RAC Foundation

Mobility • Safety • Economy • Environment

Intelligent Vehicles

A public attitude survey

Lewis Hill, Ajit Chauhan and Joe Wheeler
Ipsos MORI Social Research Institute
October 2017

Ipsos MORI

The Royal Automobile Club Foundation for Motoring Ltd is a transport policy and research organisation which explores the economic, mobility, safety and environmental issues relating to roads and their users. The Foundation publishes independent and authoritative research with which it promotes informed debate and advocates policy in the interest of the responsible motorist.

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Disclaimer

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This work was carried out in accordance with the requirements of the international quality standard for market research, ISO 20252, and with the Ipsos MORI Terms and Conditions.

As the RAC Foundation has engaged Ipsos MORI to undertake an objective programme of research, it is important to protect both organisations' interests by ensuring that the findings are accurately reflected in any press release or publication of the findings.

As part of our standard terms and conditions, the publication of the findings of this report are therefore subject to the advance approval of Ipsos MORI. Such approval will only be refused on the grounds of inaccuracy or misrepresentation.

Contents

Foreword

It is about two years since we last decided to test whether our enthusiasm for being 'connected' drivers matched the industry excitement about giving us 'connected' cars. We thought it would be useful to find out what people understood by and wanted from 'connectivity'.

Returning to the subject with a survey carried out this summer, it's clear that two years is a long time in the automotive design cycle, particularly when it comes to driver assistance and driverless technology. So we've looked beyond connectivity to further explore motorists' views about driver assistance and the path onward to fully autonomous vehicles.

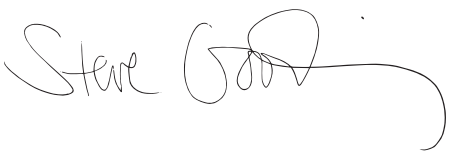
The results suggest that as a nation of motorists, we do like our tech – a view borne out by a brief skim of the road tests found in motoring magazines, which routinely cover not just traditional aspects of performance (speed, fuel economy, roadholding and so on) but also the level and sophistication of technology you are getting for your money in journey planning, satnav and entertainment systems.

But alongside an enthusiasm for technologies that help keep us informed, entertained and hopefully safer, there is an undercurrent of concern that future driver assistance technologies could start taking too much control away from the driver – a concern shared, it seems, by half of the British public.

As matters stand, in law a driver is responsible for their vehicle, but where does responsibility rest when the vehicle itself decides where to steer in order to stay in lane, or when and how fiercely to brake in order to maintain a safe distance from the vehicle ahead?

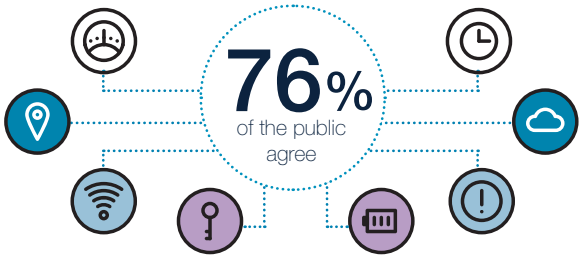
Driving is a task that requires skill, concentration and judgement – perhaps henceforward we need our automotive designers to put more of their energy and creative thinking into how our vehicles can help drivers to stay awake, alert and focused, as opposed to entertained, soothed or, worse still, distracted by high-end 'infotainment' systems and dashboard touchscreen controls.

Steve Gooding



Director, RAC Foundation

Technology generally makes life better



Most important factor in vehicle purchasing decision...*

price of the vehicle &

74%

running costs.

67%

The latest in-car technologies are considered low priority for drivers in their purchasing decisions in comparison to price and running costs.

3 in 5 of the British public...

say they try to keep up with technology.

say their current lifestyle means they need a vehicle.

Individual groups most likely to be interested in having driver assistance technologies in their vehicle...

Those with children.

Those in households that earn over

£55k a year.

Those in ABC1 social classes.

Of drivers and/or those looking to buy a new or used vehicle in the next year or two...

39% would be happy to pay extra for certain connected services.

Of drivers and/or those looking to buy a new vehicle in the next year or two...

78% are interested in connected driving technologies.

94% have heard about driver assistance technologies.

76% say they know at least a little about driver assistance technologies.

60% are interested to have driver assistance technologies in their vehicle.

Driver assistance technologies going forward*

47%

of the British Public support the development of driver assistance technology if it means improving safety on the UK's roads.

50%

of the British pubic say that they are concerned about future driver assistance technologies taking too much control away from the driver.

Only **24%**

of the British public agree that fully-autonomous ('driverless') cars are what we should be working towards.

* For all who currently drive or who are considering buying a vehicle in the next 1-2 years.

1. Summary of Findings

In June 2017, independent researchers Ipsos MORI were commissioned by the RAC Foundation to undertake research with the public to discover their views on 'intelligent vehicles'. Building on research carried out on behalf on the RAC Foundation nearly two years earlier, which looked at 'connected drivers' and the technologies they use, the 2017 survey was focused on exploring the implications of, and attitudes towards, the increasing range of driver assistance technologies available today, as well as gauging views on potential developments in the UK driving test and training regime.

The general public of Great Britain retain a strong appetite for using technology more generally, as observed in 2015. Three quarters (76%) of the public agree that technology generally makes life better, while more than three fifths (63%) say that they try to keep up with technology. Confidence using technology remains high, with close to four in five (78%) saying they disagree that computers confuse them.

Likewise, cars remain central to the lives of the majority of the British public: almost three in five (58%) say that their current lifestyle means that they need a vehicle, which is consistent with findings from 2015 (when 59% said this).

One quarter (25%) say that they like to keep up with the latest developments about new cars (as we found in 2015, where 26% agreed).

There is also still interest in connected driving technologies, those which are increasingly connecting the driver to their vehicle (e.g. tyre pressure), to their journey (e.g. traffic alerts) and the outside world (e.g. text messages, phone calls). Among those who drive and/or who are thinking about buying a vehicle in the next one to two years, more than three in five (62%) are interested in these technologies. While interest has not grown particularly since 2015 (when 61% of the public said the same thing), this finding suggests that the majority of the public remain interested two years on.

Regulators and manufacturers may be encouraged by the finding that, among those considering buying a new vehicle in the next year or two, almost four in five (78%) are interested in connected driving technologies.

In 2017, the survey introduced for the first time the concept of driver assistance technologies – systems that operate automatically, such as cruise control and automatic parking. The vast majority of those who drive a vehicle and/or are considering buying one in the next year or two – 94% – have heard of these technologies. Indeed, three quarters (76%) of this group say that they know at least a little about them. Three in five (60%) are interested in having driver assistance technologies in their vehicle.

However, 'the latest in-car technologies' (e.g. connected driving and driver assistance technologies) are considered a low priority by drivers when it comes to their purchasing decisions, which are still driven mostly by price, running costs and reliability. As things stand, the public are split over whether or not they would be happy to pay extra for certain driver assistance technologies (e.g. adaptive cruise control, automatic emergency braking) if they were considering buying a new vehicle. While 39% agree that they would be happy, one third (33%) disagree.

Nevertheless, in terms of the relative importance of various driving features, driver assistance technologies appear to be given greater weight by the driving public in their purchasing decisions. Those who drive and/or are considering buying a vehicle in the next one or two years were presented with a list of 13 specific in-car driving features, and asked how important these would be if they were to purchase a new or used vehicle. 'Vehicle insight' features – information about vehicle condition (cited by 83%) and smart journey information (70%), as well as 'navigation' features such as satellite navigation systems (69%), are regarded as the most important three features. However, automatic emergency braking (68%) and automatic headlights (59%) are the fourth and fifth most important features when members of the public come to buy a new or used vehicle, followed closely by speed camera warning (59%). Many drivers – particularly men, older people aged 55–75 and those from households with higher incomes (£55,000 or more) – already have these features in their current vehicles. These groups are also more likely to say that they try to keep up with the latest developments in technology generally.

Given the transformative potential of driver assistance technologies and autonomous vehicles, the British public were asked about their experiences of, and attitudes towards,

driver assistance technologies, both now and in the future. Those who said that they had at least one form of driver assistance technology in their current vehicle (around two-thirds of drivers with at least one vehicle in their household) are more likely to be positive than negative about the impact of these technologies on their experiences – they are more likely to feel safer on the road (47% agree, as against 20% who disagree), and are far more likely to agree than disagree that driver assistance technologies have improved their overall driving experience (51% vs 15%). Many (42%) acknowledge that their overall quality of driving has improved as a result of these technologies.

However, there remains a degree of anxiety among the public about the impact of driver assistance technologies in the future. In particular, fully automated driverless cars mark the point at which the weight of public opinion shifts: considerably more disagree (42%) than agree (24%) that fully self-driving cars (i.e. cars that can operate themselves without human input) are what we should be working towards. What is more, half of the British public – 50% – say that they are concerned about future driver assistance technologies taking too much control away from the driver.

It would seem that demonstrating safety benefits is likely to prove the most successful way to win the hearts and minds of those yet to be convinced by autonomous vehicles and driver assistance technologies. Close to half of the public say that they support the development of driver assistance technologies which reduce the role played by the driver *if* it means improving safety on the UK's roads (47% agree vs 16% who disagree).

Finally, in achieving these benefits, driver preparedness is likely to have a bearing on safety. The 2017 survey included questions designed to gauge public views on the extent to which people feel the UK driving test and training regime needs to change in order to reflect the availability of new technologies now and in the future. While most of those interviewed who had taken a UK driving test did so over 20 years ago, the public agreed, by some margin (59% to 9%), that the way people are taught to drive should be updated to reflect the new technologies in vehicles nowadays. It is perhaps unsurprising, then, that the public are more likely to support (49%) rather than oppose (14%) the use of a satnav to provide route information to candidates in future driving tests (though a third of the public have no feelings either way).

2. Background

Building on research carried out on behalf of the RAC Foundation in 2015, which explored the 'connected driver' and views about the technologies they used, independent researchers Ipsos MORI were commissioned in June 2017 by the RAC Foundation to undertake a piece of research with the public to gain their views on 'intelligent vehicles'. The focus of this 2017 survey was to explore the implications of, and attitudes towards, the increasing range of driver assistance technologies such as automatic braking and lane departure detection, as well as public perception of the latest changes made to the UK driver testing and training regime, and also possible future developments in it.

Specifically, the objectives of the research were to measure:

- the importance of different forms of driver assistance technologies when purchasing a new/used vehicle, including new aspects such as cruise control / lane departure detection etc.;
- the appetite for newer, 'near-market' forms of technology in future vehicles;
- ownership/usage of existing driver assistance technologies;
- attitudes towards 'self-drive' technology – in particular, measuring confidence in using this feature; and
- the implications that driver assistance technologies will have for driver training/testing, and the public's views on the latest developments in the UK driving test.

Ipsos MORI and the RAC Foundation collaborated in the design of an online self-completion questionnaire to ensure that the objectives of the research were met.

Fieldwork took place between 14 July and 18 July 2017 and was conducted through Ipsos MORI's online omnibus service – i-omnibus. The final survey results were derived from 2,154 respondents of the Ipsos MORI online panel aged 18 to 75.

More detailed sample information, along with a guide to statistical reliability, can be found in Appendix A. The questionnaire used is shown in Appendix B.

