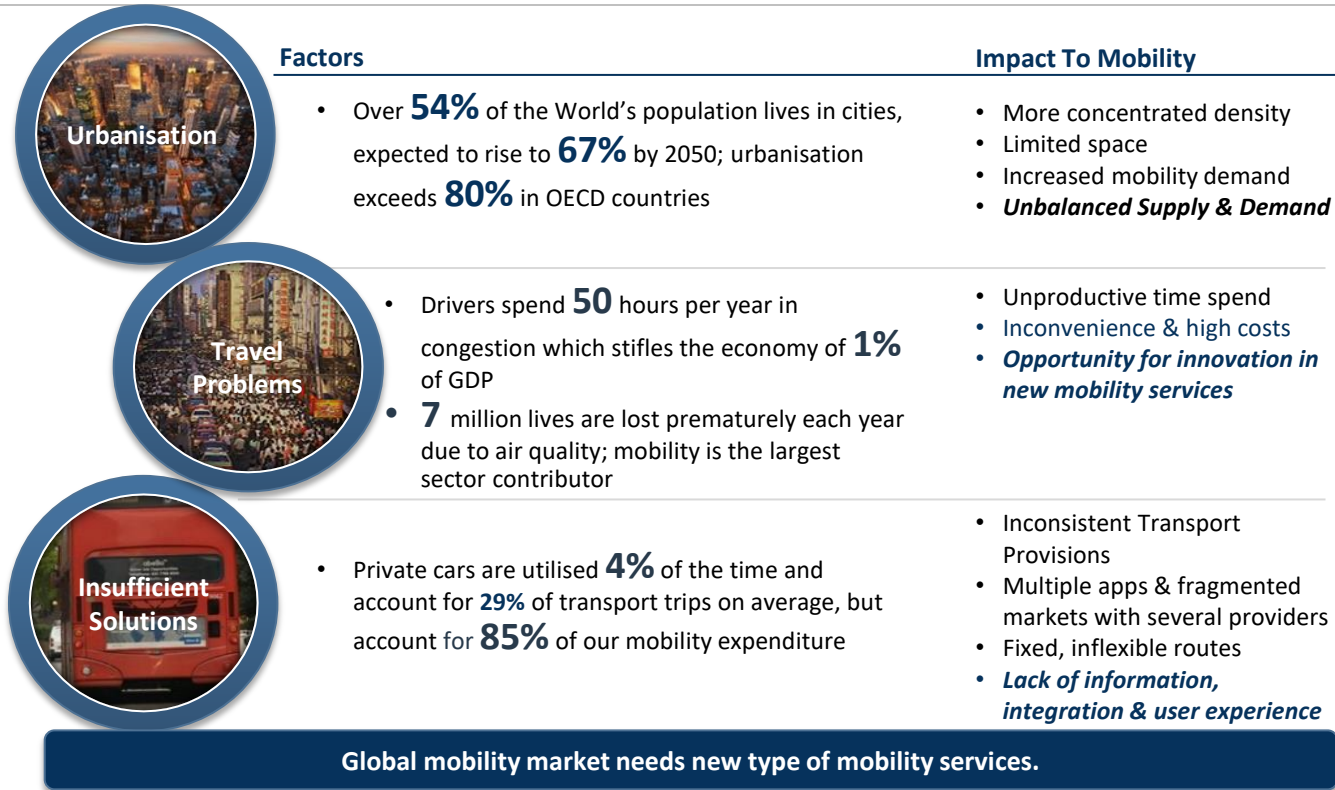
- does it change the world and when?

