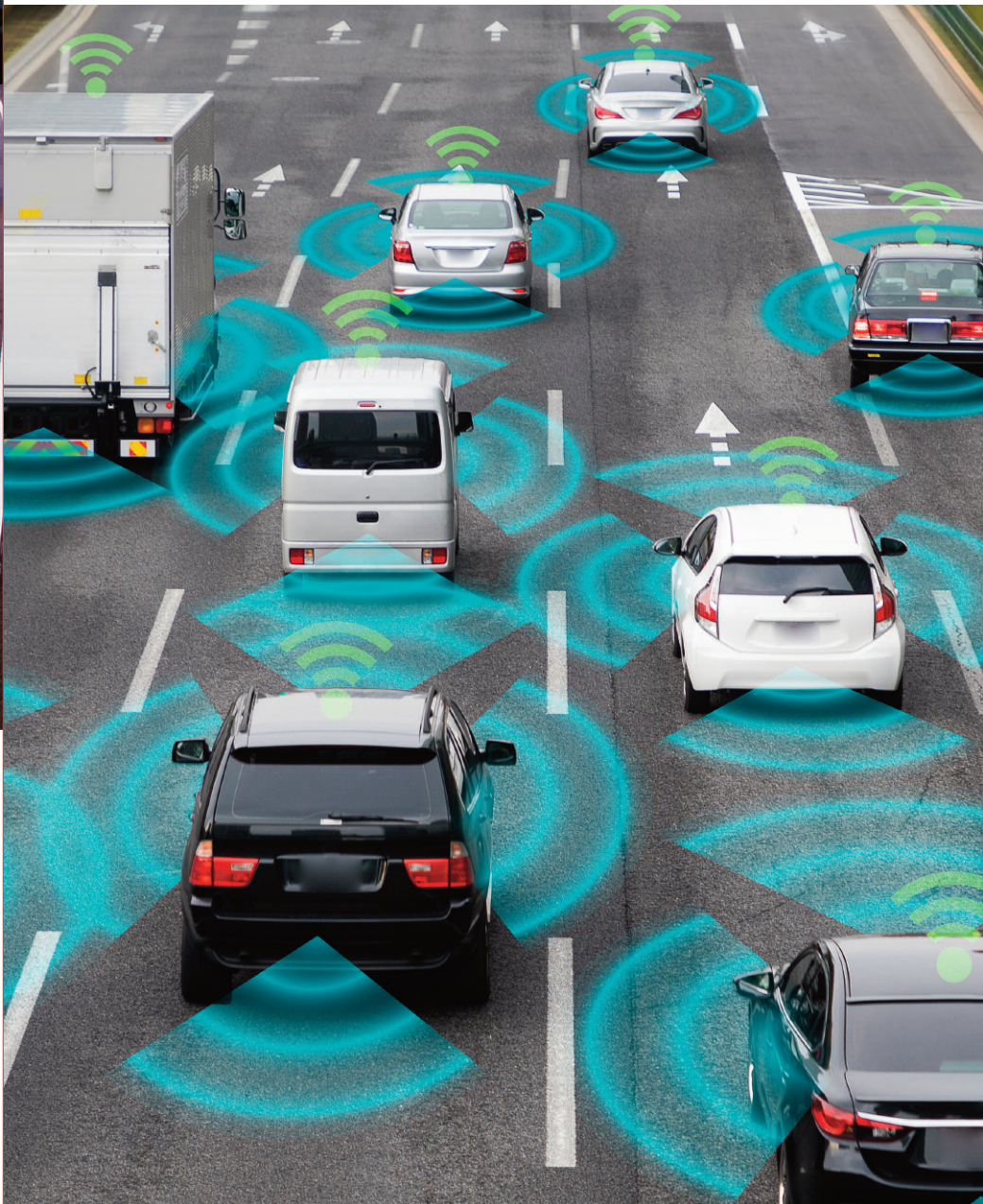


# Direct Line & Brake Reports on Safe Driving

## Advanced Driver Assistance Systems



Produced by:



Working in partnership with:



**direct line**

This is a survey report on safe driving, by Brake and Direct Line. Brake publishes regular survey reports on road safety throughout the year. This report is based on a survey of 2,010 car drivers, conducted by an external research agency, Surveygoo, in 2018.



**We are experiencing an era of radical technological change, reshaping our world in the way we engage with each other, the way we work and the way in which we move about.**

Vehicle technology is at the forefront of this change, advancing at pace and proffering revolutions in connectivity, sustainability and safety. Legislators all over the world are attuned to this shift and are fast realising that road death is preventable and unjustifiable and so are moving to adopt a Vision Zero approach to our roads – the goal of achieving zero road deaths and serious injuries.

