Cleaning Urban Logistics

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Why Urban Logistics?

- Significant generator of trip mileage
  - Goods vehicles travelled 5.1 billion vehicle kilometres in 2009.
  - 80% undertaken in light goods vehicles
- LGV mileage has been increasing while other sectors have been dropping
- Road transport is responsible for
  - 47% of PM$_{10}$ emissions
  - 41% of NO$_x$ emissions
  - 25% of CO$_2$ emissions
Why Electric? – Myths?

- Available
- Operationally effective
  - Ranges – up to 160km+
  - Load – 500kg, 3.5t, 12t, 19t (?)
  - Charging infrastructure at depot
- Financial and non-financial benefits
- Reduced operating costs
- Marketing & CSR opportunities
8 locations across Europe: Amsterdam, Lisbon, London, Madrid, Milan, Oslo, Rotterdam and Stockholm

15 industry partners

6 research organisations

127 electric vehicles

Freight applications include a wide range of:
- Goods deliveries
- Innovative logistics systems and ICT
- Test of different vehicle types
- Diverse climate conditions

Duration: Mar 2013 - 2017
Total budget: €14.2 m
EU Contribution (FP7): €8 m
Amsterdam/ Rotterdam

- Activity
  - All electric parcel distribution centres – no ICE
  - Trialing large 18t and 12t vehicles
  - Consolidation activity in smaller retail market
  - Suitable charging facilities – induction and/or rapid
Lisbon

- Actions
  - Electric light goods vehicles for:
    - Municipal servicing
    - Postal services
  - ‘Smart’ on-street loading bays
  - New regulations for loading and unloading
London

- Activity
  - Enhance consolidation centres through EV operation
  - Expand beneficiary pool from consolidation centres
  - Address energy grid constraints
  - Optimise existing EV logistics operations
Madrid

- **Activity**
  - Consolidation centre servicing food/drink, post and retail clients
  - Light commercial through to heavy goods vehicles
  - Dynamic fleet management integrated with public parking/charging facilities
• Activities
  - Implementation of freight consolidation centre
  - EFV linking depots to consolidation centre and end customer
  - Route and delivery regime optimised to reflect daily conditions
Oslo

- Activities
  - Large potential market for EV logistics
  - Extreme climatic conditions
  - Evaluate vehicle range and effectiveness in logistic operations
  - Manage charging requirements in 24 hour operational environment
Stockholm

- Royal Seaport Area
- Consolidation centre during construction and when completed
- Zero/ Low Emission Vehicles
- Fast and standard EV charging facilities
- ICT integration
- Policy & Regulation
Key Challenges

- Vehicle Availability
  - Scoping vehicle requirements
- Maintenance and Support
- Operational Environment
  - Fleet manager mind-set
  - Logistic models
- Policy Framework
  - Regulations based on ICE vehicles
- Charging needs
Delivery Programme

• 2013/14
  ➢ Assessment Framework
  ➢ Vehicle Order and Delivery

• 2014 – 2016
  ➢ Demonstration
  ➢ Data Collection

• 2016 - 2017
  ➢ Reporting and Closout
Conclusions

- Electric freight vehicles can be:
  - Operationally effective
  - Financially viable

- Recharging infrastructure can be easily installed*

- Can provide a significant opportunity for reducing transport emissions

- Does require greater consideration by:
  - Fleet managers
  - Local authorities
  - Customers
For more information, please contact:

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