Evaluating Assisted Driving Technologies

Dave Baldwin

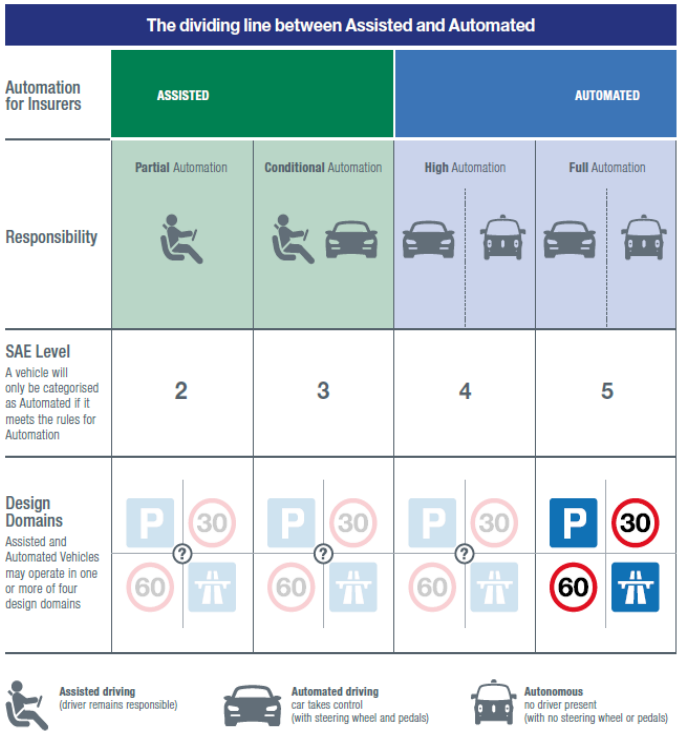
November 2018

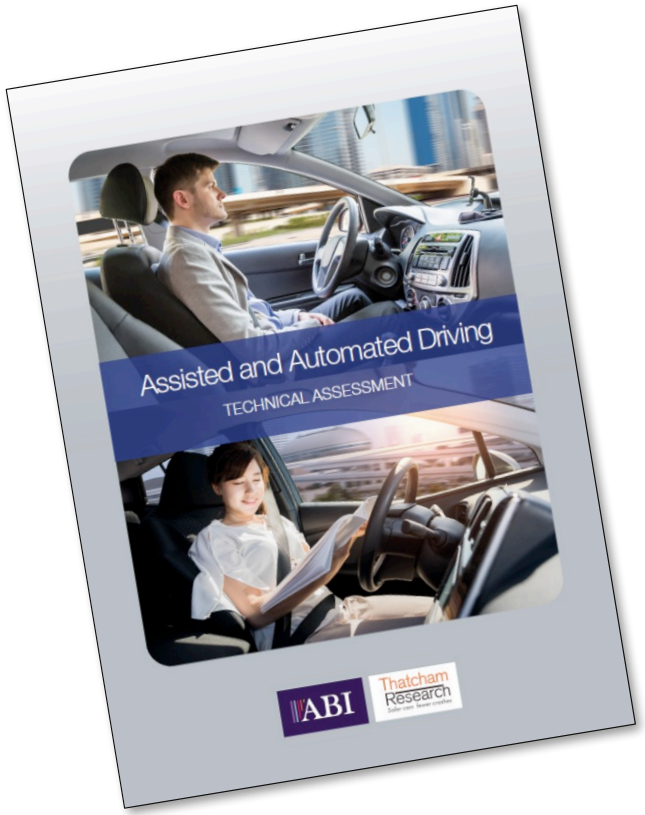
Thatcham Research

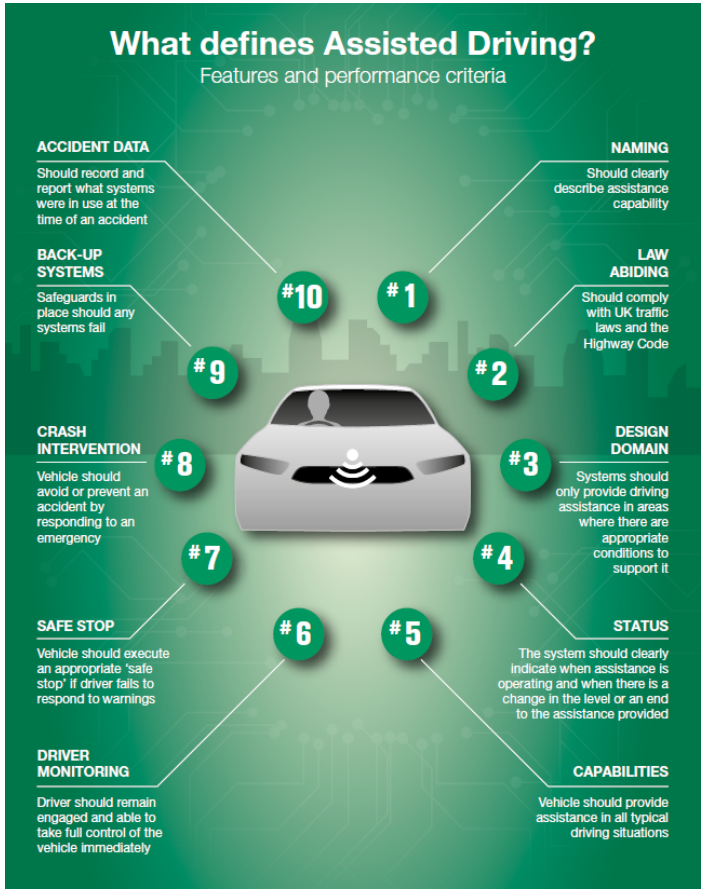
SAFER CARS. FEWER CRASHES

Assisted and Automated Foundation

- Documents to communicate the Insurers Position