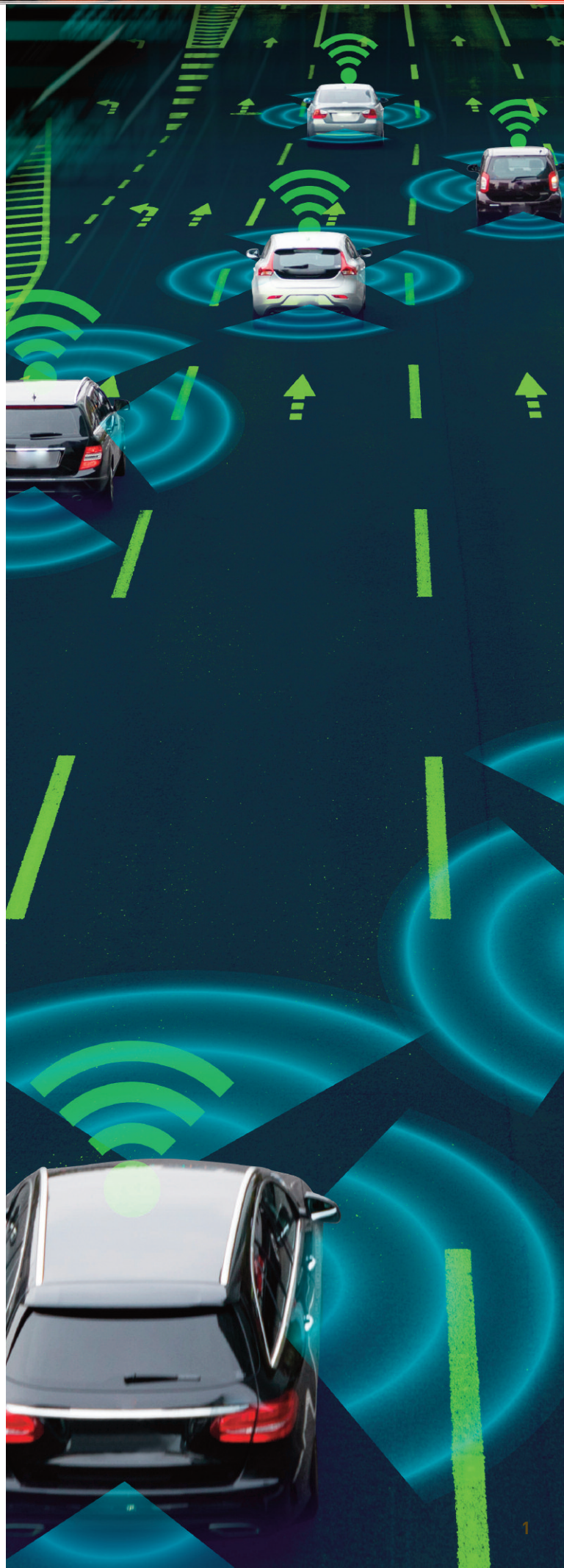
Driverless vehicles are the ultimate destination for motorised transport, but there are engineering and software developments, along with legal and social hurdles to overcome before they will be widely used on our streets. However, vehicle technologies that are developed on the path to a driverless world can help to deliver transformational improvements in safety and these are available now. These technologies are known as Advanced Driver Assistance Systems, or ADAS. Simply put, ADAS are intelligent, or active, systems which support the driver, primarily for the function of safety.

This report is timely in its investigation and analysis of drivers' views on three of the technologies at the forefront of the ADAS revolution, Autonomous Emergency Braking (AEB), Intelligent Speed Assistance (ISA) and Lane Keep Assistance (LKA). These technologies form part of a package of measures being deliberated on by European legislators with the ambition of delivering lasting change for EU road safety. This report provides a new and insightful rationale for the need for legislation to mandate these technologies on new vehicles, highlighting that whilst drivers want safety technologies, they are largely unwilling to pay extra for their protection. I hope the findings within this report resonate and, by mandating relevant and cost effective technologies on new vehicles, we can make the next step-change with respect to safety of our roads.



**Richard Cuerden**  
Brake trustee (Director, TRL Academy)

# TRL





**We are currently at a stage in vehicle manufacturing, technology development and innovation not seen since Henry Ford's model T made mass ownership of motor vehicles a reality. This success was dependent on revolutionary market changing manufacturing processes.**

Many commentators believe we are now experiencing another revolution. However, instead of innovation focused on affordability and accessibility, the innovation now is around usability, driver experience and safety.

As one of the UK's leading motor insurers, we see how vehicles are becoming increasingly sophisticated at an unprecedented pace. Today's drivers are presented with a range of safety features that previous generations could only have dreamt of.

Advanced Driver Assistance Systems (ADAS) are the very latest development, signalling the start of a manufacturing revolution that will lead to greater autonomy. Modern day cars are fitted with a range of sensors such as radar, LIDAR and cameras to improve safety and the driver experience, which is welcomed. As cars become safer, we expect to see fewer collisions overall and less lives lost on our roads.

But the pace of technological change means we will see more innovation, not less and this presents new challenges for today's drivers. While innovation intensifies, understanding the limitations, as well as the benefits, of new technology will become more pressing for drivers.

While many motorists see the benefits of ADAS, it is rarely considered a top priority when purchasing a car, particularly as the feature is often optional with an additional price tag attached. However, research and development costs are significant and it's important to enable and sustain this age of motor vehicle innovation and ensure a balance is met. Manufacturers still need to be able to innovate and vehicles to remain affordable ensuring that motorists are able to make informed choices.

This important report provides a mixed picture. There is clearly appetite for ADAS features but overall awareness of what they can offer today's driver is perhaps not as widespread as it could be. And while people buy cars for a number of reasons, the safety benefits of ADAS do not motivate consumers as much as other factors when making a purchase.

It underlines the importance of explaining the benefits that new technology will bring so drivers can truly appreciate their potential. The future of manufacturing will see greater exposure to tech and so educating tomorrow's consumers about how it can enhance their driving experience will go a long way to improving road safety.



**Neil Ingram**  
Head of Motor Product Management  
Direct Line Insurance



**direct line**





**Mary Williams OBE**, chief executive, Brake

Safe vehicle standards is a key component of a 'safe systems' approach to road safety, and one of the five key pillars of the Decade of Action for Road Safety 2011–2020.

There are 37 million vehicles on the road in the UK alone<sup>1</sup> and history teaches us that improvements in their engineering, for safety purposes, can play a massive role in saving lives. The most obvious historical example is seat belts.

In 1965, the Government mandated that car manufacturers install seat belts. Seat belt wearing was then made mandatory in 1983, for drivers and front seat passengers in cars and light vans. Following the law change, there was a 25% reduction in driver fatalities and a 29% reduction in front seat passenger fatalities,<sup>2</sup> saving thousands of lives.