3. Survey Findings

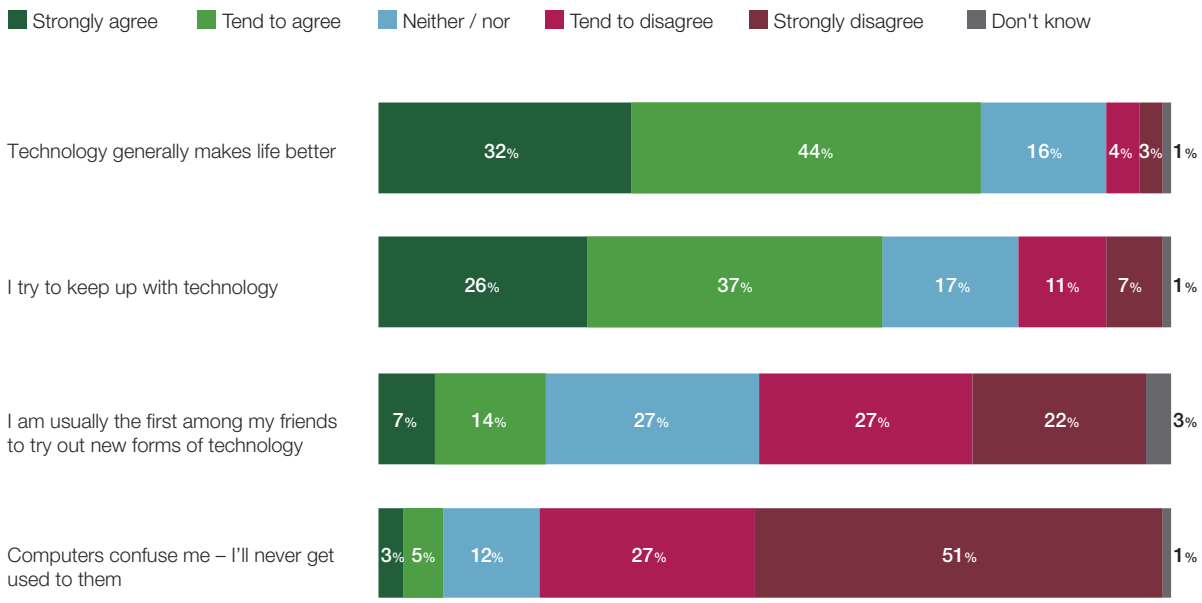
3.1 Attitudes towards technology

Participants were asked to give their opinion on a series of statements regarding their attitude toward technology, providing useful context for the range of more specific vehicle-related questions that followed. Findings generally fall in line with the 2015 survey results, suggesting little change in attitudes toward technology over the past two years.

Over three quarters (76%) of participants agree that technology generally makes life better (see Figure 3.1 and refer to the notes in Appendix A when interpreting the results presented graphically in this report), mirroring the 2015 response to this question (77%). Once again, three in five (63% vs 62% in 2015) state that they try to keep up with technology. However, around half (49%) disagree that they are usually the first among friends to try out new forms of technology – a slight increase from 2015 (45%). Most continue to disagree that "computers confuse me – I'll never get used to them" (78% vs 77% in 2015).

Figure 3.1: Attitudes towards technology

Q1. To what extent do you agree or disagree with the following statements?



Base: 2,154 British adults aged 16–75 (14–18 July 2017)

Once again there is a clear contrast of opinion to each statement between specific demographics:

- Younger people, particularly those aged 25–34, are more likely to agree than older people to the statement that technology generally makes life better (83% of those aged 25–34 vs 71% of those aged 55–75). Overall, 85% of those with a household income of £55,000 and above agree with this statement – whereas those with a household income of £19,999 or lower are less likely to agree (71%). Similarly, those with higher education qualifications are more likely to agree than those with no formal education (79% vs 64%). Four in five (79%) of those in households with at least one child think technology makes life better, and a similar story emerges for those in large households with four or more occupants, with 81% in agreement.
- Generally, these groups are also more likely to say that they try to keep up with technology. Notably, those in the 25–34 age bracket are once again the most likely to agree (74%), whereas only a slender majority (56%) of those aged 55–75 say this. As in 2015, there is a gender difference in the response to this statement, with males more likely to agree than females (68% vs 58%); this represents a wider gap than that seen two years ago (66% vs 59%). Three quarters (74%) of those with a household income of £55,000 or more try to keep up with technology, compared with 56% of those with a household income up to £19,999.
- There are noticeably lower levels of agreement among participants who claim to be "usually the first among my friends to try out new technology". The youngest participants (those aged 18–24) are the most likely to agree with this statement

(31% vs 11% of those aged 55–75). More women (56%) disagree with this statement than agree, while conversely over a quarter (26%) of males say that they are usually the first among their friends to try out new technology. Those with a household income of £55,000+ are again more likely to agree than participants whose household income is at or below the £19,999 threshold value (29% vs 15%). Following the general pattern, those without formal qualifications are one of the groups most likely to disagree with this statement (61%).

- This demographic trend continues when asked to give thoughts on a negative statement: "Computers confuse me – I'll never get used to them". Older participants (those aged 55–75) are the most likely to agree with this (12% being in agreement, compared with 9% of all age groups together). Unsurprisingly, a majority of those aged 18–24 have no problems using computers, with 84% disagreeing with this statement, and only 7% agreeing.

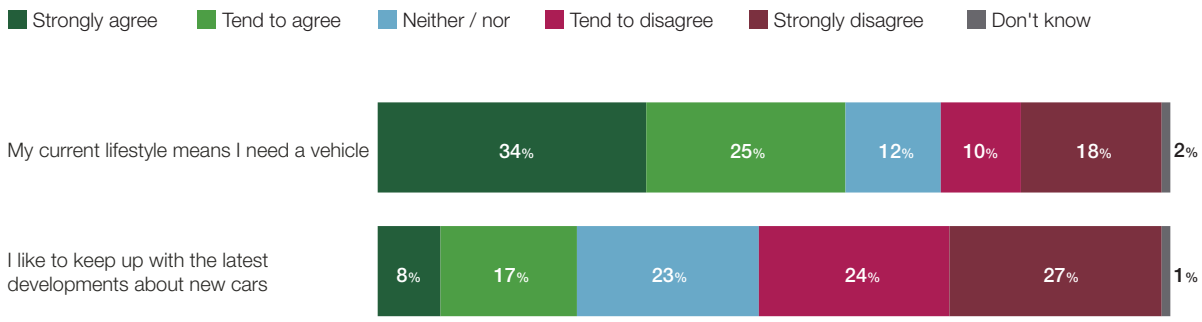
From an attitudinal perspective, positivity about technology is generally aligned to interest in both connected driving technologies and driver assistance technologies. On the other hand, finding computers confusing turns out to have negative correlation with attitudes towards vehicle technology.

3.2 Attitudes towards cars

Another question from 2015 which was included in this year's survey asked the public about their day-to-day dependence on vehicles, and their level of interest in the latest developments about new cars. A consistent picture emerges once again – three in five (58% vs 59% in 2015) agree that their current lifestyle means that they need a vehicle, while only a quarter (25% vs 26% in 2015) like to keep up with the latest developments with new cars (see Figure 3.2). Over half (51%) disagree that they like to keep up with the latest developments about new cars now, a slight increase from two years ago (47%).

Figure 3.2: Attitudes towards cars

Q6. To what extent do you agree or disagree with the following statements?



Base: 2,154 British adults aged 16–75 (14–18 July 2017)

The demographic groups who agree particularly with these statements include middle-aged people (those aged 35–54), those in the household income bracket of £55,000+ and those in households with four or more people.

- Those aged 35–44 are the group most likely to feel that "my current lifestyle means I need a vehicle" (64% agree), whereas those aged 18–24 are seemingly less reliant on a vehicle (51% agree). Unsurprisingly, those in employment are considerably more likely to agree than those who are unemployed (64% vs 49%). Participants with a household income of up to £19,999 are polarised on this statement, with 44% agreeing and 41% disagreeing, whereas seven in ten (71%) of those with a household income of £55,000+ feel reliant on their vehicle. Participants who live alone are more inclined to disagree (43% disagreeing) than households with 4+ residents (25% disagreeing). By region, Londoners continue to be less reliant on vehicles than the rest of Great Britain (40% agree vs 58% overall), whereas those living in the West Midlands are the most likely to agree (69%).
- Males (32%) are far more likely than females (18%) to say "I like to keep up with the latest developments about new cars". Younger adults aged 25–34 are the most interested in the latest developments (27%), while those with a household income of £55,000+ are, once again, far more likely to agree than those with a household income of up to £19,999 (35% vs 20%). In fact, two in five (39%) of those in the lower income group strongly disagree with this statement. Those living in households with four or more residents and with at least one child are more likely to agree (30% vs 25% average total). Participants from the West Midlands, who also feel more reliant on vehicles, are the most likely to keep up with the latest developments (33%).

From an attitudinal standpoint, it is not surprising that those who like to keep up with technology are significantly more likely to say that they are interested in the latest developments about new cars (33% agree v 25% overall).

3.3 Considering buying a vehicle

Participants were asked whether they were personally considering buying a car or van at the moment, or in the next year or two. This question retained its use as a screener question (as it was in 2015) to ensure that participants were asked relevant questions in the remainder of the survey.

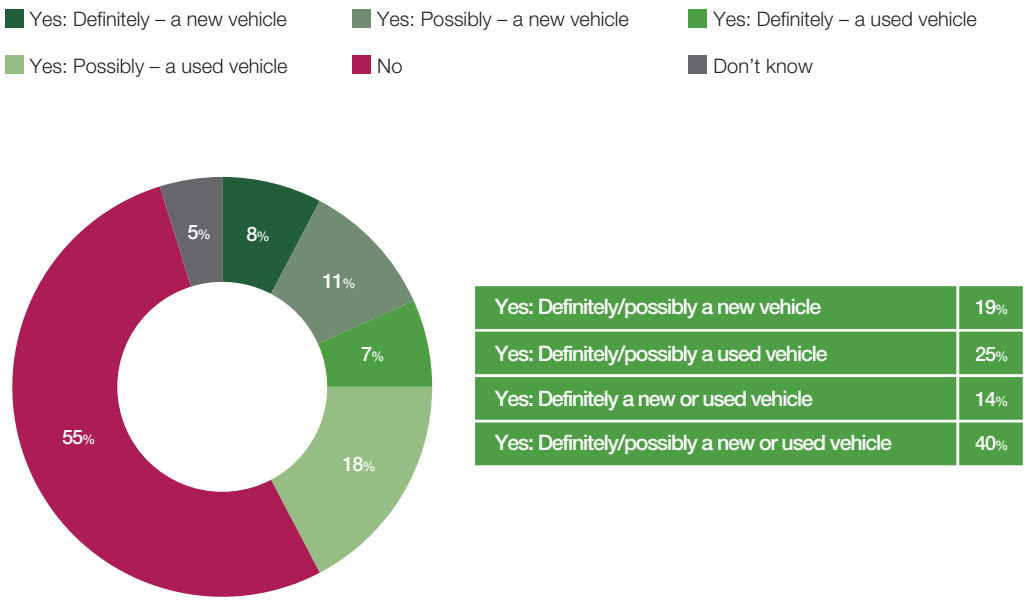
Please note that the proportion saying they are definitely/possibly considering buying a new or used vehicle, either at the moment or in the next one to two years, is not simply the sum of those saying they are definitely/possibly considering a new vehicle, *plus* those definitely/possibly considering a used vehicle. This is because the question allowed participants to select more than one option (e.g. possibly a used vehicle *and* possibly a new vehicle); only unique responses have been included in the combined figure.

Overall, two in five (40%) say that they are either definitely or possibly considering buying a

new or used car or van at the moment, or in the next year or two. Breaking this down further (see Figure 3.3), around one in five (19%) say that they are definitely/possibly considering a new vehicle, whilst one quarter (25%) say that they are definitely/possibly considering a used vehicle.

Figure 3.3: Considering buying a vehicle in the next one to two years

Q5. Are you personally looking to buy a car or van at the moment, or will you be looking to buy one in the next year or two?



Base: 2,154 British adults aged 16–75 (14–18 July 2017)

Those who are more likely to say that they will consider buying a new or used car or van in the next year or so include:

- 18- to 24-year-olds (49% vs 40% overall);
- those in the higher social grades ABC1 (42% vs 38% of C2DEs);
- those who are working (44% vs 35% of those who are not working);
- those with a household income of £55,000+ (51% vs 40% of those with a household income up to £54,999);
- those with four or more people in the household (51% vs 36% of those with three or fewer in the household);
- those with at least one child present in the household (53% vs 36% of those with no children in the household); and
- those with a degree, masters, or PhD (45% vs 35% of those whose highest qualifications are GCSE / O Level / NVQ12, and 32% of those with no formal qualifications).

Those who are also more likely to say that they are considering buying a new or used vehicle include those who say that they try to keep up with latest developments with new cars (64%), and also those who say that their current lifestyle means that they need a vehicle (50%). Comparing the findings in 2017 to those in 2015, the appetite for buying a new or used vehicle in the short term appears to be broadly unchanged (40% in 2017 vs 43% in 2015).