Transportation is being hit by a
DIGITAL TSUNAMI



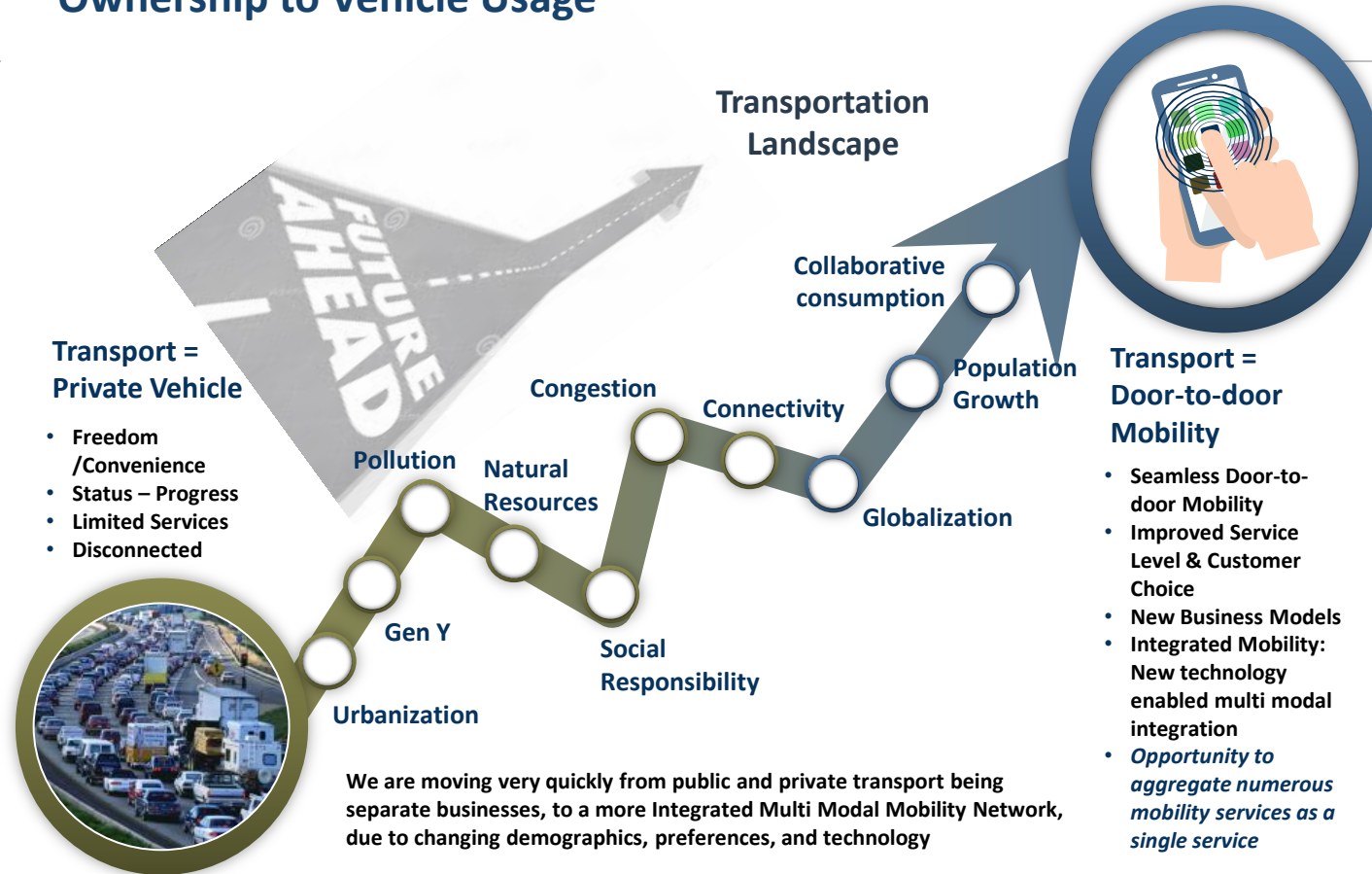


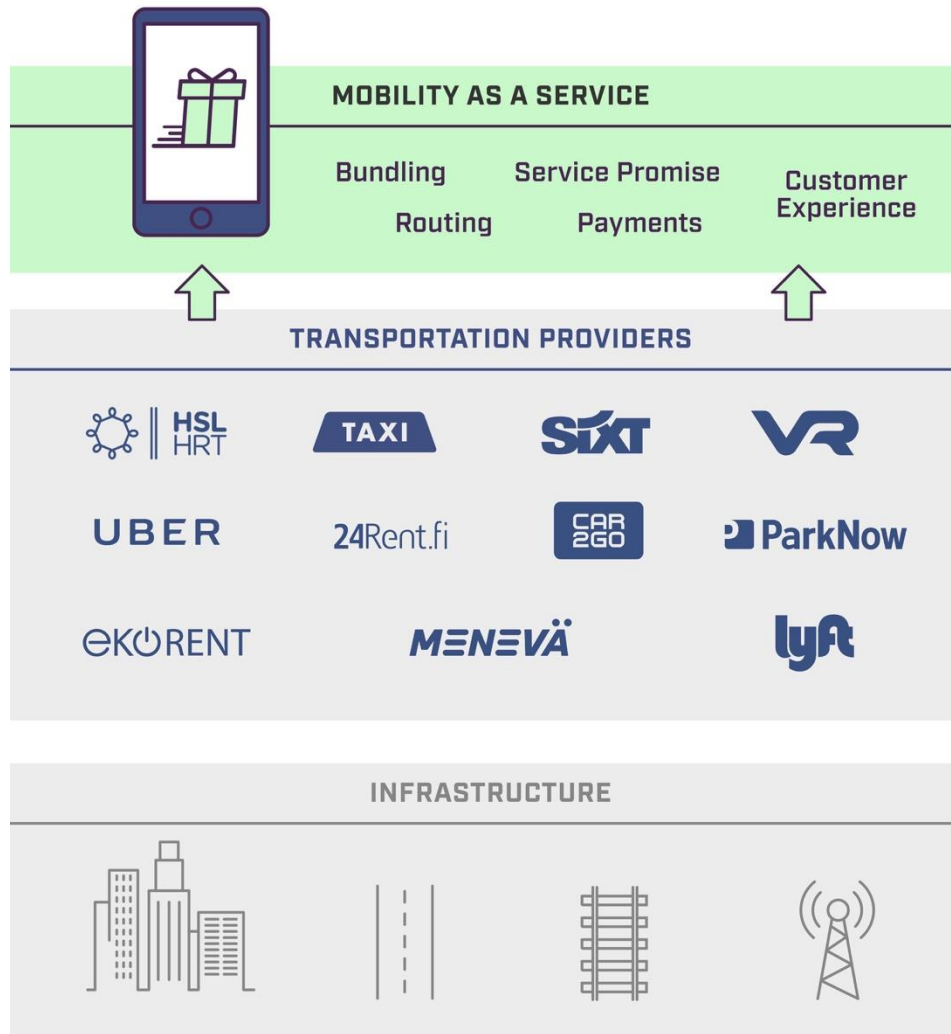
Changing Urban Demographics Are Leading To Travel Problems That Today's Mobility Services Aren't Solving



Sources: World Bank, World Health Organisation, Inrix, European Commission, Eurostat

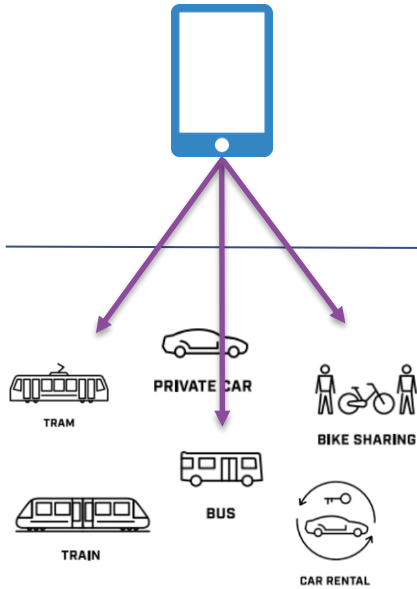
Converging Trends will lead to a Paradigm Shift from Vehicle Ownership to Vehicle Usage



