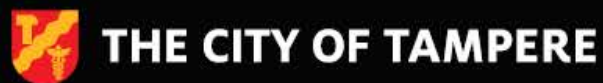


# Finnish ecosystem of FUTURE MOBILITY

Implementing MaaS Concept in Tampere

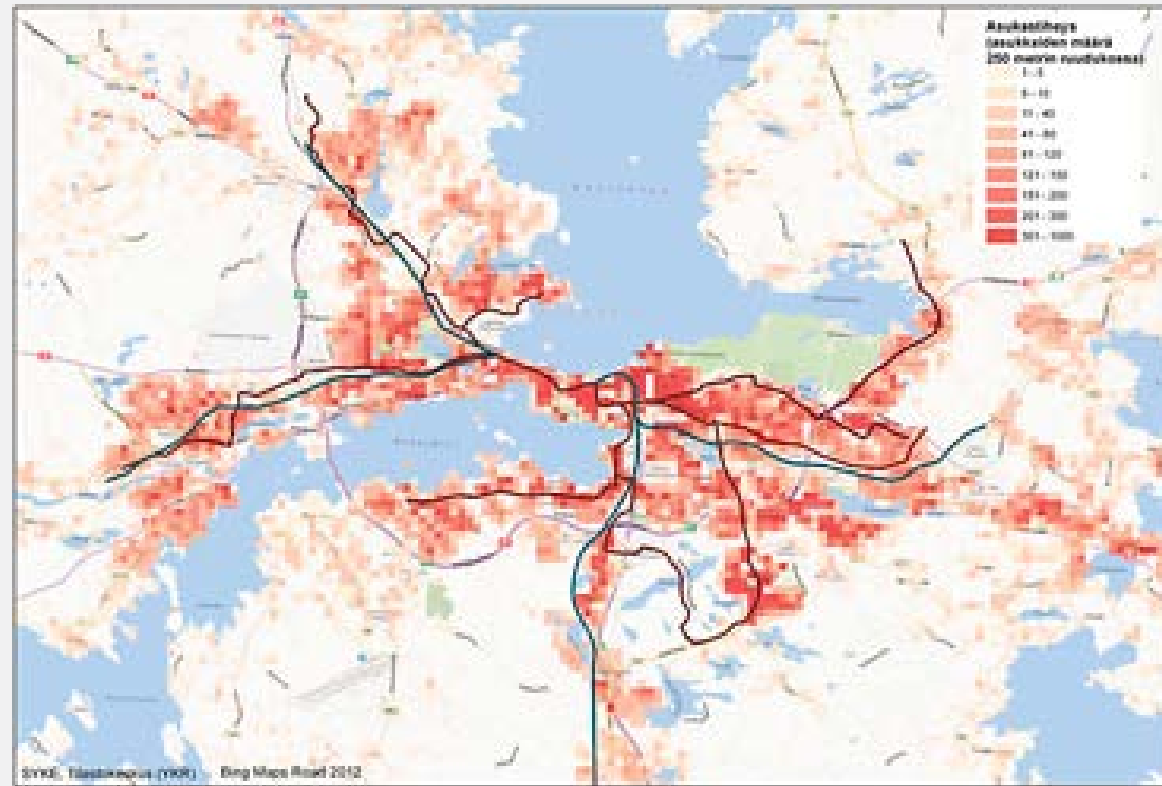


CANDIDATE  
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ITS CONGRESS  
2022/2023



# Background of Smart Mobility

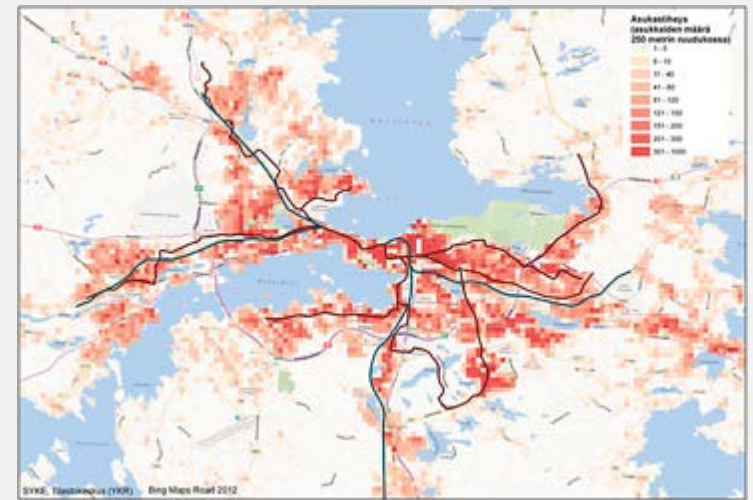
- The city is located between two lakes
- Still, it is Europe's least congested city in its own size category
- The aim is to maintain the situation, even though the city is growing rapidly



