Electric Vehicles – Insurance Liabilities & Driving Technology Today

Insurance Institutes of Sussex & North Downs
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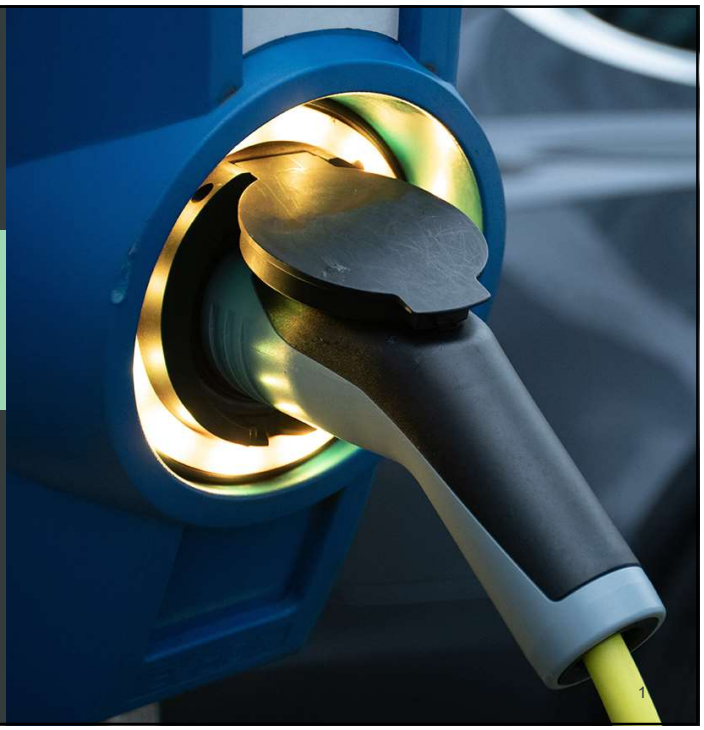

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Electric Vehicles -Insurance Liabilities & Driving Technology Today

Today's Objectives:

By the end of the session, attendees will have an understanding of :

- The different types of EV
- The UK EV Vehicle Parc and global comparison
- Drivers' liability
- Non driver liability

- The AEVA 2018
- When a driver is not a driver
- Driver assistance systems & autonomy
- Insurer Challenges

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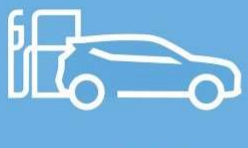
Types of Electric Vehicle

Hybrid
No plug



Range ⚡⚡⚡⚡

Features a dual engine, the primary (combustion) and an electric motor. The battery recharges when the vehicle reduces speed.

Plug-in hybrid
Refuel it and plug it in

Range ⚡⚡⚡⚡⚡

Combines a combustion engine and an electric motor which is primarily used. The battery charges when the vehicle reduces speed or directly when plugged in.

100% electric
Zero emissions

Range ⚡⚡⚡

Exclusively electric drive and all its power and range comes from its high capacity rechargeable battery.

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State of Play

USA

- In 2022, 6% of new vehicles sold were electric[6]
- 18 EVs per charge point[7]
- 34 gigafactories planned for development, not clear how many are operational[8]
- The Inflation Reduction Act provides $7,500 clean vehicle tax credit for vehicles that meet the home-grown infrastructure target and has subsequently attracted significant investment in US EV manufacturing and battery production[9]

UK

- In 2022, 16% of new vehicles sold were electric[10]
- 21 EVs per charge point[11]
- 1 gigafactory and a further gigafactory in development[12]
- All new cars and vans sold will be zero emission by 2035[13]

EU

- In 2022, 12% of new vehicles sold were electric[14]
- 15 EVs per charge point[15]
- 6 gigafactories with a further 20 planned[16 17]
- All new cars and vans sold in the EU will be zero emissions by 2035[18]

China

- In 2022, 29% of new vehicles sold were electric[19]
- 7 EVs per charge point[20]
- Over 100 gigafactories in operation and a further 200 planned for development[21 22]
- Produce 65% of the world's battery cell production capacity [23]

