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AKTIENGESELLSCHAFT



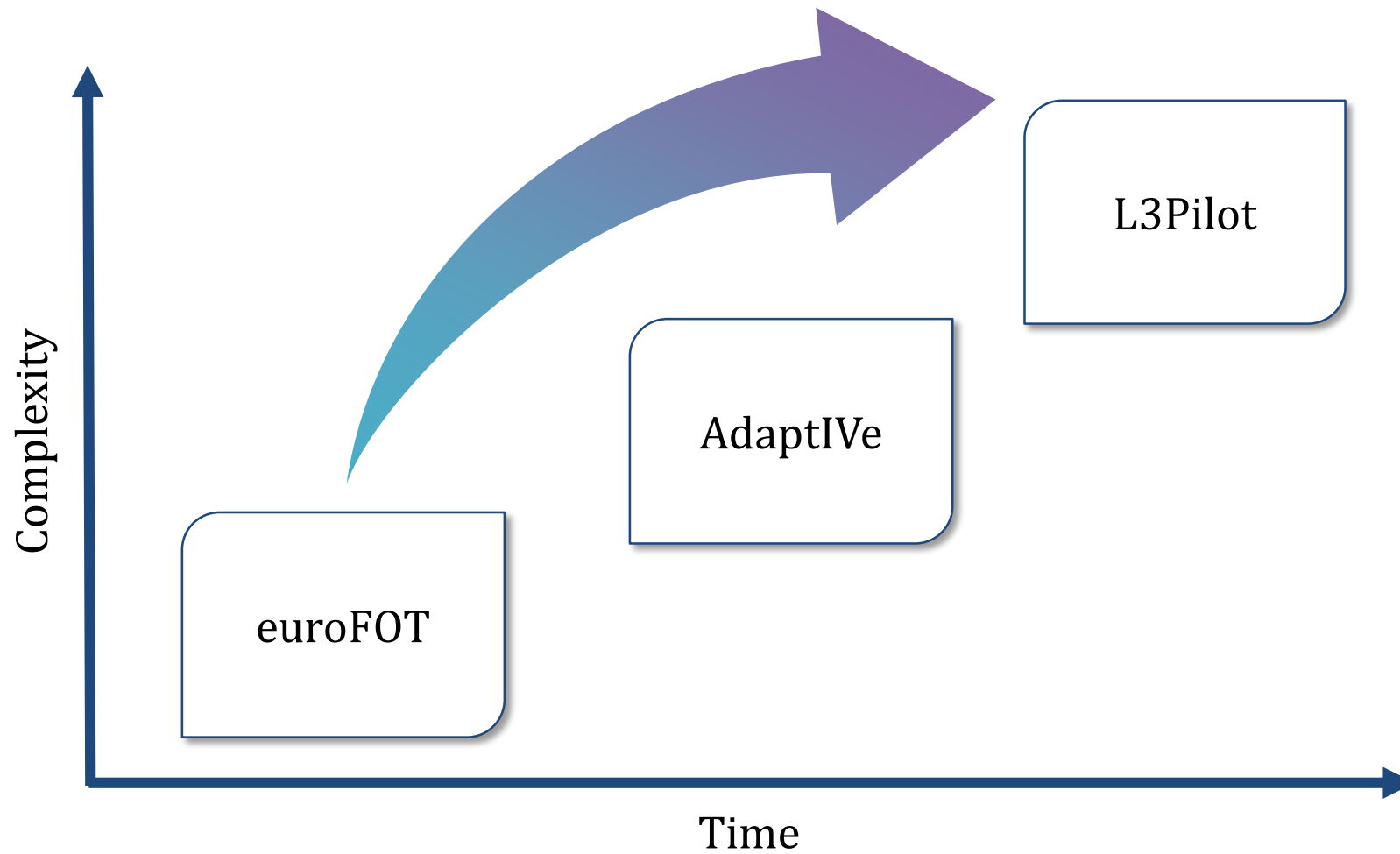
PILOTING AUTOMATED DRIVING ON EUROPEAN ROADS