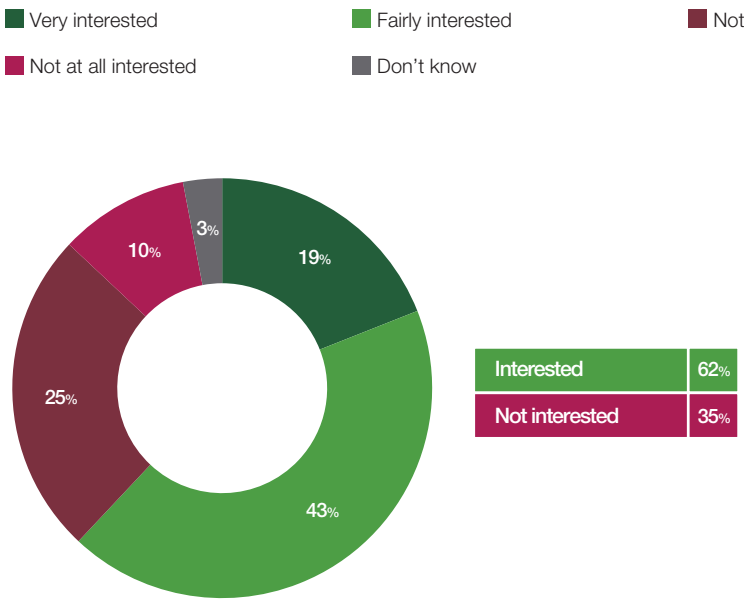
3.4 Interest in connected driving technologies

As in the 2015 connected drivers survey, those who drive a vehicle or will be purchasing one in the next year or so were asked how interested they were in connected driving technologies after being given a brief description of these types of technology.

Views have changed little since 2015, with three in five (62% vs 61% in 2015) expressing an interest in the technologies (see Figure 3.4). Just over a third (35% vs 36% in 2015) say that they are not interested.

Figure 3.4: Interest in connected driving technologies

Q7. Vehicle technologies are increasingly connecting the driver to their vehicle (e.g. tyre pressure), the journey (e.g. traffic alerts) and the outside world (e.g. text messages, phone calls). To what extent, if at all, are you interested in these 'connected driving technologies'?



Base: 1,621 British adults aged 16–75 who currently drive or are considering buying a vehicle in the next one or two years (14–18 July 2017)

Similarly to the findings in the 2015 survey, the proportion of the public who say that they are interested in connected driving technologies is higher than average both among those

who also say that they try to keep up with technology (at 73% in both 2017 and 2015), and among those who try to keep up with the latest about new cars (at 85% in 2017 and 83% in 2015); the overall figure, by comparison, is 62%.

The demographic profile of those significantly more likely to say that they are interested in connected driving technologies is similar to the profile of participants who are more likely to try to keep up with technology in general and with the latest developments about new cars, namely:

- males (67% vs 57% of females);
- those aged 25–34 (72% vs 55% of 45- to 75-year-olds);
- those who are working (65% vs 56% of those who are not working);
- those with a household income of £55,000+ (70% vs 58% of those with a household income of up to £34,999);
- larger households – those consisting of four or more people (68% vs 59% of households with two or fewer people);
- those with at least one child present in the household (66% vs 60% of those with no children in the household); and
- those with a degree, masters, or PhD (66% vs 57% of those whose highest qualifications are GCSE / O Level / NVQ12, and 53% of those with no formal qualifications).

Those who are considering buying a new car or van in the next one or two years are significantly more likely than average to say that they are interested in connected driving technologies (78% vs 62% overall).

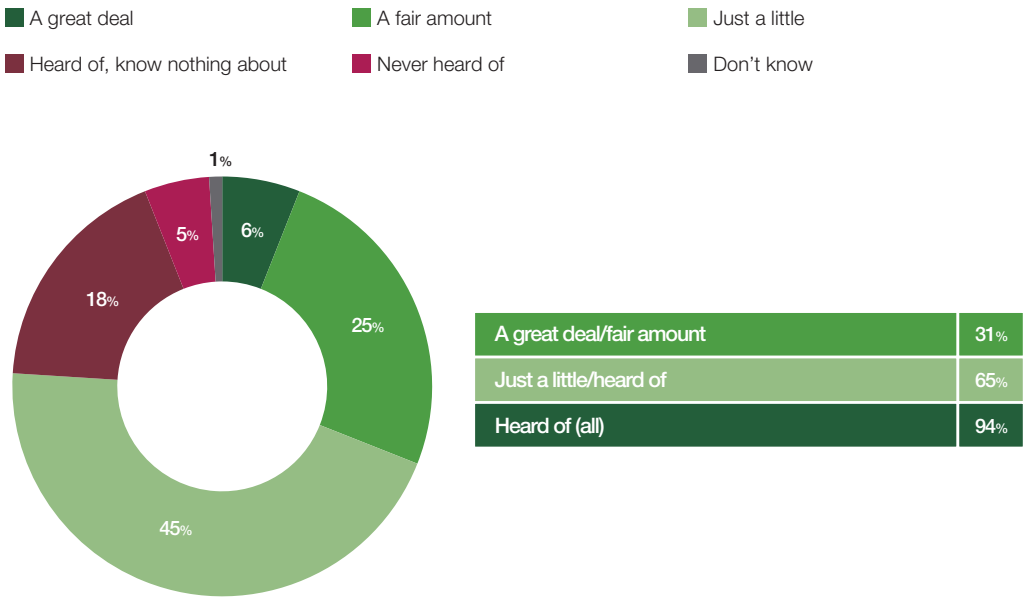
3.5 Awareness of driver assistance technologies

Participants who currently drive or are considering buying a vehicle in the next couple of years were asked how much they knew about driver assistance technologies. Participants were given a brief description of what driver assistance technologies include before being asked how much they knew about these technologies.

Almost all participants (94%) say that they have at least heard of driver assistance technologies (see Figure 3.5). However, the majority of the public know relatively little about these technologies beyond the name. Close to two thirds (63%) say that they have either heard of them but know nothing about them, or know just a little. In contrast, one quarter say that they know a fair amount about driver assistance technologies (25%) and just 6% say that they know a great deal about them.

Figure 3.5: Awareness of driver assistance technologies

Q8. Vehicle technologies are increasingly incorporating 'driver assistance' systems that operate automatically, such as cruise control and automatic parking. How much, if anything, would you say you know about 'driver assistance' technologies?



Base: 1,621 British adults aged 16–75 who currently drive or are considering buying a vehicle in the next one or two years (14–18 July 2017)

As might be expected, those who say that they are interested in connected driving technologies are significantly more likely to say that they know a great deal or fair amount about them (42% vs 31% overall). The same is true of those who try to keep up with technology in general (38% vs 31% overall).

The demographic profile of those with a great deal or a fair amount of awareness about driver assistance technologies has some similarities with the profile of those who say that they are interested in them, namely:

- males (43% vs 19% of females);
- those in social grades ABC1 (34% vs 27% of C2DEs); and
- those with a household income of £35,000 or more (36% vs 28% of those with a household income of £34,999 or less).

There are no significant differences between those who currently have a vehicle in the household and those who do not. However, those who are considering buying a new or used car or van in the next couple of years are more likely to say that they know a great deal / fair amount about driver assistance technologies (36% vs 31% overall).

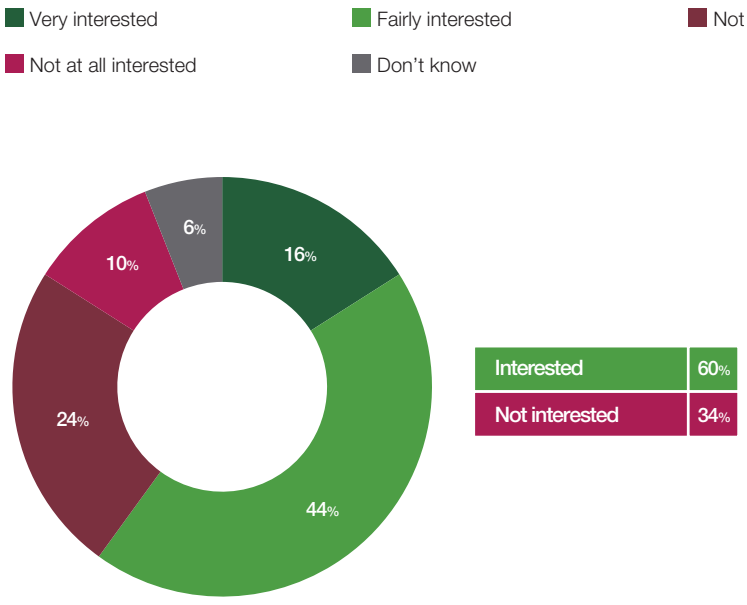
3.6 Interest in driver assistance technologies

Having established the relatively low stated awareness of driver assistance technologies, the survey asked how interested members of the public are in having these technologies in their vehicle.

Three in five (60%) express an interest in having these technologies (see Figure 3.6), a much greater proportion than the third or so who state that they are not interested (34%). Whilst interest is relatively high overall, it is important to note that the majority of those who express this interest say that they are *fairly* interested (44%) rather than *very* interested, suggesting that, while the public tend to favour having driver assistance technologies in their vehicles, their views are not particularly strong at this time.

Figure 3.6: Interest in driver assistance technologies

Q9. To what extent, if at all, would you be interested in having these 'driver assistance' technologies in your vehicle?



Base: 1,621 British adults aged 16–75 who currently drive or are considering buying a vehicle in the next one or two years (14–18 July 2017)

The demographic profile of those who express an interest in having driver assistance technologies in their vehicle appears to be similar to those who say that they are interested in connected driving technologies, namely:

- males (64% vs 57% of females);
- those aged 18–24 or 25–34 (71% and 66% respectively vs 53% of 45- to 75-year-olds);
- those in social grades ABC1 (62% vs 57% of C2DEs);
- those who are working (62% vs 57% of those not working);
- those with a household income of £55,000+ (71% vs 52% of those with a household income of £19,999 or less);
- those with four or more people in the household (67% vs 51% of single-person households);
- those with at least one child present in the household (65% vs 58% of those with no children in the household); and
- those with a degree, masters, or PhD (64% vs 56% of those whose highest qualifications are GCSE / O Level / NVQ12, and 50% of those with no formal qualifications).

In addition to the demographic profile, those who were significantly more likely to express having an interest in having driver assistance technologies in their vehicle include those:

- considering buying a new or used car or van in the next couple of years (67% vs 52% of those who do not have such an intention);
- who try to keep up with technology (70% vs 38% of those who do not);
- who try to keep up with the latest about new cars (79% vs 48% of those who do not); and those
- who are interested in connected driving technologies (83% vs 22% of those not interested).

