

# Session Six

## Last Mile

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**Peter Harris**

Director of Sustainability  
UPS Europe



**Can urban logistics be sustainable in the real world?**

Peter Harris, International Sustainability Director

## GLOBAL SMALL PACKAGE

Full spectrum of ground and air package shipping services



Traditional and nontraditional financial and payment services through UPS Capital

## INSURANCE & FINANCING

## LOGISTICS & DISTRIBUTION

Solutions that manage the flow of goods from receiving and storage to processing and shipping



A global portfolio of brokerage, less-than-truckload and full truckload services, and air and ocean freight services

## FREIGHT FORWARDING



## Who We Serve

**10.5 Million+**  
Customers  
Daily

**46 Million+**  
UPS My Choice\*  
Members  
*(as of June 2018)*

**220+**  
Countries and  
Territories Served

## Where We Go

**5.1 Billion**  
2017 Delivery  
Volume

Americas  
Asia-Pacific  
Europe  
Indian Subcontinent,  
Middle East, and Africa  
(ISMEA)  
USA

**20 Million**  
Package Deliveries  
Daily

## How We Do It

**454,000+**  
Global Employees

**2,240+**  
Daily Flight  
Segments

**119,000**  
Vehicles

**2,500+**  
Worldwide  
Operating Facilities

**27,500+**  
UPS Access Point™  
Locations

**~9,100**  
Alternative Fuel  
or Advanced  
Technology Vehicles

**580+**  
Owned and  
Leased Aircraft

## Emissions and congestion



# Dirty diesel death toll hits 60,000

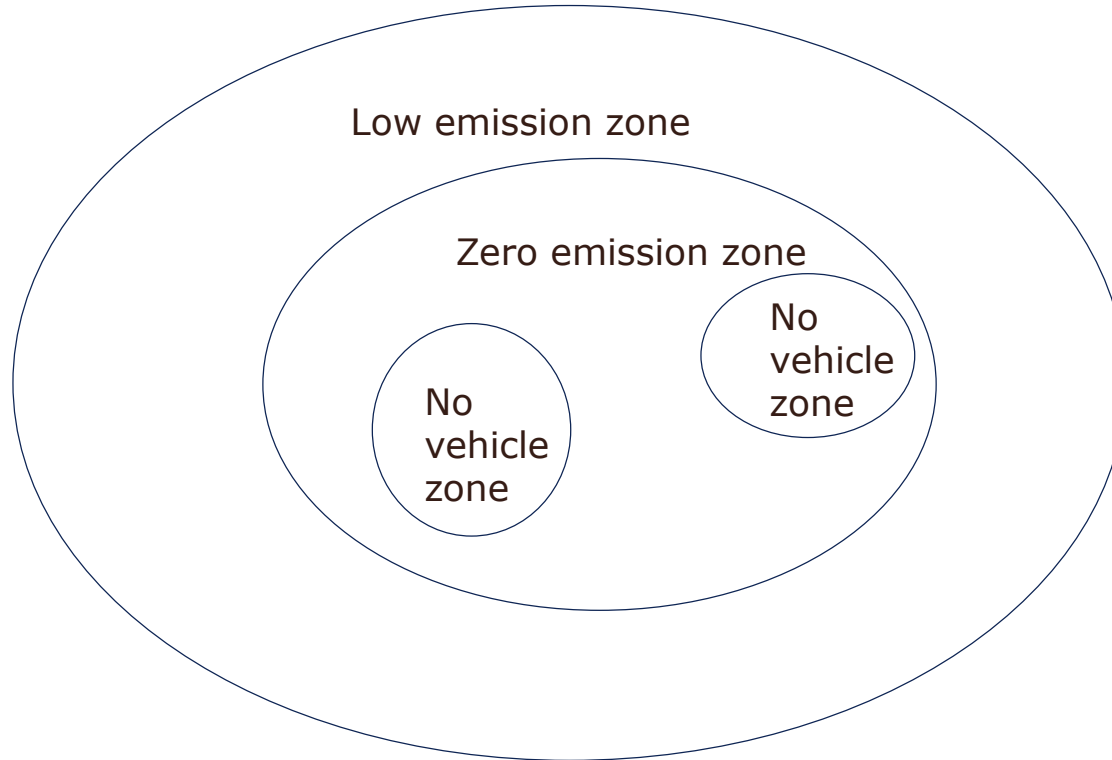


## Invisible killer

Air pollution could be killing far more people than previously realised, say scientists