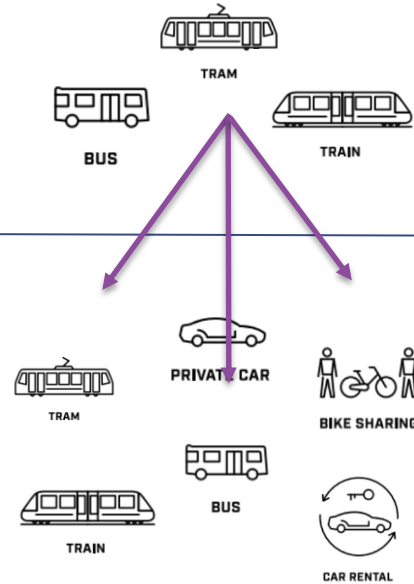


Three ways for markets to evolve

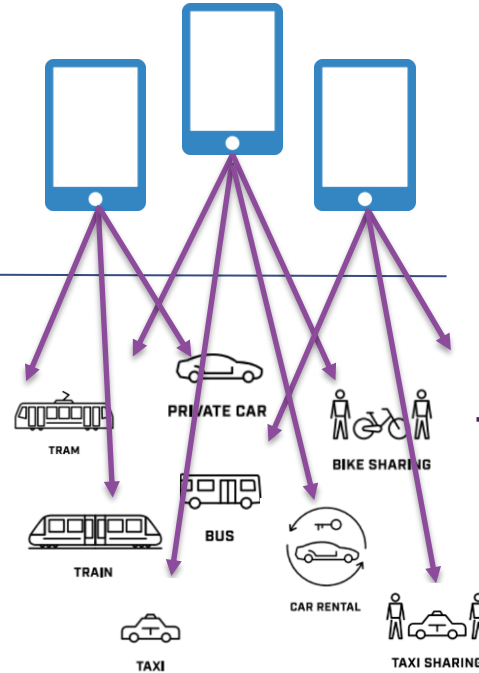
Winner takes it all



Public transportation takes it all



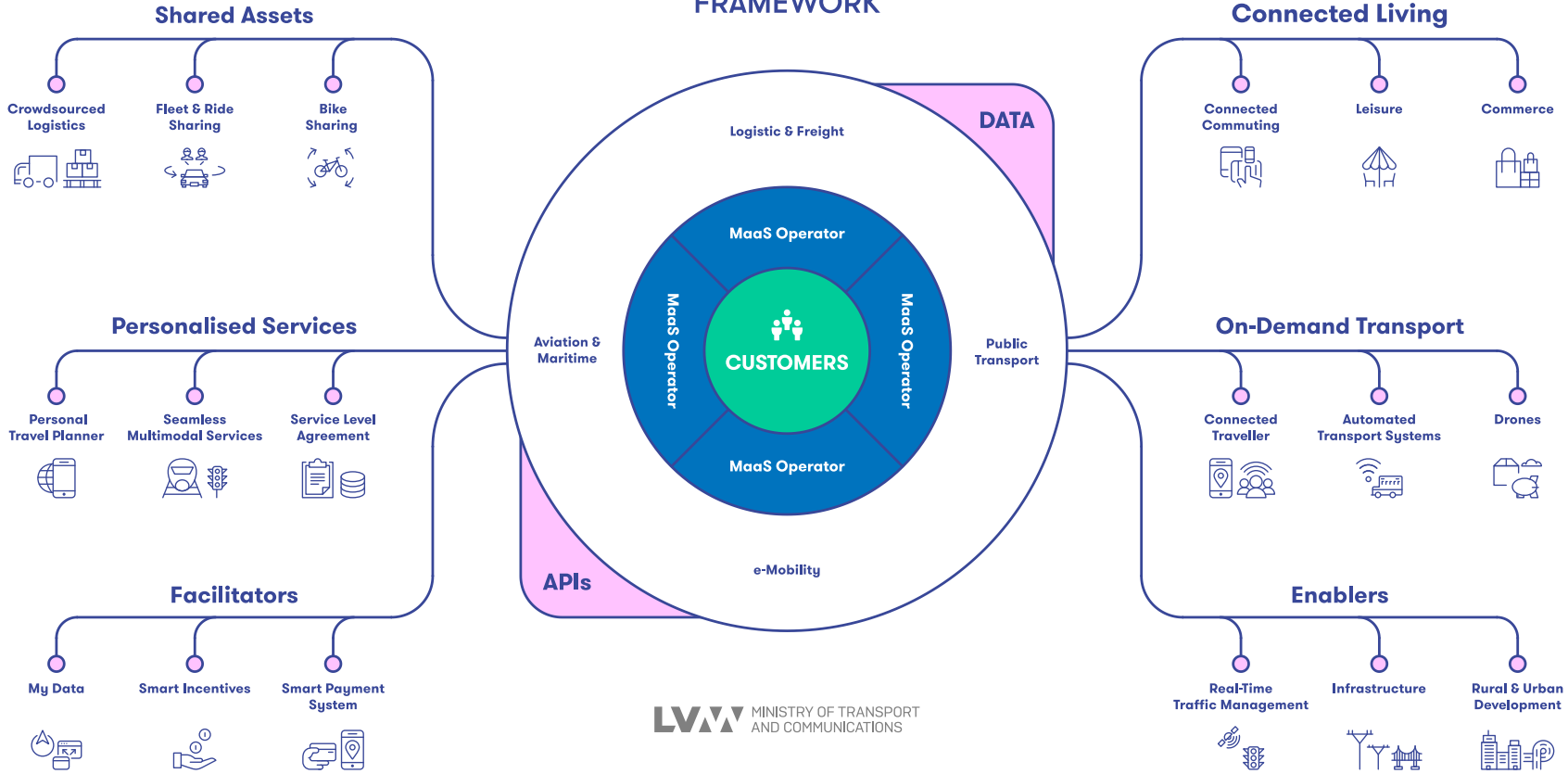
Roaming ecosystem



Mobility as a Service (aggregators)

Transportation providers

MOBILITY AS A SERVICE FRAMEWORK



LVM MINISTRY OF TRANSPORT AND COMMUNICATIONS

Why Cities and Mobility as a Service?

- **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

What does a MaaS operator need?

- **Step 1:** Contracts between transportation providers and MaaS operators to buy transportation from at least:
 - Public transport (urban, intercity)
 - Taxi or taxi-like service
 - Access to car (car share, car rental etc.)
- **Step 2:** API's allowing 3rd party service providers including
 - Information about transportation services (timetables, routing, locations, disturbances etc.)
 - Background payment, hailing, ticketing, validation.
- To learn more about technical integrations for MaaS, go to:
www.maas-api.org

From cities there is no need financing, just co-operation and active enabling.

A perspective view of a long, brightly lit tunnel with a grid floor and glowing pink lines on the walls, symbolizing a path forward. The tunnel is illuminated by overhead lights, creating a sense of depth and movement. The walls are dark with glowing pink lines, and the floor is a dark grid pattern. The overall atmosphere is futuristic and high-tech.

**MARKETS OPENING WITH
INVESTMENTS**

Technology | Media | Telecommunications

Wednesday, September 14, 2016

Mobility as a Service Revenues will Reach \$1 Trillion

Urban transportation is undergoing a revolution that's being driven by a variety of technologies. They've enabled new and disruptive business models. Recent research findings now indicate more changes are coming.

Where there's big change, there's often big opportunities. The emerging category of Mobility as a Service (MaaS), which provides aggregated, single account, on-demand multi-modal transportation services, is quickly gaining momentum.

According to the latest market study by ABI Research, global MaaS revenues will exceed \$1 trillion by 2030. The anticipated impact on traditional transportation modes -- such as car ownership, buses, trains, taxis, and rental cars -- is causing a reevaluation of the economic foundation for legacy transportation companies.

Everything as a Service Market Development

"Driverless technology, through the Car as a Service (CaaS) paradigm, will be the defining factor for the success of on-demand mobility, offering consumers the possibility to summon transportation on the fly," said Dominique Bente, vice

”Volkswagen Group is getting into the ride-hail game with a \$300 million investment in Uber competitor Gett.”

24.5.2016 Recode

“Apple invests \$1 billion in Chinese ride-hailing service Didi Chuxing.”

13.5.2016 Reuters

”NuTonomy raises \$16M to make self-driving taxis a reality by 2018.”

24.5.2016 Techcrunch

“Lyft raises \$530 million in funding to battle Uber in the U.S.”