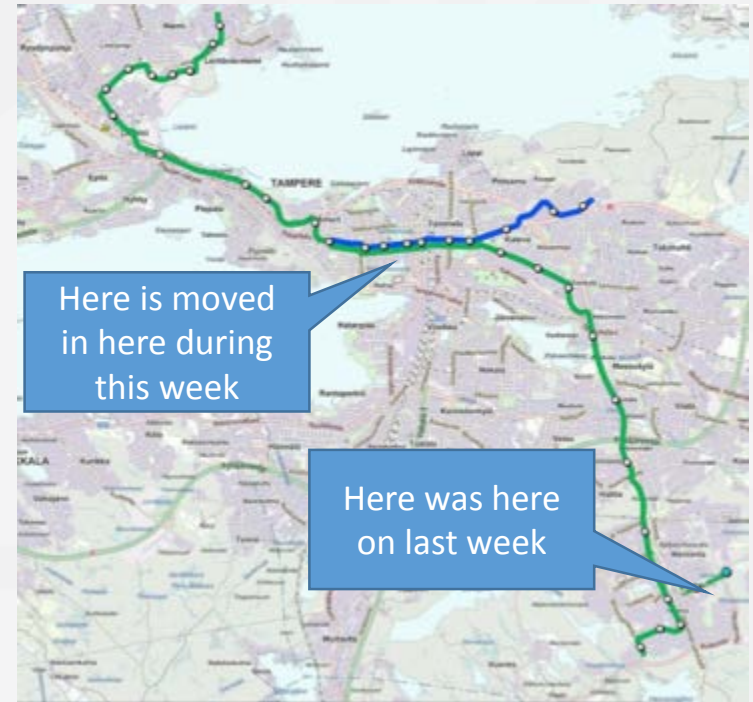
Population density

# Tramway

- Tramway will create the top of the public transport hierarchy
- Buses will feed passengers via multiple HUBs to tram line



