

Strategies & needs on EV fast charging infrastructure for urban freight & service trips

ASSURED Urban Freight Users Group Oslo, 24th of September 2018

Giacomo Lozzi – Polis Network

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Urban freight User Group

- Urban freight User Group:
 - Mix of local authorities and freight operators
 - Mix of organisations within and outside the 'city pilots'
- Further exchange with pilot coordinators

Local Authorities	Operators
Gothenburg	SEUR
Stockholm	Breytner
Gdynia	Voltia
TfGM	Coltruyt
Barcelona	Urbaser
Eindhoven	DHL
Osnabruck	Schenker
TfL	
EMT - Madrid	



Aim of the workshop

Debate and exchange of visions and approaches between the different parties involved to:

- Improve cooperation and mutual understanding
- Discuss effective measures for a full-scale deployment
- Validate output of ASSURED Deliverable 2.1

End of the project: ASSURED cities → Electrification Deployment Strategies





Agenda

13.00 -	Welcome & Introduction
13.05	Sabina Asanova, VUB, ASSURED project manager
13.05 - 13.20	Presentation of ASSURED city and operator needs and views on fast charging infrastructure – focus on electric freight vehicles (EFVs)
	Giacomo Lozzi, Polis Network
13.20 - 14.00	 European cities' experience: policies supporting EFVs and related charging infrastructure Àngel López Rodríguez, City of Barcelona David Talbot, Transport for London Sture Portvik, City of Oslo
14.00 - 14.15	Coffee break
14.15 - 15.05	 Logistics, infrastructure operators and manufacturers: views and needs for deployment Marie-José Baartmans, BREYTNER Zero Emission Transport May López Díaz, SEUR – DPD Group Aaron Fishbone, GreenWay – VOLTIA Fredrik Cederstav, AB VOLVO
15.05 - 15.15	Coffee break
15.15 - 16:30	 Stakeholder Dialogue - World Café Roundtables Breakout sessions to discuss views and needs of public authorities, urban freight private stakeholders and charging infrastructure operators on (super) fast charging of urban commercial vehicles for freight and service trips. Topics for discussion: Integration of electrification strategies into local plans Procurement, incentives and support
16 20 -	Charging infrastructure
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Outline

- Introduction ASSURED project
- Assessing strategies and needs within ASSURED (Deliverable 2.1 approach and results)
- Three topics for further discussion:
 - Roadmaps for transport electrification E-mobility in SUMPs
 - 2. Procurement
 - 3. Charging infrastructure
- Next step: world café roundtables



Why HD vehicles

- The feets that are the most polluting (busses, trucks)
- Fleets which cover long distances per day
- Direct decision by the public local authorities
- Big impact of the electrification of these fleets (compared to cars)

Total emissions city traffic in Rotterdam



Source: TNO



Assessing strategies and needs within ASSURED

Survey existing roadmaps for transport electrification

- Main mid-or long term goals?
- ASSURED solutions to fit these goals

Create cities' 'electromobility profiles': key measureable indicators

- Main context and goals
- Type of infrastructure and vehicles deployed

Identifying needs, constraints and expectations

 Development and integration of e-buses, etrucks and e-vans and related charging infrastructure and methods





ASSURED survey template – 'building' the ASSURED City profile

Торіс	Indicators
City info and vision	City basic information
	Alternative Fuels considered in local strategy
	Projects EU/National, case studies
	Targets , e.g. long-term electrification, zero emission vehicles, renewable energy
Strategies and policies	Planning: SUMPS/electrification strategy including freight
	Procurement promoting fleet electrification
	Incentives: purchase, parking, access, infrastructure
	Charging infrastructure, including fast charging
Infrastructure data	Statistics charging points and stations
	Normal/High Power
Vehicles data	Statistics according to EU vehicle categories or could be
	completed with data as registered by local authority
E-buses data	Manufacturer, technology, charging method