12.3.2015 Mashable

”At \$68 Billion Valuation, Uber Will Be Bigger Than GM, Ford, And Honda”

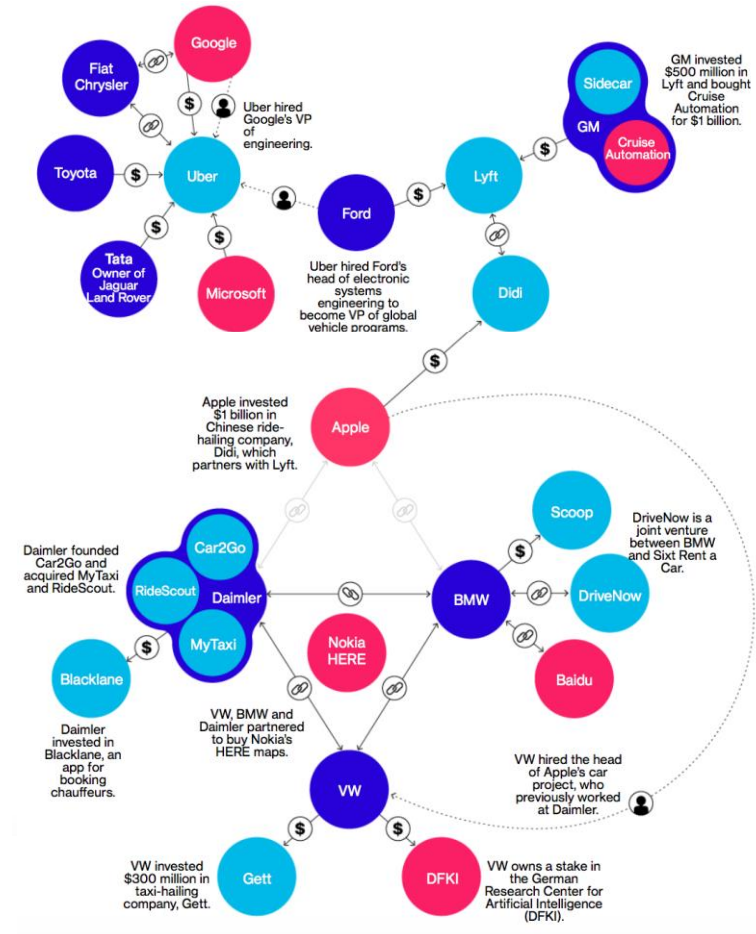
4.12.2015 Forbes

“Chinese taxi app Travice gains \$600 million investment from Softbank, Alibaba “

14.1.2015 Reuters

THE LINE BETWEEN THE TECHNOLOGY AND AUTOMOTIVE INDUSTRIES IS BLURRING

- Transportation is being tied even more closely to cell phone, while autonomous driving technology is turning car into a computer > Development is expensive: Carmakers' R&D budgets jumped 61 percent, to \$137 billion from 2010 to 2014
- Building alliances to share some of the risk and cost > Incumbent automotive giants and their "would-be" disruptors are teaming up



”Volkswagen preps new strategy to become 'mobility provider’”

20.5.2016 Automotive News

”BMW’s Head of Sustainability and Environmental , Ursula Mathar: "It’s all about selling mobility”“

12.5.2016 FIA Mobility Conference

“General Motors CEO Mary Barra has said she expects the auto industry to change more in the next five years than it has over the last 50.”

21.1.2016 World Economic Forum

“Ford chairman: Our new transportation revolution will be like going from horses to cars”

19.2.2016 Business Insider

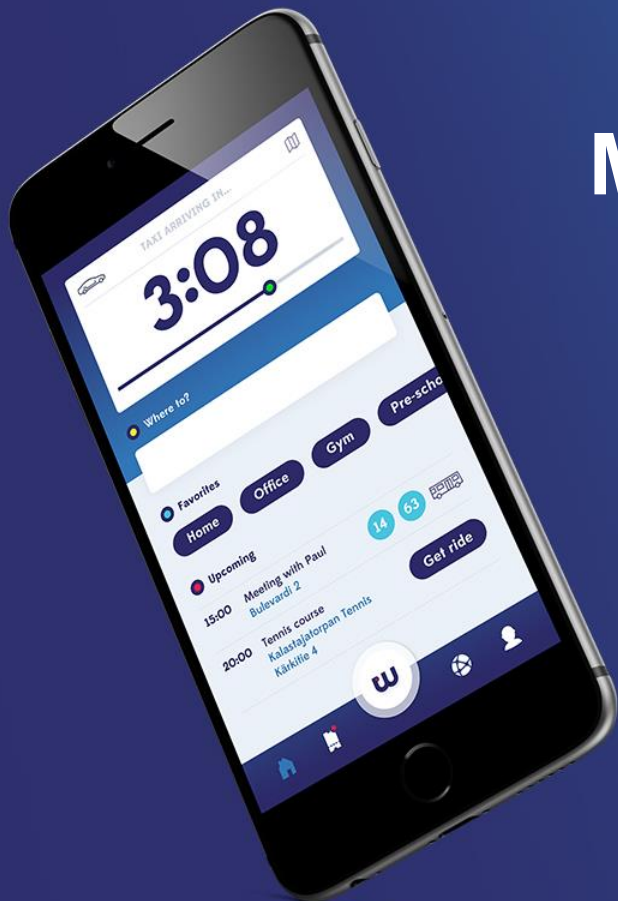
Examples of MaaS initiatives around the globe



ALLIANCE

www.maas-alliance.eu

**Cities and governments to
own the market vision**



MaaS Global has launched

Whim

The World's First MaaS
Solution

"THE NETFLIX OF TRANSPORTATION"

sign in become a sup

Transport as a service

It starts with a single app

Combining old and new ways of getting around will transi
Oct 1st 2016 | HELSINKI | From the print edition

Science SUBSCRIBE LOG IN

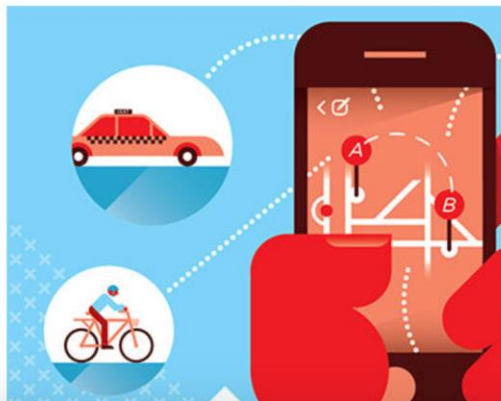
UK world sport football

home > opinion columnists

Transport policy Opinion

Stop obsessing about trains, and start using Simon Jenkins

Ministers are dazzled by the idea of



A Slow Ride Toward the Future of Public Transportation

Through an app called Whim, MaaS Global lets customers order transportation from point A to point B and then guarantees it will provide it, using a combination of trams, buses, taxis, rental cars and car-sharing services.