Since then, the vehicle manufacturing industry has made massive and intelligent strides in developing safety features, inclusive of 'passive systems' that help mitigate the effects of a crash (such as air bags) to, increasingly, 'active systems' that prevent collisions (such as emergency braking systems), often referred to as Advanced Driver Assistance Systems or ADAS. There are a number of reasons for these advances, including the spotlight that has been shone on safety by campaigning organisations, inclusive of Brake and others, and including vital initiatives such as the New Car Assessment Programme, which gives cars star ratings for safety.

A main and current reason for rapid developments in ADAS is the race to produce autonomous vehicles, with the aspiration that such vehicles will predict and prevent crashes far more effectively than a human. Technological advances include Autonomous Emergency Braking (AEB), which means a vehicle can brake automatically on identification of a hazard; Intelligent Speed Assistance (ISA), which controls the maximum speed of a vehicle to below any given speed limit zone it is travelling within; and Lane Keep Assistance (LKA), which prevents a vehicle drifting out of lane. These are just a few of the ADAS technologies that can play a vital role in stopping deaths and injuries, and which have been tried and tested.

Vehicle standards legislation, however, is lagging far behind industry developments. Consequently, urgent safety advances that have been proven to work, are, sadly, often not fitted in many vehicles.

The UK is currently in the midst of a troubling period of road safety stagnation. After decades of improvements, since 2012 the number of UK road deaths has plateaued and reached a six-year high in 2017 at 1,793 deaths (the 2010–14 average was 1,799). A similar story can be told for serious injuries.<sup>3</sup> Mandating vehicle design improvements, inclusive of ADAS, would undoubtedly result in a decline in road deaths again. Such a move forms part of the EU Commission's Third Mobility Package proposals, with analysis from TRL (the UK-based Transport Research Laboratory) showing that the package's proposed vehicle safety measures could prevent 24,794 deaths in the EU, across all vehicle categories, between 2022 and 2037.<sup>4</sup>

This report seeks to play a role in the debate by identifying and analysing the current public perception of ADAS among UK drivers. Sadly, it appears that safety is still a low priority for many drivers when choosing a car – which further indicates why legislation, requiring manufacturers to fit safety as standard, is so important at this time to save lives.



# Direct Line & Brake Reports on Safe Driving: Advanced Driver Assistance Systems



## ADVANCED DRIVER ASSISTANCE SYSTEMS (ADAS)

Brake asked 2,010 car drivers various questions about ADAS. The survey was carried out online by Surveygoo in 2018.

### Question 1

**In Question 1, we asked drivers what they would consider to be most important when buying a car.**

More than half of drivers (56%) considered price and make/model to be their top priority when buying a car, with just 12% opting for safety features. Comparing across all age groups, young people aged 18–25 were least likely to rank safety features highest, with only 7% saying it would be their top priority.

Safety features was ranked as the lowest priority of eight choices by 6% of all drivers and by 10% of those aged 18–24.

These findings indicate that the vast majority drivers do not consider safety a primary concern, and younger drivers in particular consider safety of lower importance when buying a car.

**Q1. What do you consider to be most important when buying a car?**

Highest priority choice	Total	18–24	25–34	35–44	45–54	55–64	65+
Price	36.07 %	30.77 %	25.41 %	36.25 %	37.76 %	41.31 %	35.93 %
Make/ model	19.55 %	16.24 %	20.08 %	16.62 %	20.41 %	17.79 %	23.57 %
Fuel economy	13.08 %	11.97 %	11.89 %	10.57 %	14.80 %	13.50 %	13.96 %
Safety features	11.59 %	6.84 %	13.11 %	10.27 %	7.91 %	12.88 %	14.87 %
Cost of insurance	9.40 %	19.66 %	16.39 %	12.39 %	8.67 %	6.75 %	4.12 %
Emissions	5.02 %	9.40 %	7.79 %	5.74 %	4.08 %	3.89 %	3.89 %
Style/ aesthetics	3.58 %	2.56 %	2.05 %	6.65 %	4.59 %	2.66 %	2.52 %
Power/ speed	1.69 %	2.56 %	3.28 %	1.51 %	1.79 %	1.23 %	1.14 %

Lowest priority choice	Total	18–24	25–34	35–44	45–54	55–64	65+
Power/ speed	26.42 %	15.19 %	19.32 %	21.81 %	23.91 %	31.85 %	31.27 %
Emissions	24.38 %	22.78 %	20.45 %	28.81 %	25.93 %	25.43 %	21.29 %
Style/ aesthetics	20.50 %	18.99 %	16.48 %	16.46 %	21.21 %	19.26 %	26.15 %
Cost of insurance	10.50 %	11.39 %	13.64 %	11.11 %	10.77 %	7.90 %	11.05 %
Make/ model	6.87 %	10.13 %	9.09 %	8.64 %	7.41 %	6.42 %	4.04 %
Safety features	6.05 %	10.13 %	9.09 %	4.12 %	6.73 %	6.17 %	4.31 %
Price	2.74 %	3.80 %	5.68 %	5.35 %	1.35 %	1.98 %	1.35 %
Fuel economy	2.55 %	7.59 %	6.25 %	3.70 %	2.69 %	0.99 %	0.54 %

### Question 2–4

**In Questions 2–4, respondents were asked about three ADAS technologies: Autonomous Emergency Braking (AEB), Lane Keep Assistance (LKA) and Intelligent Speed Assistance (ISA).**

They were first asked about their awareness of the technology (Do you know what ... is?) and were then provided with a written description of the technology. Respondents were then asked if this technology was fitted to their car and if they were buying a new car, would they spend more to ensure it was fitted with this technology.