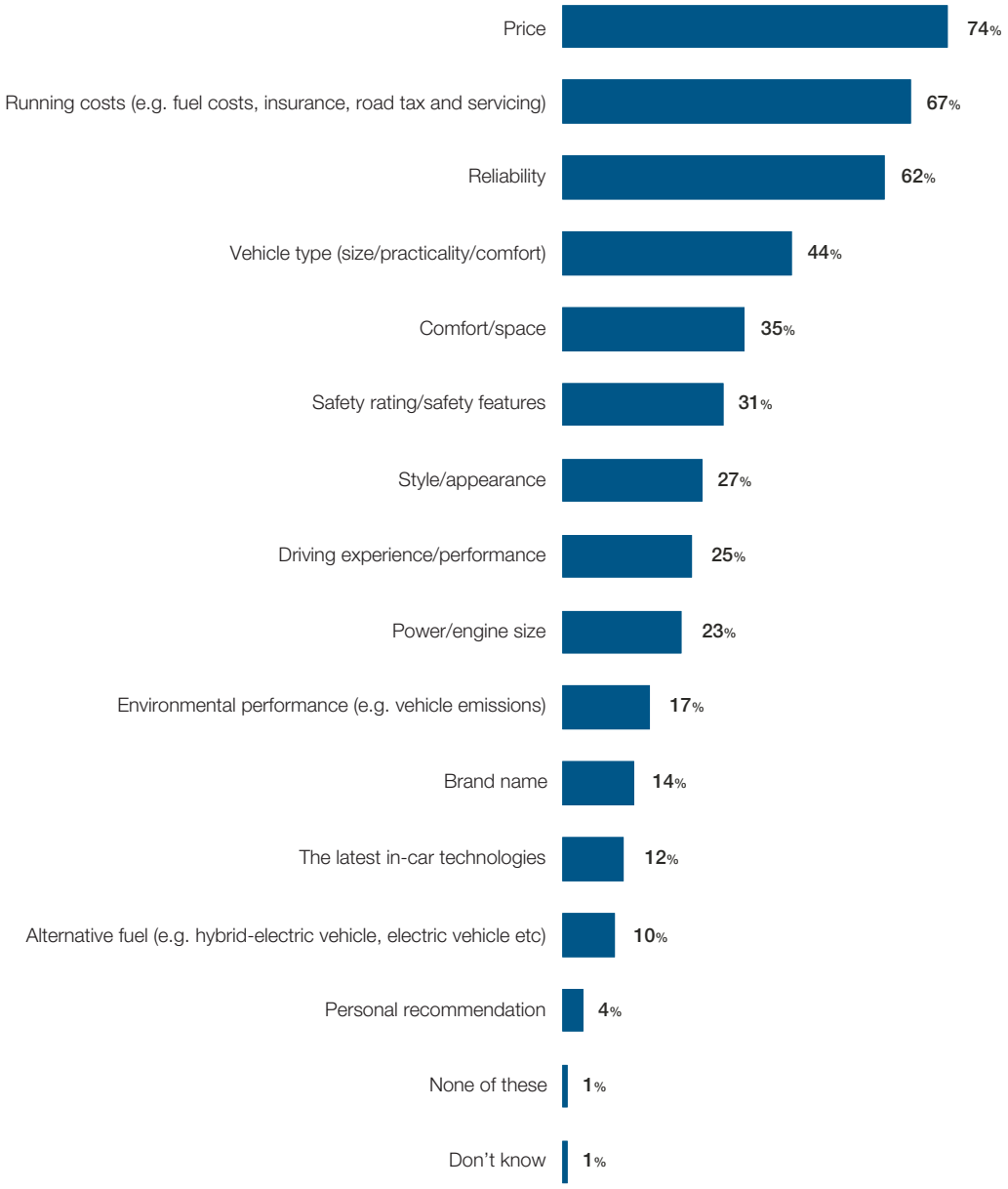
3.7 Factors influencing a vehicle purchase

As in the 2015 connected drivers survey, participants who currently drive or are considering buying a new or used vehicle in the next one or two years were asked what factors they would consider the most important in their potential purchase. Participants were able to select up to five options in the list presented.

While the list of codes was adjusted slightly in 2017 to reflect the new focus of the research, broadly speaking the findings in 2017 mirror that of those in 2015, with the most important factor chosen by participants (see Figure 3.7) being price, almost three quarters (74%) of participants selecting this option (both in 2017 and in 2015). The most important factors following this are running costs (67% in 2017, 70% in 2015), reliability (62% in 2017, 66% in 2015), vehicle type (44% in 2017, 50% in 2015), and comfort/space (35%) which replaces safety rating / safety features as the fifth most important factor in 2017.

Figure 3.7: Most important factors in making a decision about a new or used vehicle

Q10. If you were looking to buy a new or used vehicle, which, if any, of these factors would be the most important in helping you make your decision?



Base: 1,621 British adults aged 16–75 who currently drive or are considering buying a vehicle in the next one or two years (14–18 July 2017)
Note: Up to five options could be chosen.

Reflecting on those who cite 'the latest in-car technologies' as one of the most important factors in helping them make their decision when buying a new or used vehicle, among those most likely to do so are those who try to keep up with technology (16% of whom cite it as important) and those who try to keep up with the latest about new vehicles (24% of whom do).

Demographically, the following groups are significantly more likely to say that the latest in-car technologies are one of the most important factors when purchasing a vehicle:

- males (15% vs 9% of females);
- 25- to 34-year-olds (17% vs 10% of 55- to 75-year-olds);
- those with household income of £55,000+ (19% vs 10% of those with household income up to £34,999);
- those with four or more people living in the household (16% vs 8% of single-person households); and
- those with at least one child in the household (17% vs 10% of those with no children in the household).

Those who say that they are considering buying a new car or van in the next one or two years are significantly more likely (at 23%) to place importance on the latest in-car technologies than those who are considering buying a used car or van in the next one or two years (of whom only 9% do).

3.8 Importance of driving features

After being asked which factors influenced their decision when buying a new or used vehicle, drivers and/or those considering buying a car in the next one or two years were presented with a list of 13 features that can be found inside a vehicle, and then asked how important each vehicle feature would be if they were considering buying a new or used vehicle. These features were split into four themes:

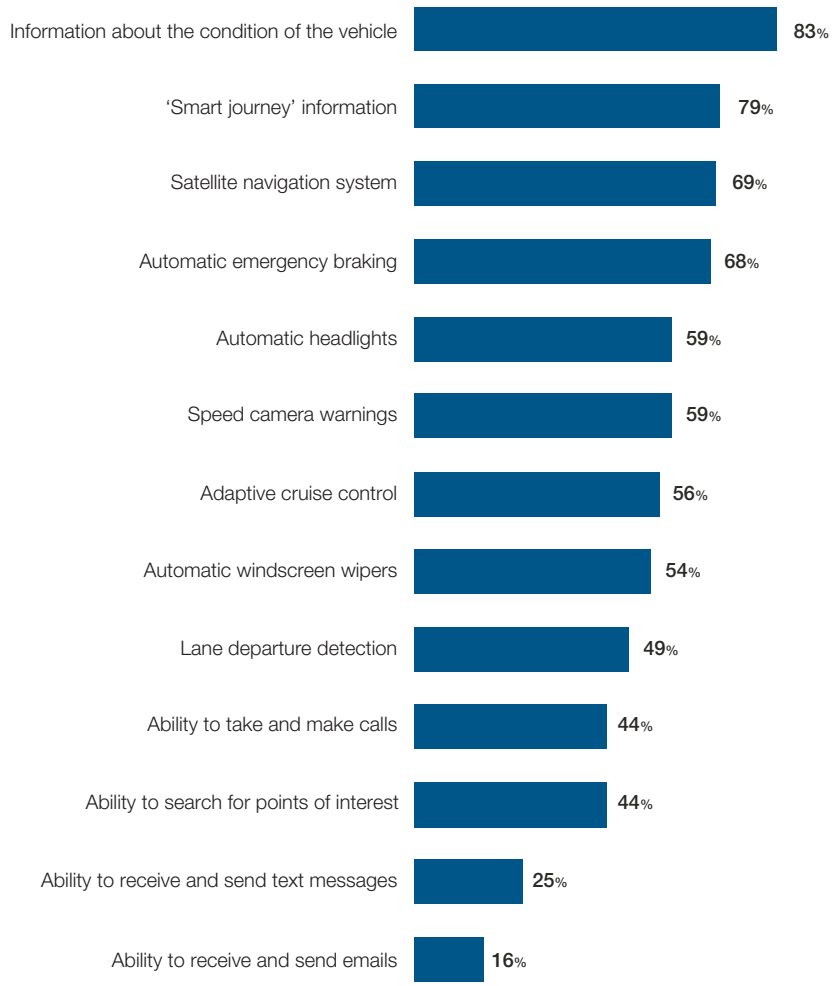
- vehicle insight;
- navigation;
- information & entertainment; and
- driver assistance technologies.

Overall, the five most important features according to the public (see Figure 3.8) are information about the condition of the vehicle (83%), smart journey information (70%), a satellite navigation system (69%), automatic emergency braking (68%), and automatic headlights (59%).

Please note that for the 2017 survey, the list of driving features was changed significantly from 2015's list, to allow for new options which were updated to meet the research aims and objectives of the later survey. Broadly speaking, however, participants still regard information about the condition of the vehicle (at 85% in 2015, 83% in 2017), a satellite navigation system (79% in 2015, third at 69% in 2017), and smart journey information (71% in 2015, 70% in 2017) as amongst the most important driving features in a vehicle.

Figure 3.8: Importance of driving features

Q11. How important, if at all, would each of these features be to you if you were looking to buy a new or used vehicle?

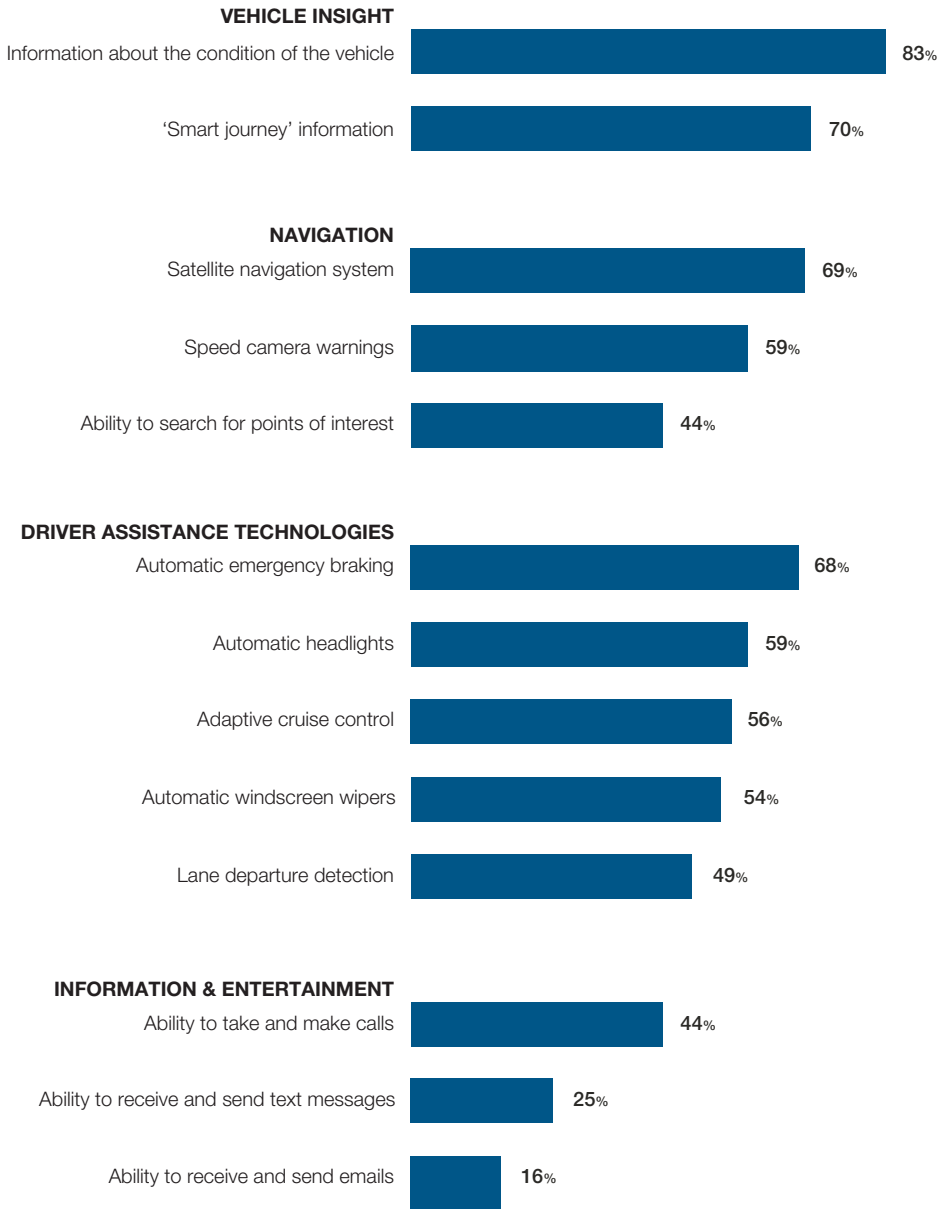


Base: 1,621 British adults aged 16–75 who currently drive or are considering buying a vehicle in the next one or two years (14–18 July 2017)

When looking at the same results concerning driving features, this time grouped by theme (see Figure 3.9), it can be seen that almost half of participants consider each of the driver assistance technologies listed as important, particularly automatic emergency braking (68%). 'Vehicle insight' features remain the most important class of feature in the opinion of those considering buying a vehicle in the next one or two years (comprising information about the condition of the vehicle, and smart journey information).