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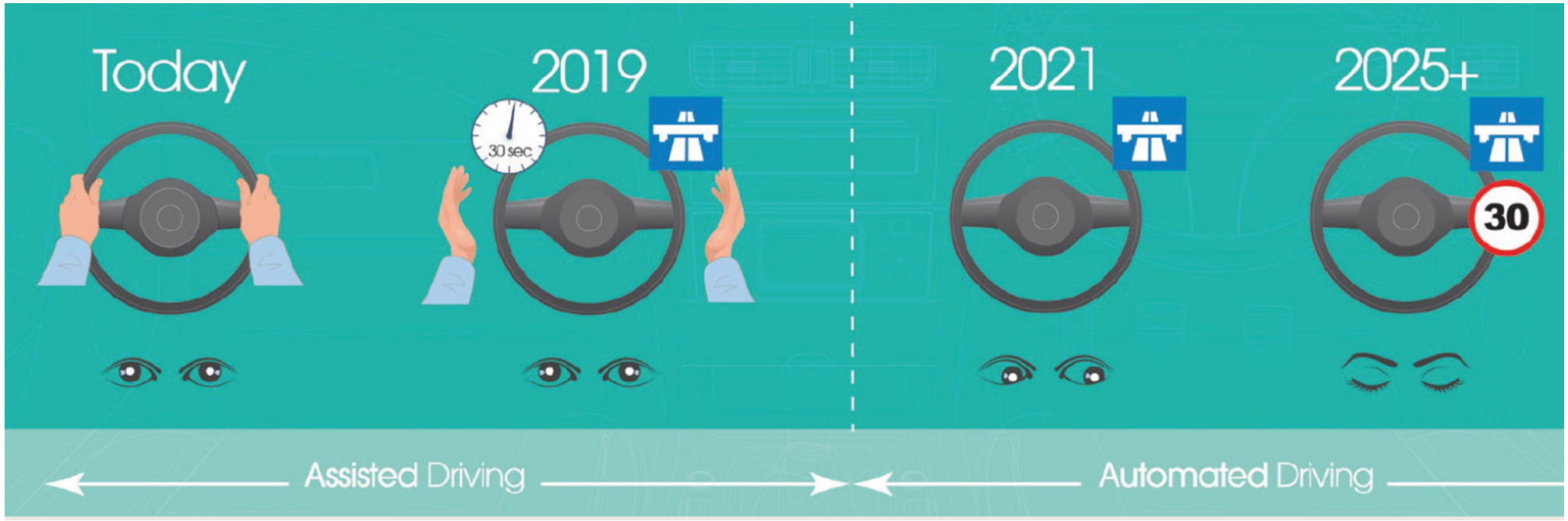
Rating AD Technology

- Part 1 – 2018+ Assisted Driving Technology



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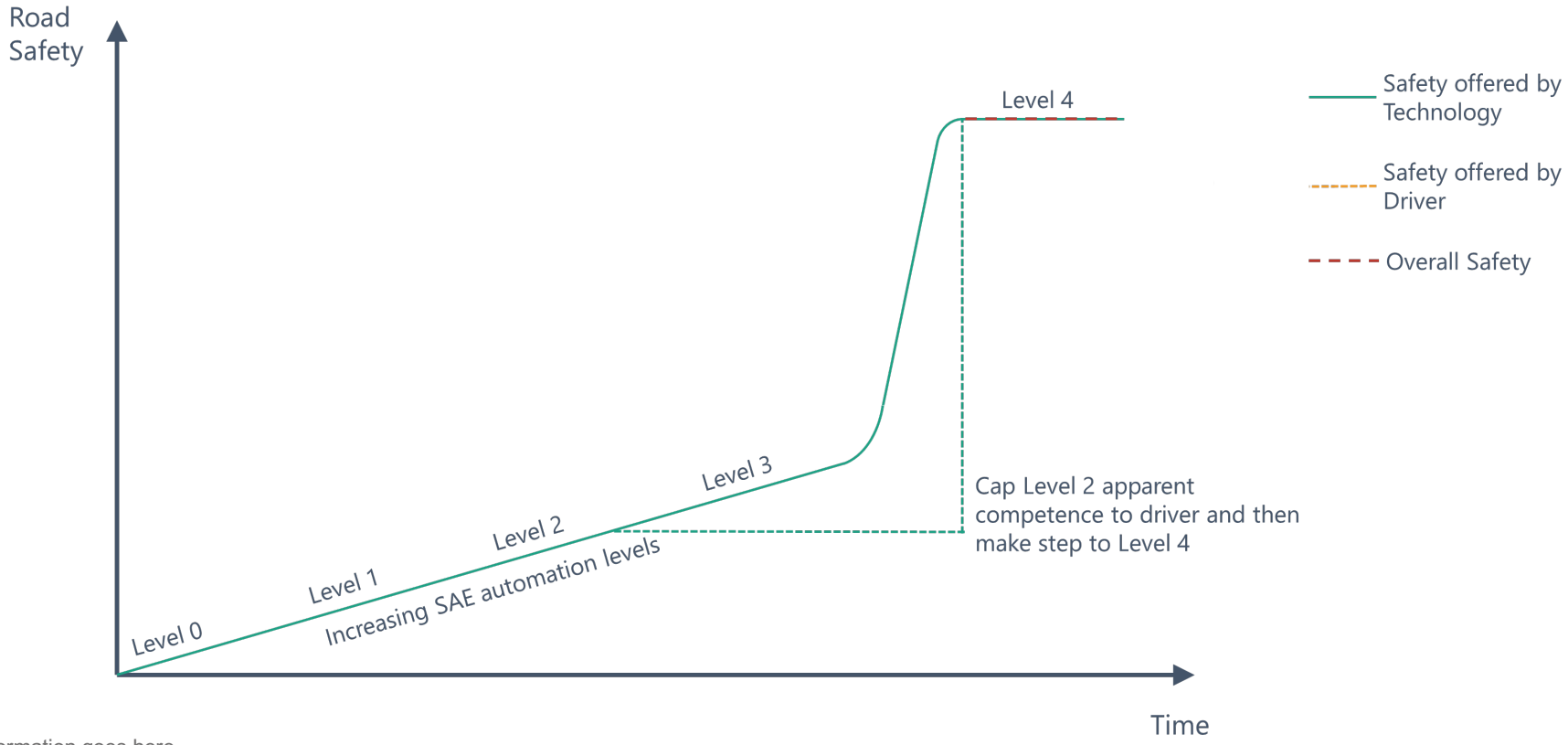
Impact of Automation on Safety



