Electric Vehicles today

Matthew Trevaskis - Director, Ecodrive Ltd.

Energyst Conference, 9th April 2019

Independent EV Consultancy

Working with Peugeot, Citroën, Renault, Nissan, Vauxhall, BMW & Kia.

ecodrive

Advice to fleets and retail customers.

e.g. Fleet of 15 Renault ZOEs to the NHS. Working with other public and private customers to design solutions including (semi) Rapid Charging.

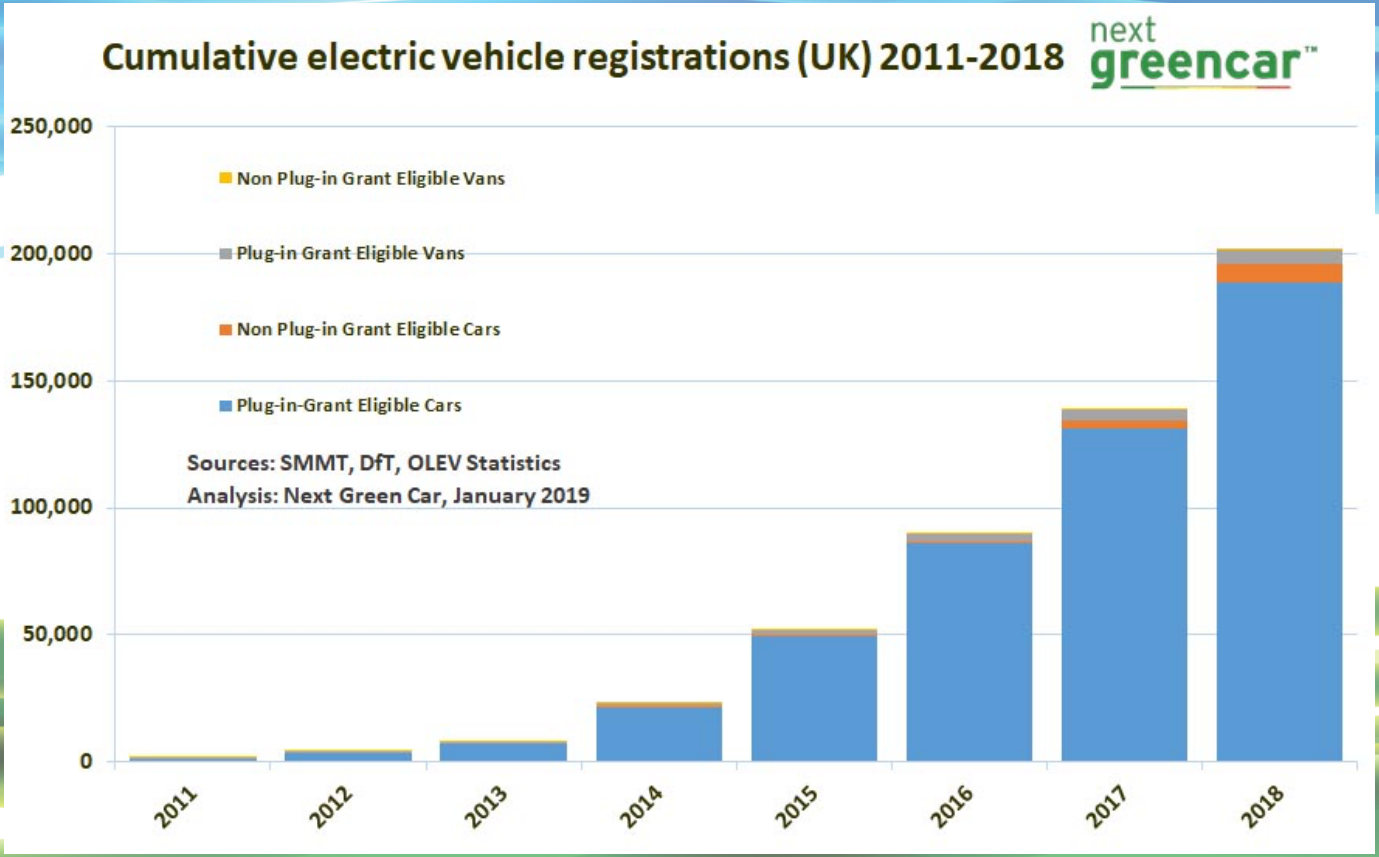
ecodrive

Charging infrastructure consulting

ecodrive

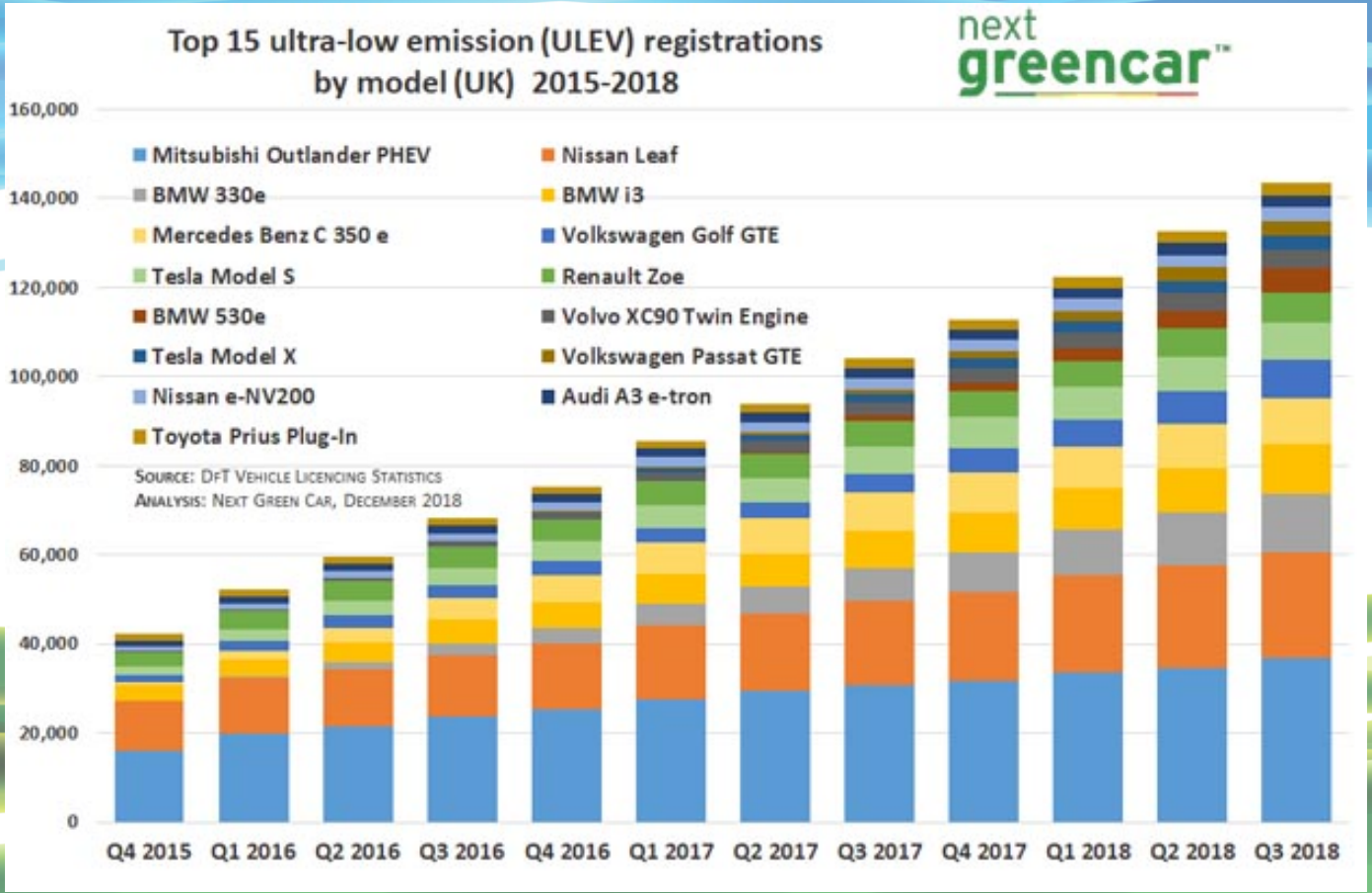
Coming up

- The state of the market
- Cars & Commercial vehicles
- Planning for expansion
- Spatial planning and use cases



