Thatcham Research
Automotive Risk Intelligence

Future Technologies: the risks to vehicle safety

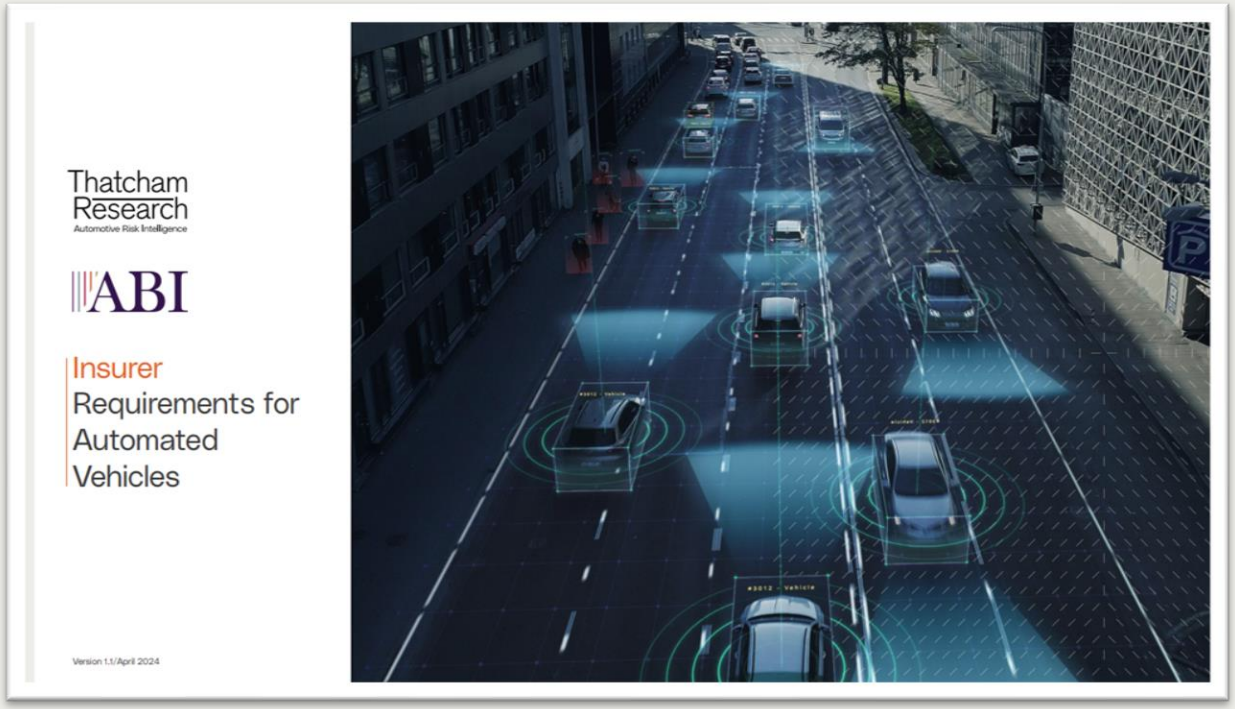
11.03.25

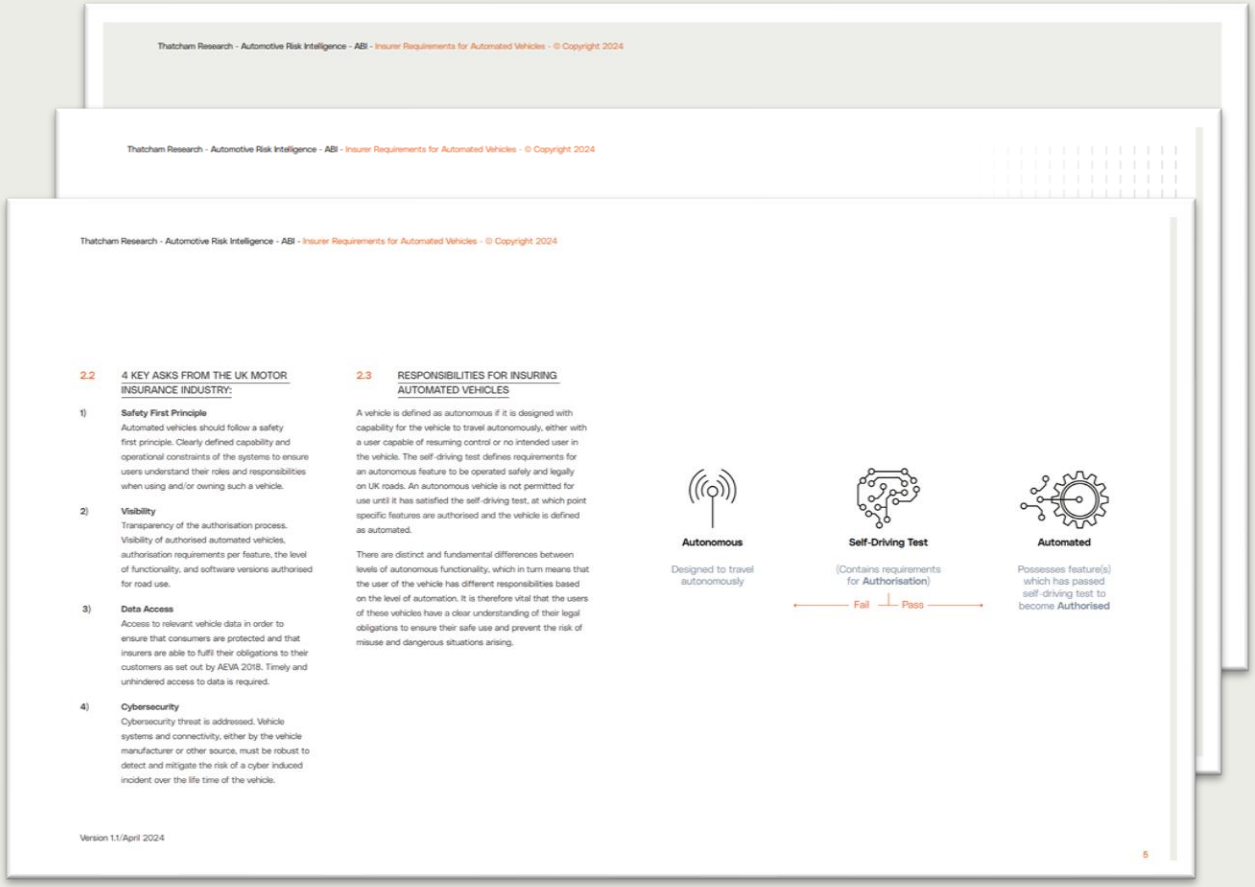
Tom Leggett - Vehicle Technology Manager

Risk 1:

Automation:
-Limited access to data will diminish trust

Insurer Requirements for Automated Vehicles





Risk 2:

Hands off, Eyes on:

-L2.99

-Uncertain benefits

Hands off, Eyes on

Goal:

Compare continuous eyes-off road time in manual driving vs **hands-on and hands-off** assisted driving using Ford BlueCruise - a L2 ADAS feature allowing hands-off driving on motorways.