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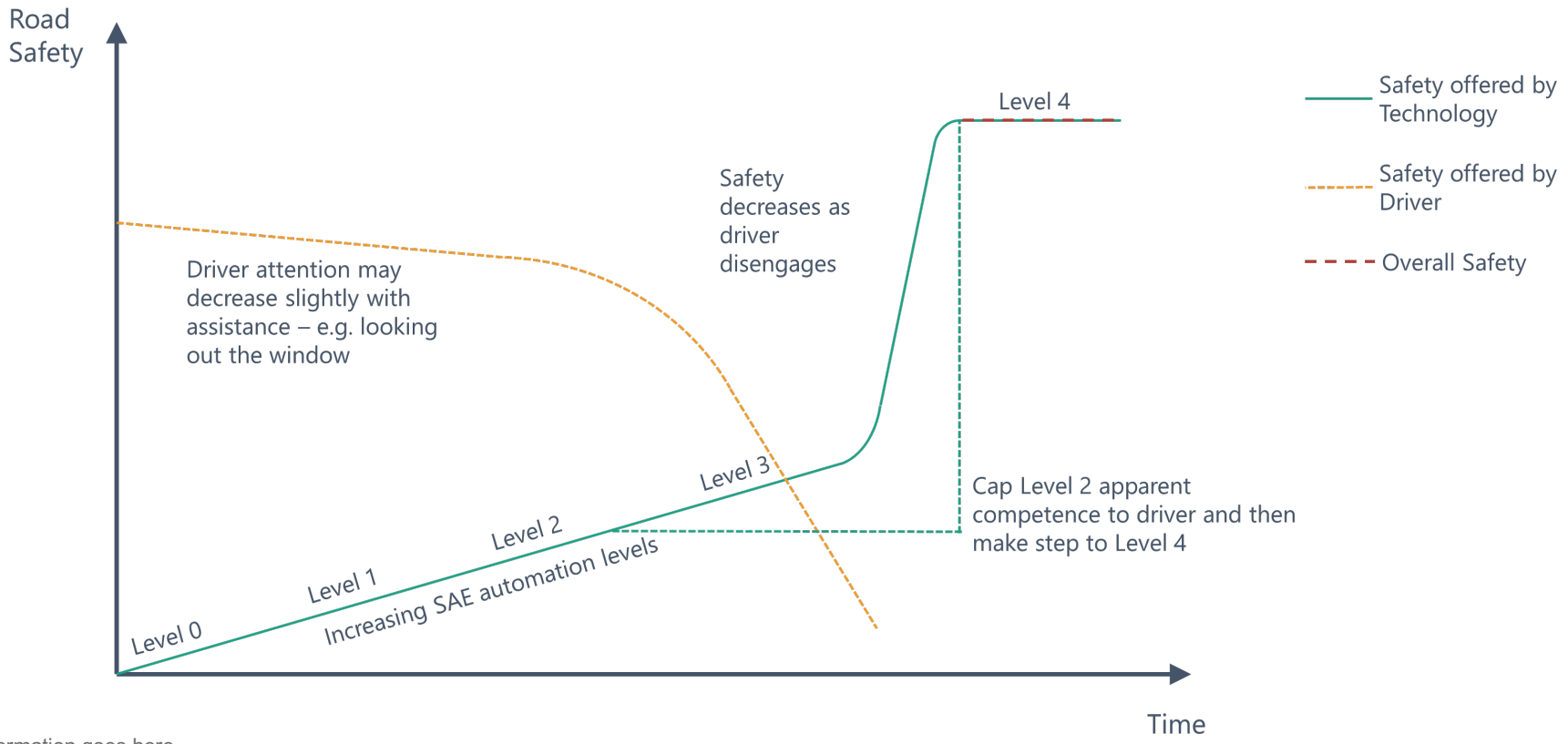
Impact of Automation on Safety