“You’re covered,” said Sampo Hietanen, the chief executive of MaaS Global. “You can just

...all for investors,
...stock market analysts and media –
...release of AAK's Interim report for the
...first quarter 2016

15 minutes package for 135 C/ month:

LESS HASSLE

TAKING AWAY THE PAIN
OF “HOW DO I GET THERE”

MORE FREE TIME

GIVING BACK YOU 90
MINUTES TO YOUR DAY



HAPPIER LIVING

OFFER YOU A TRUE
FREEDOM OF MOBILITY

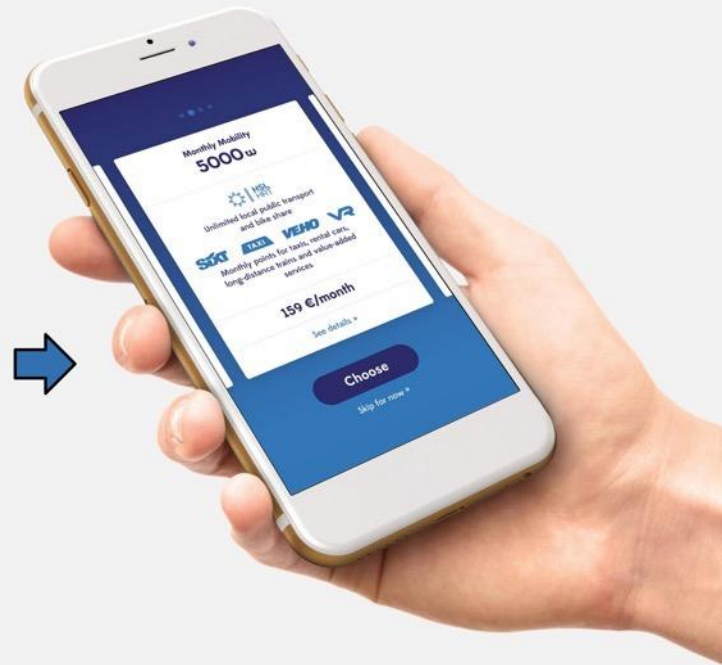
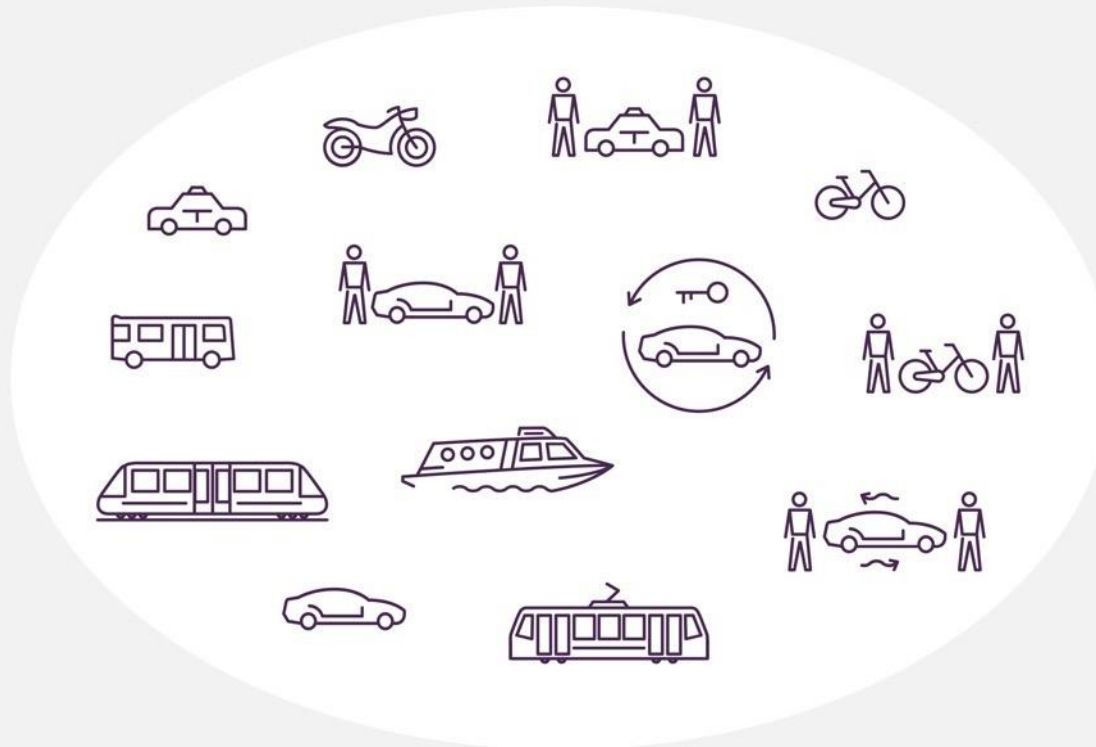
GREENER CITIES

MAKING SURE YOU ARE
NOT A POLLUTER

Mobility as a Service – The Netflix Of Transportation

What if all transportation
was converged...

...and tailored to your need
as monthly packages?



Whim is the way to go

You can plan your route, or get moving by taxi, bus, car, tram or metro with a single tap.



**YOUR EVERY MOVE
ON A WHIM**



Light Package

89 €
month

Street value 100€

The Light travel package includes unlimited public transport and 1000 Whim points. You choose how to use your whims, top-up is also possible, whenever you need!

1000 Whim points gives you e.g.



2

taxi trips



Unlimited

public transport
in Helsinki

Suggested upgrade

HSL regional ticket +50 € / month

Travel between Helsinki, Espoo, Vantaa and Kauniainen.

Medium Package

249 €
month

Street value 330€

The Medium travel package includes unlimited public transport and 5500 points to use for taxi rides, rental cars and Whim Car booking. We get you to your destination using your preferred mode - all in one app!

5500 Whim points gives you e.g.



6

taxi trips



Unlimited

public transport
in Helsinki



2

days of car

Suggested upgrade

HSL regional ticket +50 € / month

Travel between Helsinki, Espoo, Vantaa and Kauniainen.

Premium Package

349 €
month

Street value 491€

The Premium travel package includes 9000 Whim points to use for an extensive amount of taxi trips, rental car days, Whim Car booking. On-top of that you'll get unlimited public transport. We get you to your destination using your preferred mode - all in one app!

9000 Whim points gives you e.g.



8

taxi trips



Unlimited

public transport
in Helsinki



4

days of car

Suggested upgrade

HSL regional ticket +50 € / month

Travel between Helsinki, Espoo, Vantaa and Kauniainen.

Limitless travel.

Monthly payment. No bounds.

