

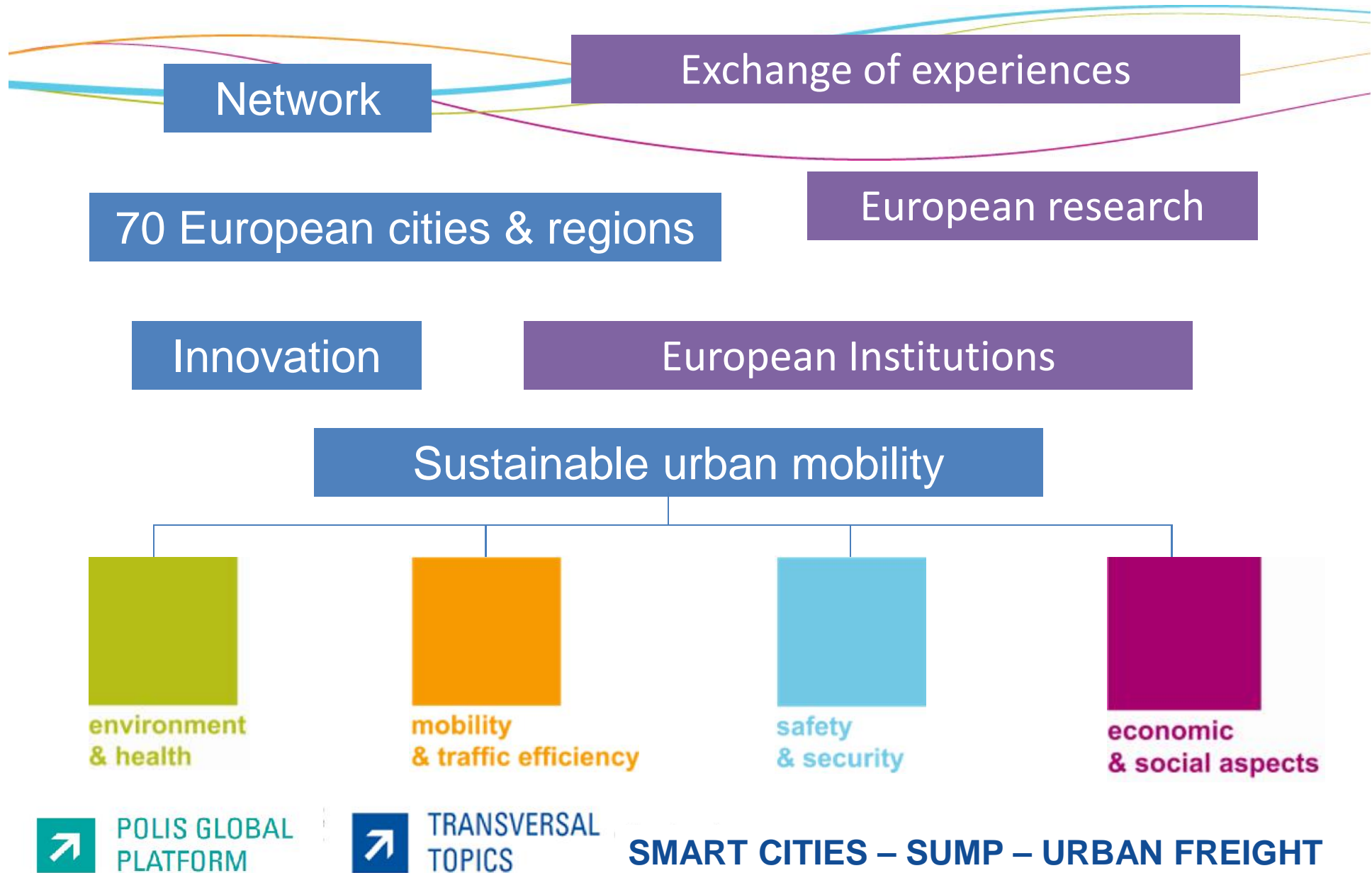


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Innovation: Application of innovative ICT solutions to regional/cross-border mobility in Central Europe

Suzanne Hoadley, Polis

What is Polis ?