# The future urban landscape we need to plan for...





# Global Goals

- 25% of all vehicle purchases to be alternative fuel / technology by 2020
- 40% of all ground fuel purchased to be alternative fuel by 2025
- 25% of electricity to be from renewable sources by 2025
- Absolute greenhouse gas emissions from ground operations reduction of 12% by 2025



# Cycle logistics



# Renewable natural gas



# Electrification: Challenges and solutions

## Vehicles:

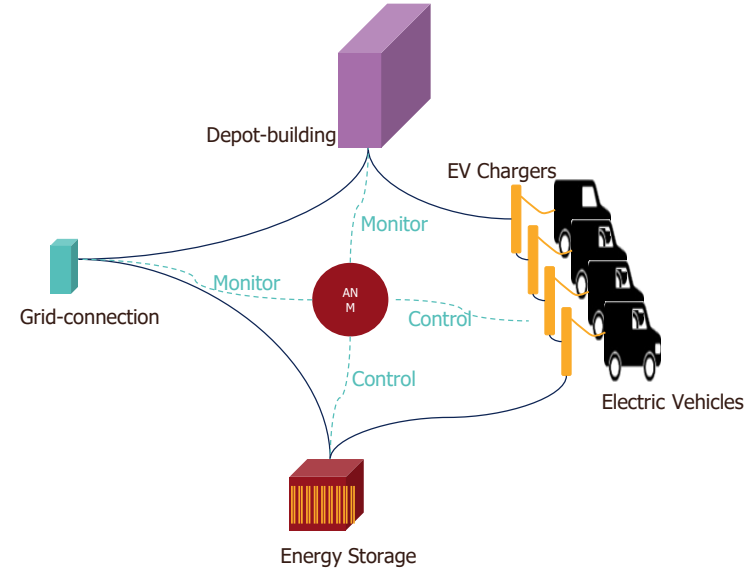
- Lack of product
- High cost
- Lack of range for some applications



# Electrification: Challenges and solutions

## Infrastructure:

- Network pinchpoints mean supply upgrades are frequently needed
- Upgrades are expensive, non-incremental and require the operator to fund assets belonging to the DNO
- Smart-grid, energy storage, timed connection and local energy generation solutions can reduce upgrade capex and introduce opex savings / revenue



# Conclusion

- Sustainable urban logistics is not easy but it is possible.
- It will take time, money and collaborative commitment from industry, government and civil society to get right.
- But get it right we must

<https://ups.app.box.com/s/lz04xve7nj65imijlz1ytfzlr6hn40k>

**Thank you**  
**[www.sustainability.ups.com](http://www.sustainability.ups.com)**



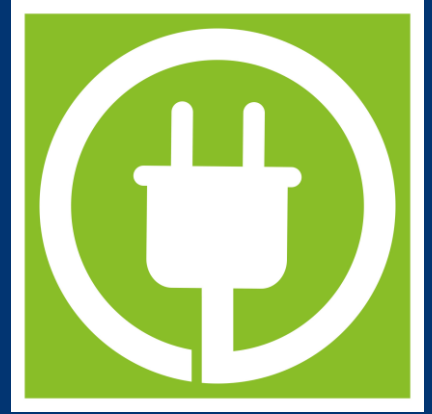
# James Walker

Commercial Director  
Fraikin Ltd

# ELECTRIC FOCUS

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**JAMES WALKER**  
Commercial Director UK



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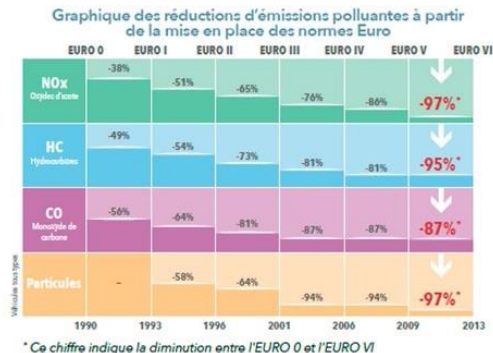
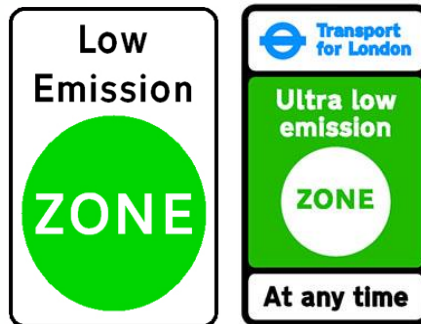
# THE ENERGY CONTEXT



# The energy context

## INCREASINGLY DEMANDING STANDARDS

- Awareness of the public authorities
- Euro standards
- LZE - ULEZ



Londonwide ULEZ, as early as 2019, but possibly later (heavy vehicles)