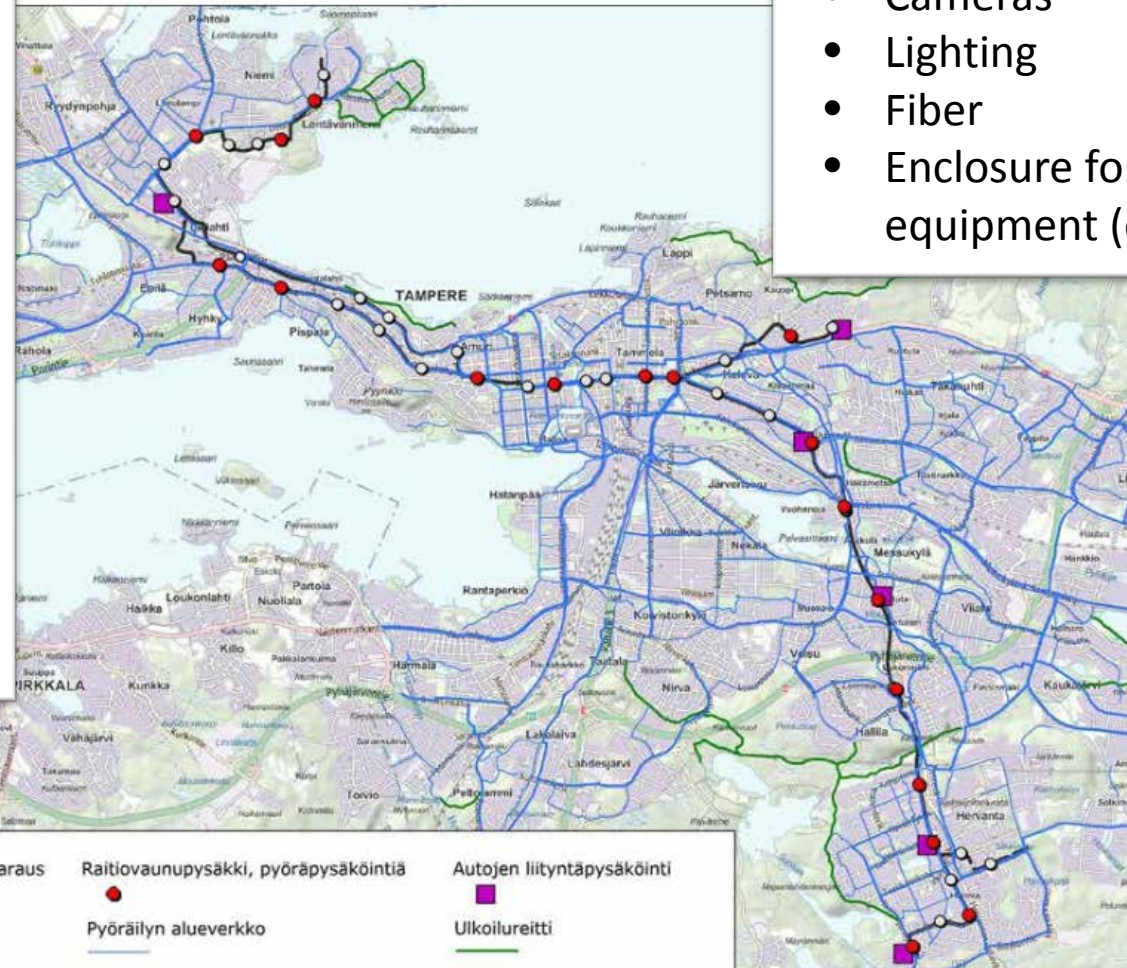
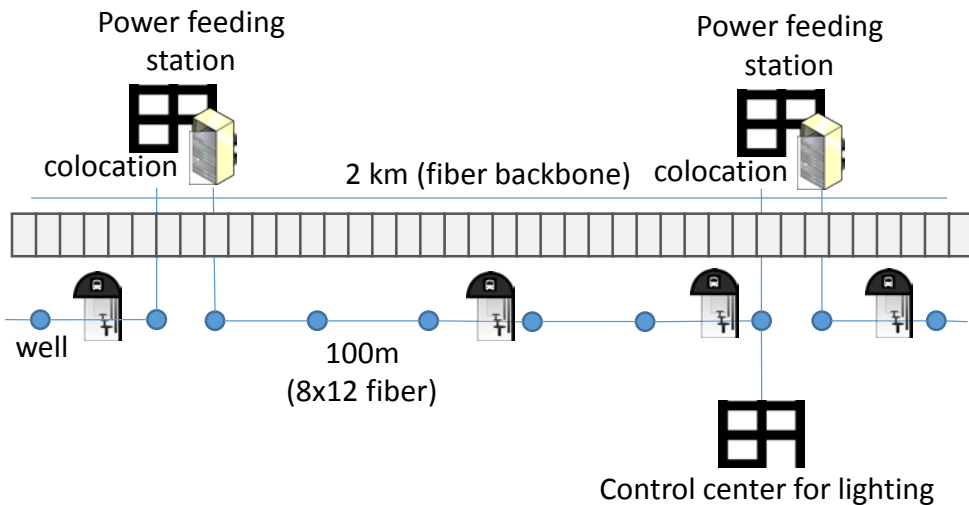
Population density



# Tram line and tram stops

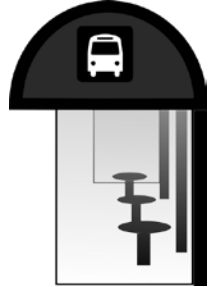
## Tram line and power feeding stations

- New fiber backbone network is built along the tram line
- Frees up some capacity in existing network



## Tram Stops

- Info displays
- Ads
- WiFi
- Cameras
- Lighting
- Fiber
- Enclosure for 3rd party equipment (colocation)