Needs, constraints and expectations for Local Authorities





1. Roadmaps for transport electrification E-mobility in SUMPs





Types of integration of e-strategies

- Horizontal:
 - E-mobility (EM) in Air Quality Plans / SUMPs: no target actions
 - Standalone EM strategy: targets + measures
- Modal:
 - EM is multimodal (PT blackbone)
 - Targets for e-travel share & Fast charging/ interoperable solutions missing
- Sectorial:
 - Strong influence on CI if city owns utilities
 - Need for cooperation with stakeholders, incl. logistics
- Societal:
 - Inclusion of EM in SUMPs implies public participation (enable citizens to submit requests for charging points)





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Guidelines **Developing and Implementing** a Sustainable Urban Mobility Plan



2. Procurement

- Start with own fleet
- Coordinate with buying departments
- Align with market offer / ensure access to all
- Transition period to be considered (existing contracts)
- Charging infrastructure in public buildings and facilities
- Joint procurement (but different buyers have different needs)



Madrid - ECCENTRIC project

- Madrid's municipal fleet: 70 new EVs (Economy and Finance Department)
- E-charging points installed: 34 buildings receiving the systems



Oslo: Framework agreement for procuring zeroemission vehicles

- All municipal vehicles into a fleet of zero-emission electric cars within five years (2013-2018).
- As of 2017, around 50% of the City's 1,100 vehicles are electric
- Currently working on a new EV framework → market dialogue (BuyZET project)







The national procurement of electric vehicles: the Swedish example

- Joint procurement for EVs: city of Stockholm and energy company Vattenfall
- Two-year framework agreement involving six vehicle suppliers.
- Over 800 EVs purchased





London & Ghent: clean emergency vehicles

- Innovation procurement risks:
 - Breach of legislation
 - Technical failure
 - Delays in the process
- Joint procurement not feasible: differences in management, laws, country-specific requirements, equipment needs
- Support & advise on each other's procurement processes
- Access to London Fire Brigade's experience success factor for Ghent.
- The framework contract adaptable for fire brigades and logistic operators from across Europe



3. Charging Infrastructure

- Large-scale: challenges with the energy grid & lack of space (conflicting usages)
- Couple with smart energy use / renewable energy strategies
- Cities to work with service providers: PPPs? But ask for data!
- On-street infrastructure of fast chargers: consider needs of freight (position, power, etc.)
- Fast opportunity charging coupled with a prebooking system + added value for drivers



Charging infrastructure and the urban freight sector

- 80% of the daily distribution operations within range
- But..
- Current Cl not supporting LSPs
- Private infrastructure (and investment) for 'public need'
- Private infrastructure upgrades non-incremental and expensive
- Need for public incentives (FREVUE, ASSURED, etc.)
- Often vehicles not owned subcontractors
 - Paris: no EVs



Studies & strategies on charging infrastructure for urban freight

- TfGM
 - study for a roadmap for heavy vehicles towards fuel electrification: overnight charging at the company depot
- Madrid
 - PLAN A: Air quality and Climate Change Strategy: deployment of charging infrastructure for professional users (taxi and freight)



'Opportunity charging' during operational hours

Stockholm

- 8 fast charging points
- Usage of fast-charging linked to work, incl. freight operators
- Majority of users: commercial EVs drivers

Oslo

- 11 fast chargers and 22 semiquick chargers
- Pre-booking system for freight operators
- High demand
- Stations can be easily upgraded



80% battery in 30 mins

Source: FREVUE project



Economics

Stockholm

- Access rights agreements (for free) between the city and electric utility companies (costs of maintenance)
- Station should be functioning at least 90-95% of the time

For users: 0.20€ - 0.25€/min

Oslo

• Joint-venture between the City of Oslo and private companies: costs and incomes shared equally



Recommendations for freight distribution and service trips

- Testing new business models for the charging infrastructure including freight actors
- Fast-charging infrastructure in the planning processes and in e-mobility strategies of EU cities
- Provision of charging points, methods of access and payment: consistent throughout cities
- National and local regulation and incentives schemes for transport companies purchasing EFVs









http://frevue.eu/declaration-of-intent

So far 40 **Declarations of Intent** have been signed in Europe, representing a potential market of **5,141** electric vans and **4,185** electric trucks.

Join the initiative!



Thanks for your attention! Questions?

Giacomo Lozzi

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