Figure 3.9: Importance of driving features (by theme)

Q11. How important, if at all, would each of these features be to you if you were looking to buy a new or used vehicle?



Base: 1,621 British adults aged 16–75 who currently drive or are considering buying a vehicle in the next one or two years (14–18 July 2017)

Again, it is those who try to try to keep up with technology, those who try to keep up with the latest developments about new cars, and those who express an interest in connected driving technologies who are significantly more likely to say, in each case, that driver assistance technologies are important when considering buying a new or used vehicle.

3.9 Current driving features

Participants who currently drive a vehicle and have at least one already in the household were asked a series of questions about possible connected driver / driver assistance features that they might have in their main vehicle (it was made clear that this could be as a built-in feature, or brought in – for example, the use of satellite navigation app on a smartphone). This was to gauge the prevalence of these features and how frequently they are used.

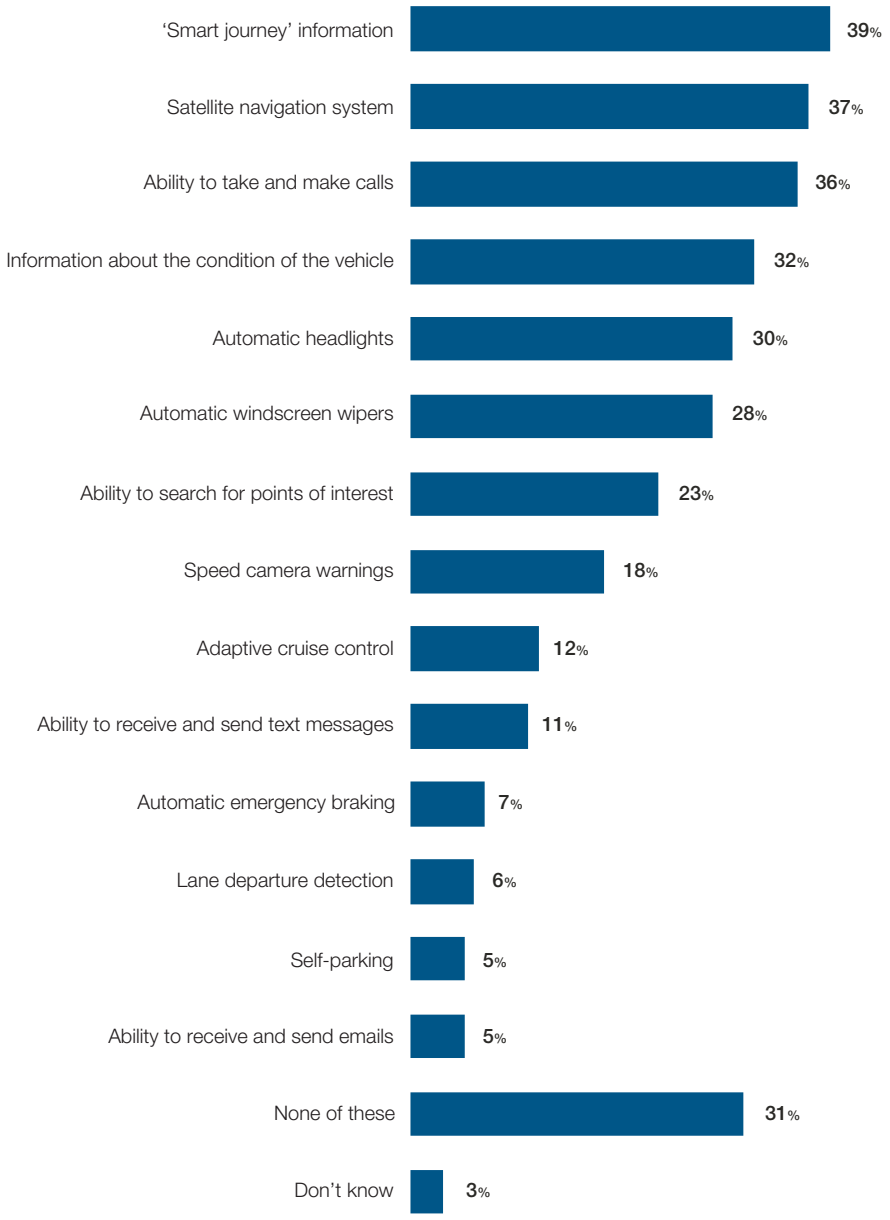
Those who currently drive and have at least one vehicle in their household were presented with a list of 14 features that could be found in a vehicle. They were then asked which they currently have in their main vehicle (again, please note that the list of driving features is somewhat different to 2015's, to reflect the 2017 survey's updated aims and objectives). Two thirds (66%) of drivers say that they have at least one of the listed features in their vehicle, while one third (31%) say that they do not.

Looking at the results as presented in Figure 3.10, it can be seen that smart journey information is the most prevalent feature in vehicles (39%), followed by a satellite navigation system (37%), the ability to take and make calls (36%), information about the condition of the vehicle (32%), and automatic headlights (30%). Comparing the findings to those in 2015, the first four of these all remain amongst the most common features found in today's vehicles.

The least common features include the ability to receive and send emails (at 5%), self-parking (5%), lane departure detection (6%) and automatic emergency braking (7%).

Figure 3.10: Current driving features

Q12. Thinking again about the vehicle that you personally use the most, either as a driver or a passenger: which of the following features, if any, do you have in this vehicle?



Base: 1,474 British adults aged 16–75 who are drivers and have at least one vehicle in their household

Table 3.1 below shows the demographic groups who are significantly more likely to say that they have each feature in their main vehicle. It would appear those with a household income of £55,000+ are significantly more likely than overall to say that they possess almost all of the listed features.

Table 3.1: Current driving features by demographics

Feature	Percentage having feature in main vehicle	
	In overall population	In demographic group(s) more likely than average to have feature
Smart journey information (e.g. miles per gallon, average speed, fuel usage)	39%	Social grades ABC1 (42%) Household income of £55,000+ (49%)
Satellite navigation system	37%	Males (40%) Aged 55–75 (41%) Household income of £55,000+ (47%)
Ability to take and make calls	36%	Social grades ABC1 (38%) Household income of £55,000+ (48%)
Information about the condition of the vehicle (e.g. tyre pressure, oil, brake fluid)	32%	Aged 55–75 (36%) Social grades ABC1 (35%) Household income of £55,000+ (37%)
Automatic headlights	30%	Aged 55–75 (34%) Household income of £55,000+ (37%)
Automatic windscreen wipers	28%	Aged 55–75 (32%) Social grades ABC1 (31%) Household income of £55,000+ (38%)
Ability to search for local points of interest (e.g. restaurants, places to visit, petrol stations) using software	23%	Males (26%) Household income of £55,000+ (33%)
Speed camera warnings	18%	Males (21%) Household income of £55,000+ (22%)
Adaptive cruise control (i.e. speed is automatically adjusted whilst in cruise control to maintain a safe distance from vehicles ahead)	12%	Household income of £55,000+ (19%)
Ability to receive and send text messages	11%	Social grades ABC1 (13%) Household income of £55,000+ (15%)
Automatic emergency braking (i.e. vehicle automatically applies brakes when it detects a collision is imminent)	7%	Males (9%) Household income of £55,000+ (11%) East Midlands region (13%)
Lane departure detection (i.e. vehicle automatically steers into centre of the lane when drifting outside)	6%	Household income of £55,000+ (10%) Greater London region (12%)
Self-parking	5%	Aged 45–54 (7%) Greater London region (9%)
Ability to receive and send emails	5%	Household income of £55,000+ (7%)

Base: 1,474 British adults aged 16–75 who are drivers and have at least one vehicle in their household

Those who are significantly more likely to state that they have at least one of the listed features in their cars compared to the overall (66%) include those:

- aged 25–34 (73%);
- in social grades ABC1 (68%);
- with a household income of £55,000+ (74%);
- who try to keep up with technology (71%);
- who try to keep up with the latest about new cars (79%);
- whose current lifestyle means that they need a vehicle (68%); and those
- who are interested in driver assistance technologies (74%).

On the other hand, those significantly more likely than the overall proportion (31%) to say that they have *none* of the above-listed features include those:

- aged 18–24 (38%);
- in social grades C2DE (36%);
- with a household income of up to £19,999 (44%);
- in single-person households (39%);
- considering buying a used car or van in the next one or two years (36%);
- who do not try to keep up with technology (42%);
- who do not try to keep up with the latest about new cars (41%);
- who are not interested in connected driving technologies (43%); and those
- who are not interested in driver assistance technologies (43%).

3.10 Frequency of features used

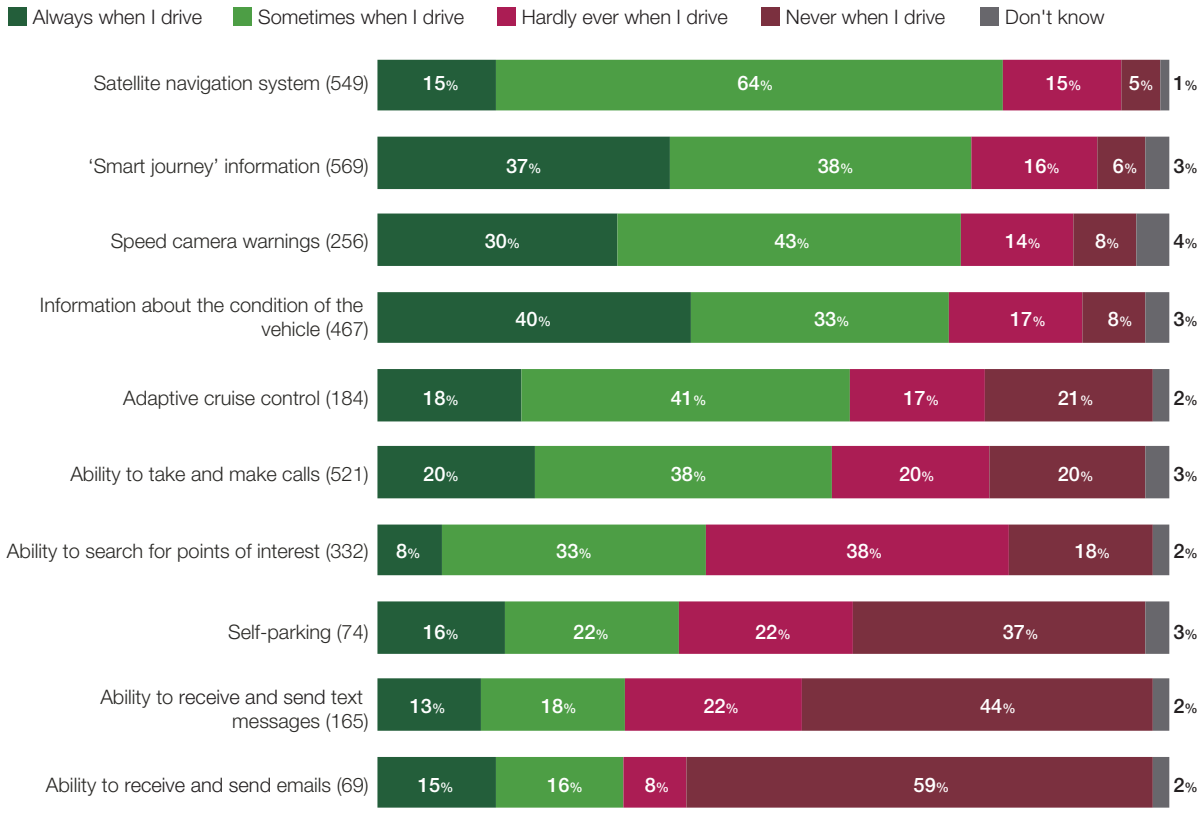
After identifying which features were present in participants' main vehicles, participants were asked how frequently they used each feature. Please note that some features are present in relatively few participants' vehicles, and in such cases these findings should be treated as indicative only.

The most regularly used features (that is to say, 'always' or 'sometimes') by participants (see Figure 3.11) include satellite navigation systems (78%), smart journey information (75%), speed camera warnings (74%), information about the condition of the vehicle (72%), and adaptive cruise control (59%).