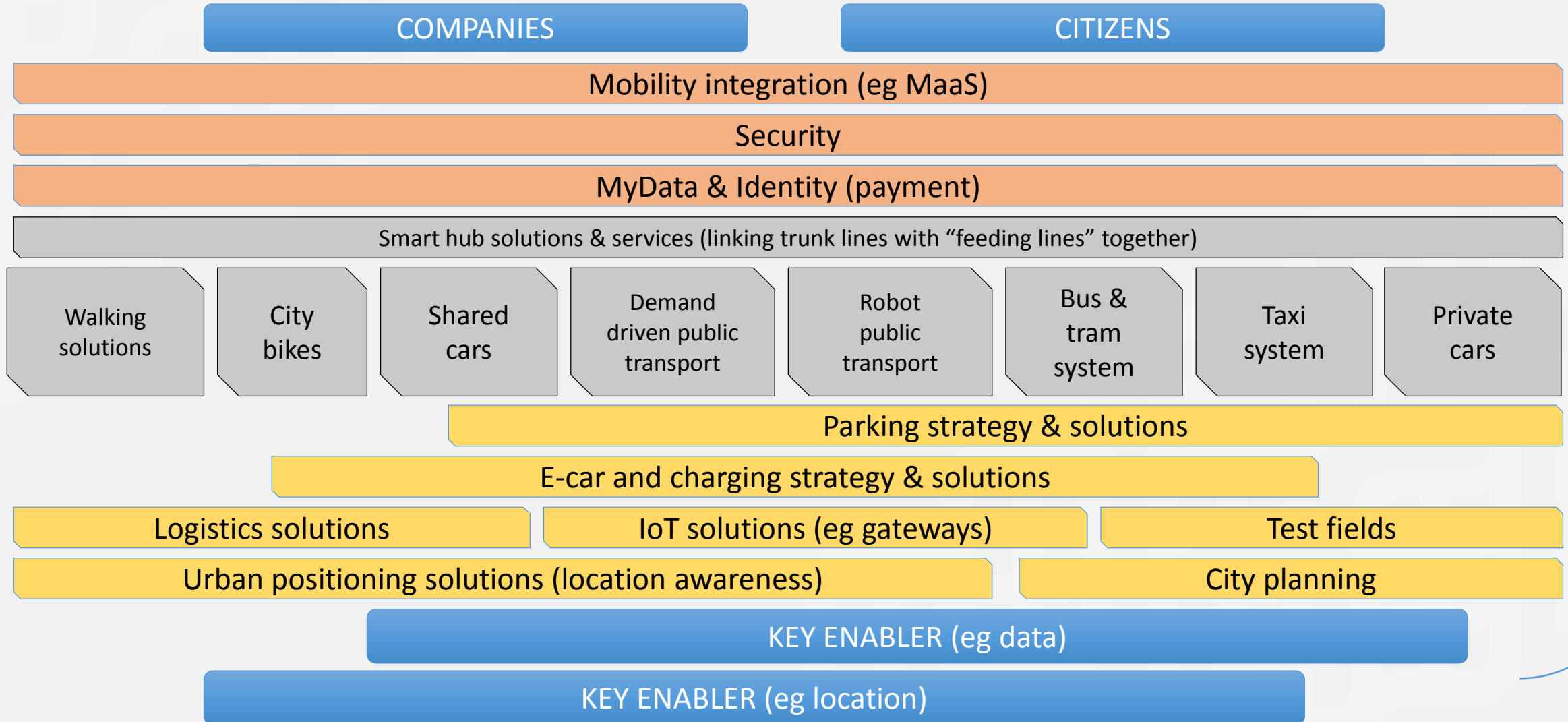
TAMPERE

kuva: Tampereen raitiotie, yleissuunnitelma

SMARTTAMPERE.FI | #SMARTTAMPERE



# Modern Mobility Ecosystem



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# Mobility HUBs

## Service Innovations and accessibility

Lucrative and user friendly mobility HUBs will allure passengers to tram line with its services, smart parking and easy transfer solutions