Aria Etemad
Volkswagen Group Research

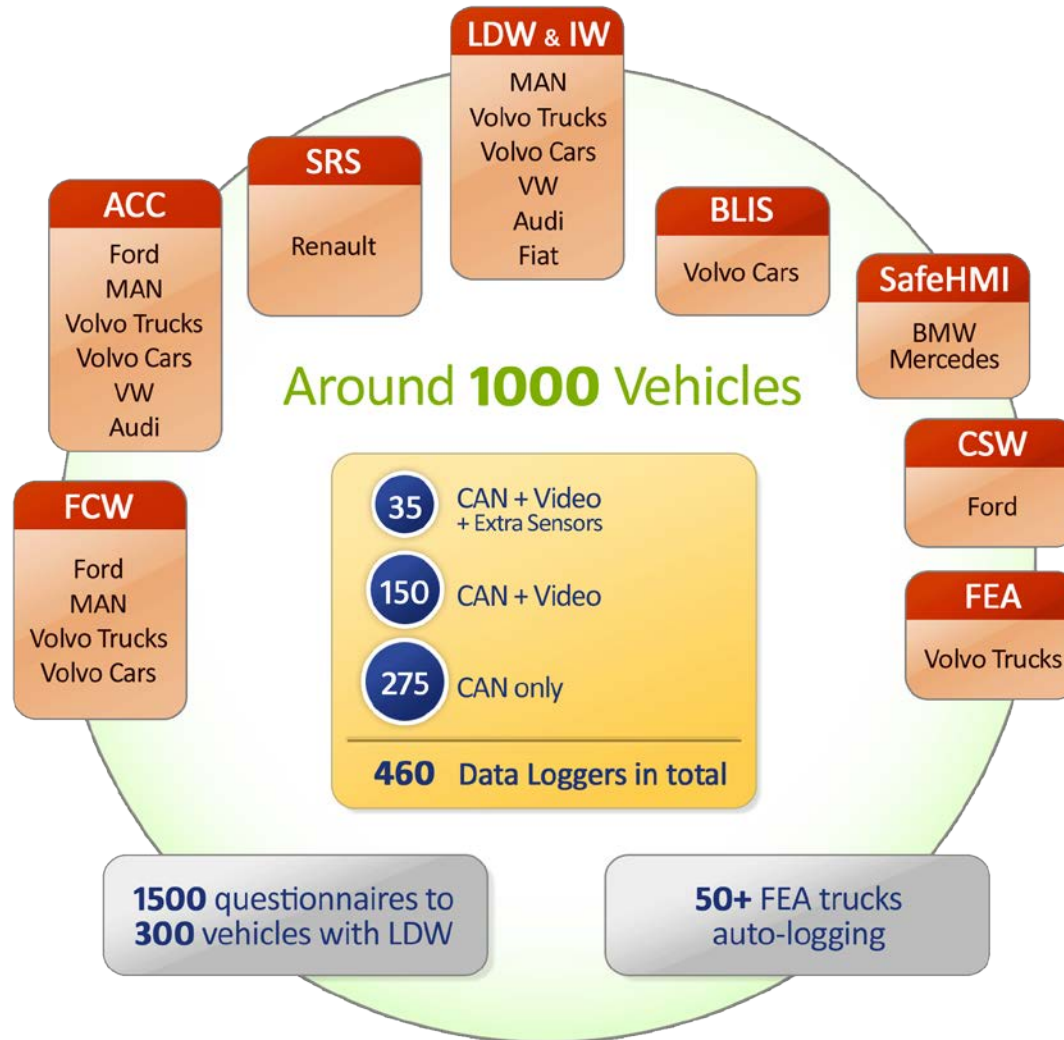
From 3 to 0



From euroFOT to L3Pilot



Previous Projects: euroFOT



Longitudinal control functions

- ♣ Forward Collision Warning (FCW)
- ♣ Adaptive Cruise Control (ACC)
- ♣ Speed Restriction System (SRS)