Light	Medium	Premium	Pay-as-you-go
89€ /month	249€ /month	317€ /month	
Includes HSL Helsinki season ticket + 1,000 Whim points	Includes HSL Helsinki season ticket + 5,500 Whim points	Includes HSL Helsinki season ticket + 8,000 Whim points	Try Whim without commitment and upgrade whenever you like.
Use your Whim points as you like, for example:  2 +  ∞	Use your Whim points as you like, for example:  8 +  ∞ +  2	Use your Whim points as you like, for example:  8 +  ∞ +  5	Transport providers:    
Taxi trips (>10 km/trip) daytime	Taxi trips (>10 km/trip) daytime	Taxi trips (>10 km/trip) daytime	We get you to your destination using your preferred mode of transport, letting you pay as you go – all in one app!
Unlimited local public transport	Unlimited local public transport	Unlimited local public transport	
	days with a rental car	days with a rental car	

You can upgrade packages with these benefits:

 **HSL Region**
season ticket
+ 50 €

 **Whim Leasing**
Add a car

Our transport providers:



What is in 249 package?

For example:

- Unlimited public transport in Helsinki including citybikes +
 - 12 taxi rides
 - **OR** 6 days of rental car
 - **OR** 8 taxi rides + 2 days of rental car
 - **OR** 4 taxi rides + 4 days of rental car
 - **OR** 2 taxi rides + 5 days of rental car

Would that be enough for you?

Order now at
www.whimapp.com

From Production Based to Service Promises



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

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



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



Competitive advantage – freedom of mobility

Our service promise is total freedom of mobility.



The only available option today



Tomorrow's freedom of mobility

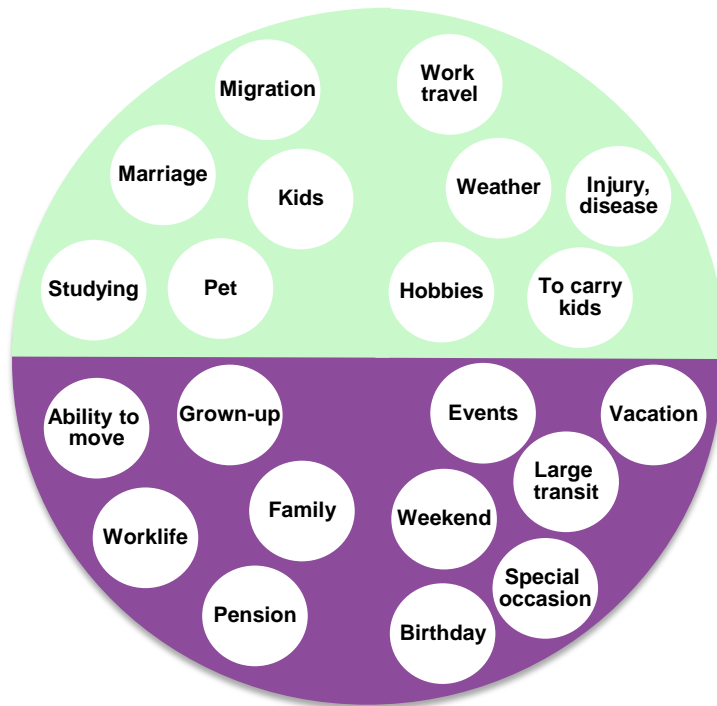
Life situation and unexpected incidents affecting your daily mobility

Situation of life

What kind of major things are you experiencing in your life? Getting children, moving together?

Lifecycle

What needs and necessities different phases are bringing to your life? You are old enough to move by yourself?



Hours

What does the day look like for you? Is it raining, are you having a flu, do you need to take children from school?

Calendar

What does your year look like? Are you going to some event, for vacations or maybe just buying a new couch?



**YOUR EVERY MOVE
ON A WHIM**

Roadmap 2015-2020

Call for Partners
12/2014

Business plan with
24 organizations
Q1-Q2 / 2015

Helsinki
launch

Birmingham UK
open

Three areas
open - MVP

Commercial Launch -
Full product,
5-10 areas
2017

Global availability
2018 - 2020



2015

2016

2017

2018

LOOKING FOR FOUR NEW LOCATIONS FOR 2017

Mobility as a Service with Whim

The First Customer Experiences

ONE SINGLE SOLUTION (APP)

Better than owning a car

Variety of operators and transport providers in same platform. Both public and private (taxi, public transport, train, car sharing, car rental, ride sharing, parking, logistic services, ferries, ships, bikes) will ensure that customers are getting where ever they want.



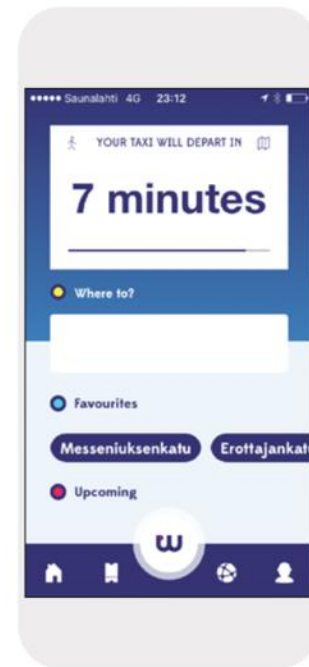
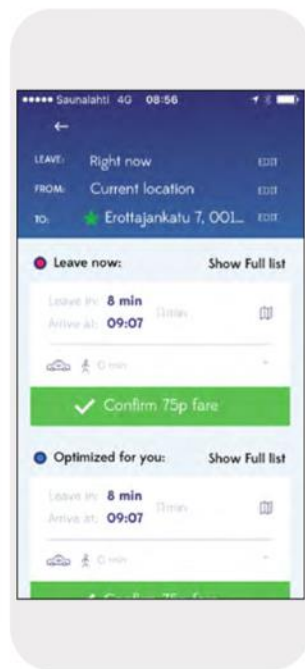
Better than Owning a Car

“To give away my car, transitions to rental shop need to be really smooth”

“I would like to take my own bike to the train station, and then continue on a train. Could the service offer these routes?”

“Ultimately, I would need to be able to include all my own owned mobility modes too”

”I would love to rent out my own car in the service”





DOOR-TO-DOOR JOURNEY

Much more than trip planner

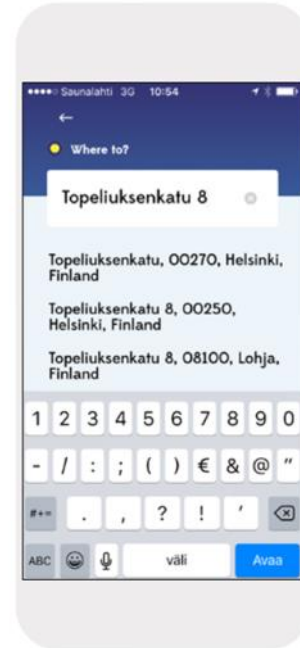
New kind trip planner which is chaining and combining operators unconventionally to serve customers according to their needs and current traffic conditions. All your trips from A to B to Z – with an enjoyable experience.