University Hospital Campus



Station area and city center

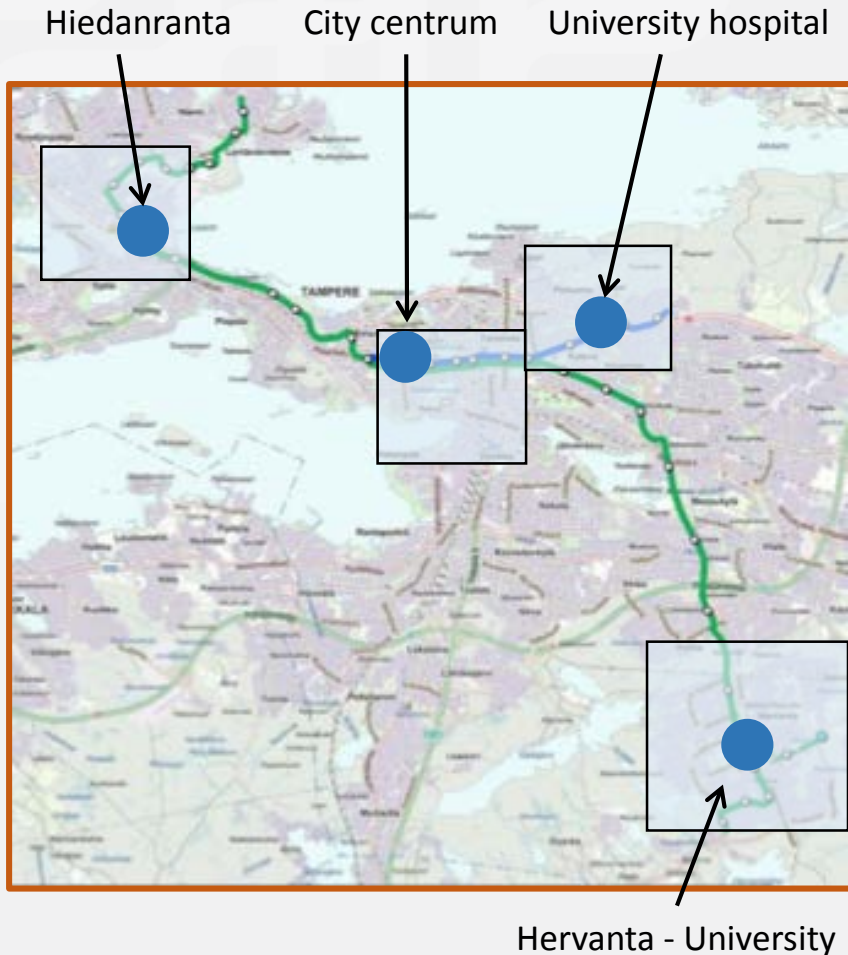


Hiedanranta Lake District



Hervanta - University city

# Smart Mobility – “Smooth-running everyday life”

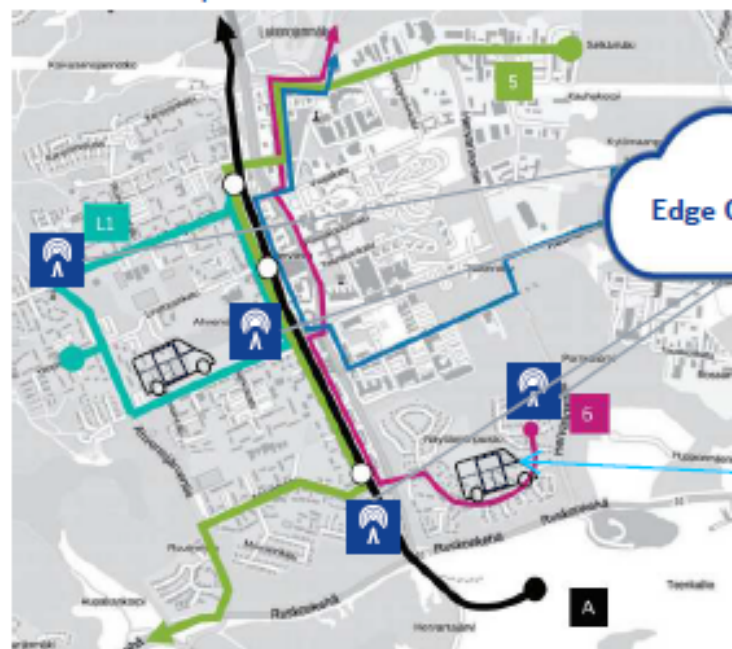


- **Tramway** as an integrated part of smart city mobility services
- First **PPP MAAS project** in Finland with Tuomi Logistic and Siemens
- **Mobility HUBs** as innovation platforms for passengers, vehicles and logistic services
- **Mobility Innovation Test Areas** developed together with authorities, universities, companies and research centers
- **Elisa 5G ready network and several other network technologies** provide possibilities for new service and value creation activities
- **Telia’s Crowd analytics** provides holistic and reliable insights on people behavior, transportation, urban planning and experience