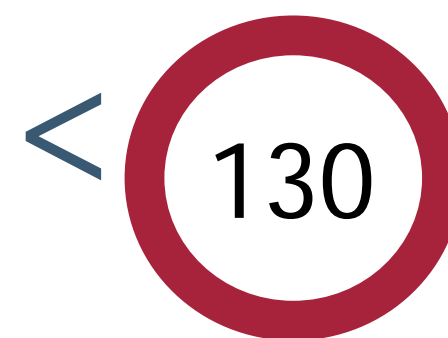
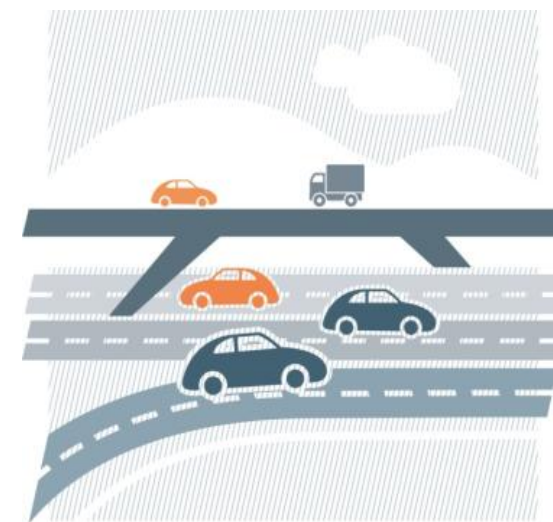
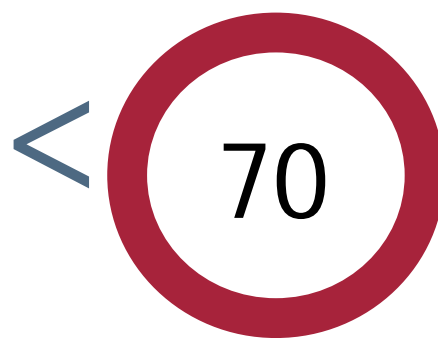
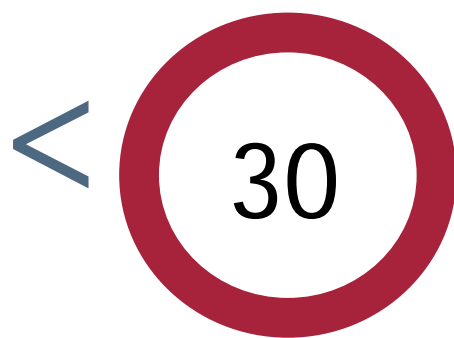
Lateral control functions

- ♣ Blind Spot Information System (BLIS)
- ♣ Lane Departure Warning (LDW)
- ♣ Impairment Warning (IW)

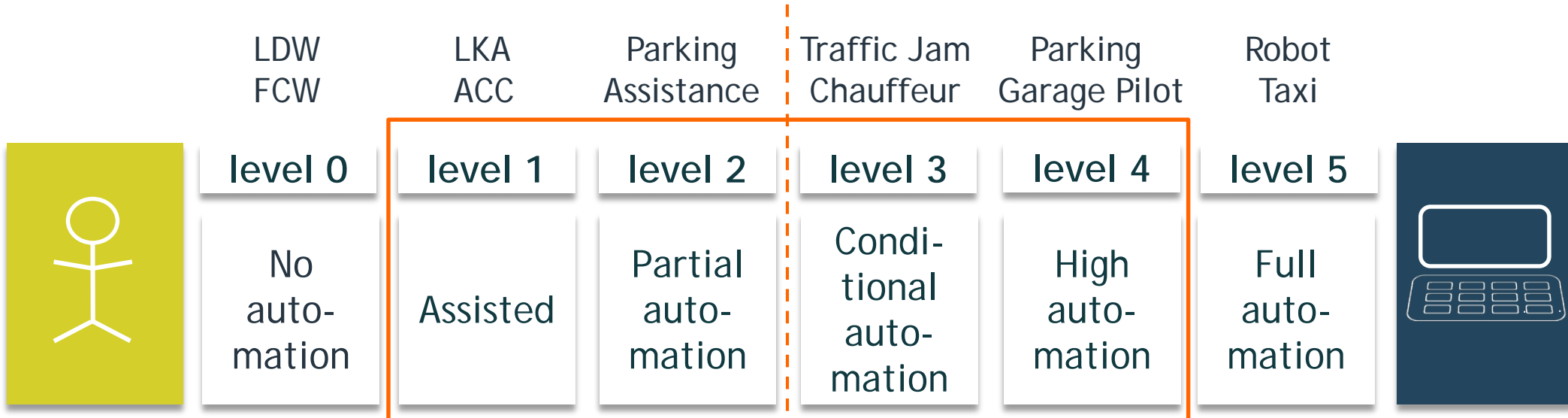
Advanced applications

- ♣ Curve Speed Warning (CSW)
- ♣ Fuel Efficiency Advisor (FEA)
- ♣ Safe Human Machine Interaction (SafeHMI)