60k plug-in vehicles registered in 2018 (plug-ins = 3.8% by year end, 2.7% over the year)
3,900 BEVs registered in March 2019 (+30% YoY)
PHEV down 23% YoY in March.

ecodrive


Top 15 ultra-low emission (ULEV) registrations by model (UK) 2015-2018
next greencar™
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
Mitsubishi Outlander PHEV
Nissan Leaf
BMW 330e
BMW i3
Mercedes Benz C 350 e
Volkswagen Golf GTE
Tesla Model S
Renault Zoe
BMW 530e
Volvo XC90 Twin Engine
Tesla Model X
Volkswagen Passat GTE
Nissan e-NV200
Audi A3 e-tron
Toyota Prius Plug-In
Source: DfT Vehicle Licencing Statistics
Analysis: Next Green Car, December 2018
Q4 2015
Q1 2016
Q2 2016
Q3 2016
Q4 2016
Q1 2017
Q2 2017
Q3 2017
Q4 2017
Q1 2018
Q2 2018
Q3 2018

ecodrive

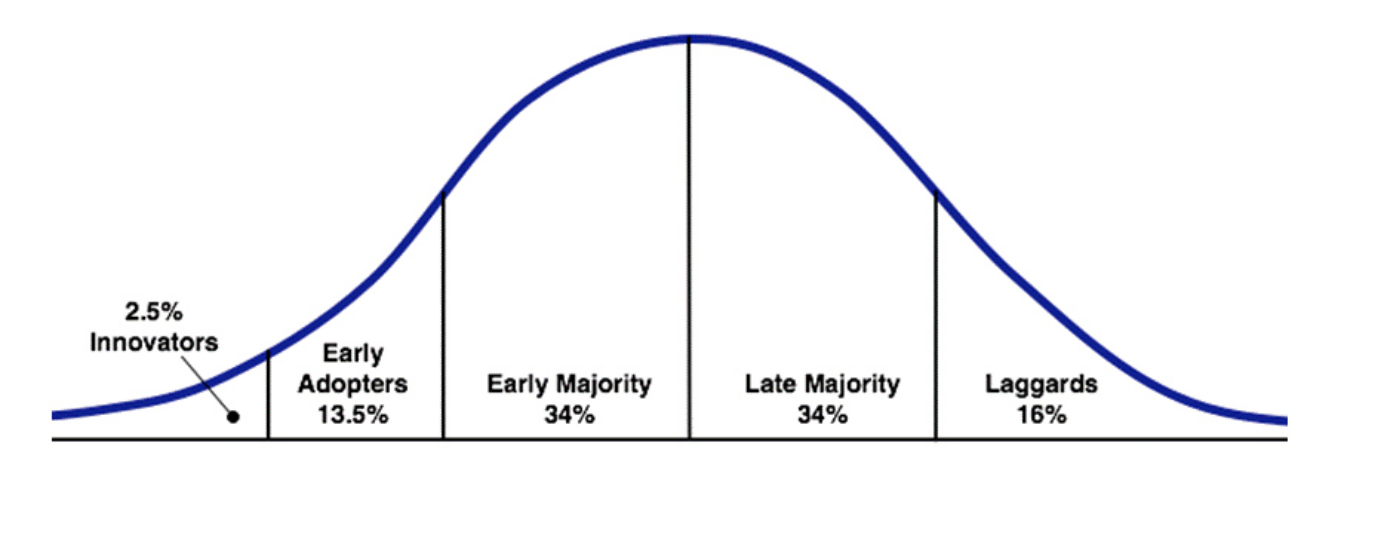
Company Car Tax BIK Rates April 2018 to March 2021