Features used less regularly (that is to say 'hardly ever' or 'never') include the ability to receive and send emails (67%), ability to receive and send text messages (66%), self-parking (59%), ability to search for points of interest (57%), and the ability to take and make calls (39%).

Figure 3.11: Frequency of driving features used

Q13. How often, if at all, do you personally, as a driver, use each of these features?



Base: (see above) British adults aged 16-75 who have this feature in their vehicle (14–18 July 2017)

Looking at features which participants say that they 'always' use, information about the condition of the vehicle is the feature most used at all times by participants who have it in their vehicle (with 40% always using this feature), while 37% of those with access to smart journey information, and 30% of those who have speed camera warnings available to them, say that they 'always' use this feature.

3.11 Driver assistance technologies

Having established usage of, and attitudes towards, a range of different specific driver assistance technologies, participants were asked a series of broader questions about their experiences of, and attitudes towards, these technologies in general. These included questions designed to elicit views about the implications of driver assistance technologies on driving in the future.

On balance, those drivers with at least one form of driver assistance technology in their vehicle are more likely to be positive than negative about the impact of these technologies on their experience. Close to half (47%) agree that they feel safer on the road as a result,

compared with one in five (20%) who disagree. More than half (51%) feel that driver assistance technologies have improved their overall driving experience (compared with 15% who disagree), while drivers are more than twice as likely to agree (42%) than disagree (20%) that their overall quality of driving has improved as a result.

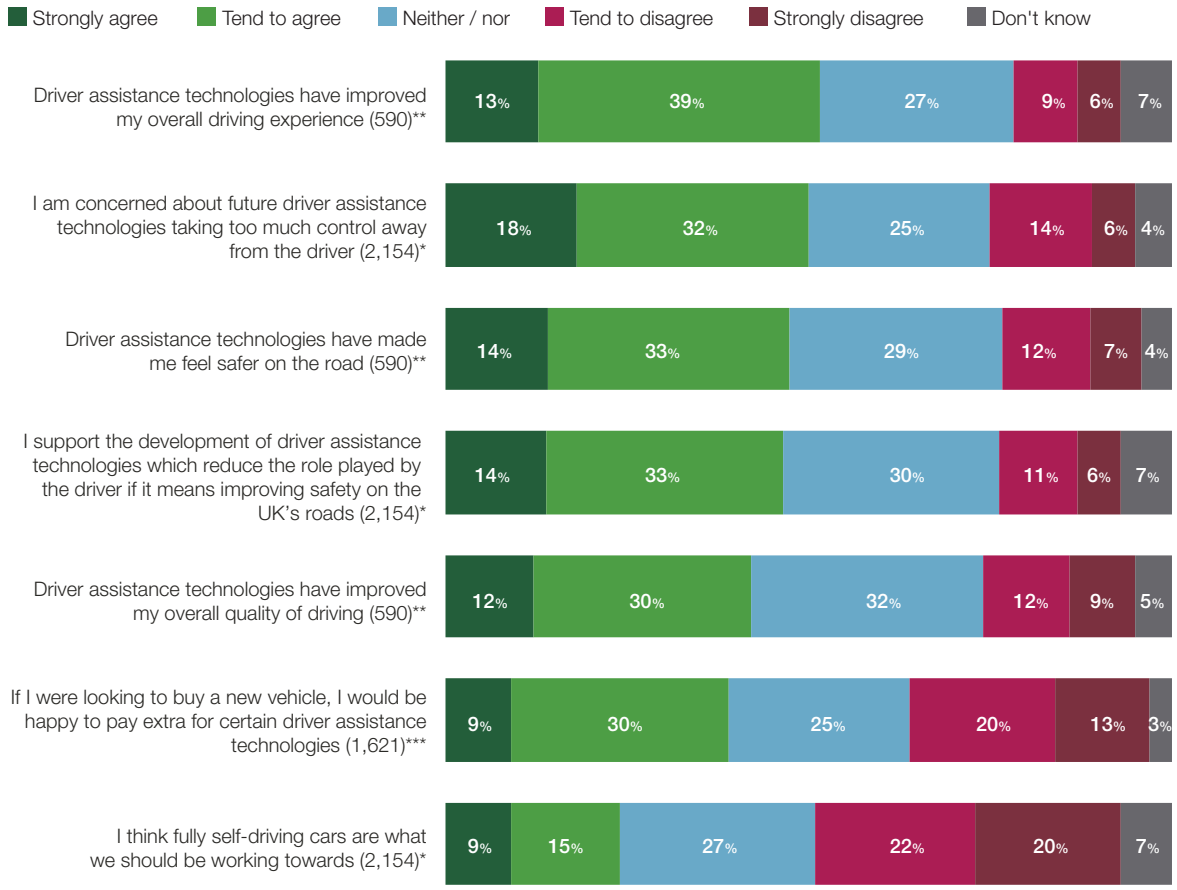
These broader questions also reveal a degree of anxiety about the impact of driver assistance technologies in the future, however. In particular, fully automated 'driverless' cars appear to mark the point at which the weight of public opinion shifts, with only a quarter of the public (24%) agreeing that fully self-driving cars (i.e. cars that can operate themselves without human input) are what we should be working towards, while a much greater proportion of the public (42%) disagrees. On a related note, half of participants (50%) say that they are concerned about future driver assistance technologies taking too much control away from the driver (compared with 20% who are not).

Safety considerations form an important element of views about driver assistance technologies. A far greater proportion of the public say that they do support, than those who say that they do not support, the development of driver assistance technologies which reduce the role played by the driver *if* it means improving safety on the UK's roads (47% agree vs 16% who disagree), suggesting that demonstrating the safety benefits of these technologies might help to increase support for greater autonomy of vehicles in future. As things stand, though, the public are split over whether or not they would be happy to pay extra for certain driver assistance technologies (e.g. adaptive cruise control, automatic emergency braking) if they were considering buying a new vehicle (39% agreeing vs 33% who disagree).

Overall, the results are also characterised by a degree of uncertainty among the public towards the impact of driver assistance technologies, with more than a quarter of participants in every case expressing a neutral opinion about the statements, as shown in Figure 3.12.

Figure 3.12: Experiences of, and attitudes towards, driver assistance technologies

Q14. To what extent do you agree or disagree with the following statements?



Base: * 2,154 British adults aged 16–75 / ** 590 British adults aged 16-75 who have at least one form of driver assistance technology in their vehicle / *** 1,621 British adults aged 16–75 who currently drive or are considering buying a vehicle in the next one or two years (14–18 July 2017)

In line with findings throughout the report, views differ between demographic and attitudinal subgroups:

- Younger drivers (aged 18–34) tend to be more positive about the impact of driver assistance technologies, and typically less concerned about the implications of these technologies in the future, than older drivers aged 55–75. For example, 57% and 54% of 18–24 and 25- to 34-year-olds respectively (with at least one form of driver assistance technology in their vehicle) say that these technologies have improved their overall driving experience compared with 42% of 55- to 75-year-olds. Similarly, while it is still the minority view among them, 18- to 24-year-olds, and also 25- to 34-year-olds, are nonetheless more likely than 55- to 75-year-olds to feel that fully self-driving cars are what we should be working towards (29% and 32% respectively for these two younger groups, vs 17% for the older).

Other groups who are more positive about fully self-driving cars are Londoners (32% of whom agree that this is what we should be working towards, compared with 24% overall), those educated to degree, masters or PhD level (with 29% agreeing), those considering buying a new car or van in the next couple of years (32%), and those who would pay extra for certain connected driving services (41%).

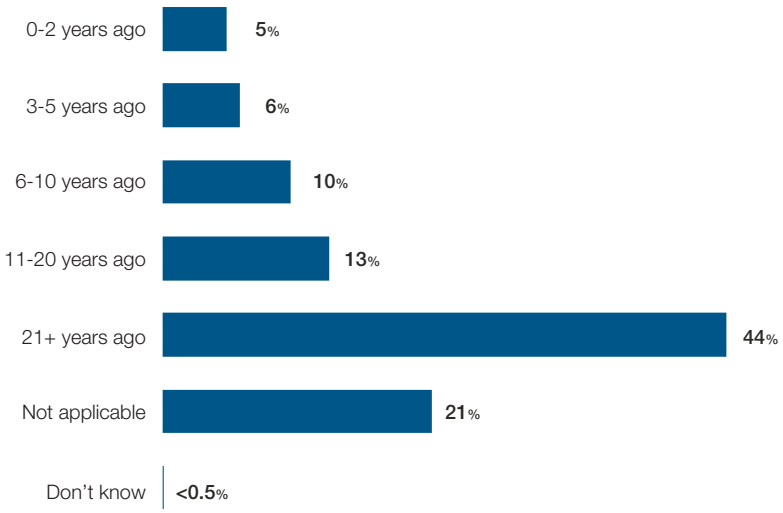
3.12 UK driving test and training

Given the various implications of driver assistance technologies and autonomous vehicles for driver behaviour, the public were asked a series of questions about driving tests in the UK and the extent to which they need to change in order to reflect the availability of new technologies.

Most participants (44%) took their driving test 21 or more years ago, while 13% took their test between 11 and 20 years ago, and a further 10% took their test between six and ten years ago (see Figure 3.13). A combined 11% of participants say that they took their test within the last five years (almost all of whom are under the age of 45, and most of whom are aged between 18 and 34). Around one in five (21%) say this question does not apply to them, having never before taken a driving test.

Figure 3.13: Time since participants took their driving test

Q15. When did you take your driving test?



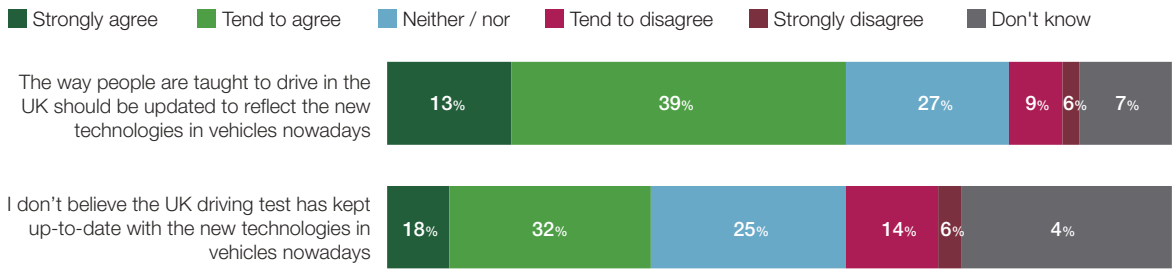
Base: 2,154 British adults aged 16–75 (14–18 July 2017)

Participants were then asked two attitudinal questions about the UK driving test. Firstly they were asked whether they agreed or disagreed that the way people are taught to drive in the UK should be updated to reflect the new technologies in vehicles nowadays; and, secondly, whether they believe that the UK driving test has, or has not, kept up to date with the new technologies in vehicles nowadays.

Overwhelmingly, by a margin of more than six to one (see Figure 3.14), members of the public are more likely to agree than disagree that the way people are taught to drive in the UK should be updated to reflect the new technologies in vehicles nowadays (59% vs 9%). However, the public are unsure about whether or not driving tests have actually kept up with the latest vehicle technologies. While on balance the public are more likely to agree than disagree with the statement "I don't believe the UK driving test has kept up to date with the new technologies in vehicles nowadays" (33% vs 15%), the majority, a combined 52%, say that they neither agree nor disagree (25%) or that they simply don't know (27%).

Figure 3.14: Attitudes towards the current UK driving test

Q16. To what extent do you agree or disagree with the following statements?



Base: 2,154 British adults aged 16–75 (14–18 July 2017)

Views regarding the statement "the way people are taught to drive in the UK should be updated to reflect the new technologies in vehicles nowadays" are typically more consistent between demographic groups than for some of the other statements in the survey. Older people aged 55–75 (at 63% compared with the average of 59%) and those in the higher household income bracket of £55,000+ (at 65%) are a little more likely to agree with this statement, while those aged 45–54 (54%), in social grades C2DE (57%) and those educated up to GCSE / O Level / NVQ12 (53%) are a little less likely to agree. Looking at attitudinal subgroups, those considering buying a new vehicle in the next couple of years (67%), those who try to keep up with the latest about new cars (69%) and those who would pay extra for certain connected driver services (71%) are all more likely than the average adult to feel that teaching should be updated to reflect new technologies in vehicles.