# Hervanta Feeder Bus for Tram – Start testing now, no wait for the tram

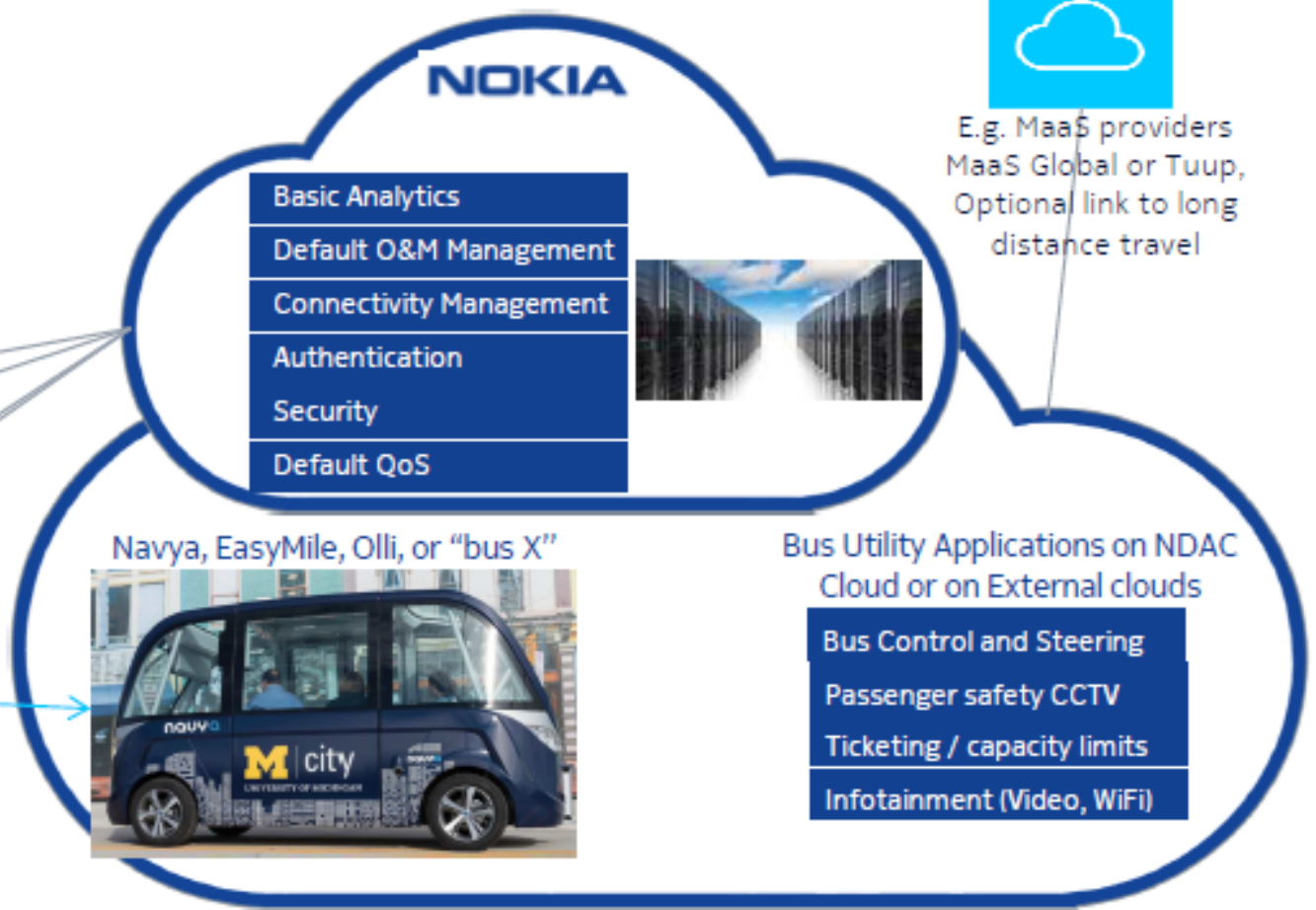
Initial test route L1 and possibly localised/shortened 6