Vehicle CO2 (g/km)	Electric range (miles)	FY 2018-19 %BIK Rate		FY 2019-20 %BIK Rate		FY 2020-21 %BIK Rate	
		Petrol, Electric, RDE2 Diesel*	Non-RDE2 Diesel*	Petrol, Electric, RDE2 Diesel*	Non-RDE2 Diesel*	Petrol, Electric, RDE2 Diesel*	Non-RDE2 Diesel*
0		13		16		2	
1-50	130+	13		16		2	
1-50	70-129	13		16		5	
1-50	40-69	13		16		8	
1-50	30-39	13		16		12	
1-50	<30	13		16		14	
51-54		16		19		15	
55-59		16		19		16	
60-64		16		19		17	
65-69		16		19		18	
70-74		16		19		19	
75		16		19		20	
76-79		19	23	22	26	20	24
80-84		19	23	22	26	21	25
85-89		19	23	22	26	22	26
90-94		19	23	22	26	23	27
95-99		20	24	23	27	24	28
100-104		21	25	24	28	25	29
105-109		22	26	25	29	26	30
110-114		23	27	26	30	27	31
115-119		24	28	27	31	28	32
120-124		25	29	28	32	29	33
125-129		26	30	29	33	30	34
130-134		27	31	30	34	31	35
135-139		28	32	31	35	32	36

ecodrive

Which technology – and when?

ecodrive



Everett Rogers technology adoption curve (1962)

Premium models

95kWh

ecodrive

Volume brands

39kWh / 64kWh option

ecodrive

Used vehicles – long life

Good infrastructure ‘unlocks’ potential in older vehicles

ecodrive

Commercial EVs

ecodrive

Commercial EVs

ecodrive

Specification

22kW AC as a norm. ~75 miles per hour of charging (on compatible vehicles)

ecodrive

Charging inlet location

Not standardised

ecodrive

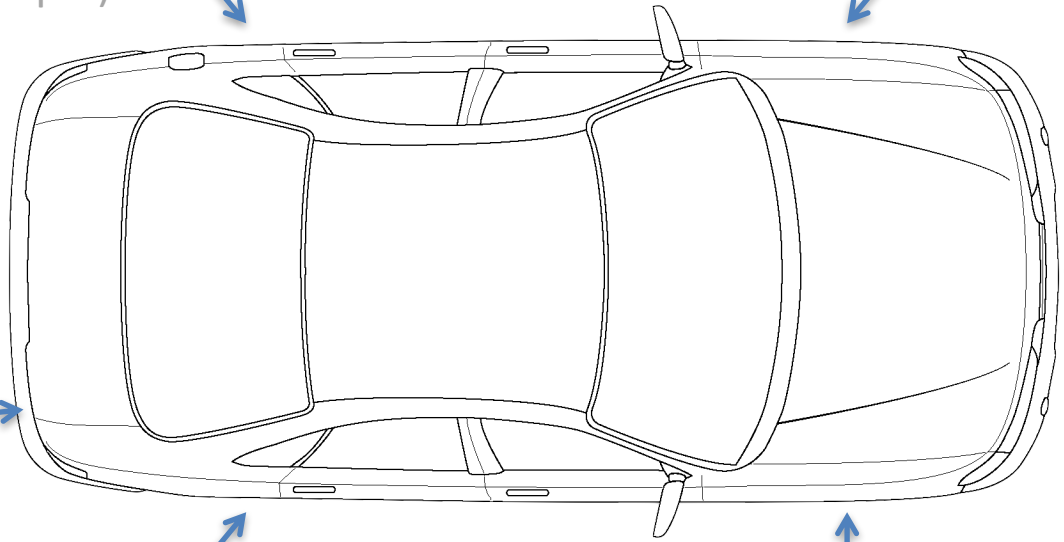
Charging inlet location

Not standardised

ecodrive

Hyundai Ioniq
Peugeot / Citroën
(Rapid)

