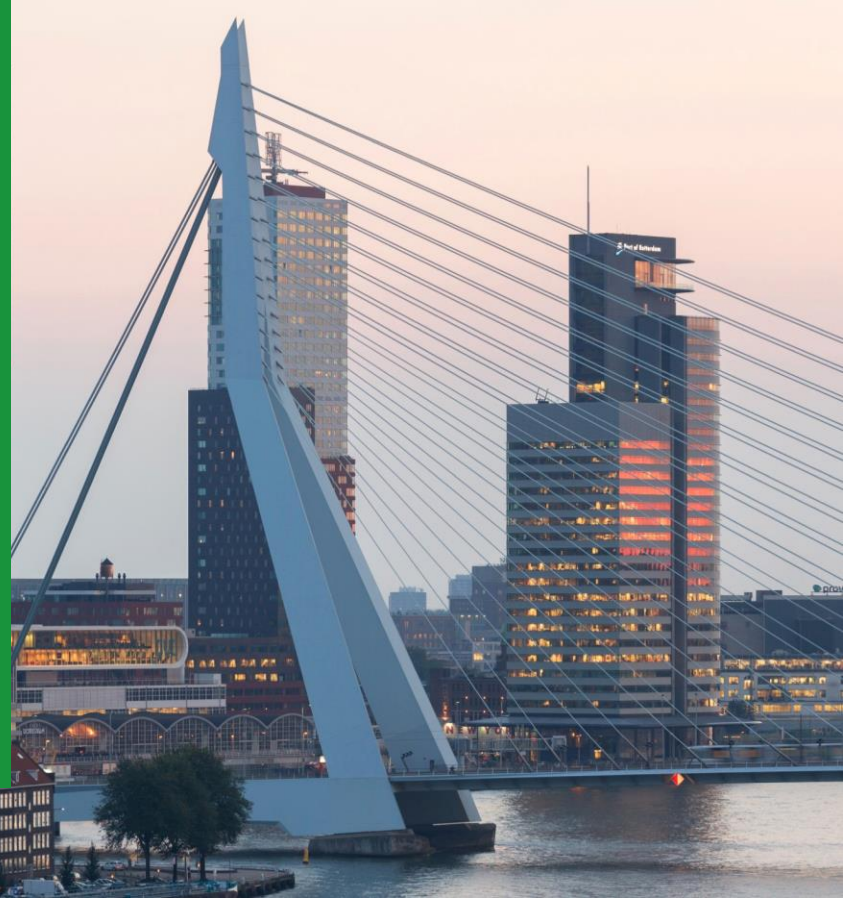




Gemeente Rotterdam

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

Collegetargets

- 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 Nexa
- 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

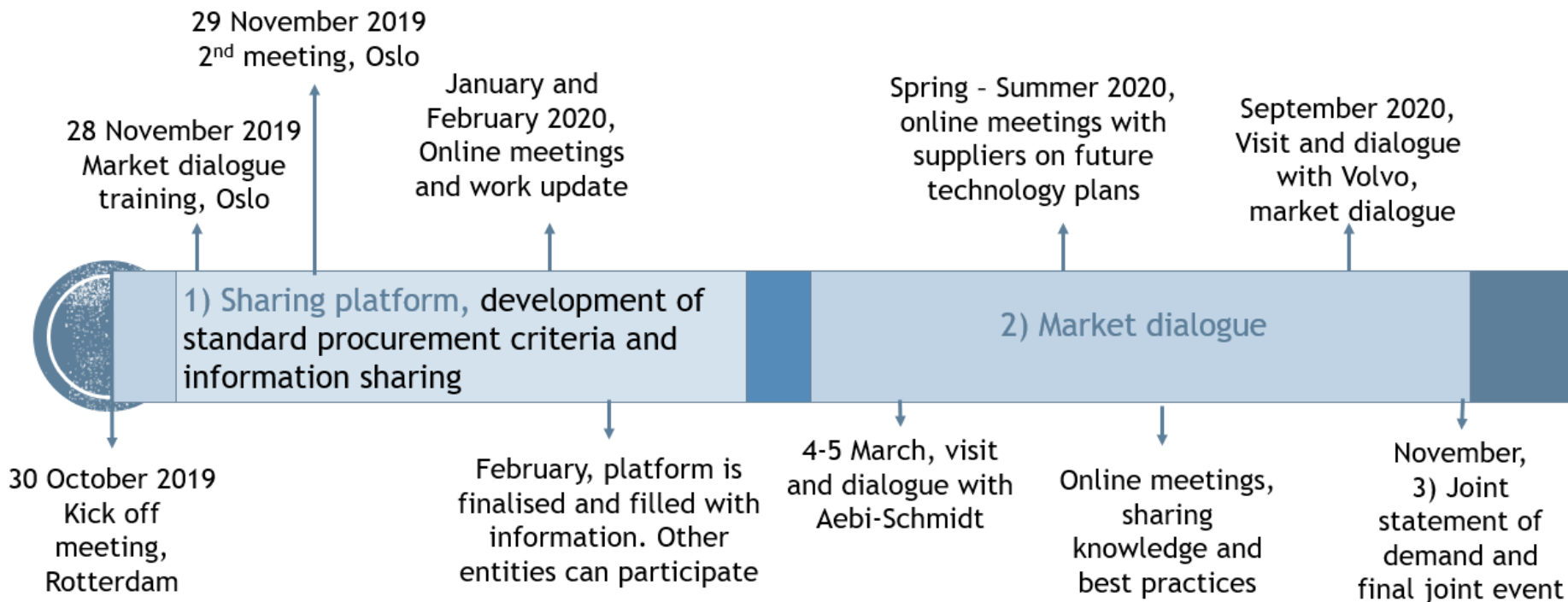


Focus

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



Timeline



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

BEV = Battery electric vehicle
FCEV = Fuel cell electric vehicle
GV = Gas vehicle

Type of Vehicle/ fuel	Manufacture	Model	Manufacture / production location	OEM / Retrofit	Maximum weight [tonnes]	Payload [tonnes]	Dimensions (length, width, height) mm	Power / output engine	Battery size [kWh]
BEV	Volvo	Volvo FL		OEM	16	5-6			200/300
BEV	Volvo	Volvo FE		OEM	26/27				200/300
BEV	Renault	Renault Master ZE		OEM		8-22 m3			
BEV	Renault	Renault D Wide ZE		OEM	26				
BEV	Renault	Renault D ZE		OEM	16				
BEV		MAN CitE 15 tonn		OEM	15				
BEV	Fuso - A Daimler Brand	Fuso eCanter	Portugal - Abrantes	OEM	Gross vehicle 7,490 axle Loads (front/rear) - 3,1/5,99	4,5	Wheelbase - 3400 Ovweall Lenght - 5935 cab Lenght - 1625 cab width - 1995 track width (front/rear) - 1665/1560 Front/rear overhang - 1140/1395 Frame width - 750	max.speed - 80km/h max.climbing ability - 20%	83
BEV		Mercedes-Benz eActros		OEM	18-25				
BEV		Contena-Ochsner/Designwerk Futuricum		OEM					
BEV		Emoss		Retrofit					
BEV		Dennis Eagle (rebuilt for Norsk Gjenvinning)		Retrofit	26				255
BEV		Mercedes-Benz Urban eTruck		OEM					212
FCEV		Nikola Tre		OEM					
FCEV		Hyundai Hydrogen Mobility truck		OEM					

Questions?