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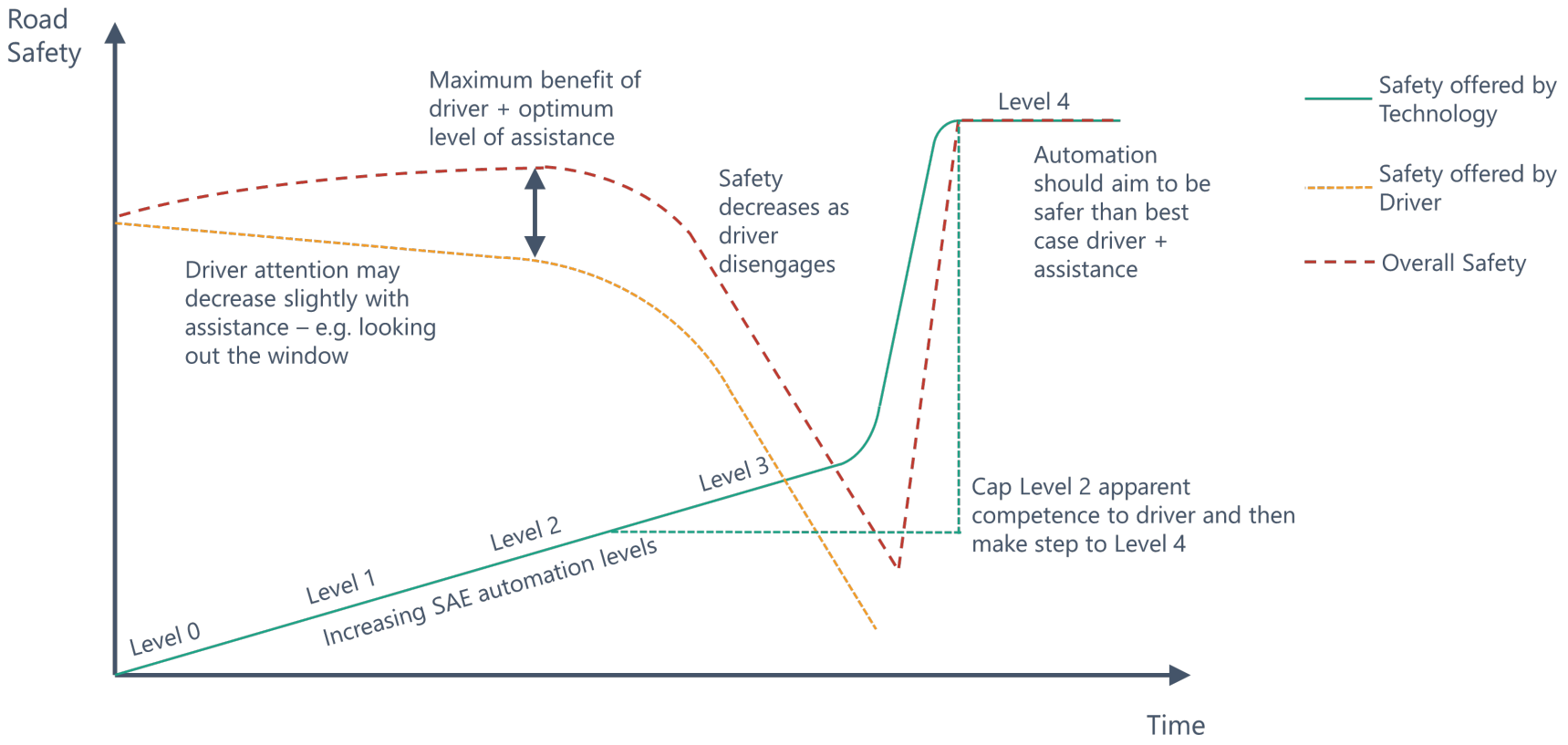
Impact of Automation on Safety



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Thatcham AD Assessment Process

Rating AD car tech

Desk-based

Review handbook to determine functionality, performance, limitations, driver responsibility etc. for:

- Naming
- Law Abiding
- Design Domain
- Status
- Capabilities
- Driver Engagement
- Driver Monitoring
- Crash Intervention
- Back-Up Systems
- Accident Data

Understand system

On the public road

Evaluation in accordance with Highway Code maintaining road safety

Verifying performance interacting with:

- Road environment
- Other vehicles and road users
- Driver

At the test track

Safe, controlled test environment for attempting and verifying performance in:

- Illegal driving manoeuvres
- Unsafe/near miss/emergency situations
- Driver disengagement

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Thatcham AD Assessment Fleet