ICT/ITS – an enabling technology

Traffic/network management

Traffic light control



Public transport priority



Demand management (enforcement)



London launches congestion charging

Real-time information



Information services

Multimodal info



Payment systems, fleet management & other areas



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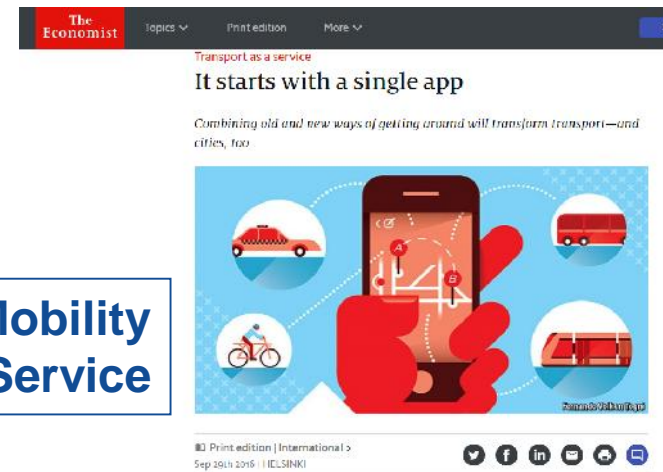
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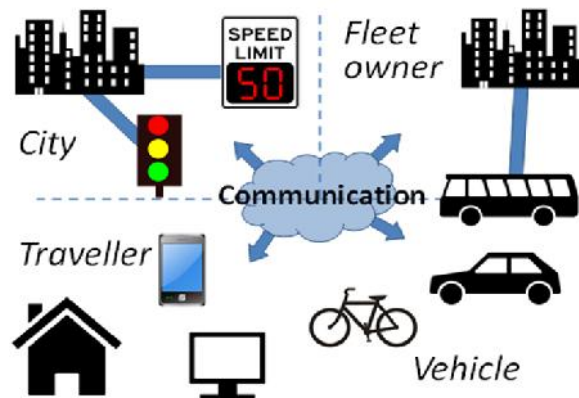
Main ICT/ITS-related innovations