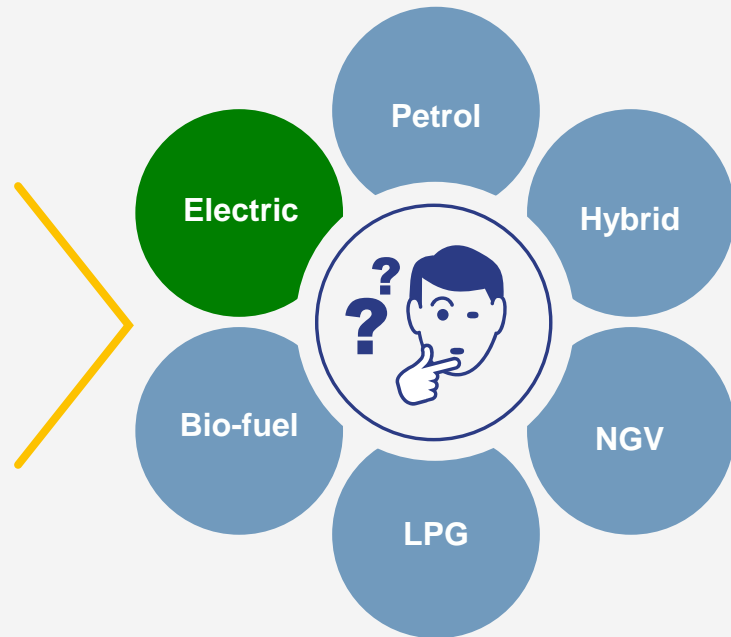
Up to £100 per day

# The energy context

## A SLOW EVOLUTION OF THE ENERGY MIX

- A decrease in the market share of diesel (for cars)
- Alternative energies under development
- An industrialised technological offer

**Diesel has never been so clean but there are now alternatives available**



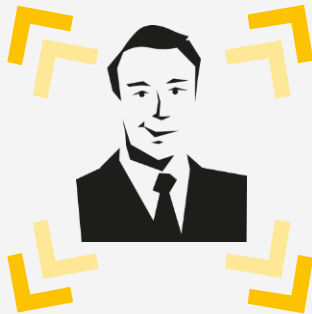


# The energy context

## What motivates our clients?

**Environmental motives:**  
Carbon footprint, greener  
environmental footprint, etc.

**Improved competitiveness:** TCO/fuel  
consumption improved by the cost  
of electricity, no ADblue



**A response to regulatory constraints:**  
EV's makes it possible to drive in  
restricted traffic zones when  
restrictions are in force...

**A differentiating business asset:**  
Submitting a tender that requires a specific  
engine type, turning the fleet into a  
differentiating asset, etc.



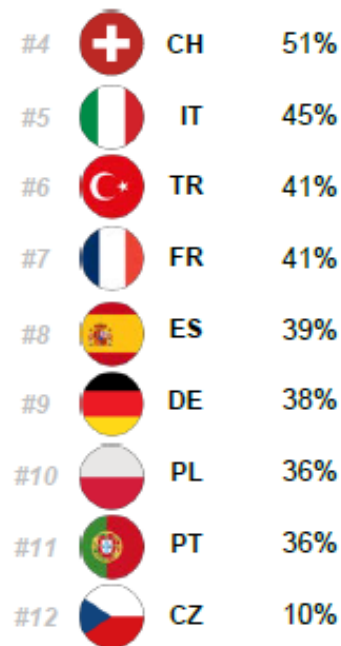
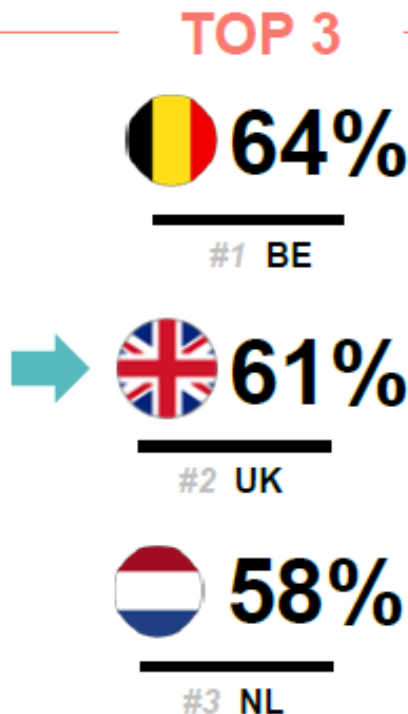
## TRENDS