Hervanta Maps from Raitiotieallianssi Document



Copyright Raitiotieallianssi

Edge Cloud



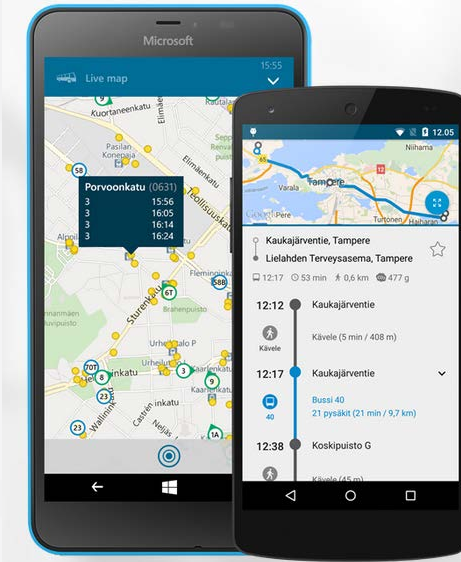


# Basics of MaaS - Traffic Data

- Open Traffic Data enables variety of ITS applications, products and services. Data is fuel of new MaaS services.
- The City of Tampere has opened both static and real time public transport data in standard interfaces - [wiki.itsfactory.fi](http://wiki.itsfactory.fi)
  - number of apps and users

## Public Transport APIs

- Tampere Public Transport SIRI Interface (Realtime JSON at [data.itsfactory.fi](http://data.itsfactory.fi))
- Tampere Public Transport SIRI Interface (Realtime XML at [data.itsfactory.fi](http://data.itsfactory.fi))
- Tampere Public Transport SIRI Interface (Realtime machine-to-machine)
- Tampere Public Transport SIRI Interface (Static)
- TRE API Public Transport
- Tampere Public Transport GTFS-RT Feeds **NEW!**
- Tampere Public Transport Journeys API
- Tampere Älynysse API
- HSL Reittiopas API
- Matka.fi API
- Read more...



**1. Route suggestion:**

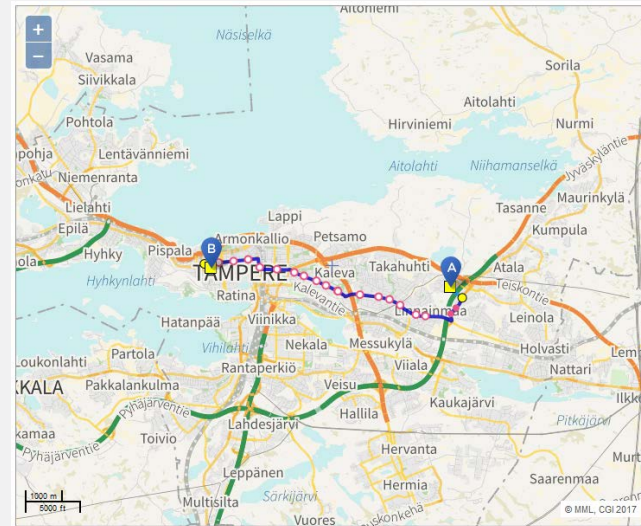
17:23 Eetunkatu 8, Tampere  
 Walk 600m  
 17:31 Aitolahdentie 43 (5125)  
 Bus 37  
 17:58 Sotkankatu (0060)  
 Walk 300m  
 18:03 Amurinkuja, Tampere

- Return route search
- Continue route from destination
- Show detailed information and transfer maps
- Print route suggestion
- Save route

**Fare zones**

- zone A
- zone B
- zone C
- zone D
- zone E
- zone F

[More information](#)



Route suggestions: Eetunkatu 8, Tampere - Amurinkuja, Tampere Thursday 26.10.2017