**Vehicle
automation**



**MaaS/Mobility
as a Service**



**C-ITS/
connected
vehicles**

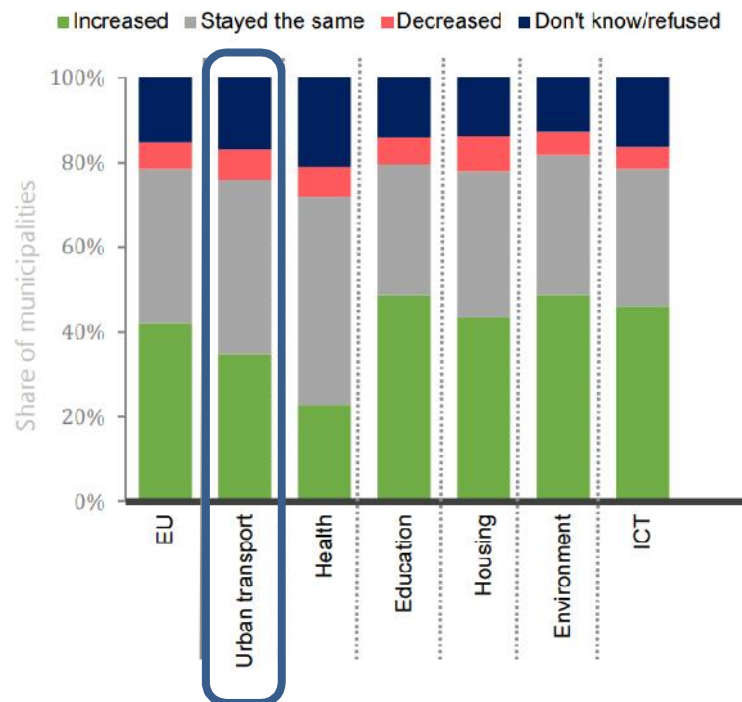
Data



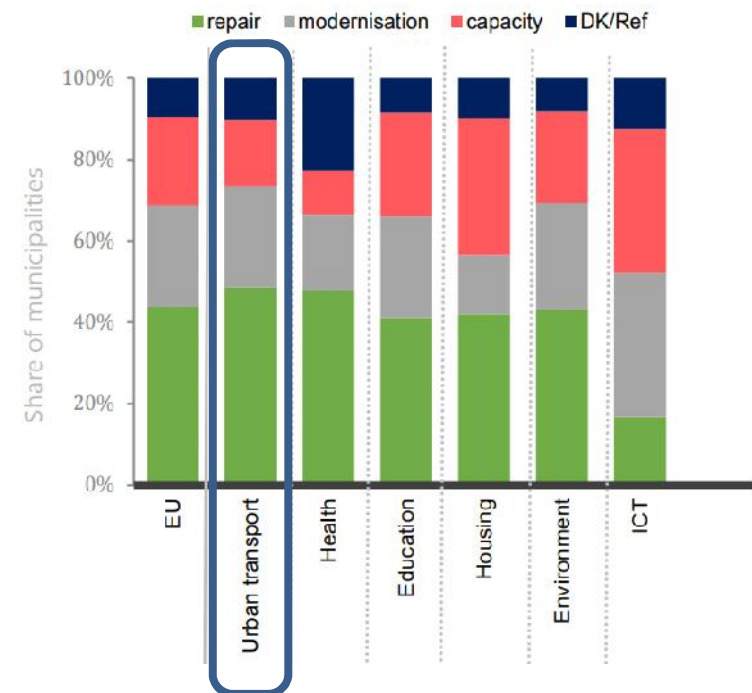
Municipal infrastructure spending



INFRASTRUCTURE INVESTMENT SPEND OVER THE LAST FIVE YEARS



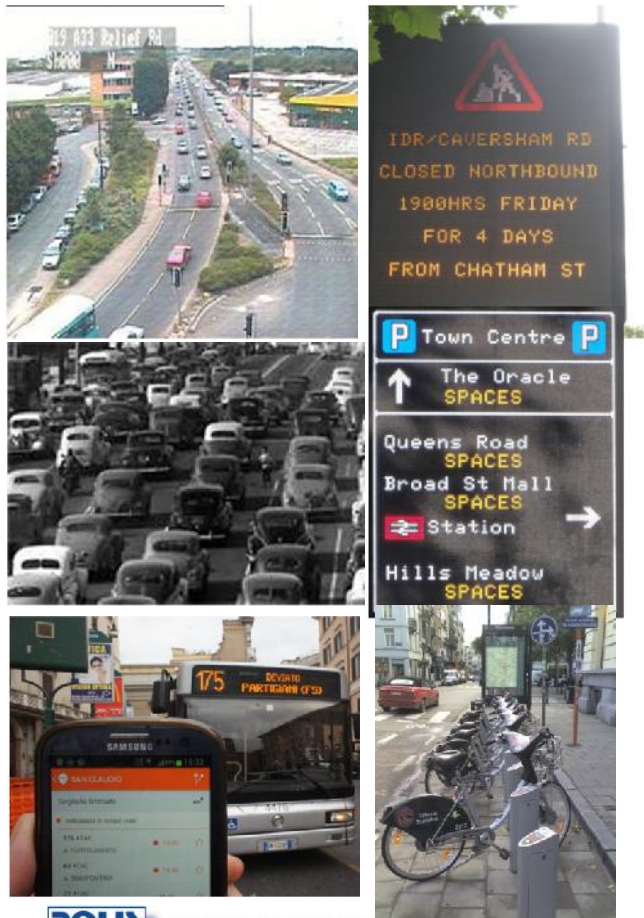
INVESTMENT FOCUS FOR THE NEXT FIVE YEARS



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Data



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Open data

➤ Growing momentum for opening up transport data

Transparency

Outreach

Innovation

Economic benefit

Reduce costs

Optimal use of network

➤ **Most transport authorities are committed to opening up transport data where technically, legally and financially viable**

- Transport authority is not always owner of data
- Systems not designed for publishing data
- Few authorities have dedicated budget for opening up data

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Data

EC delegated act: Action A (MMTIS)



WHAT: Access and exchange of at least **STATIC** Public and Private Travel and Traffic Data for Travel **PLANNING** across all modes

HOW (1): via **National Access Points (NAP)** in phased implementation - MS to determine shape/form of NAP

HOW (2): Standardised Travel and Traffic Data in NAP – harmonised set across different modes. Use of translators possible

HOW (3): Use via licence agreements, harmonised set of terms and conditions, quality criteria

Priority Action A is not just about DATA but also about SERVICES



WHAT: Push for Distributed Journey Planning across EU via linking local, regional and national services where there is a demand

HOW: Recommended use of European standardised interface, defined 'handover points' and contractual agreements



@Transport_EU

Mobility and
Transport

**CONNECTING
EUROPE**

Data

EC delegated act: Action A (MMTIS)



Static Dataset	Comprehensive TEN-T incl. Urban Nodes	Other parts of the network
Timetables, access nodes, accessibility PRM, network topology etc.	2019	2023
Bike-sharing & car-sharing stations, vehicle facilities, basic common standard fares, how and where to buy tickets etc.	2020	
Detailed cycling network attributes, estimated travel times etc.	2021	

Dynamic data – if MS choose to include dynamic data in the NAP, they are encouraged to follow the above timeframe