# UK EV'S TRENDS

*Proportion of companies that have already, or are considering implementation, in the next 3 years (including hybrid, plug-in hybrid, CNG, LPG, electric vehicle or fuel cell electric / hydrogen)*

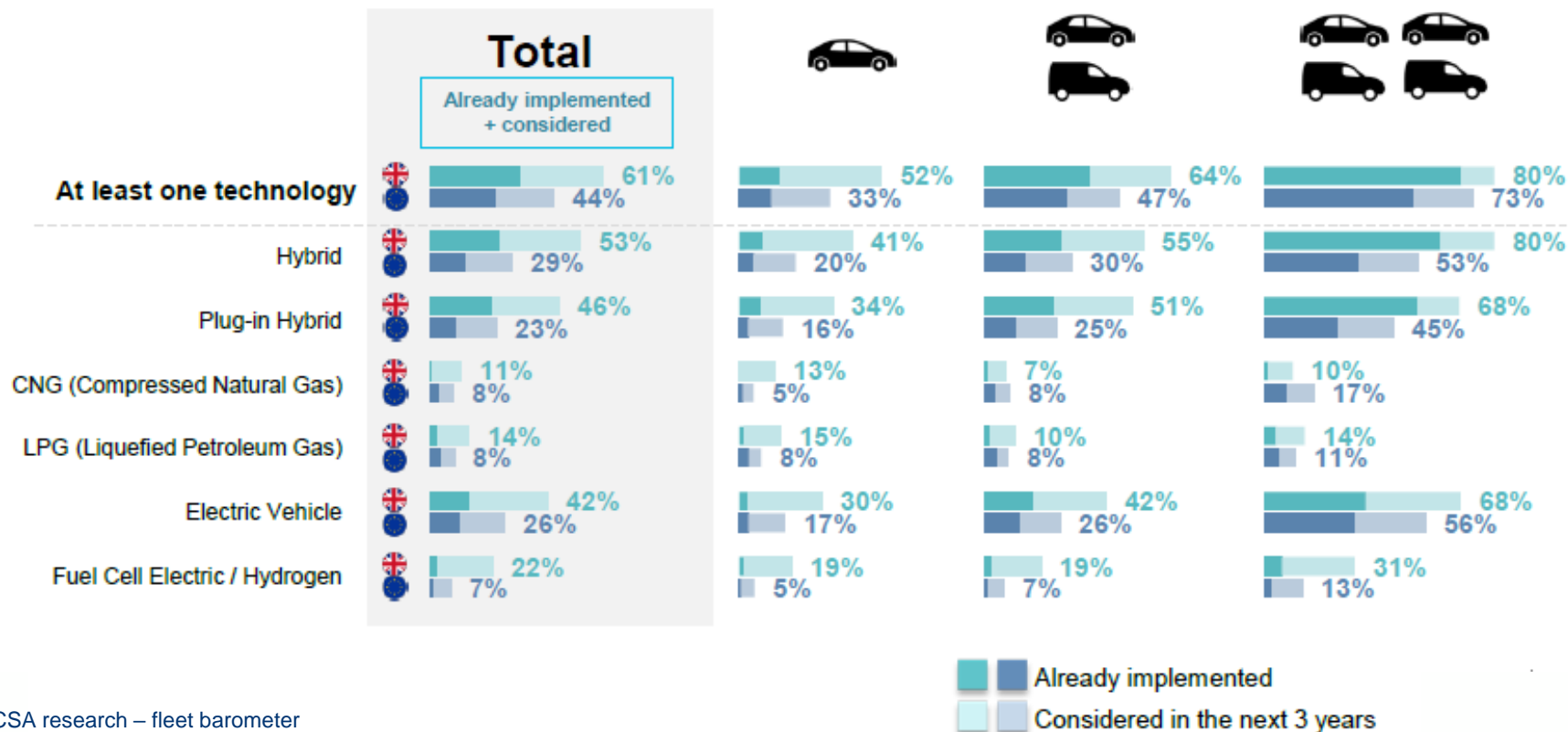
% Already  
implemented  
+ considered in the  
next 3 years



Source: CSA research – fleet barometer

# UK EV'S TRENDS

Proportion of companies that have already, or are considering implementation, in the next 3 years



# UK EV'S TRENDS : REASONS TO DELAY

## What's stopping UK drivers from buying an electric car?

"What would it take for you to choose a battery electric vehicle?"