Previous Projects: AdaptIVe



// Levels of driving automation acc. to SAE and VDA



Driver in the loop

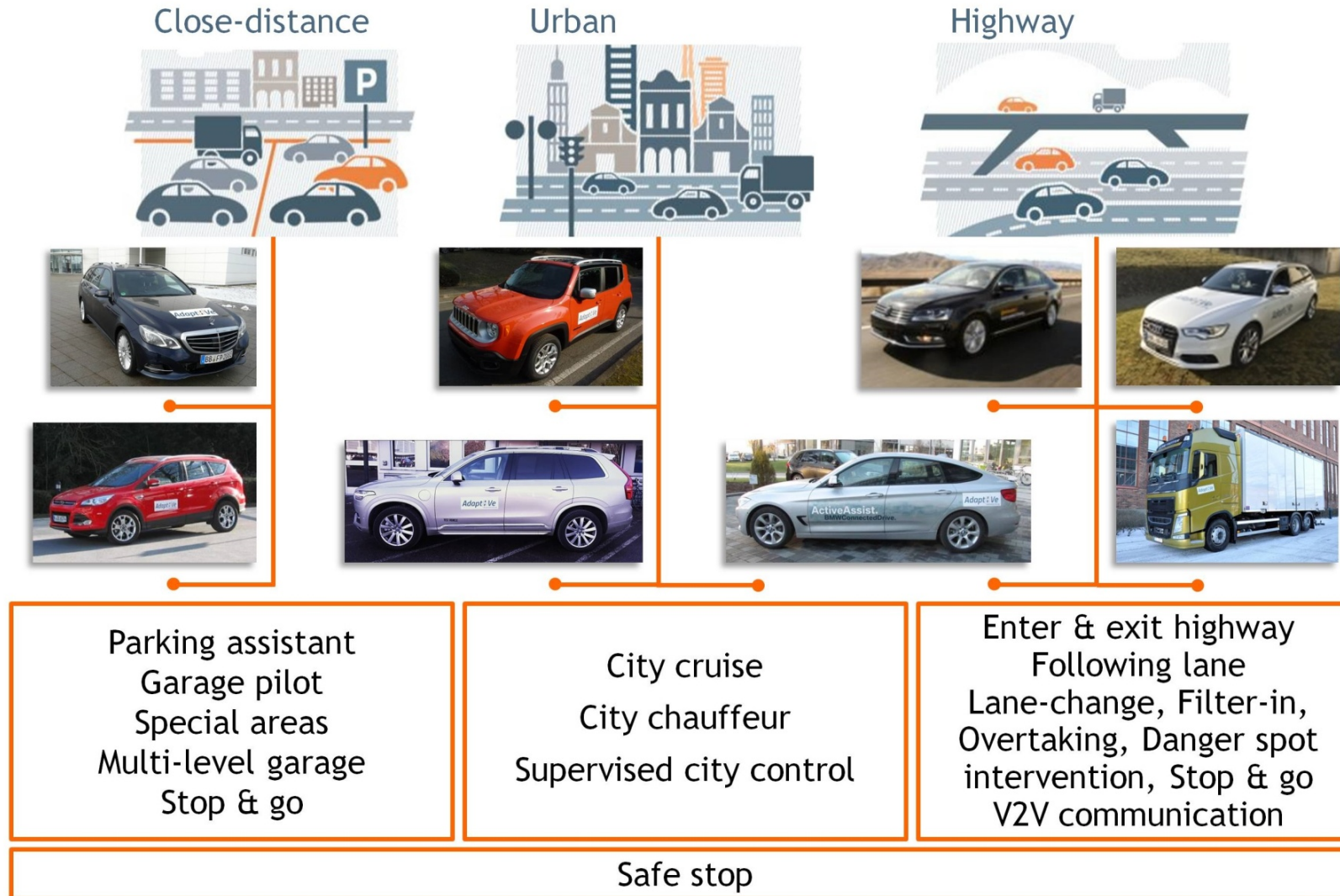
- No significant change with respect to existing driver assistance systems

Source: SAE document J3016, "Taxonomy and Definitions for Terms Related to On-Road Automated Motor Vehicles", issued 2016-09-30, see also http://standards.sae.org/j3016_201609/

Driver out of the loop

- Not in accordance with regulatory law (Vienna Convention of 1968, national road law)
- Shared responsibility for control between driver and system
→ need for action

// Demonstrators



// Achievement



- **System Classification and Glossary**
- Systematic derivation of relevant system parameters for:
 - Vehicle
 - Driver
 - Environment
- Public Deliverable D2.1 is available on the AdaptIVe website.