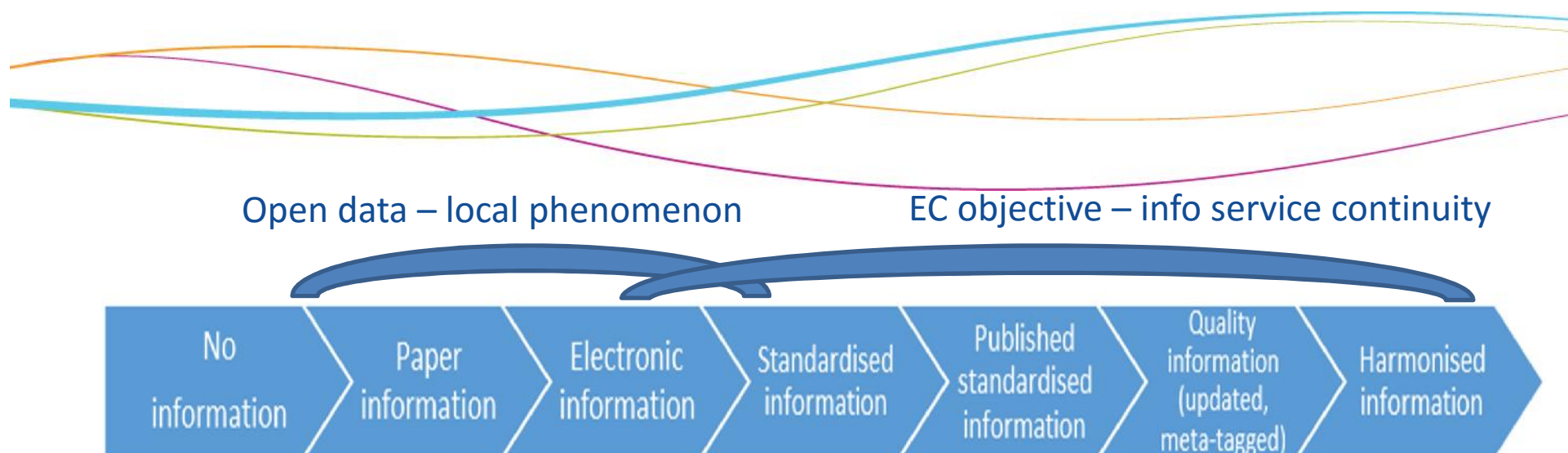


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Mobility and
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EUROPE

Data



The seven stages of city RTTI readiness - source: CIVITAS CAPITAL project

➤ **Two types of transport data users in market place:**

- App developers prefer internet language
- Large info service providers favour standardised data (DATEX2, NETEX)

➤ **Transport authorities interested in moving towards standardised data but:**

- prevalence of legacy systems – data not standardised
- some challenges (especially in cost) to convert data to a standardised form

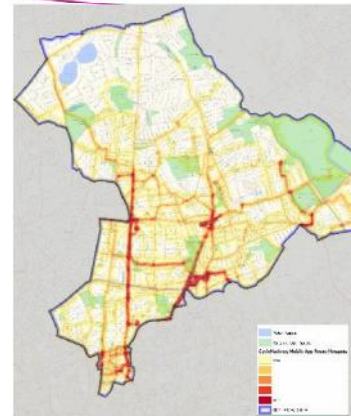
➤ **Data standards have only emerged in recent years, primarily in the area of public transport**

Data

Data analysis

➤ Cycle Hackney app

Monitor cycle trips to know least/most popular routes
Report issues/suggest improvements



Gender Differences ?

Male Cycle Choice



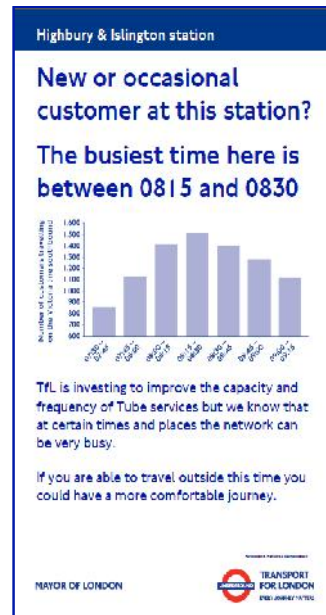
London Borough of Hackney Female Cycle Choice



More work needed however...