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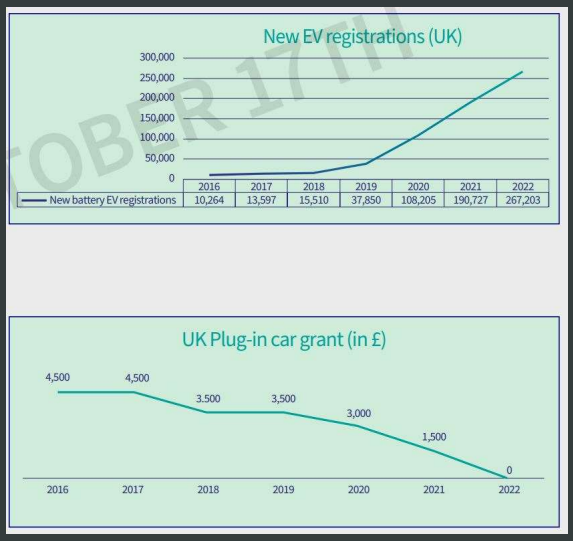
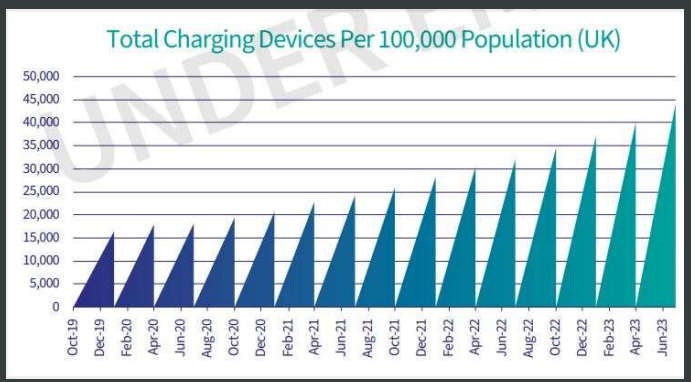
Electric Vehicles UK Registrations

- Private Car v Commercial Veh
- Impact of 2030 to 2035 move
- What needs to change to continue the growth
- Beyond 2035



"Range Anxiety" and UK infrastructure



Liability

Drivers' Liability

- Comprehensive cover
- TP Cover

Non Driver Liability

- AEVA 2018
- ALKs – Automated Lane Keeping Technology
- DCAS, DMS, OMS…….

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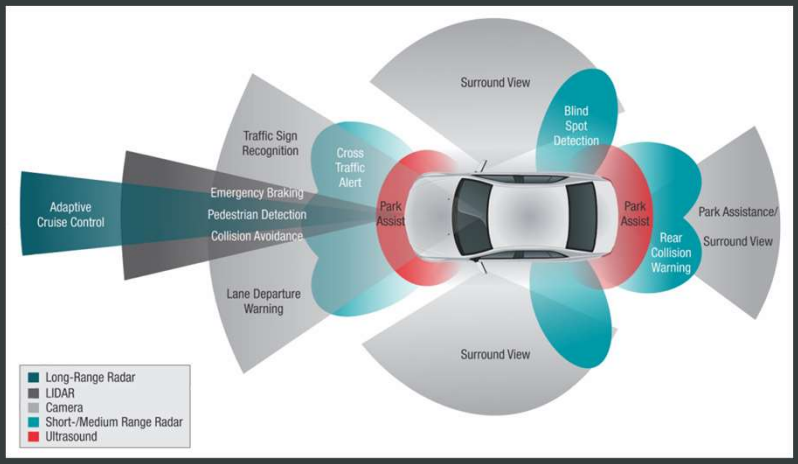
Driver Assistance Systems



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DCAS – Driver Control Assistance Systems

Four core principles

1. "Driver" refers to a human being driving a vehicle
2. A DCAS is a driver-operated vehicle system
3. A DCAS assists the driver through sustained lateral and longitudinal motion control support
4. The availability of a DCAS to the driver is constrained by defined system boundaries