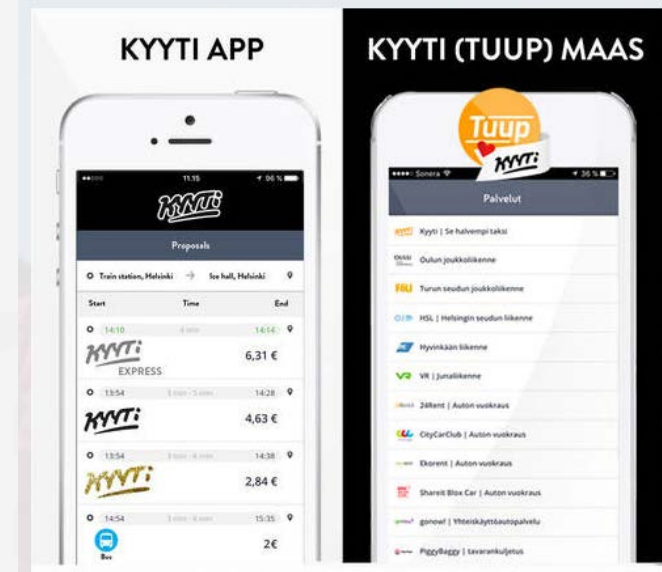
Dep.	Route	Arrival	Duration	Total walking
17:23	Aitolahdentie 43 37	18:03	39 min	0.9 km
17:25	Sotkankatu P 90T	18:05	30 min	1.0 km
17:27	Luhjankatu 29K	18:08	40 min	0.6 km
17:32	Sotkankatu P 90T	18:12	39 min	0.9 km
17:34	Petäskatu 17	18:18	43 min	1.4 km

← Earlier Later →



# Basics of MaaS – Open API for PT Payment & Information system

- New public transport payment and information –system is under procurement, will be ready in 2018-2019
- New ID based payment system, mobile payment and opening payment interface → key elements of MaaS services
- New information system will have same functionalities as in the previous one
  - Better information of incidents and incident management
  - Better transfer management
- Few MaaS operators already in Tampere and some pilot projects currently in progress → the City as an enabler
  - Demand-based, first mile-last mile
  - Linking different transport operators, train-bus, bus - taxi, bus - cycle...
  - Linking events & traveling



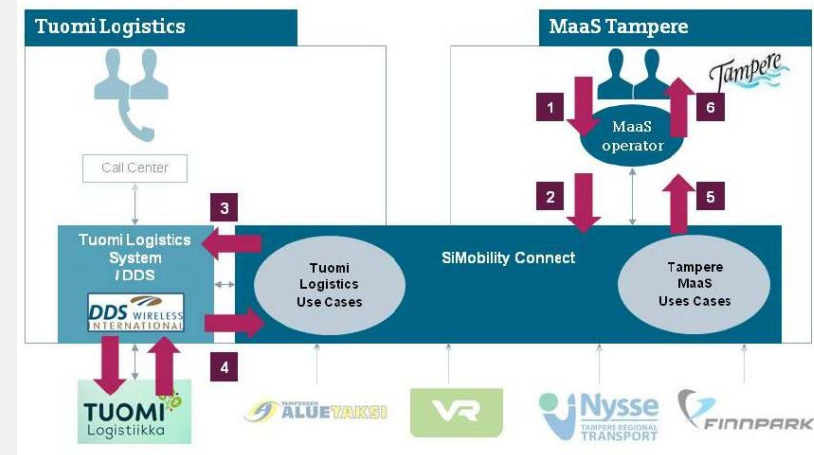
Picture: Kyyti

# MaaS pilot – publicly supported rides part of MaaS

- MaaS pilot project with Tuomi-Logistics and Siemens
- Just started a three-year pilot
- Publicly supported rides a part of MaaS
- Reduce operational costs for specific types of trips managed by Tuomi-Logistics, e.g. disabled persons trips
- Opening capacity and improve the quality of services for citizens
- Costs saving potential to customer and to the City of Tampere
- Savings will be shared between the City and the supplier
- Open platform to MaaS-operators which sells trips and travel chains to consumers

Flexible traveling in Tampere: The Mobility as a Service pilot project is being launched

Tampere is a pioneer in digitalization services. The city has a major role in supporting the three-year Mobility as a Service (MaaS) ecosystem project, which is being implemented in cooperation with Siemens and Tuomi Logistiikka. This is the first time publicly supported rides are a part of the MaaS project.



# Automated vehicles – part of MaaS services

- Plan for automated traffic, potential and impacts in Tampere has been made
- SOHJOA-project, automated buses drove in Hervanta area last fall and spring