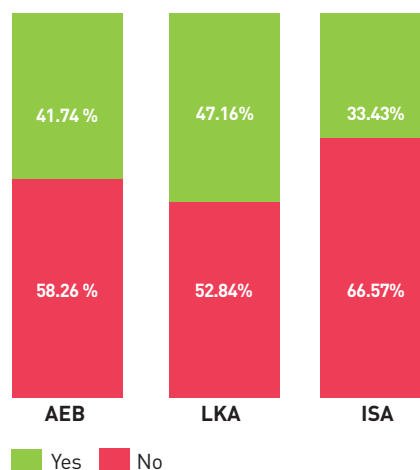
For the three technologies surveyed, consistent trends emerged:

- More than half of respondents did not know what the technology was;
- More than half of respondents did not think their cars were fitted with the technology (to their knowledge); and
- in the hypothetical scenario of buying a new car, more than half of respondents said they would not spend more or were not sure whether they would spend more, to ensure it had the technology.

These findings indicate that more than half of drivers are not aware of these three ADAS technologies, that these technologies have not yet achieved widespread penetration in the vehicle parc and that, at present, less than half of drivers would be willing to pay more to have these technologies installed in a new car. It is also possible to draw some correlations between these findings; for example, a lack of knowledge of the technologies implies that their safety benefits are also not known, hence a lack of desire to pay more to have them installed.

This lack of desire to pay more for the technology indicates that voluntary action by consumers will not be widespread. If the goal is full penetration of these technologies in the vehicle parc, mandating their fitment – as has been proposed by the European Commission due to their potential safety impact (see boxout) – may be necessary. However, these findings also show that for each technology surveyed, the percentage of those willing to pay more to have the technology on a new car, was far greater than the percentage who thought they had this technology on their car already (+27% for AEB, +32% for LKA, +27% for ISA). This indicates that although leaving the technology adoption to market forces will likely not achieve full penetration across the vehicle parc, there would still likely be some increase through new car sales (or, additionally, through manufacturers voluntarily fitting ADAS technologies in more models).

**Do you know what ... is?**

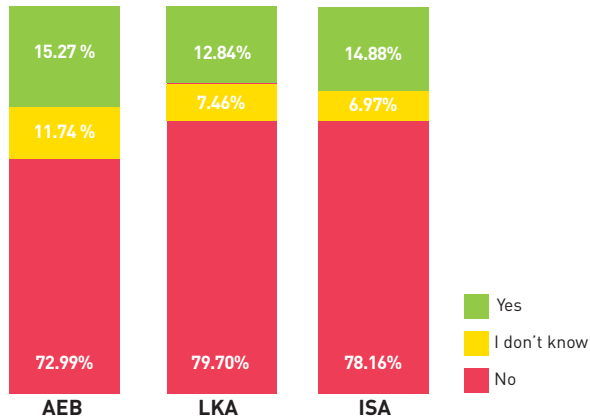




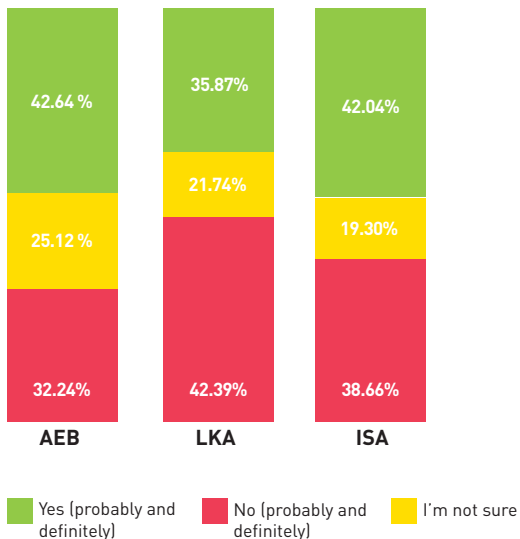
# Direct Line & Brake Reports on Safe Driving: Advanced Driver Assistance Systems



Is your car fitted with...?



If you were buying a new car, would you spend more to ensure it had ...?



## UK ROAD SAFETY AND HUMAN FACTORS

Improvement in Britain's road safety has stagnated, with 1,793 people killed on roads in Britain in 2017, the highest annual total since 2011.<sup>5</sup> Department for Transport statistics show that 64% of fatal crashes in 2017 (and 65% of serious crashes) have 'driver/rider error or reaction' as a contributory factor,<sup>6</sup> indicating that human factors are a primary reason for collisions and deaths and injuries on our roads. ADAS technologies can help reduce human error by preventing crashes and minimising the seriousness of injury/improving the chances of survival if a collision occurs.

## In Question 2, we asked drivers about Autonomous Emergency Braking (AEB).

The description of AEB provided to respondents was: *Autonomous Emergency Braking (AEB) is a system that combines sensing of the environment ahead of the vehicle with the automatic activation of the brakes, without driver input, to mitigate or avoid a crash. AEB detects the possibility of a crash, warns the driver and, if the driver takes no action, automatically applies the vehicle's brakes.*

More than half of drivers (58%) responded that they did not know what AEB is. Once they were informed what AEB is, with the above description of the technology, 88% gave a definite answer to the question 'Is your car fitted with AEB?', with just 12% still unsure.

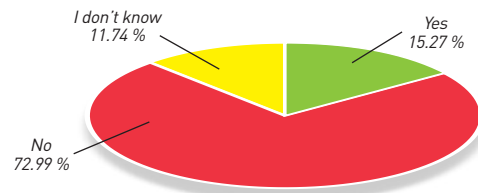
This large disparity (46%) between the number who said they know what AEB is (42%) and those that gave a definite answer to the question 'Is your car fitted with AEB?' (88%), after reading a description of the technology, indicates a lack of recognition of the technology's name, perhaps as a result of the variety of manufacturer trade names on the market (see boxout). It does, however, indicate that the vast majority of drivers (88%) think they know for sure whether or not their car has this technology.