Likewise, there are comparatively few differences in opinion between demographic groups with regard to the statement "I don't believe the UK driving test has kept up to date with the new technologies in vehicles nowadays". Men and those aged 55–75 (both at 37%) are a little more likely to agree this is so than the average 33%, while those aged 18–24,

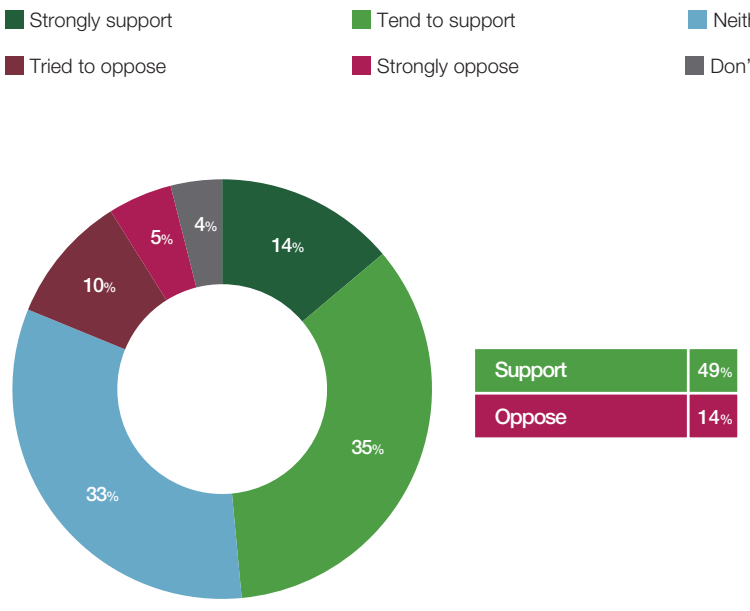
the vast majority of whom took their driving test in the past two years, are much more likely to disagree with this statement than the public overall (26% vs 15%). However, attitudinal differences are more pronounced than demographic ones. Among those more likely to agree with this statement than the public overall are:

- those considering buying a new car or van (43%);
- those interested in connected driving (39%);
- those who have connected driving technology in their current vehicle (38%);
- those who would pay extra for certain connected technologies (44%); and
- those who try to keep up with the latest developments about new cars (48%).

In line with broad public agreement that people should be taught to drive in the UK in a way which reflects the latest technologies in vehicles, almost half (49%) of participants support the use of a satnav to provide route information to candidates in future driving tests, while 14% oppose this change (see Figure 3.15).

Figure 3.15: Support for or opposition to the use of a satnav in most UK driving tests

Q17. The Driver and Vehicle Standards Agency (DVSA) recently confirmed that from 4 December 2017 the majority of driving tests will include a section where the candidate will be asked to follow directions from a DVSA-supplied satnav. To what extent do you support or oppose the use of a satnav to provide route information to candidates in future driving tests, or do you have no feelings either way?



Base: 2,154 British adults aged 16–75 (14–18 July 2017)

Age appears to have a strong bearing on views about this policy change. Younger participants aged 18–24 (59%) and 25–34 (63%) are particularly supportive of the introduction of satnavs to provide route information to candidates in future driving tests, while a far smaller proportion of 55- to 75-year-olds (40%) agree. Indeed, one in five (20%)

of those aged 55–75 oppose this change. Looking from other perspectives, those in social grades ABC1 are more likely than those in social grades C2DE to support the use of satnavs for this purpose (53% vs 44%), as are those educated to degree, masters or PhD level compared with those educated to GCSE, O Level or NVQ12 (55% vs 41%).

Attitudinal variation follows a similar pattern to that described earlier for views regarding the current driving test regime:

- Those considering buying a new car or van in the next couple of years are more supportive of the introduction of satnavs into most driving tests than those who are not (60% vs 46%).
- Those who try to keep up with technology are more supportive than those who do not (56% vs 39%).
- Those who try to keep up with the latest about new cars are more supportive than those who do not (60% vs 49%).
- Those who would pay extra for certain connected driver services are more likely to support this policy than those who would not (67% vs 42%).

4. Conclusions

Cars continue to be an important feature in the lifestyles of the majority of the British public. Few adults say that they like to keep up with the latest developments about new cars at the moment, but the transformative nature of developments to vehicle technology in the not-too-distant future could mean that this soon changes. Trends observed by Ipsos MORI's Technology Tracker[1] tell us that the public have become increasingly technology-dependent in recent years; findings from the research support this, painting a picture of a British public positive about the impact of technology on their lives, and confident in using it.

Connected vehicle technologies are of interest to the British public. Regulators and manufacturers will be encouraged to know that the great majority of drivers considering buying a new vehicle in the next year or two are interested in connected driving technologies. They will also be buoyed by the finding that almost all drivers who are considering buying a new vehicle in the next year or two have heard of driver assistance technologies, and, further, that the majority are interested in having driver assistance technologies in their vehicle.

However, some of the findings offer a more cautionary note, and suggest that there is still some way to go before these new technologies become commonplace. 'The latest in-car technologies' (e.g. connected driving and

1 https://www.ipsos.com/en/technology-tracker-q2-2017

driver assistance technologies) remain low on the list of drivers' priorities when it comes to purchasing new vehicles, with the traditional factors of price, running costs and reliability dominating. There is also uncertainty over whether or not people are prepared to pay more for certain driver assistance technologies (such as adaptive cruise control and automatic emergency braking) if they are considering buying a new vehicle, with the public currently split on this.

Nonetheless, when prompted on *specific* driving features which might affect their purchasing decisions in future, individual driver assistance technologies feature higher on buyers' list of priorities, with automatic emergency braking and automatic headlights trailing only 'vehicle insight' features (e.g. those which give information about vehicle condition), smart journey information and satellite navigation systems. Many drivers already have some of these features in their vehicles.

As these technologies become more widely used and continue to develop, there will undoubtedly be a need for further research into driver sentiment towards both the technology already available to them and the technology soon to come to market. The findings from this report show that the British public are broadly supportive of autonomous vehicles and the range of comfort and safety benefits that they bring to the driving experience. However, there is something of a shift in the weight of public opinion when it comes to driverless cars: the balance of public sentiment about driver assistance technologies swings from positive to negative when they are mentioned, and the public make it clear that this is about control, and specifically a concern about too much control being taken away from the driver – something they are not yet familiar with. There is also uncertainty about willingness to pay for such technologies at this stage – this may well change in the future, but is something which has major implications for manufacturers and regulators alike, and should be monitored over time.

Members of the public agree, by some margin, that the way people are taught to drive should be updated to reflect recently developed technologies in vehicles that are now commonplace. As the driving test regime in the UK responds to technological developments, it will also be important to measure how well equipped drivers feel to use the technology at their disposal when passing their tests.

Qualitative research has been commissioned to delve deeper into some of the issues which have been explored in this report. In the longer term, qualitative research will have an important role to play in understanding the concerns that drivers have about 'intelligent vehicles', concerns which might well change in response to new technologies becoming more mainstream parts of the automotive industry's retail offer, as they are introduced. The British public's apparent dependence on driving has seemingly not changed in the past two years, and is unlikely to any time soon; exploring views in a greater level of detail will therefore provide invaluable insight into what they are expecting to see next.

It would also be interesting to see whether future research validates some of the findings from this research about attitudes towards autonomous vehicles and driver assistance technologies. These findings suggest that support for the development of driver assistance technologies which reduce the role played by the driver is higher where improvement to the safety on the UK's roads can be demonstrated to be a consequence of such technologies.

Appendix A: Notes on Methodology and Reliability

Vehicles in household

As in the 2015 survey, to keep the questions in each section as relevant as possible, an additional series of screener questions were asked in order to ascertain whether participants were:

- a driver with a car in the household;
- a non-driver with a car in the household; or
- living in a household with no vehicle.

Participants were first asked whether they or anyone else in their household drives a car or van at the moment. The first two options were not mutually exclusive, i.e. yes to both was a valid response (thus the percentages sum to over 100%). Just under two thirds (64%) said they do so themselves, 36% mentioned someone else, and one in five (19%) said no one in the household does.

Those indicating that anyone drives at the moment were then asked how many cars or vans they currently have in the household. Over half (52%) said they have one vehicle, over one third (37%) have two, and 11% have three or more. A small minority (1%) said they have no cars or vans in the household.

Those with at least one vehicle in the household were then asked to answer another question about the car or van that they use the most, either as a driver or as a passenger; 85% of them say that they drive the main vehicle in their household, with 80% driving at least once a week, and 54% driving daily. Again thinking about the main vehicle in the household, over four in five (83%) use the vehicle as a passenger, with over half (51%) doing so at least once a week and 7% daily.

Using the responses to these questions, the term “All who currently drive…” was based on as broad a definition as possible: those who indicate that they personally ever drive (at either of the two questions), as long as they have at least one car or van in their household.

Social grade definitions

Throughout the report, the results are analysed by socioeconomic grades. A definition of these grades is included below for reference. In most cases, comparisons are made between ABC1 groups (non-manual occupations) and C2DE groups (manual occupations and those with no income aside from state benefits).

Social grading		
Non - manual	A	Senior management and professionals
	B	Middle management and professional
	C1	Junior management. Small traders with staff and premises
Manual	C2	Skilled manual workers
	D	Semi-skilled and unskilled manual workers
	E	No income other than state benefits

Sample profile

Quotas were set to ensure that the profile of those responding was as representative of the Great Britain population aged 16–75 as possible. However, please note that owing to the nature of the methodology, this approach does exclude the offline population – those without access to the Internet.

Data has been weighted back to the known population of Great Britain to counteract nonresponse bias. Data is weighted by age, gender, working status, region, social grade, and number of vehicles in the household to reflect the population of Great Britain aged 16–75.

Statistical reliability and margins of error

Participants in the research are only samples of the total population, so we cannot be certain that the figures obtained are exactly those we would have found if every single person in Great Britain aged 16–75 had been surveyed. However, we can predict the variation between the sample results and the true values from knowing the size of the samples on which the results are based and the number of times that a particular answer is given.

It is important to note that margins of error relate only to samples that have been selected using strict random probability sampling methods. However, in practice it is reasonable to assume that these calculations provide a good indication of the confidence intervals relating to this survey and the sampling approach used.

Table A.1 illustrates the predicted ranges for different sample sizes and percentage results at what is called the '95% confidence interval'.

Table A.1: Sampling tolerances

Size of sample on which the survey results are based	Approximate sampling tolerances applicable to percentages at or near these levels		
	10% or 90% ±	30% or 70% ±	50% ±
2,154 (all participants)	1.3%	1.9%	2.1%
1,621 (all who currently drive or who are considering buying a vehicle in the next one to two years)	1.5%	2.2%	2.4%
1,474 (drivers with a vehicle in the household)	1.5%	2.3%	2.6%

For example, with a sample of 2,154 where 50% give a particular answer, the chances are 19 in 20 (95%) that the true value (which would have been obtained if the whole population had been surveyed) will fall within the range of plus or minus 2.1 percentage points from the sample result, i.e. between 47.9% and 52.1%.

Unless otherwise stated, all subgroup differences included in the report represent statistically significant differences.

Technical note

Data points which appear as asterisks (*) denote a figure of less than 0.5% but greater than zero.

Where percentages do not sum to 100, this is due to computer rounding, multiple responses or the exclusion of 'don't know' categories.

Where percentages of combinations are shown (e.g. 'Agree'), these reflect the combined raw numbers, and so may not be the same as the sum of the individual percentages (e.g. 'Strongly agree' and 'Tend to agree').

Appendix B: Questionnaire

Screening questions and attitudinal questions

Now for some questions about the technology that you use on a day-to-day basis.

Question 1.

To what extent do you agree or disagree with the following statements?

	Strongly agree	Tend to agree	Neither agree nor disagree	Tend to disagree	Strongly disagree	Don't know
I try to keep up with technology	○	○	○	○	○	○
Technology generally makes life better	○	○	○	○	○	○
Computers confuse me – I'll never get used to them	○	○	○	○	○	○
I am usually the first among my friends to try out new forms of technology	○	○	○	○	○	○

Now for some questions about cars and transport.