Deliverable D2.1 //
System Classification and Glossary

Dissemination level	PU
Version	1.2
Due date	31.12.2014
Version date	06.02.2015

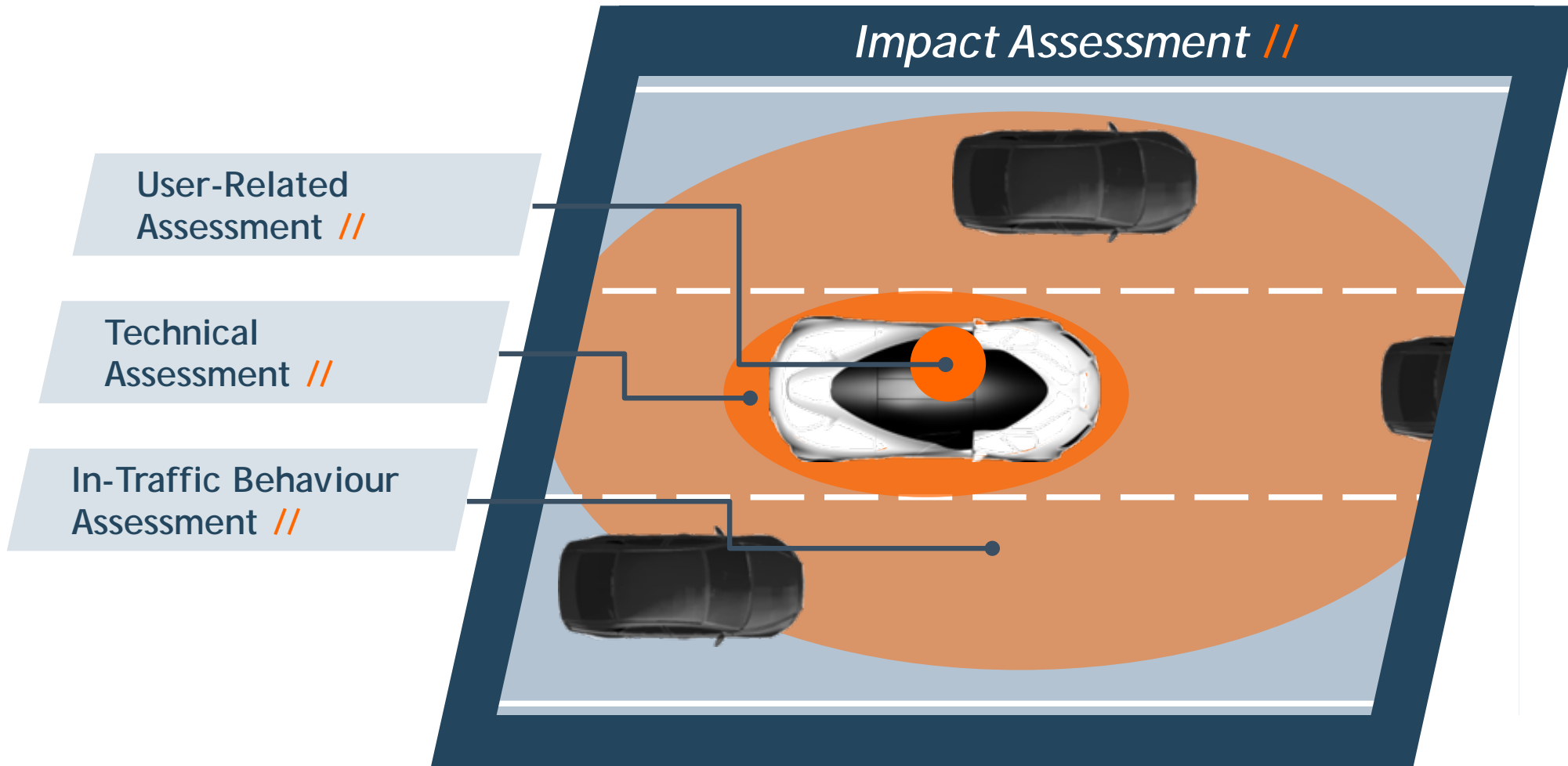
// Achievement



- A total of 17 experiments were conducted
 - Surveys
 - Simulator studies
 - Field studies
- Over 490 car and truck drivers
- One survey with 2743 respondents
- Basis for the human factors recommendations