15% of drivers stated that their car is fitted with AEB. This is double the percentage of cars in the UK parc with standard-fit AEB (6.9%),<sup>7</sup> indicating that a proportion of respondents to the survey paid for AEB as an optional extra, or answered incorrectly.

Q2a. Do you know what Autonomous Emergency Braking (AEB) is?

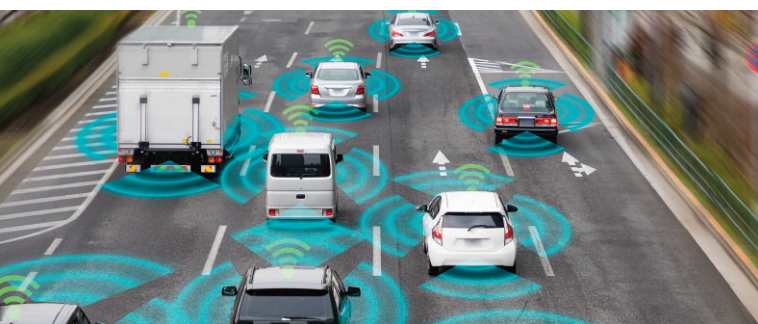
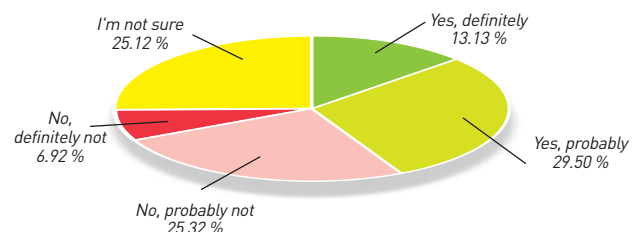


Q2b. Is your car fitted with AEB?



Nearly a third (32%) of drivers stated that they would definitely not or probably not spend more on a new car to ensure it had AEB, with an additional quarter (25%) unsure. Less than half of drivers (42%) said they would definitely or probably spend more on a new car to ensure it has AEB.

Q2c. If you were buying a new car, would you spend more to ensure it had AEB?



## Direct Line & Brake Reports on Safe Driving: Advanced Driver Assistance Systems



### GENERAL SAFETY REGULATION REVISION AND THE THIRD MOBILITY PACKAGE

Vehicle safety requirements are an EU competence and are detailed in two key documents, the General Safety Regulation (EC) No 661/2009<sup>8</sup> (or GSR) and Pedestrian Safety Regulation (EC) No 78/2009<sup>9</sup> (or PSR). The GSR covers most aspects of vehicle safety, such as crash testing, seat belt restraint systems, lighting, glazing, brakes, stability control systems, child seat anchorages such as ISOFIX and tyre safety. The PSR manages the requirements for vehicles in terms of the protection of pedestrians and other vulnerable road users that are struck by a vehicle on the road.<sup>10</sup> These regulations were last updated in 2009 and the EU has identified a need to revise them to help arrest the stagnation in road safety improvement.

In May 2018, the European Commission announced details of its Third Mobility Package,<sup>11</sup> with the objective of allowing all drivers across Europe to benefit from safer traffic, less-polluting vehicles and more advanced technological solutions; revisions of the GSR and PSR are included within this package. It is a wide-ranging initiative, including within it a target to reduce deaths and serious injuries on EU roads by 50% between 2020 and 2030 but, perhaps most significant of all, are the proposals relating to the revision of the GSR. These propose that, within three years, all new vehicles introduced on the market must have a raft of advanced safety features, including AEB, LKA and ISA technologies. TRL (the UK-based Transport Research Laboratory) delivered the impact assessment of the introduction of these measures, on behalf of the European Commission, and found that the proposed vehicle safety measures could prevent 24,794 deaths in the EU, across all vehicle categories between 2022 and 2037.<sup>12</sup> In order to become law, these proposals are required to pass through the EU legislative process, requiring agreement from the EU Council (or member states) and EU Parliament.

### AUTONOMOUS EMERGENCY BRAKING (AEB)

The European Commission describes AEB as a system that: “Combines sensing of the environment ahead of the vehicle with the automatic activation of the brakes, without driver input, in order to mitigate or avoid an accident. The systems shall detect the possibility of a collision, warn the driver by a combination of optical, acoustic or haptic (the sense of touch through the application of force) signals and, if the driver takes no action, automatically apply the vehicle’s brakes.” AEB systems improve safety in two ways: (i) by helping to avoid collisions by identifying critical situations early and warning the driver; and (ii) by reducing the severity of crashes that cannot be avoided by lowering the speed of collision and, in some cases, by preparing the vehicle and restraint systems for impact.

In 2014, TRL carried out in-depth investigations for Highways England into most of the fatal crashes on England’s Strategic Road Network (all of England’s motorways and most of its A roads), using crash investigation teams. TRL estimated how many deaths in these fatal crashes would have been prevented if certain ADAS technologies had been mandated. TRL concluded that more than a third (34%) of deaths studied could have been prevented if AEB had been mandatory on all vehicles.<sup>13</sup>

Manufacturers use a range of trade names for their own proprietary versions of AEB including City Safety (Volvo), Smart City Brake Support (Mazda), Active City Stop (Ford) and City Emergency Braking (Volkswagen).

