Presentation of EVs group and activities and Rotterdam work

25 May 2020
Agenda

• Rotterdam work and ambition
  Introduction
  Ambition
  Solutions
• Big Buyers Electric Vehicles
  Focus
  Possible outcomes
  Timeline
Introduction

Richard Brabers – Category buyer mobility

College targets

• 49% CO2-reductie
• Improvement of air quality

Approach – a.o. our own fleet

• +/- 1.500 vehicles
Ambition

The entire fleet in 2030 zero emission:

• Passenger cars: 2023 zero emission.
• Light commercial vehicles 2025 zero emission.
• Heavy commercial vehicles 2030 zero emission.
Solutions: Passenger Cars

Already operational:

• All cars of the City are already Hybrid or gasoline
• 1 x FuelCell: Toyota Mirai
• 1 x FuelCell: Hyundai Nexo
• 200 Electric scooters + segways voor Parking management

• Disadvantages: no towhook, charging time, range
Solutions: Light Commercial Vans

Already operational:

• Nissan ENV200
• Evalia Passengerbus (7p)
• Renault KangooZE
• GroupilG4

Disadvantages: Less payload[kg],
No towhook, Charge time, Range
Solutions: Garbage truck

Already operational:
• EMOSS ZE

Already in order:
• VDL Translift ZE
• DAF/Holth(H2)

Disadvantages:
Less payload [-1000 kg], Charging time,
Power of chargepoint, Range
Electric heavy duty vehicles

Focus

• Electrification of heavy-duty vehicles (waste trucks, street cleaning, heavy delivery)
Timeline

1) Sharing platform, development of standard procurement criteria and information sharing

- 30 October 2019
  Kick off meeting, Rotterdam

- February
  Platform is finalised and filled with information. Other entities can participate

2) Market dialogue

- 4-5 March
  Visit and dialogue with Aebi-Schmidt

- Spring - Summer 2020
  Online meetings with suppliers on future technology plans

- September 2020
  Visit and dialogue with Volvo, market dialogue

3) Joint statement of demand and final joint event

- November
Outcomes

• Meeting in Rotterdam, Oslo and Freiburg
• Sharing Platform
• Preparation of online meetings with suppliers (market consultation)
• Vehicle list
• Future procurement plans
# Vehicle list

## VEHICLE LIST - BIG BUYERS INITIATIVE WORKING GROUP

### Zero emission heavy duty vehicles

<table>
<thead>
<tr>
<th>Type of Vehicle / fuel</th>
<th>Manufacturer</th>
<th>Model</th>
<th>Manufacture / production location</th>
<th>OEM / Retrofit</th>
<th>Maximum weight [tonnes]</th>
<th>Payload [tonnes]</th>
<th>Dimensions (length, width, height) [mm]</th>
<th>Power / output engine</th>
<th>Battery size [kWh]</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEV</td>
<td>Volvo</td>
<td>FL</td>
<td>OEM</td>
<td>OEM</td>
<td>16</td>
<td>5-6</td>
<td>3.12x2.30x3.59</td>
<td>200/300</td>
<td></td>
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<tr>
<td>BEV</td>
<td>Volvo</td>
<td>FE</td>
<td>OEM</td>
<td>OEM</td>
<td>26/27</td>
<td></td>
<td></td>
<td>200/300</td>
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<tr>
<td>BEV</td>
<td>Renault</td>
<td>Master ZE</td>
<td>OEM</td>
<td>OEM</td>
<td>8.22 m3</td>
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<tr>
<td>BEV</td>
<td>Renault</td>
<td>D Wide ZE</td>
<td>OEM</td>
<td>OEM</td>
<td>26</td>
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<tr>
<td>BEV</td>
<td>Renault</td>
<td>D ZE</td>
<td>OEM</td>
<td>OEM</td>
<td>16</td>
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<tr>
<td>BEV</td>
<td>MAN CTE 15 tnom</td>
<td>OEM</td>
<td>Portugal - Abrantes</td>
<td>OEM</td>
<td>15</td>
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<tr>
<td>BEV</td>
<td>Fuso - Daimler Brand</td>
<td>eCanter</td>
<td>Portugal - Abrantes</td>
<td>OEM</td>
<td>Gross vehicle 7,490 axles loads (front/rear) - 3.1/off 5.99</td>
<td>4.5</td>
<td>Wheelbase - 3400; Overhead length - 5935; Cab length - 1615; Cab width - 1915; Track width (front/rear) - 1365/1360; Front/rear overhang - 1140/1395; Frame width - 750</td>
<td>max speed - 80km/h; max climbing ability - 20%</td>
<td>83</td>
</tr>
<tr>
<td>BEV</td>
<td>Mercedes-Benz</td>
<td>eActros</td>
<td>OEM</td>
<td>OEM</td>
<td>18.25</td>
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<tr>
<td>BEV</td>
<td>Contena-Ochsner/Designwerk Futuricum</td>
<td>OEM</td>
<td>OEM</td>
<td>OEM</td>
<td>18.25</td>
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<tr>
<td>BEV</td>
<td>Liner</td>
<td>Retrofit</td>
<td>OEM</td>
<td>Retrofit</td>
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<tr>
<td>BEV</td>
<td>Dennis Eagle (rebuilt for Norsk Olsenin)</td>
<td>Retrofit</td>
<td>OEM</td>
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<tr>
<td>BEV</td>
<td>Mercedes-Benz Urban eTruck</td>
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<td>OEM</td>
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<td>BEV</td>
<td>Nikola Tre</td>
<td>OEM</td>
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<td>Hyundai</td>
<td>Urban Mobility truck</td>
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26-5-2020 Electric heavy duty vehicles
Questions?

Rotterdam. Make it happen.