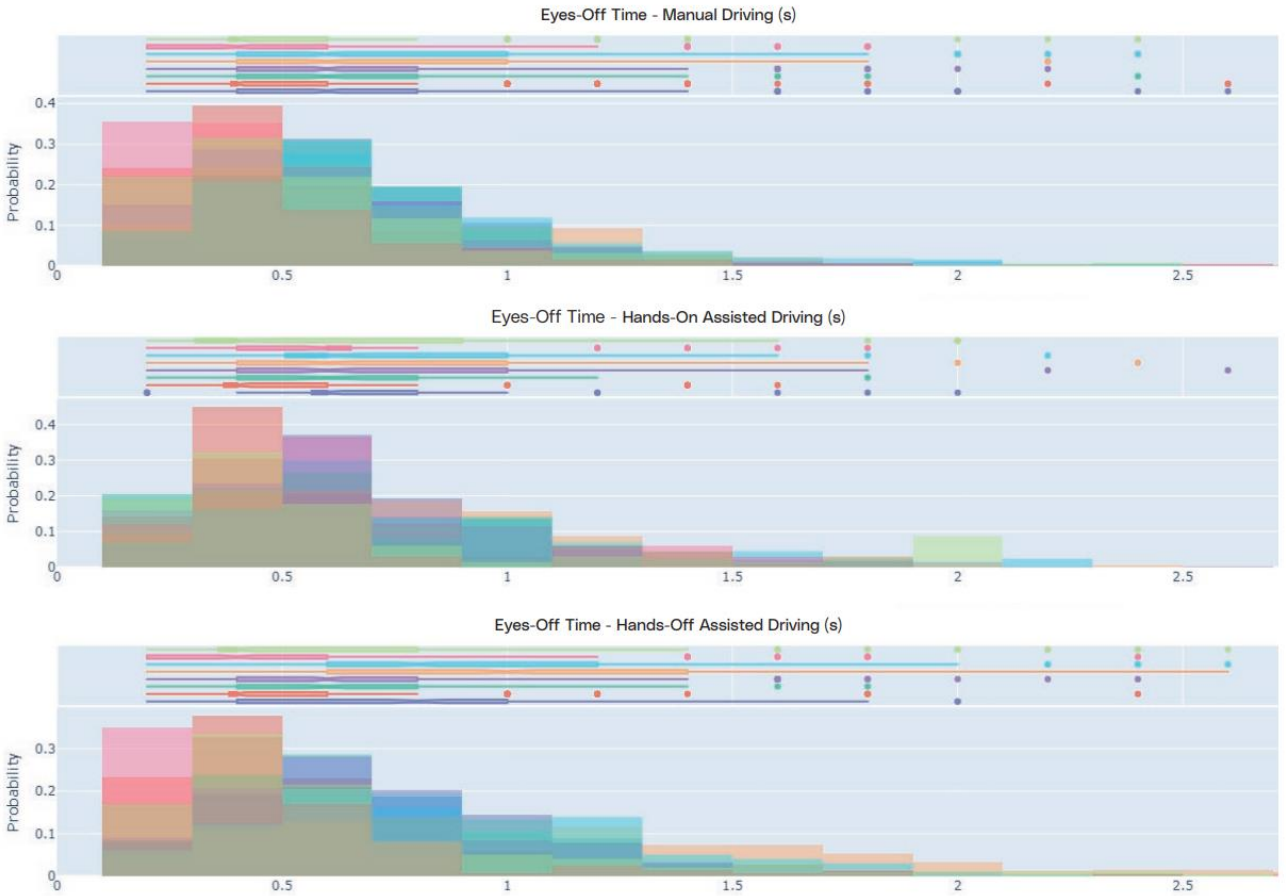
Assess if the new technology of **hands-off, eyes-on** assisted driving presents **an increased probability of driver disengagement**.

Scope:

Participants: 12
Distance: 4618km
Test drive: 472km
Commuting: 1566km
Business Travel: 2580km

User Behaviours Reference Route

Reference Route - Drivers 1-8



No significant difference observed in eyes-off road time distributions between driving modes.

Driver 1 Driver 2 Driver 3 Driver 4 Driver 5 Driver 6 Driver 7 Driver 8

Warning Type	#
Eyes-Off Road	2
Hands-Off Wheel	3

Driver Experience Level	
Never use ADAS	1
Use ADAS but not hands-on assisted driving	4
Use hands-on assisted driving but not BlueCruise	2
Use BlueCruise	1

Risk 3:

ADAS: Real-world robustness

ADAS Robustness

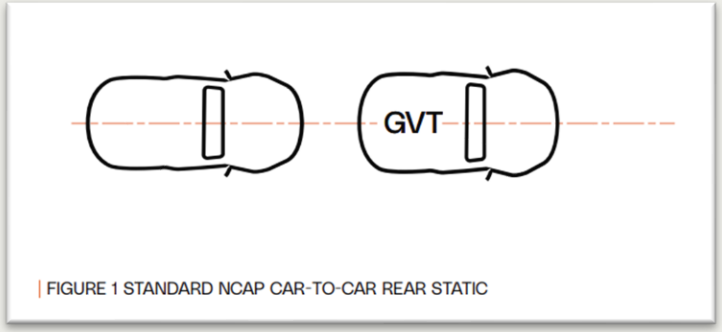


FIGURE 1 STANDARD NCAP CAR-TO-CAR REAR STATIC

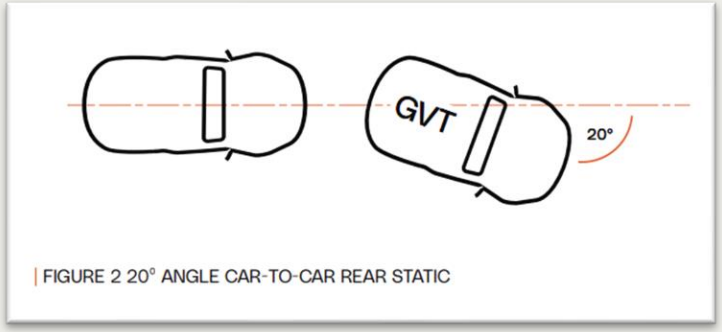


FIGURE 2 20° ANGLE CAR-TO-CAR REAR STATIC

	40km/h CCRs Standard NCAP (morning runs)			40km/h CCRs Standard NCAP re-runs (afternoon)*			40km/h CCRs 20° Angle		
Run #	Result	Impact Speed (km/h)	FCW TTC (s)	Result	Impact Speed (km/h)	FCW TTC (s)	Result	Impact Speed (km/h)	FCW TTC (s)
1	Avoid	0	2.43	No Response	40	hgv detected	No Response	40	hgv detected
2	Avoid	0	2.39	No Response	40	hgv detected	No Response	40	hgv detected
3	Mitigate	6.28	2.35	Avoid	0	2.5	No Response	40	hgv detected
4	Avoid	0	2.37	Avoid	0	2.53	No Response	40	
5	Mitigate	12.99	2.33	Avoid	0	2.43	No Response	40	hgv detected
6	No Response	40		Mitigate	5.6	2.46	No Response	40	hgv detected
7	No Response	40		Avoid	0	2.48	Avoid	0	2.43
8	No Response	40		Avoid	0	2.15	Mitigate	6	2.08
9	No Response	40		Avoid	0	1.79	Avoid	0	2.07
10	No Response	40		Avoid	0	2.46	Avoid	0	2.26
11	Mitigate	17.6	2.36	Avoid	0	2.09	Avoid	0	2.19
12	Avoid	0	2.43	Mitigate	9.75	2.34	Mitigate	10 (est)	2.3
13	Avoid	0	2.08	Avoid	0	2.34	Avoid	0	2.25
14	Avoid	0	2.43	Avoid	0	2.44	No Response	40	hgv detected
15	No Response	40		Avoid	0	2.5	No Response	40	hgv detected
16	No Response	40		Avoid	0	2.38	No Response	40	hgv detected
17	No Response	40		Avoid	0	2.43	Mitigate	8	1.7
18	No Response	40		Avoid	0	2.53	Mitigate	37 (est)	1.72
19	No Response	40		Avoid	0	2.4	No Response	40	car detected
20	Avoid	0	2.4	Avoid	0	2.48	No Response	40	hgv detected
21	Mitigate	15 (est)	2.45	Avoid	0	2.33	No Response	40	car detected
22	No Response	40		Avoid	0	2.36	Mitigate	30 (est)	1.56
23	No Response	40		Mitigate	7.4	2.37	Avoid	0	2.27
24	No Response	40		Avoid	0	2.36	Avoid	0	2.11
25	Avoid	0	2.41	Avoid	0	2.36	Mitigate	38 (est)	1.59

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Thank you

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