### In Question 3, we asked drivers about Lane Keep Assistance (LKA) systems.

The description of LKA provided to respondents was: *Lane Keep Assistance (LKA) helps the driver to stay in their lane. When the vehicle drifts out of the lane, LKA gently guides the vehicle back into the lane by either turning the steering wheel or engaging the brakes on one side of the vehicle.*

The analysis for this question investigates correlations between age group and responses to questions about LKA.

When asked whether they know what LKA is, 6 in 10 of young drivers aged 18–34 did know, whereas drivers aged 35 and over were less familiar with the technology. When informed what LKA is, using the description of the technology given above, 9 in 10 (92%) of drivers aged 65 and above stated that their car was not fitted with LKA, with only 4% indicating that their car did have LKA. This contrasts with responses from younger drivers (18–24, 25–34) where more than half (59%, 55%) indicated that their car was not fitted with LKA, while approximately a third (32%, 35%) said their car did have LKA.

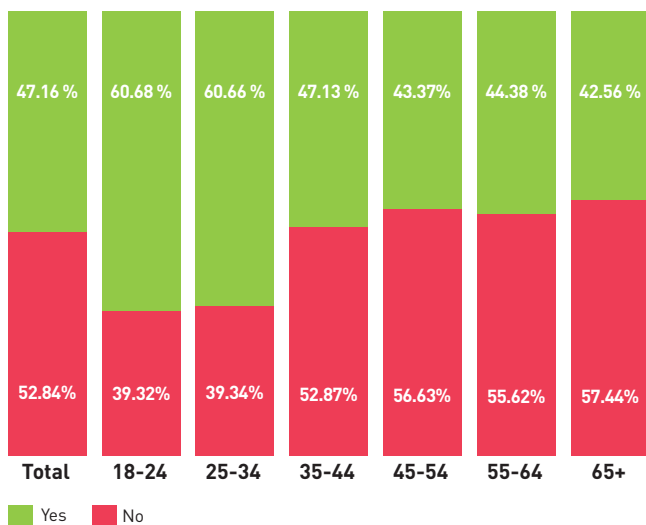




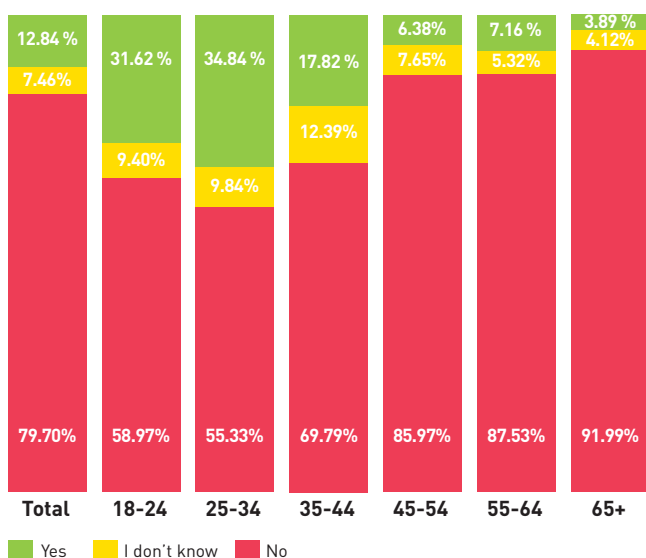
# Direct Line & Brake Reports on Safe Driving: Advanced Driver Assistance Systems



Q3a. Do you know what LKA is?

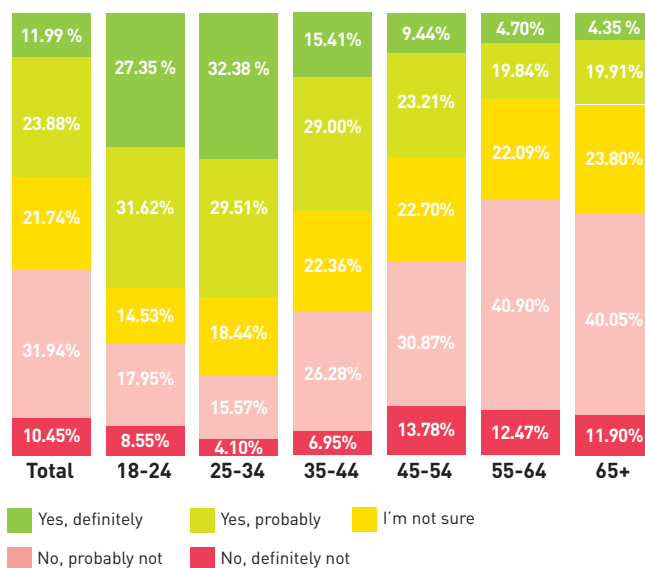


Q3b. Is your car fitted with LKA?



More than three-quarters of drivers in the age brackets 55–64 (75%) and 65+ (76%) who responded to the survey are either unsure or would not pay extra to make sure that their car had LKA. This lack of desire to pay for LKA within these age brackets is perhaps explained by a lack of exposure to the technology — Questions 3a and 3b illustrated that more than half of older drivers do not know what LKA is, nor do they think that their cars have it fitted. This assumption – that willingness to pay correlates with knowledge and exposure to the technology – is supported by more than half of younger drivers (18–24, 25–34) stating that they definitely or probably would pay extra to ensure their car had LKA fitted (59%, 62%); these age brackets also stated the highest awareness and exposure to the technology in their responses to Questions 3a and 3b.

Q3c. If you were buying a new car, would you spend more to ensure it had LKA?



The findings and trends identified for LKA in Question 3, detailed above, were mirrored in responses to questions about the other two technologies (AEB and ISA) we asked in the survey, namely that:

- the younger the respondent, the more likely to know what the technology is;
- the younger the respondent, the more likely to think they have the technology fitted on their car; and
- in the hypothetical scenario of buying a new car, the younger the respondent, the more likely to spend more to ensure it had the technology.