- The first Rating of Assisted Driving Technology

Audi A6

BMW 5

DS 7

Ford Focus

Hyundai Nexo

Mercedes C

Nissan Leaf

Tesla S

Toyota Corolla

Volvo V60

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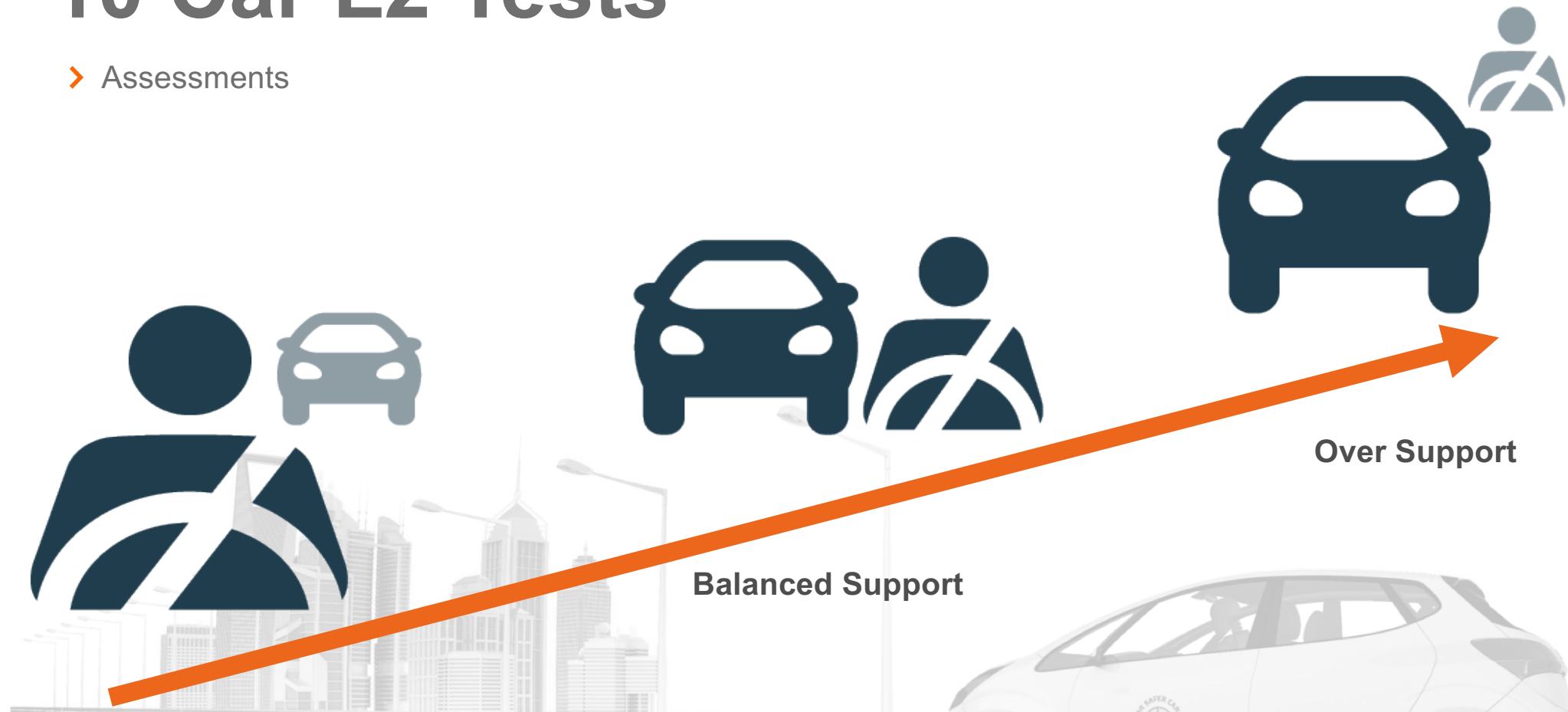
10 Car L2 Tests

