The role of cities in the transition to zero-emission mobility in Europe

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Peer-to-peer exchange
Policy
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Urban mobility: Main local policy challenges & goals

Source: EC – 2015 statistics
Nearly a third of transport-related CO$_2$ emissions originate from urban passenger transport.
Multiple challenges – integrated action

City-level activities in the transport sector gaining importance due to multiple benefits of sustainable urban mobility action:

- reducing air pollution, congestion and CO₂
- improving quality of life, traffic safety and public health
Sustainable Urban Mobility Policy

Integrated planning frameworks

**SUMP**

- Final impact assessment concluded
- Review achievements - understand success and failure
- Identify new challenges for next SUMP generation

**Implementing the plan**

- Manage plan implementation
- Inform and engage the citizens
- Check progress towards achieving the objectives

**Preparing well**

- Adopt the plan
- Create ownership of the plan
- Arrange for monitoring and evaluation

**Elaborating the plan**

- Build monitoring and assessment into the plan
- Agree on clear responsibilities and allocate funding

**Rational and transparent goal setting**

- Set priorities and measurable targets
- Identify the priorities for mobility
- Develop SMART targets

**Sustainable Urban Mobility Planning**

- Commit to overall sustainable mobility principles
- Assess impact of regional/national framework
- Conduct self-assessment
- Review availability of resources
- Define basic timeline
- Identify key actors and stakeholders
- Look beyond own boundaries and responsibilities
- Strive for policy coordination and an integrated planning approach
- Plan stakeholder and citizen involvement
- Agree on workplan and management arrangements
- Prepare an analysis of problems and opportunities
- Develop scenarios

**SECAP:** reduce CO2 emissions by at least 40% by 2030
Systems approach
Mix of measures with multiple benefits

Public transport & active travel as backbone
Mix of measures

Electromobility
Urban Vehicle Access Regulations
Active travel
Traffic management – ITS
New and shared mobility services
Urban space management & densification
Seamless travel - MaaS
Automation
Towards a transport transformation...?
Regulate to innovate!

Anticipate
Build understanding of possible impacts
Identify where innovation can deliver positive outcomes and where there are risks
Talk & cooperate – ppp's
Define measures - policy, financial, regulatory - to maximise opportunities and minimise disbenefit
Carrots & sticks
Lead by example

Need for public sector oversight
Cities should be in the driver’s seat!

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Electromobility

- Electric PT as a backbone of transport chains
- Micro-mobility and vehicle-sharing to complete first and last mile

Multimodal

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Electromobility

Captive Fleets
Electromobility

Charging infrastructure
Urban Vehicle Access Regulations
Urban vehicle access regulations

- Different reasons (=externalities) for local authorities to implement UVARs
  - air quality, safety, congestion, liveability
- Variety of UVARs appearing in the EU
- Fee-based or fine-based:
  - transparency of revenue use is key!
- The instrument is effective, and enables change/transition
Ghent Circulation Plan

Results after one year:

- 22/29 hotspots show improved air quality
- 12% reduction in car use
- 25% more cyclists
- 8% more PT users
- reduction of accidents with 1/3
- redirected car traffic increases travel time on ring road with only 3 minutes
- no more traffic jams in city centre
- 55% of citizens happy, 35% against

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Madrid Plan A

- Reduce GHG emission over 40% by 2030, versus 1990 (European Climate Agenda)
- Meet EU limits for every pollutant
- Meet WHO guidelines for particles PM10 and PM2.5 (tighter)
- 50% local road traffic emission reduction by 2030 versus 2012
Madrid: First results

First results: Air quality

The data of the station of Plaza del Carmen, the only one of the network of surveillance that is located in the interior of Madrid Central shows that the annual mean of NO2 has been reduced by 15.17% compared to the average of the period 2010-2017 (despite the atmospheric conditions). Also being reduced in 17 of the 24 stations that make up the network (71%)
Oslo: Reducing and greening car use

- Ban on all sales of diesel and gasoline cars (from 2025)
  Temporarily ban on use of diesel cars on the most polluting days (from 2017)
- Demand for green freight deliveries in public procurements (from 2018)
- Only zero emission Taxis (from 2024)
- Congestion tax + 74% (non for EVs) (from 2017)
- Zero emissions zones (2019)
- New toll gates (from 22 to 73 in 2019)
- Car free City Center 2018 (Inside Ring 1)
- Emission free City Center 2024 (within Ring 3)
- Residential parking (within Ring 2)
Active travel

Cleanest modes

Multiple gains

- Decarbonisation
- Fighting sedentary lifestyles
- Tackling obesity

Quantify benefits

Prioritise

Make space

- street design

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Traffic management & ITS

- Encourage users to shift to sustainable modes through real-time and integrated information and services
- Ensure smoother road traffic flow and thereby reduce stop and start
- Cooperative ITS and automation expected to further optimise traffic flow
- Additional research needed on emission reduction potential of ITS use from a long-term perspective
Shared/new mobility

Complement traditional mass transit

- Specific target groups, specific areas, specific times

Modal shift

- every shared car in Bremen takes 16 off the road

Need for data on impact of new mobility services, esp. ridesourcing

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New users, new forms of use
Managing urban space

1. Land use planning - densification
2. Prioritising modes through space reallocation
3. Pricing space
4. Dynamic space management
5. Transport interchanges
MaaS: Potential benefits

- Promoting sustainable travel, especially giving up the car
- Improving efficiency of existing transport services and public resources
- Leveraging personalized approach to develop inclusive systems
- Enhancing access to transport services
- Offering choices to users
Automation

Travel behaviour
- Reduction in private car ownership
- More motorised trips

Spatial
- More public space created by redundancy of parking
- Urban sprawl and longer commuting

Traffic management/efficiency
- C-ITS: richer data for traffic and asset management; improved vehicle control
- Improved traffic efficiency leads to more vehicles
Conclusions

Integrated planning vision with clear targets
Packages of measures with multiple benefits
Regulatory frameworks for policy-responsive innovation
Cross-sectoral approaches
Solutions and technologies are available, policies and regulation will need to make change happen
Pricing versus social inclusion
Behavioural change

Cost
Political leadership
Thank you!

Call for speakers open until 19 May

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