This gives further weight to the analysis that greater knowledge of, and exposure to, these technologies increases willingness to spend money on them.

## LANE KEEP ASSISTANCE (LKA)

The European Commission describes LKA as a system that can help avoid crashes "...in which a vehicle leaves the lane unintentionally, usually because of driver distraction or fatigue, that can result in head-on collisions with oncoming vehicles, involve impacts with roadside obstacles or side-swipe of the vehicle that is travelling in the same direction in an adjacent lane."<sup>14</sup> The LKA system corrects the line of travel of a vehicle automatically, gently steering it back into the correct position safely within the lane. The system can steer the vehicle either by applying gentle braking to one wheel or, in the case of electric steering systems, by applying a direct steering input. To determine if the vehicle is no longer in the correct position and if intervention is necessary, some LKA systems use infrared sensors but, increasingly, video cameras mounted at the top of the windscreen in the rear-view mirror unit are now used. Both types of system read the road markings and, when the car drifts towards and moves beyond the white lines, alert the driver. LKA is a development of Lane Departure Warning systems and has been fitted to some vehicles since the early 2000s.

Research carried out by TRL found that fitting LKA to passenger cars and light goods vehicles in the EU could prevent up to 3,500 deaths and 17,000 serious injuries.<sup>15</sup>



# Direct Line & Brake Reports on Safe Driving: Advanced Driver Assistance Systems



## In Question 4, we asked drivers about Intelligent Speed Assistance (ISA).

The description of ISA provided to respondents was:  
*Intelligent Speed Assistance (ISA) helps a driver keep within speed limits by warning the driver when the speed limit is exceeded, or by actively reducing the vehicle's speed.*

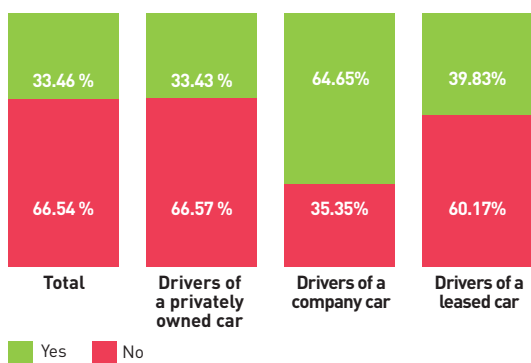
The analysis for this question investigates correlations between the ownership of the vehicles people drive and responses to questions about ISA.

As context to this analysis, more than 9 in 10 (94%) of respondents to this survey drive a privately owned car; 5% drive a company car and 6% drive a leased car. The average age of a private car on the road in the UK at year end 2017 was 8.39 years, while the average age of a company car was 2.69 years (this information is not captured for leased vehicles).<sup>16</sup>

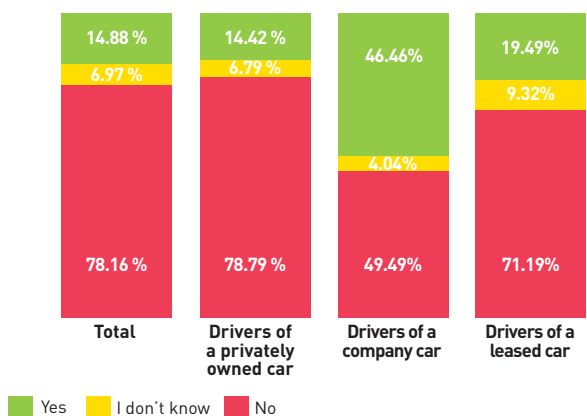
Do you drive any of the following? (tick all that apply)	Percentage (number of respondents)
A privately owned car	94% (1,886)
A company car	5% (99)
A leased car	6% (118)
I don't drive a car	0% (0)

Nearly two-thirds (65%) of those who drive a company car stated that they did know what ISA was, whereas this was the view of less than half of those who drive either a privately owned car (33%) or a leased car (40%). When informed what ISA was, just 14% of those who drive a privately owned car and 19% of those who drive a leased car said that they did have ISA fitted, whereas nearly half (46%) of those who drive a company car stated that they did have ISA fitted. This supports the logical assumption that those who think they have a particular technology fitted to their vehicle are more likely to know what that technology is.

### Q4a. Do you know what ISA is?

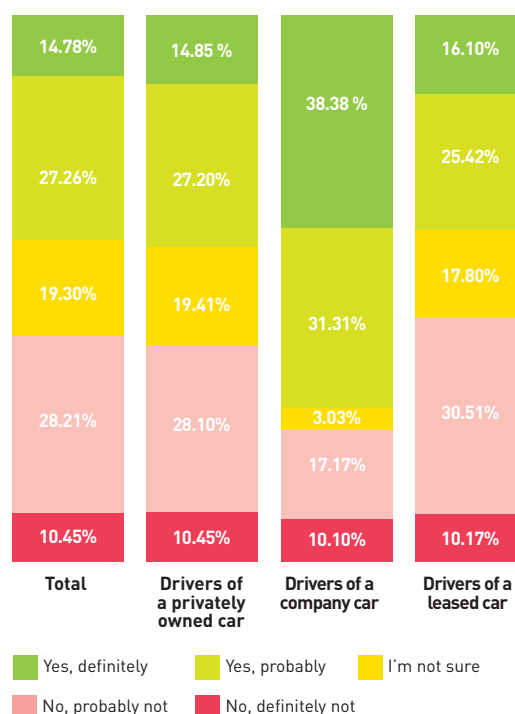


### Q4b. Is your car fitted with ISA?



When asked whether they would pay extra to have ISA installed in a new car, more than two-thirds (70%) of drivers of company cars either definitely or probably would pay more, whereas this was the view of less than half of drivers of privately owned cars (42%) and leased cars (42%). The average company car is five years younger (or newer) than the average privately owned car in the UK<sup>17</sup> and so is therefore more likely to have newer technology. This finding, therefore, indicates that people are more inclined to understand and pay for ISA if they have driven a car with ISA installed and experienced for themselves the technology (Question 4b) and its safety benefits.