Jaguar i-Pace
BMW 330e
Renault Master ZE



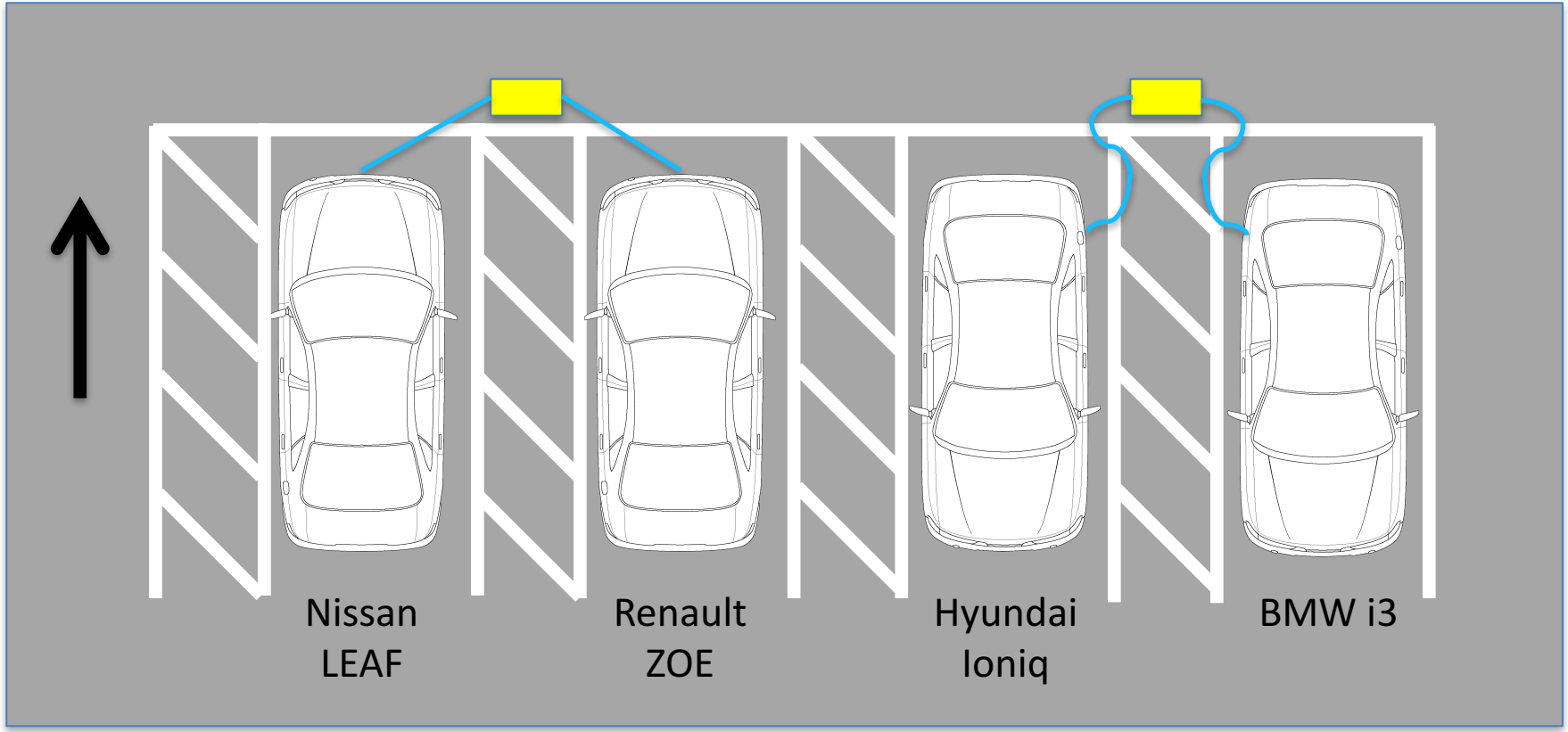
Nissan LEAF
Renault ZOE
VW Golf GTE
Kia Soul EV
Hyundai Kona EV
Nissan eNV-200
Renault Kangoo ZE