More than a Trip Planner

“Opting to take a taxi is really based on a feeling, mood”

“I need to be able to choose easily, whether I first choose the mode of transport, or whether search for a route first”

“When I open the app, it should show as a default a trip I am about to take – and I could choose it with one click”



PAYMENTS AND TICKETING

Monthly subscription for all transportation

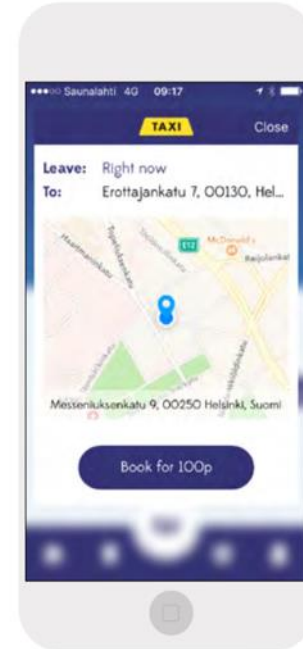
User can buy mobility packages with monthly fee.
Payment and ticketing will be handled in the background.
Tickets will be gathered into same service, so hassle free travel will be guaranteed.

Monthly Subscription

“I really don’t know my monthly needs yet. I would need to see my history, to be able to evaluate the subscriptions”

“Recommendations by friends work really well, and trials as well”

“I wasn’t really paying attention to the points – just if something cost double to another choice”





SIMPLE AND EASY CUSTOMER EXPERIENCE

Everything's set at a press of a button

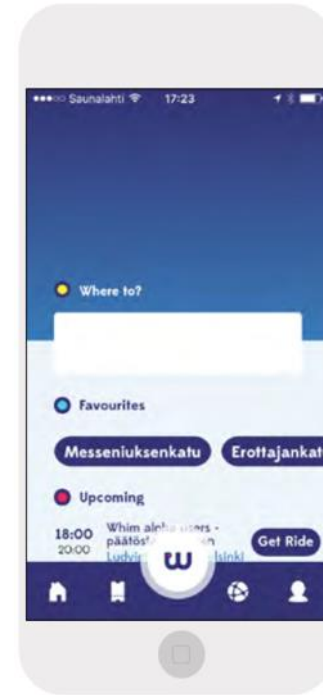
The core of everything is the easy and simple service experience. The goal is to make every day life easier for our customers: saving time, money and nerves.

Simple User Experience

“It all comes down to how intuitive and personal the service will be”

“I would love an even stronger calendar integration – it would cancel the appointments that I can’t make, would send messages if I am running late etc.”

“It should know more about my next upcoming moves, than I do”



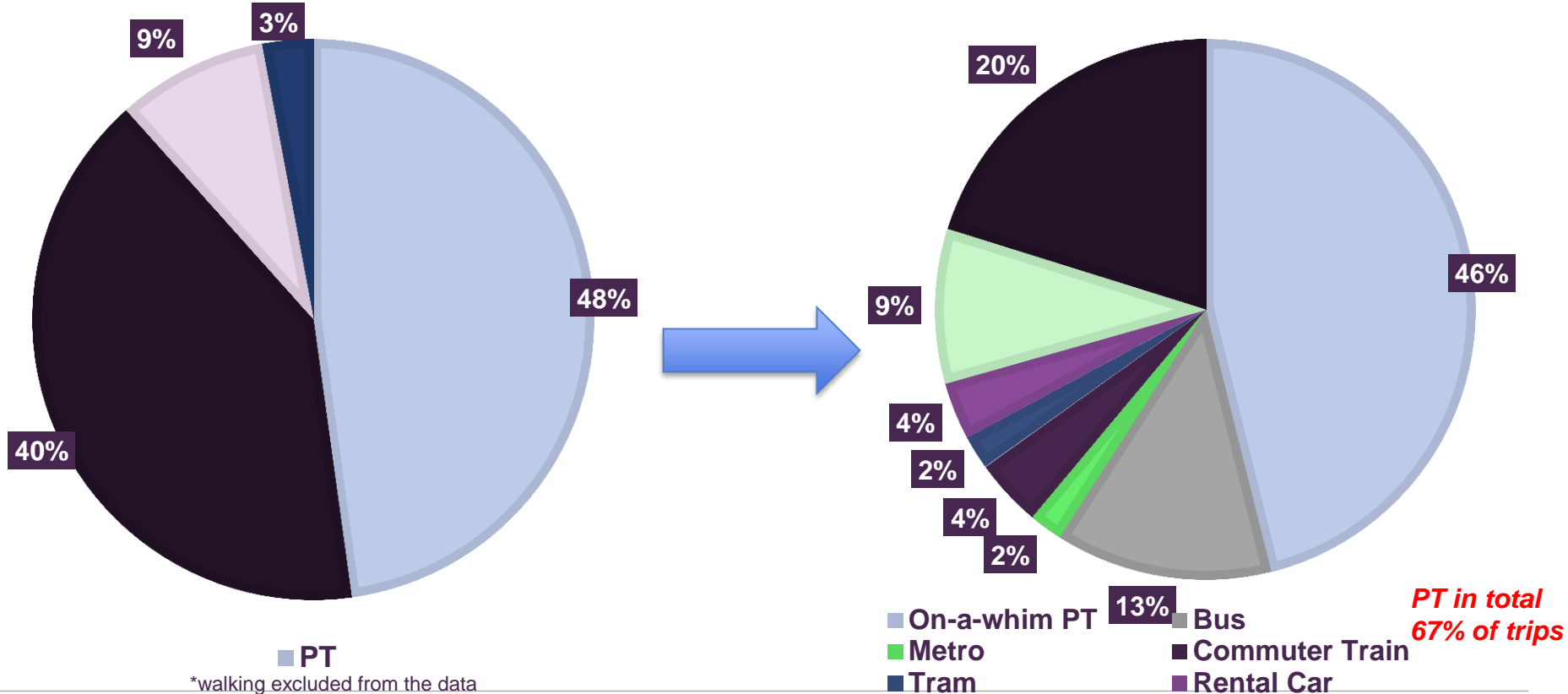
User Data from the Whim pilot

Satu Kantola

Business Analyst, MaaS Global



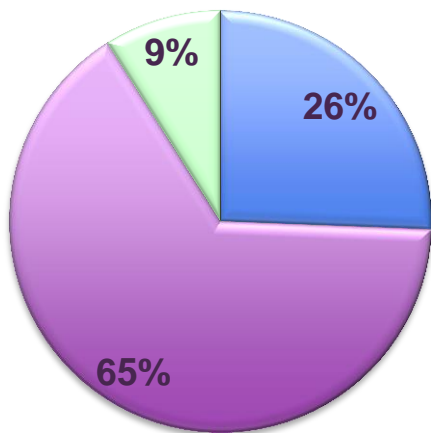
Trips made with Whim in Helsinki before and after Whim*