### Q4c. If you were buying a new car, would you spend more to ensure it had ISA?



The findings and trends identified for ISA in Question 4, detailed above, were mirrored in responses to questions about the other two technologies (AEB and LKA) we asked in the survey, namely that:

- those who drive company cars were more likely to know what the technology is;
- those who drive company cars were more likely to have the technology fitted on their car; and
- if they were buying a new car, those who drive company cars were more likely to spend more to ensure it had the technology.

When considered alongside data on average vehicle age for private cars and company cars, these findings give further weight to the analysis that greater knowledge of, and exposure to, these technologies increases the willingness to spend money on them.

## Question 2-4 findings

The findings for all three ADAS technologies, using different analysis (by age, by car ownership), strongly indicates that increased exposure to AEB, LKA and ISA technology increases the willingness to pay for such technology. This willingness to pay indicates that exposure to the technology is a positive experience, with the safety benefits understood and appreciated.

# Direct Line & Brake Reports on Safe Driving: Advanced Driver Assistance Systems



## INTELLIGENT SPEED ASSISTANCE

The European Commission describes ISA as: "A range of technologies which are designed to aid drivers in observing the appropriate speed for the road environment."<sup>18</sup> ISA identifies if a vehicle is exceeding a speed limit and can: control the vehicle to below a limit (mandatory ISA); or enable the driver to control whether the system can restrict their vehicle speed and/or the speed it is restricted to (voluntary ISA); or warn the driver if they are exceeding a limit (advisory ISA). The speed limit information is either received from a digital road map, which requires reliable information about posted speed limits from GPS, or from transponders in speed limit signs (known as a 'beacon system').

TRL's in-depth investigation into most of the fatal crashes on England's Strategic Road Network (all England's motorways and most of its A roads) in 2014, concluded that one in seven (14%) could have been prevented if advisory ISA had been mandatory.<sup>19</sup> Other transport academics have also estimated reductions in deaths through fitment of ISA and have stated that nearly one in three fatal crashes could be prevented.<sup>20</sup>

ISA is one of the ADAS technologies included within the proposed revision of the General Safety Regulation (see boxout); however, the European Commission has noted that: "...the system should at all times be easily overridden by the driver when necessary, e.g. when overtaking. The suggested method for such a system would be providing effective haptic feedback, for instance by gently pushing the pedal upwards to signal the vehicle is driving too fast and to slow it down."<sup>21</sup>

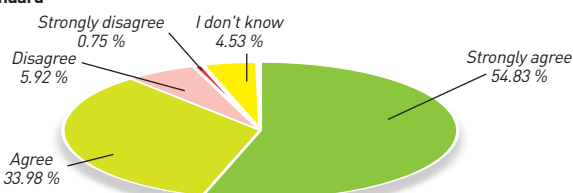
## Question 5

In Question 5, we asked drivers to rate their agreement with the following sentences:

- All new cars should be fitted with the latest life-saving safety features as standard
- Before buying a car, I would check its Euro NCAP rating
- Post-Brexit, car safety standards in the UK should stay at least as high as those across the wider EU

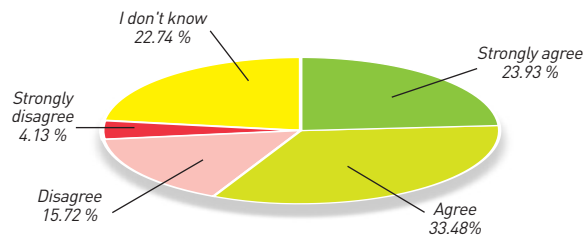
Nearly 9 in 10 drivers (89%) agreed that all new cars should be fitted with the latest life-saving safety features as standard. When viewed in line with the findings from Questions 2, 3 and 4 – i.e. that more than half of drivers would not spend more to have AEB, LKA and ISA installed when buying a new car – we can draw the conclusion that although drivers want new cars to have the latest life-saving safety features, they do not want to bear the cost burden and less than half would pay to do so.

**Q5a. All new cars should be fitted with the latest life-saving safety features as standard**



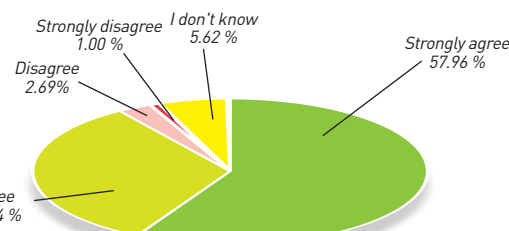
When asked about whether they would check the Euro NCAP rating, a five-star safety rating system to help drivers identify the safest choice for their need when buying a car, more than half (57%) agreed that they would. However, the high percentage of drivers (23%) who stated that they did not know perhaps indicates that there is still some lack of awareness of the system itself and that further communication efforts are required.

**Q5b. Before buying a car, I would check its Euro NCAP rating**



More than 9 in 10 (91%) agreed that, post-Brexit, car safety standards in the UK should remain at least as high as those across the EU. These findings indicate that the UK government should be considering car safety standards as part of its Brexit strategy and that the introduction of the Third Mobility Package and the mandating of AEB, LKA and ISA should be implemented in the UK regardless of its position within the EU.

**Q5c. Post-Brexit, car safety standards in the UK should stay at least as high as those across the wider EU**



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