Mercedes
C350e

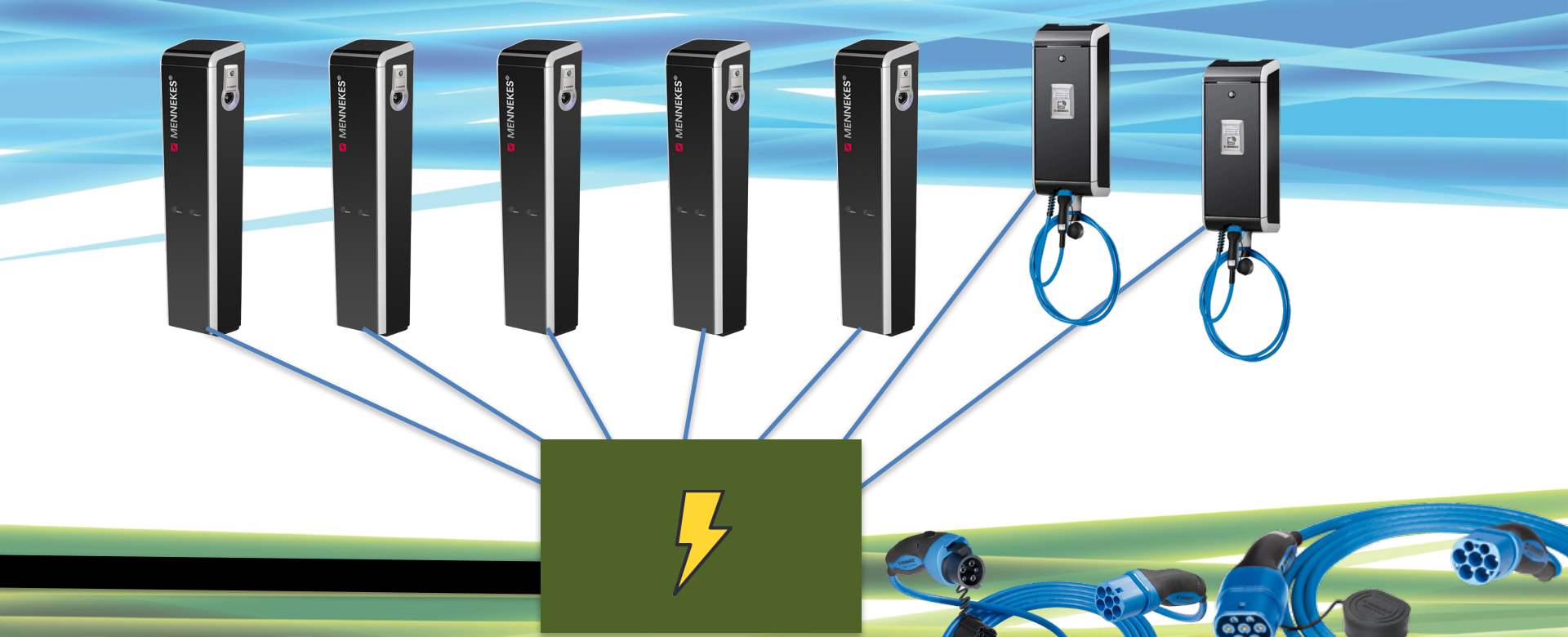
BMW i3
Smart EQ
Peugeot iOn / Citroën C-Zero
Mitsubishi Outlander PHEV

