Session Six

Last Mile
Peter Harris
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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

LOGISTICS & DISTRIBUTION

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

What We Do

Traditional and nontraditional financial and payment services through UPS Capital

FREIGHT FORWARDING

A global portfolio of brokerage, less-than-truckload and full truckload services, and air and ocean freight services
### 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
The future urban landscape we need to plan for…

- No vehicle zone
- Zero emission zone
- Low emission zone
- No vehicle zone
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/lz04xve7nj65imijilz1ytfzlr6hn40k

Thank you

www.sustainability.ups.com
James Walker
Commercial Director
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ELECTRIC FOCUS

JAMES WALKER
Commercial Director UK
01. The energy context

02. Trends

03. Existing & future EV’s

04. Fraikin’s thoughts
THE ENERGY CONTEXT
The energy context

**INCREASINGLY DEMANDING STANDARDS**

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

- **TOP 3**
  - **#1 BE** 64%
  - **#2 UK** 61%
  - **#3 NL** 58%

Source: CSA research – fleet barometer
# UK EV’s Trends

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

<table>
<thead>
<tr>
<th>Technology</th>
<th>% Already implemented</th>
<th>% Considered in the next 3 years</th>
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</thead>
<tbody>
<tr>
<td><strong>At least one technology</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>61%</td>
<td>52%</td>
</tr>
<tr>
<td>Hybrid</td>
<td>44%</td>
<td>33%</td>
</tr>
<tr>
<td>Plug-in Hybrid</td>
<td>53%</td>
<td>47%</td>
</tr>
<tr>
<td>CNG (Compressed Natural Gas)</td>
<td>11% (8%)</td>
<td>13% (8%)</td>
</tr>
<tr>
<td>LPG (Liquefied Petroleum Gas)</td>
<td>14% (8%)</td>
<td>15% (8%)</td>
</tr>
<tr>
<td>Electric Vehicle</td>
<td>42%</td>
<td>42%</td>
</tr>
<tr>
<td>Fuel Cell Electric / Hydrogen</td>
<td>22%</td>
<td>19%</td>
</tr>
</tbody>
</table>

Source: CSA research – fleet barometer
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
- Malta: 97
- Bulgaria: 94
- 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 …
  - TESLA
Our thoughts
Alternative fuels – our point of view

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
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**
  - TCO
  - Driving range
  - Energy network density

- **AND WEAKNESSES**
  - Ecological impacts
Thank you