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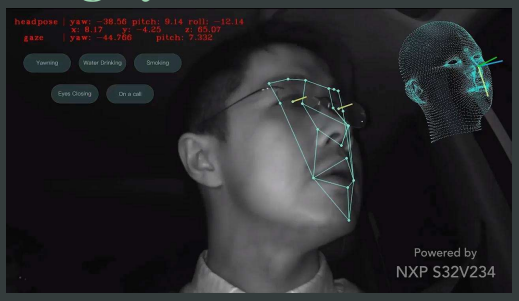
DMS – Driver Monitoring System



OMS – Occupant Monitoring System

The **driver monitoring system**, is a vehicle safety system to assess the driver's alertness and warn the driver if needed and eventually apply the brakes

The **Occupant Monitoring System** could monitor:
Body posture
Seatbelt detection
Object in hand detection
Occupant identification and classification Age / Sex Body size measurement

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Autonomous Driving

- Where are we today?
- AXA Projects
- USA and Europe

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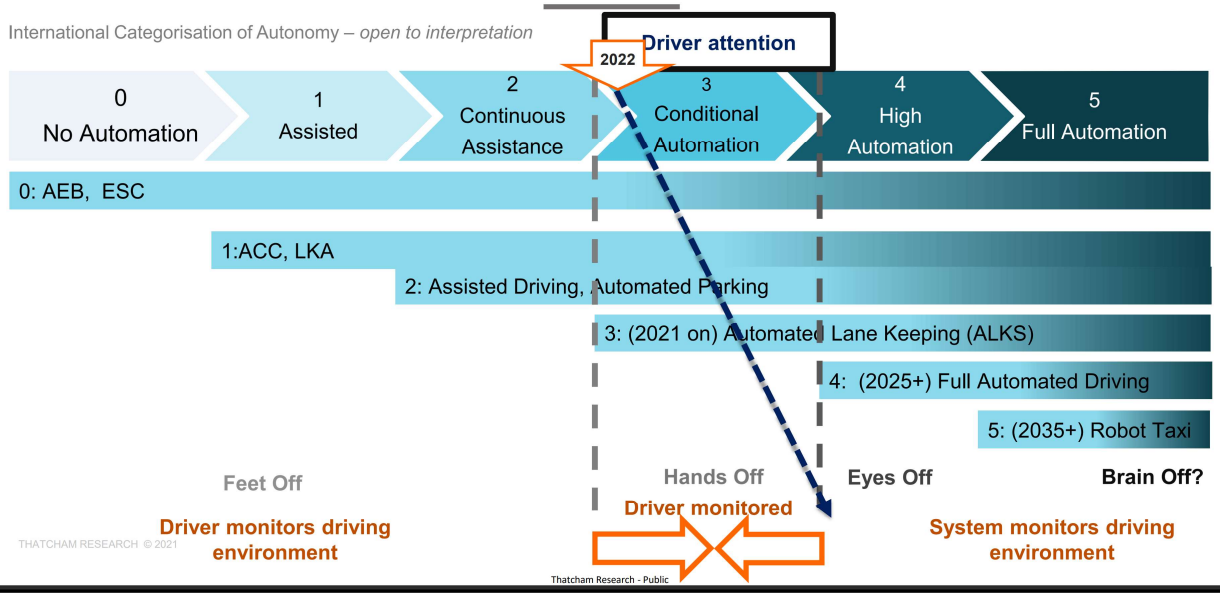
Defining Automation

SAE Definitions and Timeline



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Insurer Challenges

Three Key Areas

1. Policy Coverage
   a) Chargers (hardware)
   b) Use of a Vehicle
   c) Cyber Risk
   d) Over the air updates
2. Pricing
   a) ABI Group
   b) Driver Mgt
   c) Over the air updates
   d) Fleets
3. Claims
   a) AD Costs
   b) Access to Data
   c) Specialist Repairers

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Any questions?