// Achievement



// Evaluation of Adaptive functions



// Technical assessment:

„Considering human driver behaviour as a baseline, the Adaptive automated driving functions are showing a more uniform driver behaviour.“

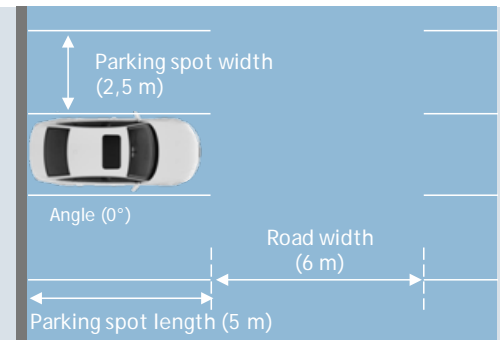


// User-related assessment:

„Test persons noted that automated driving functions affected driving positively in several ways, e.g. fewer dangerous lane changes“

// Impact Assessment:

„Automated parking functions can lead to a possible increase of parking space by 17 %.“



Facts

- Project name: L3Pilot - Piloting Automated Driving on European Roads
- Budget: €68 million
- Funding: €36 million
- Start: September 2017
- Duration: 48 months
- Coordinator: Aria Etemad, Volkswagen Group Research
- Participants: 34 (OEMs, suppliers, research, SMEs, insurers, authorities and user groups)
- Countries: Austria, Belgium, France, Finland, Germany, Greece, Italy, Netherlands, Norway, Sweden, Switzerland, UK