- Assessments



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Testing Assisted Driving

- Basic test procedures

System Name

Official Media

System Features

User Manual

Stationary Car

Slower Moving Car

Braking Car

Cut-in

Cut-out

Obstacle Avoidance

Steering In S-curve

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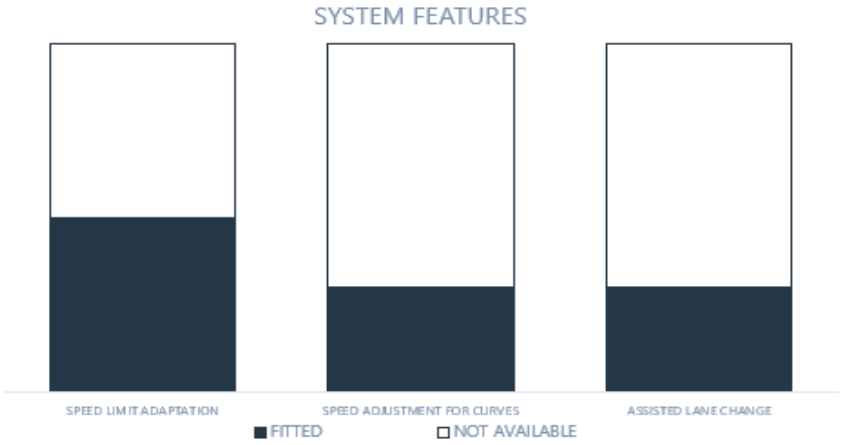
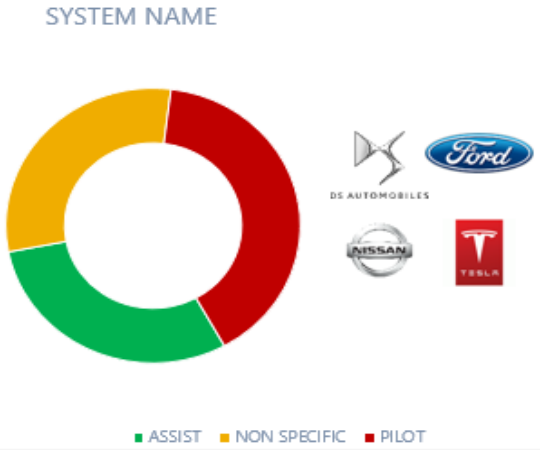
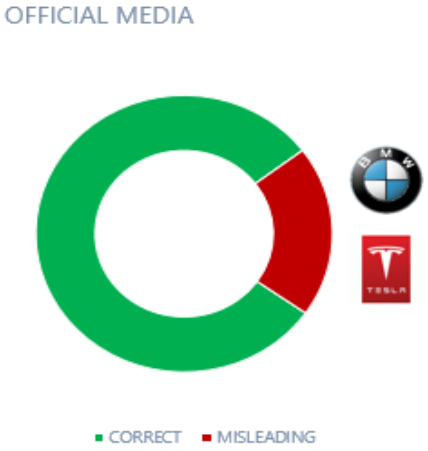
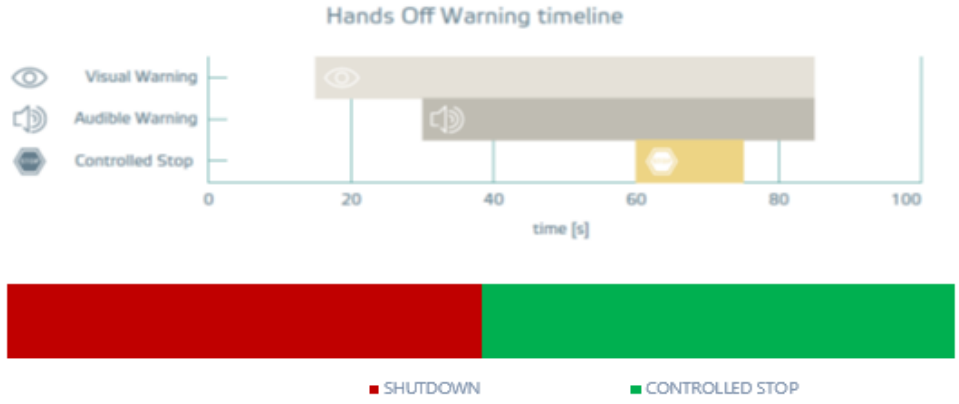
HMI