Cost the same (or less) than petrol/diesel

35%

> 250 miles on a single charge

33%

A lot more charging points where I park

27%

Hundreds of rapid chargers along strategic roads

25%

More choice of cars

16%

Penalties for driving petrol/diesel become too high

15%



Source : statistica.uk

# UK EV'S TRENDS : CHARGING NETWORK

## DISTRIBUTION OF EV CHARGING POINTS ACROSS THE EU

**76% OF ALL CHARGING POINTS ARE LOCATED IN JUST 4 EU COUNTRIES**

28% NETHERLANDS

14% FRANCE

22% GERMANY

12% UNITED KINGDOM

## TOP 6: FEWEST CHARGING POINTS

CYPRUS

36

GREECE

38

LATVIA

73

BULGARIA

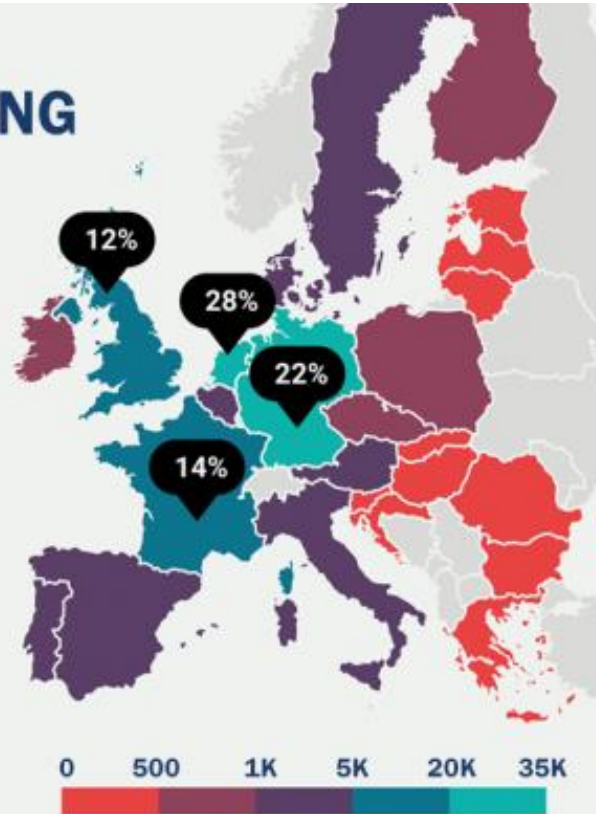
94

MALTA

97

ROMANIA

114



Source:acea.be





# EV'S RANGE

Existing and Future EV's

# EV'S range

## LCV/LUV



Kangoo  
ZE by  
Renault



E Sprinter  
by MBenz



E Crafter  
By VW



Transit  
by Ford

## TRUCKS 2020+



CF & LF  
by DAF



E Truck  
by MAN



E Actros  
by MBenz

## THE FUTURE ....

### Self-driving vehicles



Einride  
Tpod

### And further ...



**Our thoughts**



# Alternative fuels – our point of view

Bio-fuel

LPG

Petrol

Hybrid

Electric

NGV

**Fraikin has no dogma from an energy point of view.**

How each new energy will develop depends upon certain parameters:



• The maturity of the technology and its industrialisation



• The product offer and the vehicle's capex



• The security of the economic model



• The autonomy and density of the supply network



• The management of maintenance

# Point of view

Bio-fuel

LPG

Petrol

Hybrid

Electric

NGV

*"An electric car is a vehicle driven by the electromotive force of one or more electric motors, powered by a storage battery, a fuel cell (Hydrogen) or a thermal engine coupled to an electric generator (in this case, this will be referred to as a hybrid)"*



- Highly virtuous environmental image: noise – emissions
- 10,000 charging stations in UK and 160,000 in the EU
- Impact on the source of the electricity to be taken into account

- Driving range still limited
- Few new vehicles (development underway)
- Goodwill upon purchase vs. conventional
- Loss of payload



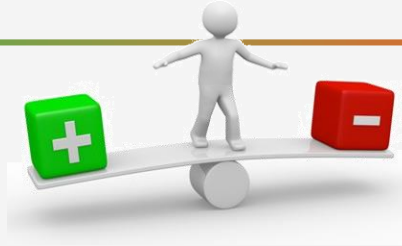
## MATURITY Vehicle offers/ Refuelling network



- Caution: only on vehicles with a manufacturer warranty
- Vigilance with respect to the development of the technology and battery life
- Brexit impact ?
- Hydrogen will be the next step ? To be continued ...

To understand the interest in electric vehicles, you need to fully understand the context in market terms

**STRENGTHS**



**AND WEAKNESSES**

**TCO**



**Driving range**



**Energy network  
density**



**Ecological  
impacts**







Thank you