Co-funded by the
European Union
under Horizon 2020
programme



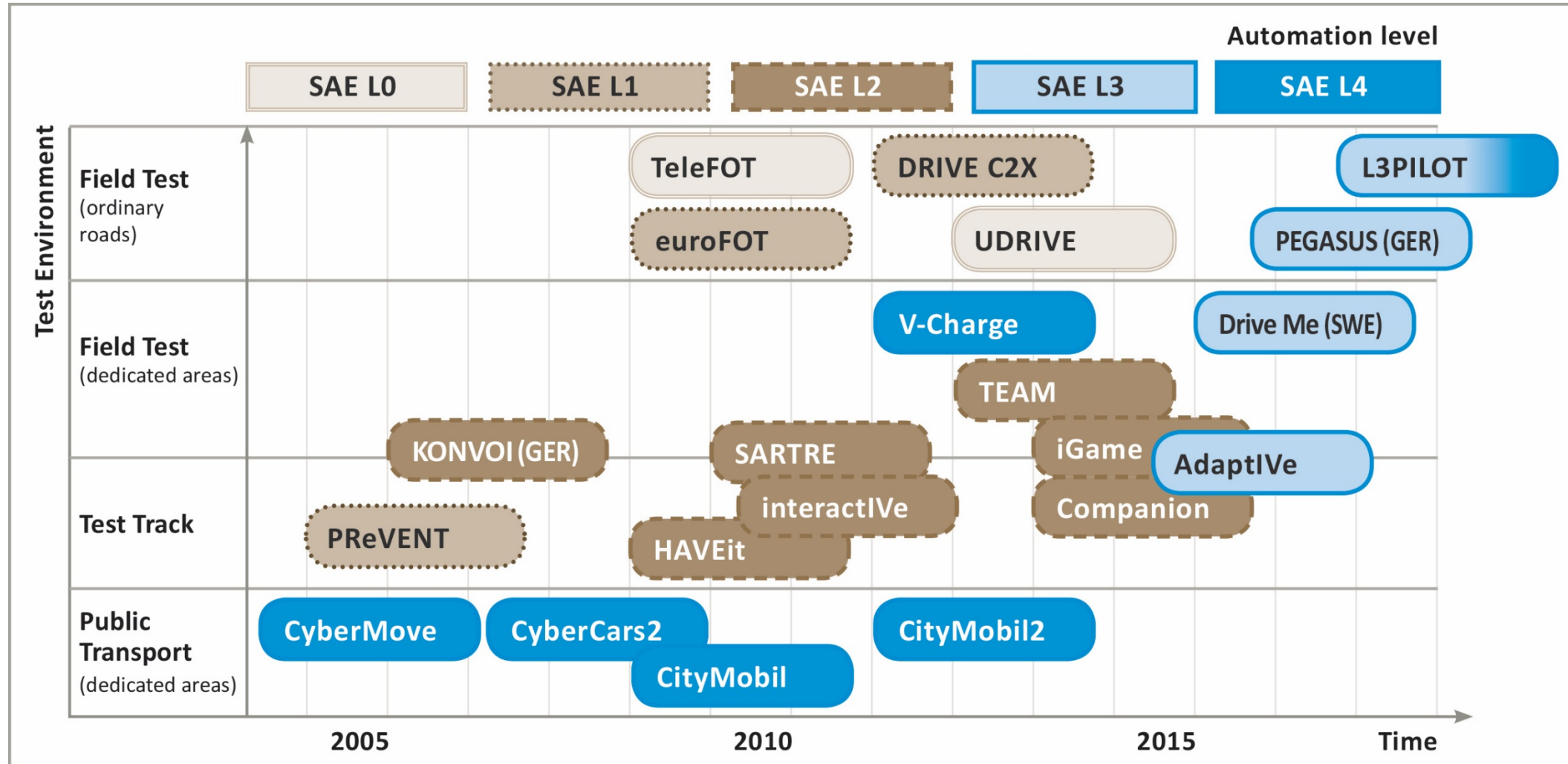
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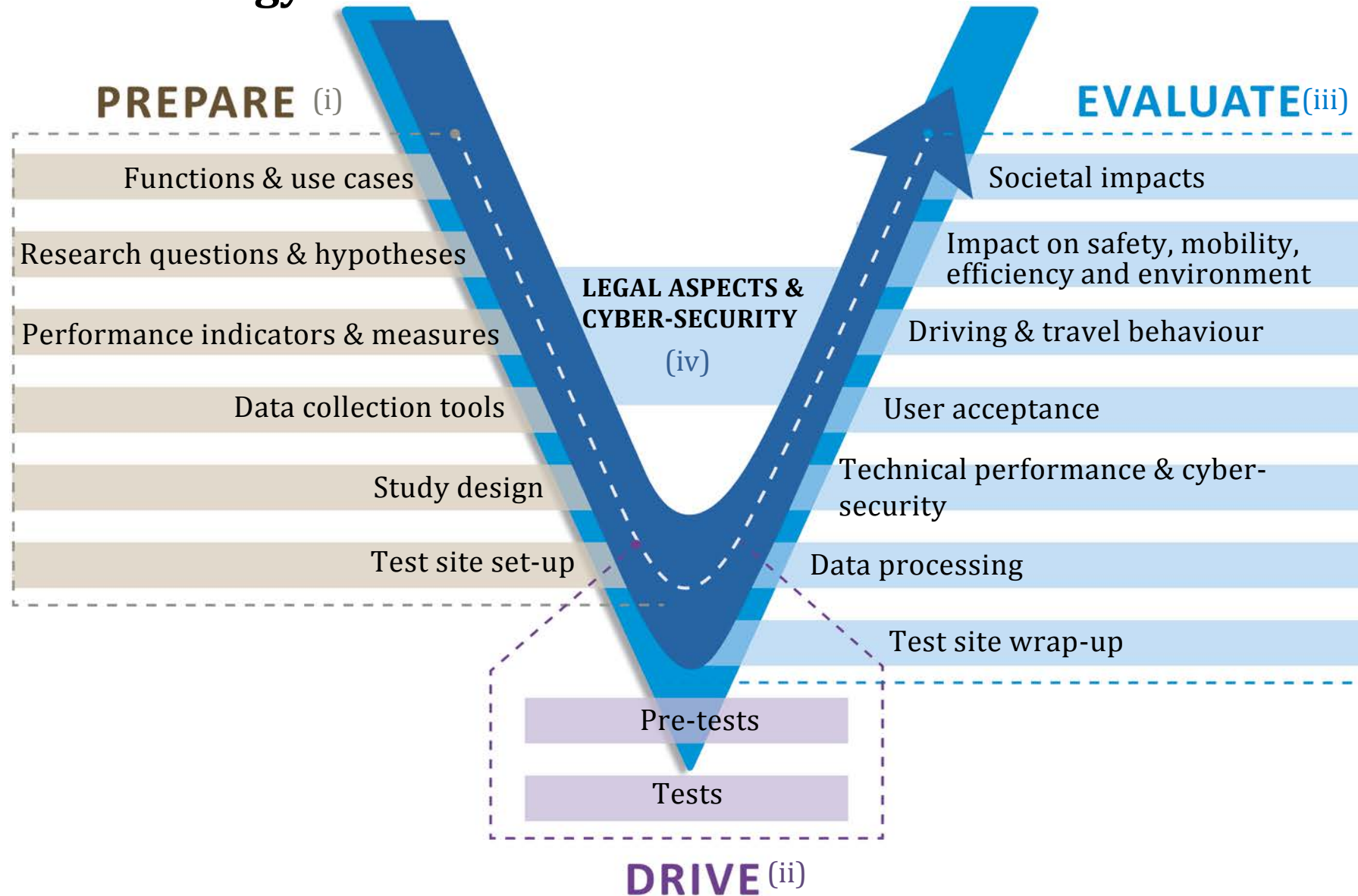
Project Partners

