Freight Electric Vehicles in Urban Europe

CLFQP Meeting 12 July 2016

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FREVUE Co-ordinator

Co-financed by the European Commission

FREVUE Context

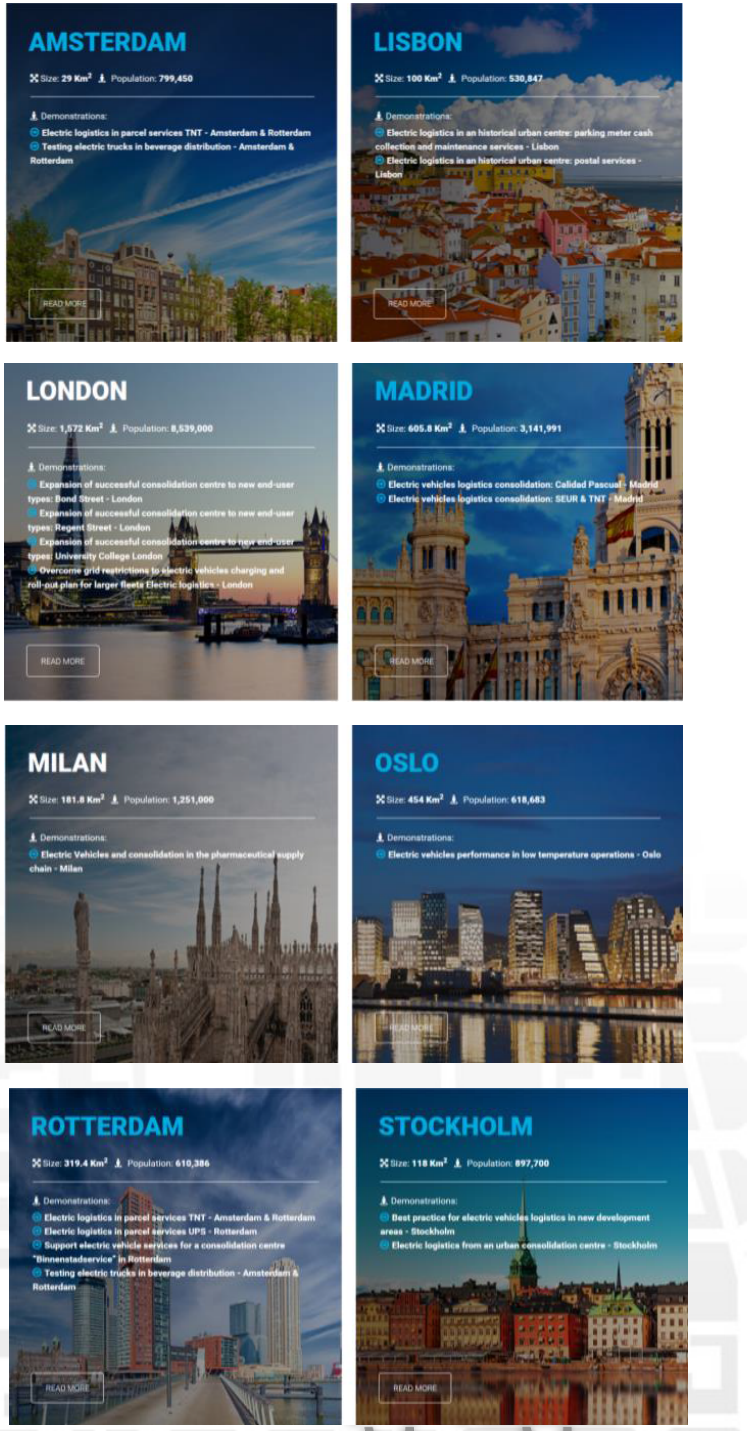
- Air quality and environmental impacts
- Urban congestion
- 2011 White Paper
  - Fossil fuel free urban logistics by 2030

Objectives

Demonstrate suitability of electric freight vehicles for urban last-mile deliveries

Underpin future uptake of these vehicles

Provide evidence for policy intervention



Consortium

City + Policy

- Cross River Partnership (Co-ordinator)
- City of Amsterdam
- City of Lisbon
- City of Madrid
- City of Milan
- City of Oslo
- City of Rotterdam
- City of Stockholm
- Swedish Transport Adm.
- EMEL
- Transport for London