➤ Influencing travel demand in London

Source: Simon Reed, TfL presentation, EC stand, ITS Congress 2015, Bordeaux

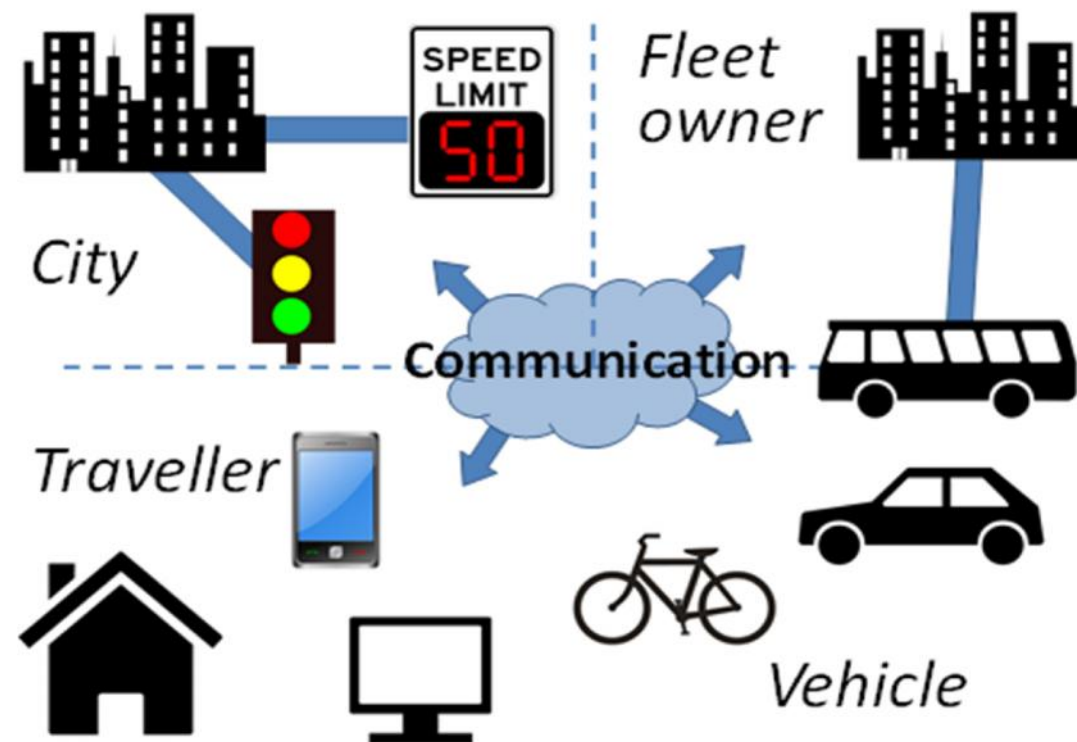


- Approximate 5% shift in demand during target time period of 08:15 to 08:45, likely to be attributable to our communications
- Total Peak Demand over the trial period relatively unchanged



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C-ITS/connected vehicles



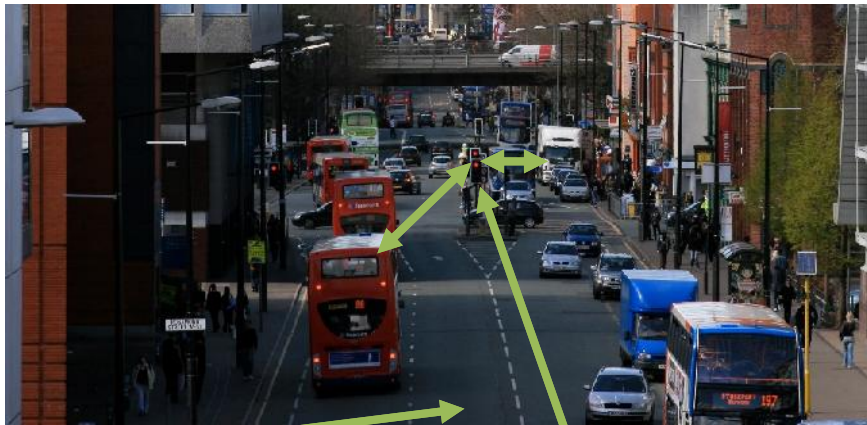
C-ITS/connected vehicles

City views & requirements for C-ITS

- *“Will C-ITS do the job better than another (cheaper) technology/measure?”*
 - *“Is it sufficiently tested to be safe and to achieve the desired outcomes?”*
 - *“How much will it cost to install, operate and maintain?”*
 - *“how can C-ITS build on existing investments, ie, how can it integrate with legacy systems?”*
 - *“is it future-proofed against obsolescence”*
 - *“Is it available and meets the specifications?”*
1. Start from the problem rather than the technology
 2. Understand the benefits/business case
 3. Facilitate procurement
 4. Enable integration
 5. Address organisational issues
 6. User response