OEMs											
Suppliers											
Research											
SMEs			Insurers			Authorities			User groups		








Landscape on Major European Projects preparing AD

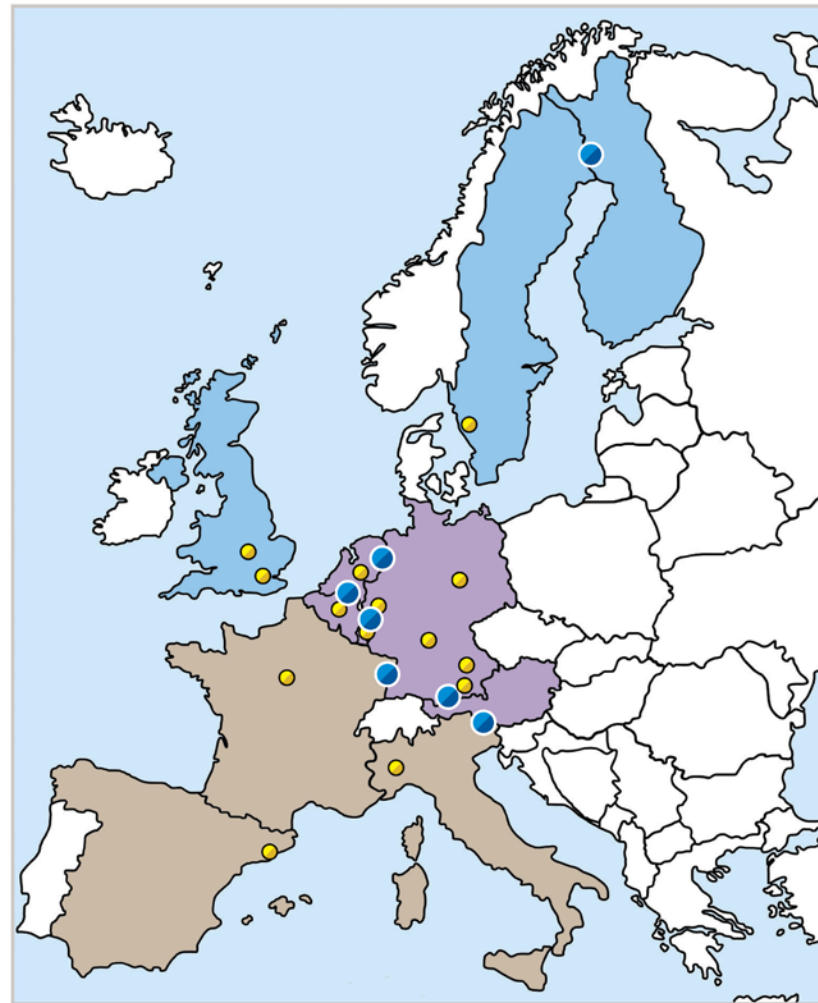


FESTA Methodology



Pilot Centers for a Pan-European Pilot

● Crossborder		
Austria		Germany
Austria		Italy
Belgium		Germany
Belgium		Netherlands
Finland		Sweden
France		Germany
Germany		Netherlands



NORTH CENTRAL SOUTH-WEST

● **Country, region - OEM**

BE, Brussels; NL;
ES, Barcelona - Toyota

DE, Aachen - Ford

DE, Ingolstadt - Audi

DE, Munich - BMW

DE, Offenbach - Honda

DE, Wolfsburg - VW

FR, Paris and other regions - REN, PSA

IT, Turin - CRF

LU; NL - Delphi

SE, Gothenburg;
UK, London - Volvo

UK, Coventry - JLR



THANK YOU FOR YOUR KIND ATTENTION

Aria Etemad
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the European Union