Peugeot Partner
Citroën Berlingo
Renault Master ZE

ecodrive



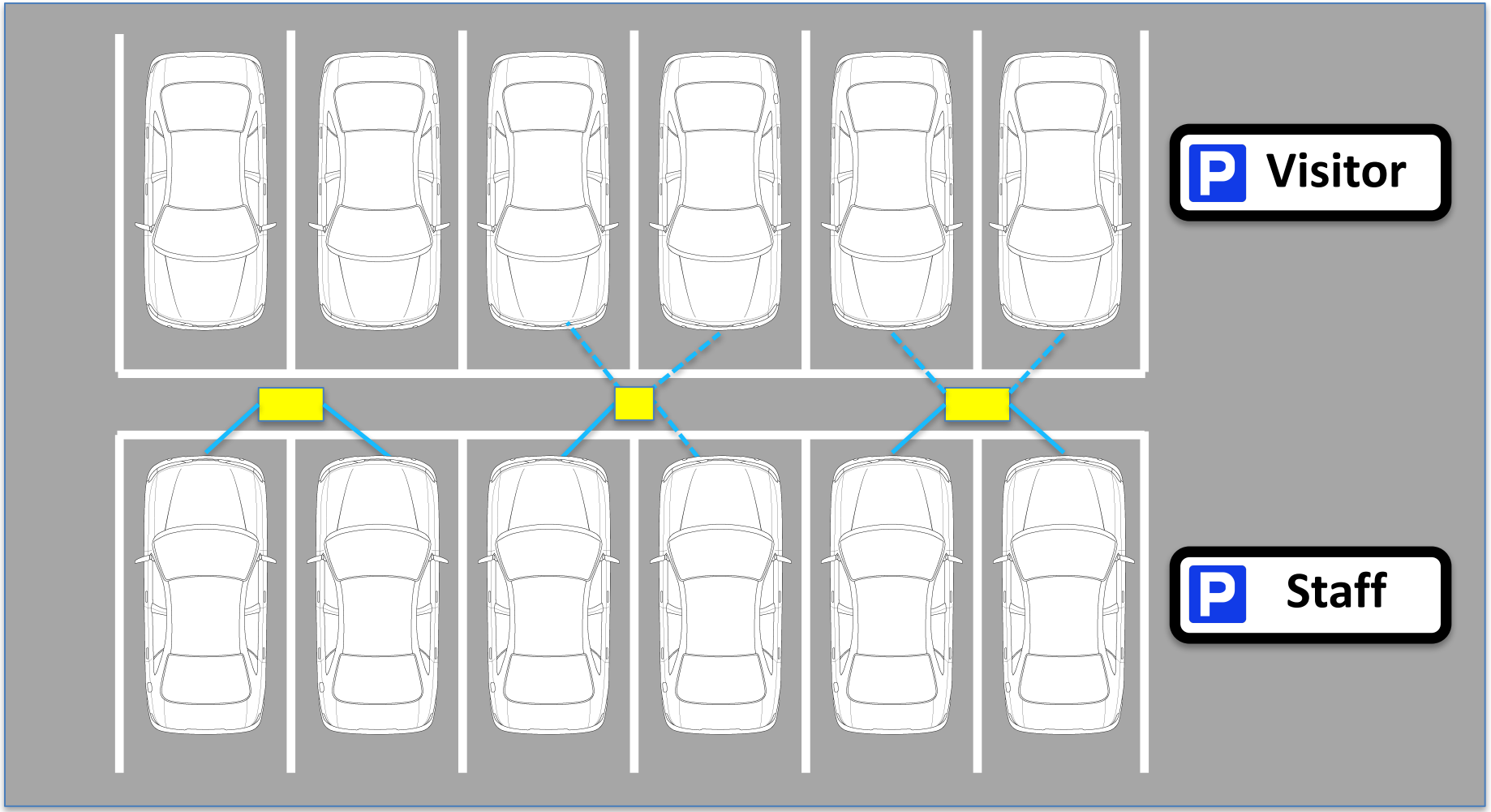
ecodrive



Type 1 vs. Type 2

Type 1: Asian / Americas
Type 2: Europe (now mandated on newly homologated vehicles)

ecodrive


Visitor
Staff

Home Charging

Liability; Reimbursement; Displaced workplace charging

ecodrive

Matthew Trevaskis
matthew.trevaskis@eco-drive.co.uk
0345 4-NO-FUEL (0345 466 3835)

Twitter: @ecodriveEV
Facebook: /ecodriveEV

ecodrive