Co-ordination and Dissemination

- Hyer
- Polis

Logistics

TNT, UPS, Heineken, bring EXPRESS, Grupo Leche Pascual, ARUP, SEUR, CTT CORREIOS

Research

- Imperial College London
- TNO (NL)
- SINTEF (NO)

ICT Partners

ITENE, Atos

Vehicle Manufacturers

SMITH ELECTRIC VEHICLES, NISSAN

Grid Operators

Fortum, UK Power Networks

FRevue

London

Proposed activity

- Deploy and monitor 17 EFVs
- Address energy grid constraints
- Establish new consolidation centre and expand end users of current

Freight Electric Vehicles in Urban Europe

Progress

- Grid capacity upgrade completed
- 16 UPS FREVUE vehicles operational
- One mid-size electric freight vehicle operating from urban consolidation centre
- One construction consolidation centre in operation

FREVUE Vehicles

Oslo
Stockholm
London
Amsterdam
Rotterdam
Milan
Madrid
Lisbon

Freight Electric Vehicles in Urban Europe

Vehicle deployment

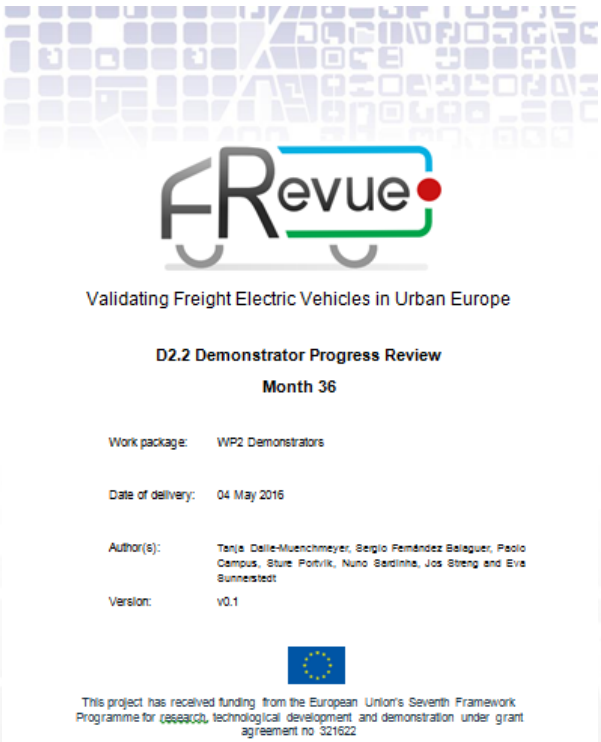
Type of goods	EFV type
Beverages	Ginaf truck Hytruck/Emoss truck
Food	Mercedes Benz Vito
Parcel delivery	Fiat e-Ducato P80E Mercedes T2 retrofitted Renault Kangoo
Parking meters: Cash collection and maintenance	Renault Kangoo ZE Maxi
Pharmaceuticals (refrigerated)	Nissan e-NV200
Postal service	Renault Kangoo and ZE Maxi Peugeot Partner
Retail, Waste, Other	Nissan e-NV200 Smith Newton EV

Logistics Models

Established in London, Madrid, Milan, Rotterdam and Stockholm

Output

- Key reports
  - Technical suitability
  - Economics of EVs for city logistics
  - Transport and environmental impacts
  - Social and attitudinal impacts
  - Policy and governance
- Guidelines / recommendations



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Validating Freight Electric Vehicles in Urban Europe

D2.2 Demonstrator Progress Review

Month 36

Work package: WP2 Demonstrators

Date of delivery: 04 May 2016

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FRevue

Preliminary findings

Key challenges

- Vehicle supply
  - Particularly in medium goods category and above (> 3.5t)
- Procurement costs
  - High purchase/lease costs
- Electricity supply
  - Constraints on grid capacity
- Maintenance and repair
  - Potential lack of after-sale support
  - Repairs can be costly and lengthy
- Others
  - Payload

Preliminary findings (cont'd)

- Operating successfully
  - Overall reliability very good
  - Vehicles well integrated into daily operations
  - Range limitations not prohibitive
  - Overnight charging
- Good acceptance
  - Positive feedback from drivers
- Clear environmental benefits
  - Reduction in vehicle emissions and mileage
  - Reduction in noise

Next steps

- Wider deployment
  - ‘Statement on Demand’
  - Further funding requirements

- Final event London June 2017

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