2020-25


SYSTEM FEATURES
SPEED LIMIT ADAPTATION
SPEED ADJUSTMENT FOR CURVES
ASSISTED LANE CHANGE
FITTED
NOT AVAILABLE


SYSTEM NAME
DS AUTOMOBILES
Ford
NISSAN
TESLA
ASSIST
NON SPECIFIC
PILOT

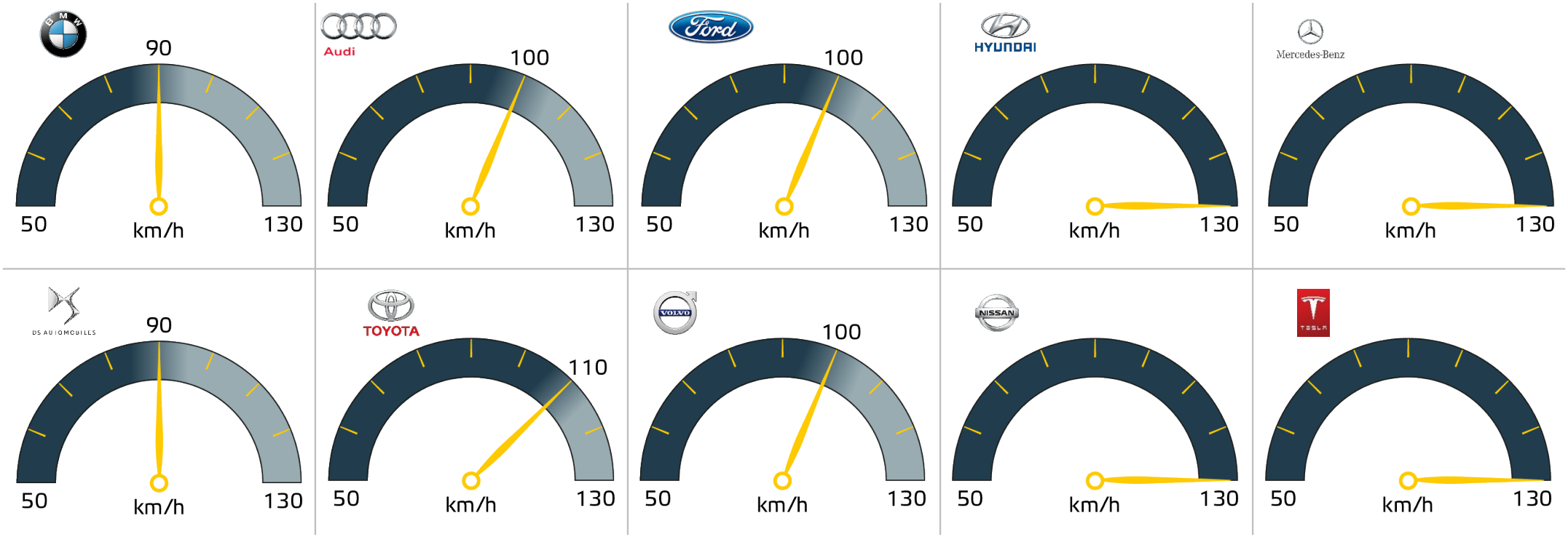

OFFICIAL MEDIA
TESLA
CORRECT
MISLEADING


Hands Off Warning timeline
Visual Warning
Audible Warning
Controlled Stop
0
20
40
60
80
100
time [s]
SHUTDOWN
CONTROLLED STOP

Adaptive Cruise Control

Slow Moving Car

EURO NCAP FOR SAFER CARS
www.euroncap.com
2020-25



ACC DESIGN LIMIT | ACC BRAKING | EMERGENCY INTERVENTION | NO RESPONSE

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Adaptive Cruise Control

Stationary Car

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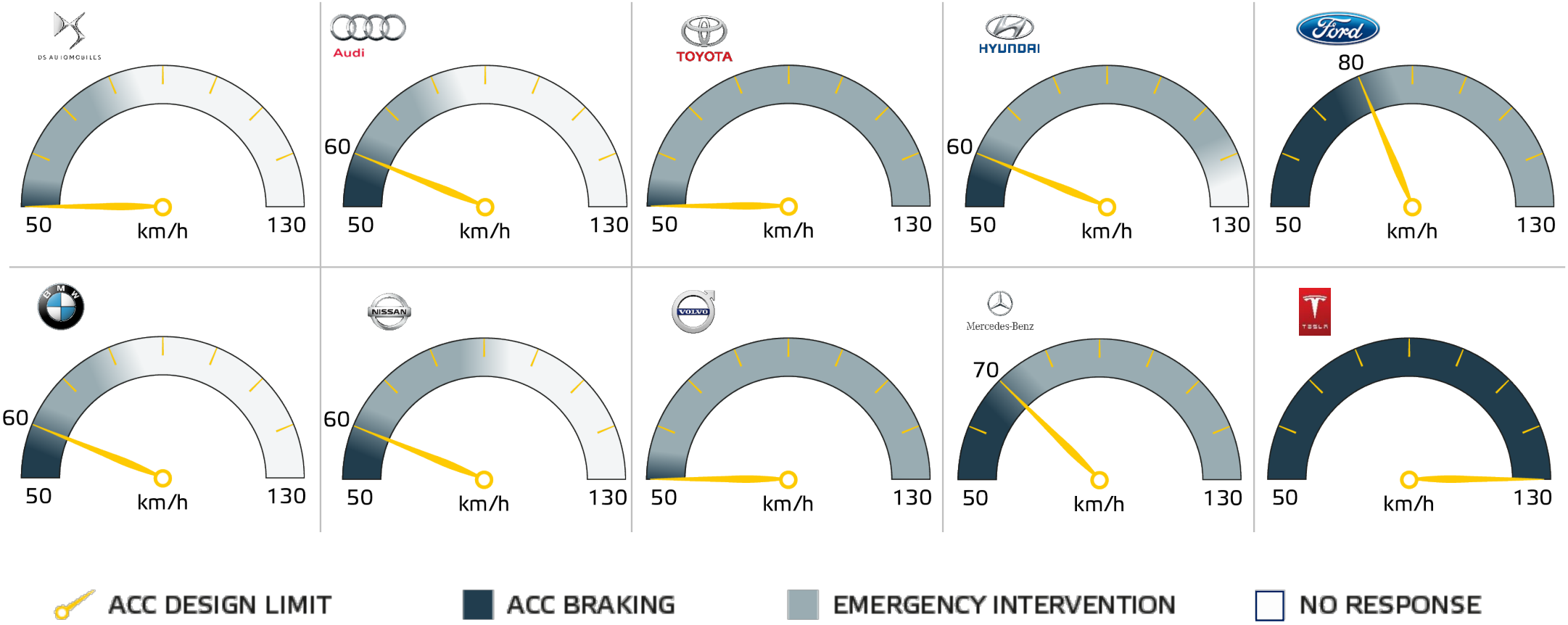