*walking excluded from the data

Trips made with Whim – distance travelled

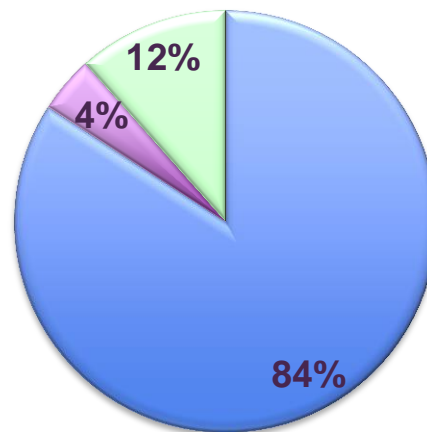
Total number of km split



Compared with nr of trips split



Total number of trips

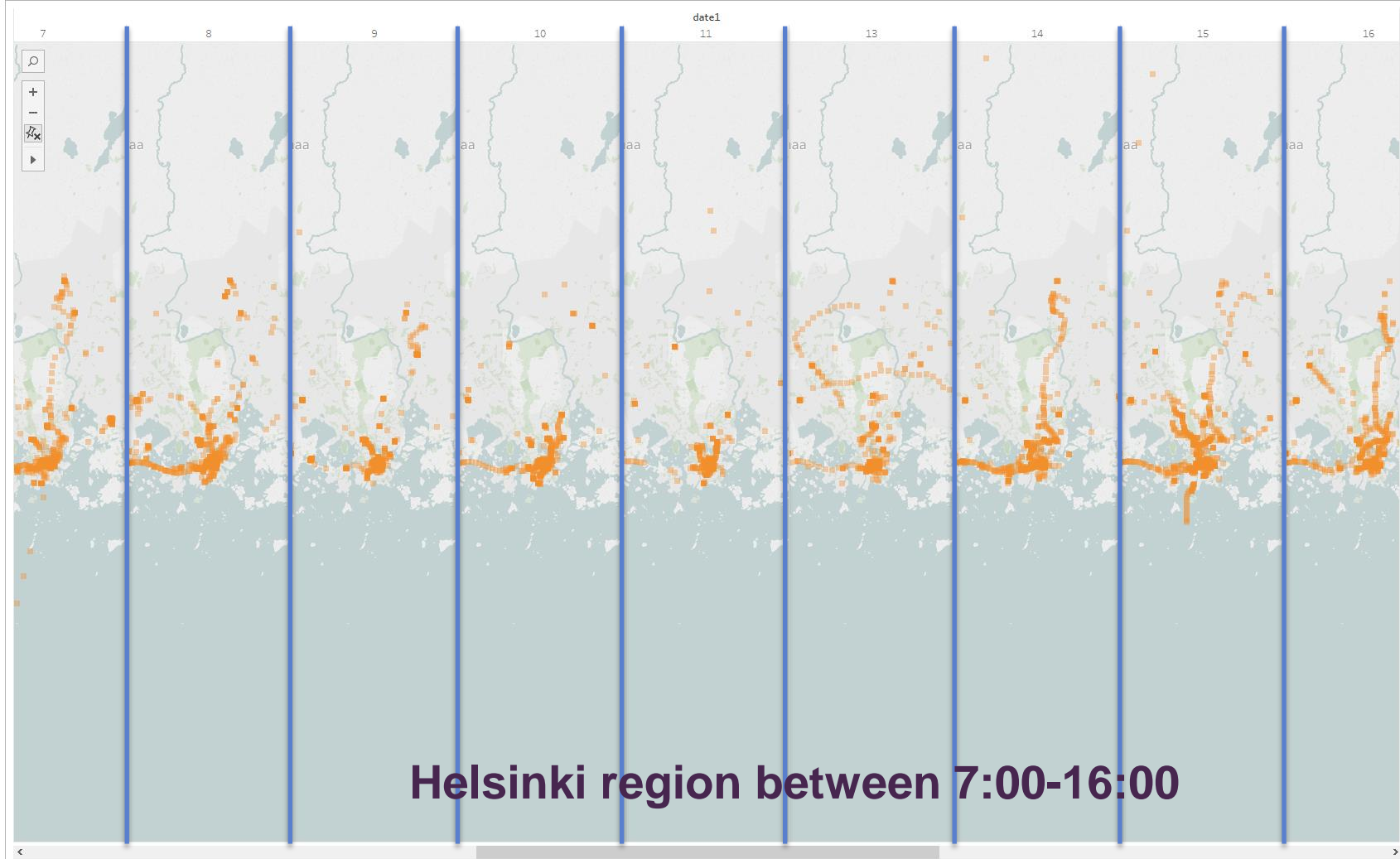


■ PT ■ Rental Car ■ Taxi

■ PT ■ Rental Car ■ Taxi

A few examples on location data analysis from Whim

A black and white photograph of a vintage open-top car, likely from the early 20th century. Two men are standing next to the car. One man is wearing a long coat and a hat, and the other is wearing a suit and a cap. The car has large spoked wheels and a prominent front grille. The background shows a stone wall and a wooden fence.



Helsinki region between 7:00-16:00



Title

Sheet 1

HOUR(date1)

0
1
2
3
4
5
6
7
8
9
10
11
13
14
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16
17
18
19
20
21
22
23

24 hours in Helsinki region

How has Whim users' behaviour changed*

- Users report that they have used more taxi than before Whim.
- Some increase also in rental car usage.
- No particular change in PT usage, cycling or walking.
- Usage of private vehicle decreased, but only little.
- Otherwise still limited amount of data on this because there are not so many different transport modes available via Whim.

*Very early findings based on Whim user data and user surveys

Users' comments

- “Service is definitely good enough for piloting, but usability requires some fine tuning. Still, I'm positively surprised!”
- “I would like to have a shared account with my family members, e.g. public transportation could be individual but often taxis and rentals are shared.”
- “More than chat/ride sharing/locate friends I would be interested in my usage statistics to see patterns, improve usage, etc.”
- “I would use rental cars more often if it would be possible to have a parking deal to have reduced or free parking in the city centre.”
- “Having points that expire every month is pushing me to rent cars or use the service more towards the end of the month just for not ‘losing’ points.”

Maas GLOBAL

SEE WHIM LIVE IN 2016

www.whimapp.com

www.maas.global

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