C-ITS/connected vehicles

C-ITS quick wins for local authorities



Vehicle detection for adaptive traffic management

Bus/truck - traffic signal communication



In-vehicle information

Source: www.sabre-roads.org.uk



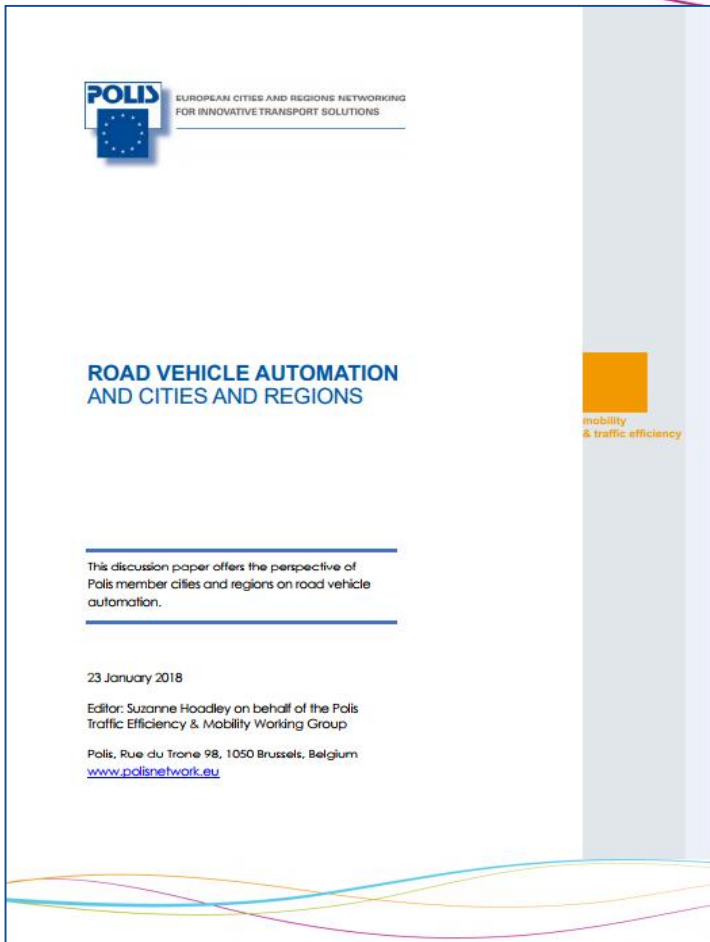
Traffic regulation enforcement



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Automated vehicles



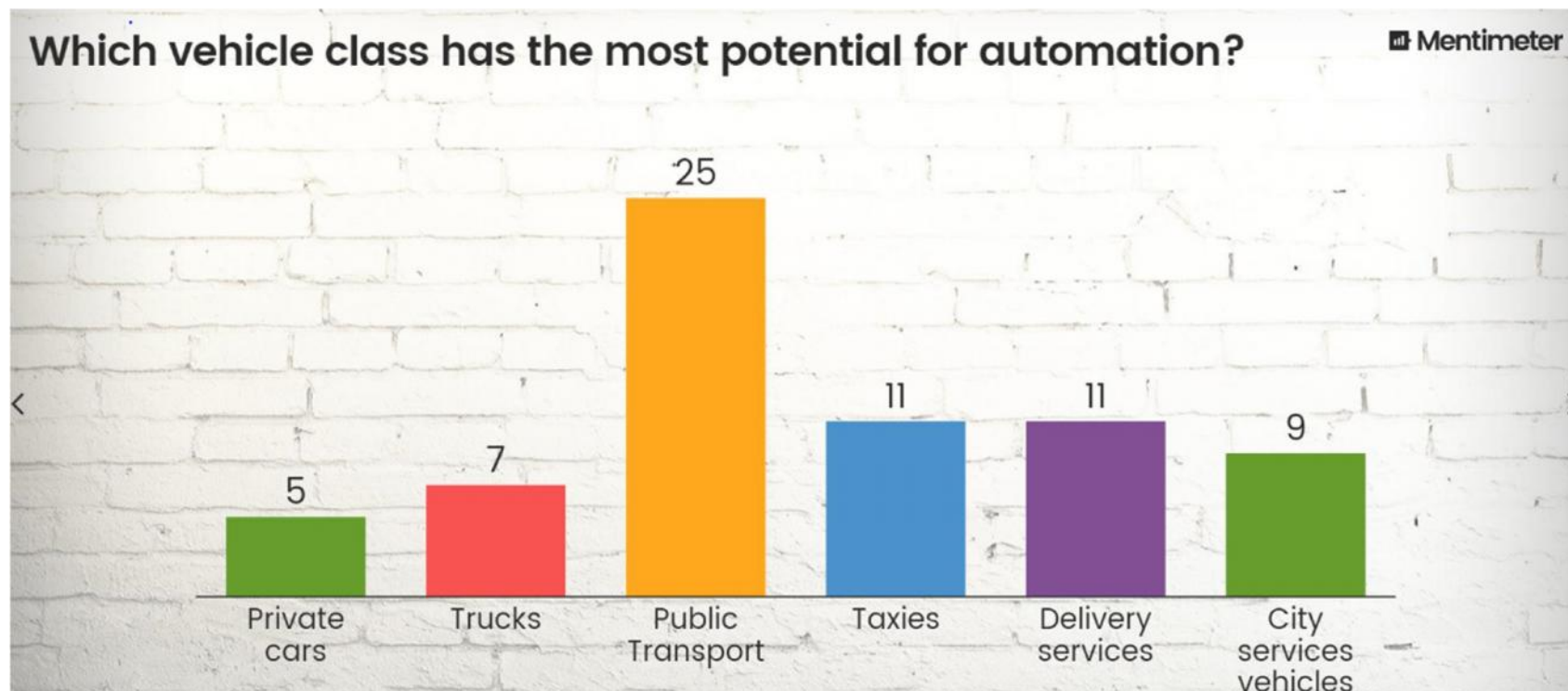
Observations

- Much optimism bias about AVs
- Potential negative impacts rarely mentioned (reduction in cycling/walking/PT, increase in vehicle km, longer trips, etc)

Purpose of paper