ACC DESIGN LIMIT | ACC BRAKING | EMERGENCY INTERVENTION | NO RESPONSE

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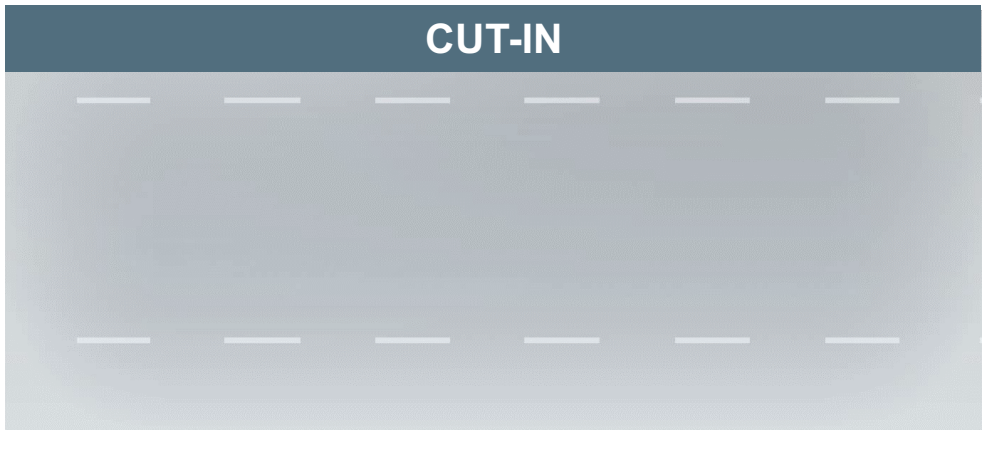
Adaptive cruise control

2020-25



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Steering Assist

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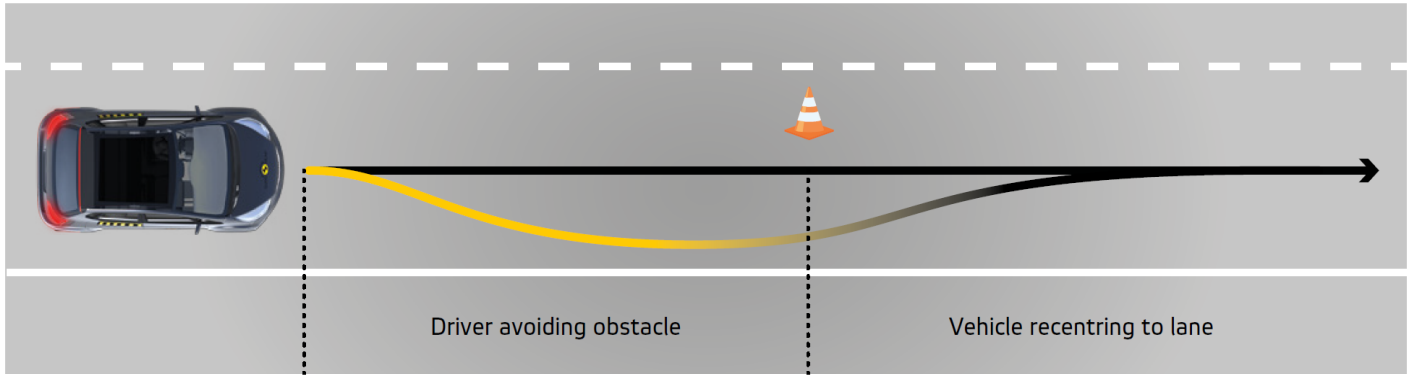
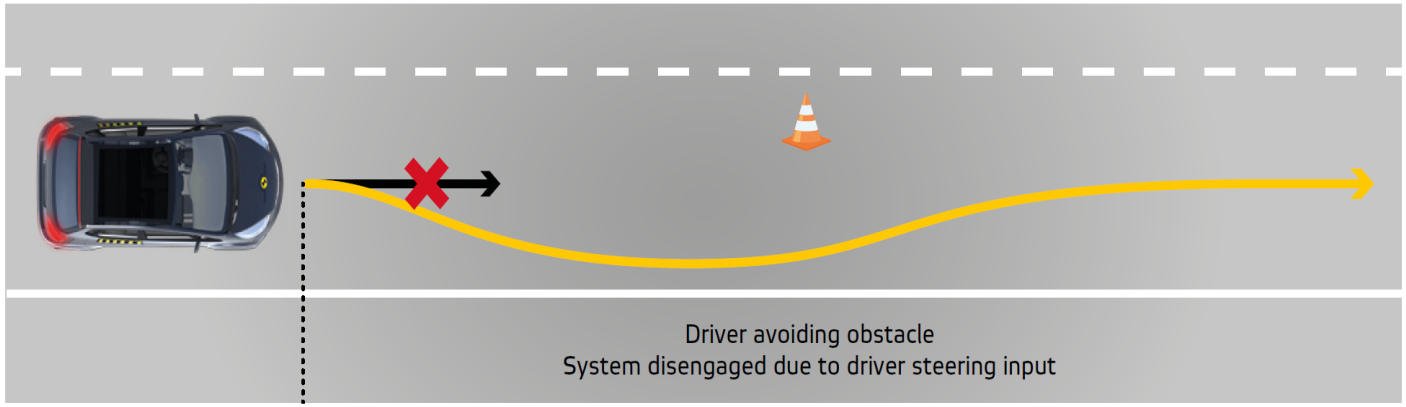
Co-operational Driving



Audi
DS AUTOMOBILES
Ford
HYUNDAI
Mercedes-Benz
NISSAN
TOYOTA
VOLVO



TESLA

SOURCE: information goes here

10 Car L2 Tests

- Summary

DS AUTOMOBILES

Audi

Mercedes-Benz

Evaluating Assisted Driving Technologies

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Thank you

Thatcham Research

SAFER CARS. FEWER CRASHES

ROUTES TO SUCCESS

ACHIEVING A STEP CHANGE IN ROAD SAFETY

Road Safety GB

#NRSC2018