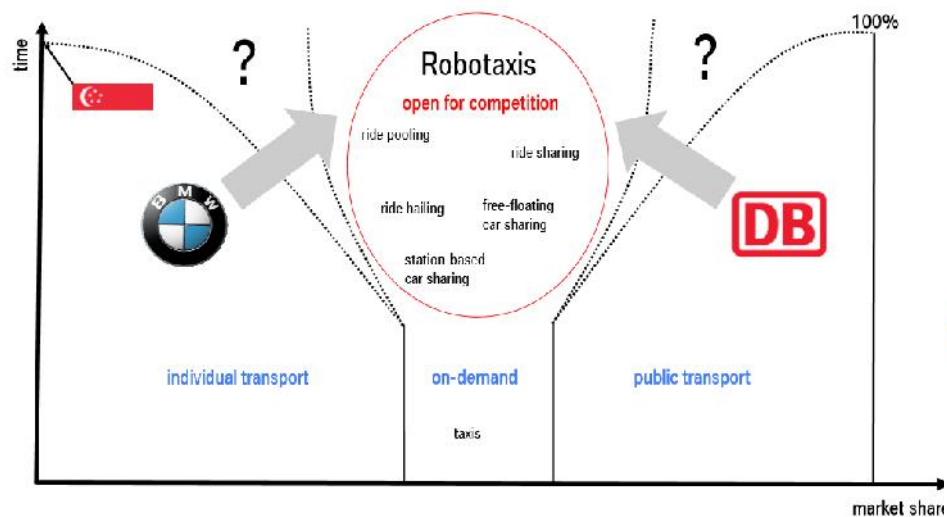
- To help city/regional transport authorities anticipate what is to come
- To build understanding of possible impacts at transportation & societal level
- To identify where automation can deliver positive outcomes for transport policy, where there are risks and how they can be mitigated
- To define measures (policy, financial, regulatory) to maximise opportunities & minimise disbenefit

Automated vehicles

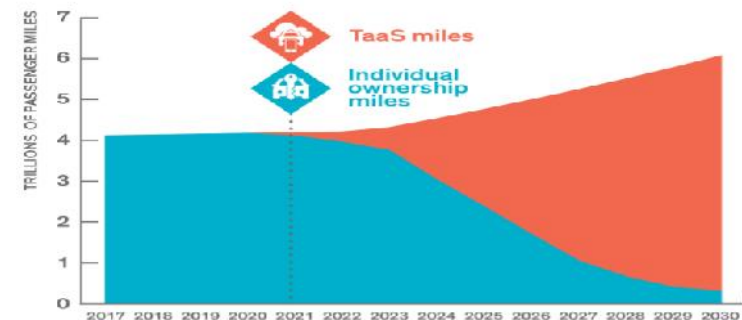


Automated vehicles

THE WORLD OF MOBILITY IS CHANGING



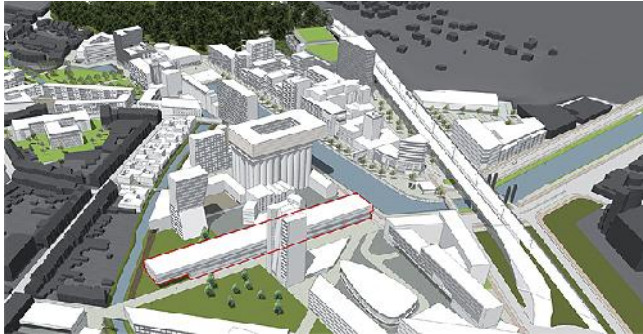
95% of Passenger Miles TaaS (AEV) by 2030



Automated vehicles

Issues transport authorities need to explore

Urban planning & development



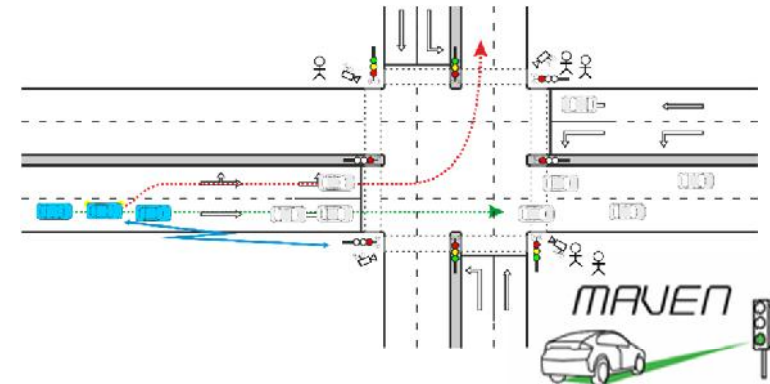
AV services rather than tech. VRU safety



Tackling predicted growth in trips/km driven



Traffic management implications

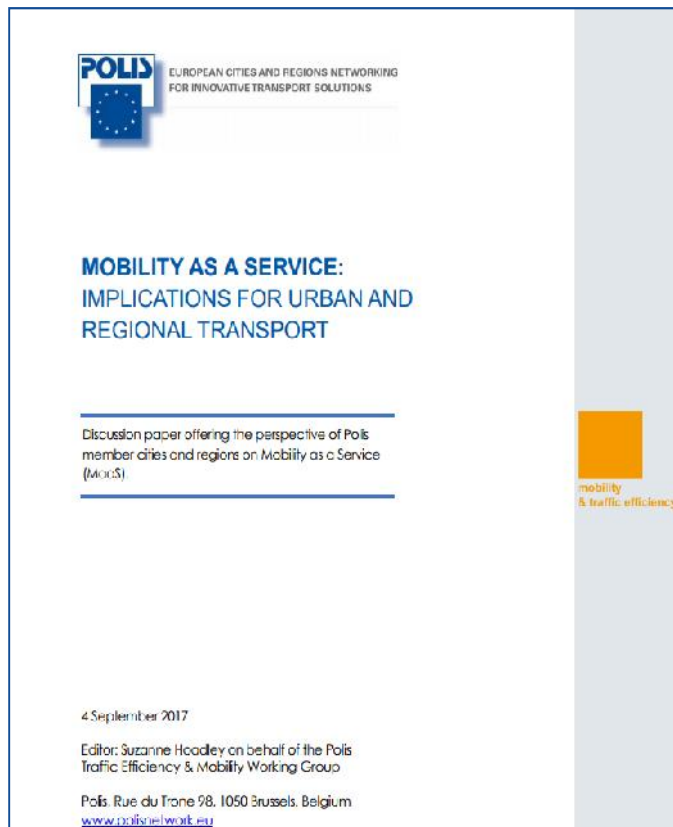


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MaaS/Mobility as a Service



- **MaaS attention at European and some national levels not replicated locally**
- **MaaS focus on personal transport sectors (taxis, car sharing, car hire) and door to door trips**
 - *what about public transport, cycling and walking?*
- **Involvement of local/regional government in MaaS developments has been limited**
- **Involvement of public transport sector in MaaS developments even weaker**
 - *public transport is backbone of urban/regional mobility*

MaaS/Mobility as a Service

Key issues for city and regional authorities to consider

- Defining the best role for the transport authority in the MaaS environment
- Finding the right public-private sector balance
- Understanding the impact of MaaS on travel behaviour
- Ensuring the user-centric approach delivers transport system benefits
- Determining the best market environment for MaaS
- Understanding the business model and who will pay
- Exploring the potential long-term impact of MaaS on transport service procurement



What views, questions or concerns do you have regarding the (changing) role and responsibilities of a traffic manager?

Mentimeter



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