Question 2.

else in your household drive a car or van at the moment? This includes vehicles owned outright, being leased (e.g. Personal Contract Purchase), or any another arrangement (e.g. using a parent's car). (Please select all that apply.)

- ☐ Yes, me (Option 1)
- ☐ Yes, someone else in the household (Option 2)
- ☐ No (Option 3)

If Question 2 answer is Option 3, move to Question 5.

Question 3.

How many cars or vans do you currently have in your household? Please include cars or vans from everyone in the household.

Cars _____

Vans _____

Question 4.

If Question 3 total number of cars **and** vans is more than 1, Question 4 displays additional text:

Thinking now about the vehicle that you personally **use the most**, either as a driver or a passenger.

Approximately how often do you make a journey in [your/this] vehicle, as…?

	Daily (Option 1)	2–3 times per week (Option 2)	Once a week (Option 3)	Once a month (Option 4)	Rarely (Option 5)	Never (Option 6)	Don't know (Option 7)
A driver (a)	○	○	○	○	○	○	○
A passenger (b)	○	○	○	○	○	○	○

Question 5.

Are you personally looking to buy a car or van at the moment, or will you be looking to buy one in the next year or two?

- ☐ Yes, definitely – a new vehicle (Option 1)
- ☐ Yes, possibly – a new vehicle (Option 2)
- ☐ Yes, definitely – a used vehicle (Option 3)
- ☐ Yes, possibly – a used vehicle (Option 4)
- ☐ No (Option 5)
- ☐ Don't know (Option 6)

Question 6.

To what extent do you agree or disagree with the following statements?

	Strongly agree	Tend to agree	Neither agree nor disagree	Tend to disagree	Strongly disagree	Don't know
I like to keep up with the latest developments about new cars	○	○	○	○	○	○
My current lifestyle means I need a vehicle	○	○	○	○	○	○

The remainder of the survey is split into three sections: A – Popularity, B – Prevalence and C – Policy. Respondents are asked to fill in certain sections based on their responses in the Screening and Attitudinal questions section.

If Question 2 answer is Option 1, then complete sections A, B and C.

If Question 2 answer is Option 3 and Question 5 answer is one of Options 1-4, complete sections A and C.

If Question 2 answer is Option 3 and Question 5 answer is Option 5, complete section C.

If Question 2 answer is Option 2 only, Question 4 (a) answer is Option 6 and Question 5 answer is Option 5, complete section C.

If Question 2 answer is Option 2 only, Question 4 (a) answer is Option 6 and Question 5 answer is one of Options 1-4, complete sections A and C.

If Question 2 answer is Option 2 only, Question 4 (a) answer is one of Options 1-5, complete sections A, B and C.

A – Popularity

Question 7.

Vehicle technologies are increasingly connecting the driver to their vehicle (e.g. tyre pressure), the journey (e.g. traffic alerts) and the outside world (e.g. text messages, phone calls).

To what extent, if at all, are you interested in these 'connected driving technologies'?

- ○ Very interested
- ○ Fairly interested
- ○ Not very interested
- ○ Not at all interested
- ○ Don't know

Question 8.

Vehicle technologies are increasingly incorporating 'driver assistance' systems that operate automatically, such as cruise control and automatic parking.

How much, if anything, would you say you know about 'driver assistance' technologies?

- ○ A great deal
- ○ A fair amount
- ○ Just a little
- ○ Heard of, know nothing about
- ○ Never heard of
- ○ Don't know

Question 9.

To what extent, if at all, would you be interested in having these 'driver assistance' technologies in your vehicle?

- ○ Very interested
- ○ Fairly interested
- ○ Not very interested
- ○ Not at all interested
- ○ Don't know

Question 10.

If you were looking to buy a new or used vehicle, which, if any, of these factors would be the most important in helping you make your decision? (Please pick up to five.)

- ☐ The latest in-car technologies
- ☐ Price
- ☐ Vehicle type (size/practicality/comfort)
- ☐ Running costs (e.g. fuel costs, insurance, road tax and servicing)
- ☐ Style/appearance
- ☐ Comfort/space
- ☐ Safety rating / safety features
- ☐ Driving experience/performance
- ☐ Safety rating / safety features
- ☐ Power / engine size
- ☐ Brand name
- ☐ Environmental performance (e.g. vehicle emissions)
- ☐ Personal recommendation
- ☐ Alternative fuel (e.g. hybrid-electric vehicle, electric vehicle etc.)
- ☐ None of these
- ☐ Don't know

Question 11.

Here is a list of potential features that could be built into a vehicle. How important, if at all, would each of these features be to you if you were looking to buy a new or used vehicle?

	Very important	Fairly important	Not very important	Not at all important	Don't know
VEHICLE INSIGHT					
"Smart' journey information (e.g. miles per gallon, average speed, fuel usage) Information about the condition of the vehicle (e.g. tyre pressure, oil, brake fluid)	○	○	○	○	○
NAVIGATION					
Satellite navigation system	○	○	○	○	○
Speed camera warnings	○	○	○	○	○
Ability to search for points of interest (e.g. restaurants, places to visit, petrol stations) using software	○	○	○	○	○
INFORMATION & ENTERTAINMENT					
Ability to take and make calls	○	○	○	○	○
Ability to receive and send text messages	○	○	○	○	○
Ability to receive and send emails	○	○	○	○	○
DRIVER ASSISTANCE TECHNOLOGIES					
Adaptive cruise control (i.e. speed is automatically adjusted whilst in cruise control to maintain a safe distance from vehicles ahead)	○	○	○	○	○
Automatic emergency braking (i.e. vehicle automatically applies brakes when it detects a collision is imminent)	○	○	○	○	○
Lane departure detection (i.e. vehicle automatically steers into centre of the lane when drifting outside)	○	○	○	○	○
Automatic windscreen wipers	○	○	○	○	○
Automatic headlights	○	○	○	○	○

B – Prevalence

If Question 3 total number of cars **and** vans is more than 1, Question 10 displays additional text:

Thinking again about the vehicle that you personally **use the most**, either as a driver or a passenger

Question 12.

Which of the following features, if any, do you have in [your/this] vehicle?
Please note that these features could be directly built in to your vehicle, or could be brought from outside using other devices (e.g. smartphones or portable satnavs)
(Please select all that apply.)

VEHICLE INSIGHT	
☐	'Smart' journey information (e.g. miles per gallon, average speed, fuel usage) Information about the condition of the vehicle (e.g. tyre pressure, oil, brake fluid)
NAVIGATION	
☐	Satellite navigation system
☐	Speed camera warnings
☐	Ability to search for points of interest (e.g. restaurants, places to visit, petrol stations) using software
INFORMATION & ENTERTAINMENT	
☐	Ability to take and make calls
☐	Ability to receive and send text messages
☐	Ability to receive and send emails
DRIVER ASSISTANCE TECHNOLOGIES	
☐	Adaptive cruise control (i.e. speed is automatically adjusted whilst in cruise control to maintain a safe distance from vehicles ahead)
☐	Self-parking
☐	Automatic emergency braking (i.e. vehicle automatically applies brakes when it detects a collision is imminent)
☐	Lane departure detection (i.e. vehicle automatically steers into centre of the lane when drifting outside)
☐	Automatic windscreen wipers
☐	Automatic headlights
☐	None of these
☐	Don't know

Question 13.

How often, if at all, do you personally, as a driver, use each of these features?

Show features selected at Question 12 except Automatic emergency braking, Lane departure detection, Automatic windscreen wipers, Automatic headlights

	Always when I drive	Sometimes when I drive	Hardly ever when I drive	Never when I drive	Don't know
VEHICLE INSIGHT					
"Smart' journey information (e.g. miles per gallon, average speed, fuel usage) Information about the condition of the vehicle (e.g. tyre pressure, oil, brake fluid)	○	○	○	○	○
NAVIGATION					
Satellite navigation system	○	○	○	○	○
Speed camera warnings	○	○	○	○	○
Ability to search for points of interest (e.g. restaurants, places to visit, petrol stations) using software	○	○	○	○	○
INFORMATION & ENTERTAINMENT					
Ability to take and make calls	○	○	○	○	○
Ability to receive and send text messages	○	○	○	○	○
Ability to receive and send emails	○	○	○	○	○
DRIVER ASSISTANCE TECHNOLOGIES					
Adaptive cruise control (i.e. speed is automatically adjusted whilst in cruise control to maintain a safe distance from vehicles ahead)	○	○	○	○	○

C – Policy

Now for some questions about driver assistance technologies, i.e. systems that operate automatically, such as cruise control and automatic parking.

Question 14.

To what extent do you agree or disagree with the following statements?

	Strongly agree	Tend to agree	Neither agree nor disagree	Tend to disagree	Strongly disagree	Don't know
(IF CURRENTLY HAVE A VEHICLE WITH AT LEAST ONE FORM OF DRIVING ASSISTANCE TECHNOLOGY (QUESTION 12) AND WHO EVER USE AT LEAST ONE (QUESTION 13) OR (IF CURRENTLY HAVE A VEHICLE WITH AT LEAST ONE OF THE FOLLOWING AUTOMATIC EMERGENCY BRAKING, LANE DEPARTURE DETECTION, AUTOMATIC WINDSCREEN WIPERS, AUTOMATIC HEADLIGHTS (QUESTION 12))						
Driver assistance technologies have improved my overall driving experience	○	○	○	○	○	○
(IF CURRENTLY HAVE A VEHICLE WITH AT LEAST ONE FORM OF DRIVING ASSISTANCE TECHNOLOGY (QUESTION 12) AND WHO EVER USE AT LEAST ONE (QUESTION 13) OR (IF CURRENTLY HAVE A VEHICLE WITH AT LEAST ONE OF THE FOLLOWING AUTOMATIC EMERGENCY BRAKING, LANE DEPARTURE DETECTION, AUTOMATIC WINDSCREEN WIPERS, AUTOMATIC HEADLIGHTS (QUESTION 12))						
Driver assistance technologies have improved my overall quality of driving	○	○	○	○	○	○
(IF CURRENTLY HAVE A VEHICLE WITH AT LEAST ONE FORM OF DRIVING ASSISTANCE TECHNOLOGY (QUESTION 12) AND WHO EVER USE AT LEAST ONE (QUESTION 13) OR (IF CURRENTLY HAVE A VEHICLE WITH AT LEAST ONE OF THE FOLLOWING AUTOMATIC EMERGENCY BRAKING, LANE DEPARTURE DETECTION, AUTOMATIC WINDSCREEN WIPERS, AUTOMATIC HEADLIGHTS (QUESTION 12))						
Driver assistance technologies have made me feel safer on the road	○	○	○	○	○	○

	Strongly agree	Tend to agree	Neither agree nor disagree	Tend to disagree	Strongly disagree	Don't know
(IF CURRENTLY HAVE A VEHICLE (QUESTION 2, OPTION 1) OR LOOKING TO BUY ONE IN THE NEXT ONE OR TWO YEARS (QUESTION 5, OPTION 1–4))						
If I were looking to buy a new vehicle, I would be happy to pay extra for certain driver assistance technologies (e.g. adaptive cruise control, automatic emergency braking)	○	○	○	○	○	○
I am concerned about future driver assistance technologies taking too much control away from the driver	○	○	○	○	○	○
I support the development of driver assistance technologies which reduce the role played by the driver if it means improving safety on the UK's roads	○	○	○	○	○	○
I think fully self-driving cars (i.e. cars that can operate themselves without human input) are what we should be working towards	○	○	○	○	○	○

Now for some questions about the UK driving test and training.

Question 15.

When did you take your driving test?

- ○ 0–2 years ago
- ○ 3–5 years ago
- ○ 6–10 years ago
- ○ 11–20 years ago
- ○ 21+ years ago
- ○ Not applicable
- ○ Don't know

Question 16.

To what extent do you agree or disagree with the following statements?

	Strongly agree	Tend to agree	Neither agree nor disagree	Tend to disagree	Strongly disagree	Don't know
I don't believe the UK driving test has kept up to date with the new technologies in vehicles nowadays	○	○	○	○	○	○
The way people are taught to drive in the UK should be updated to reflect the new technologies in vehicles nowadays	○	○	○	○	○	○

Question 17.

The Driver and Vehicle Standards Agency (DVSA) recently confirmed that from 4 December 2017 the majority of driving tests will include a section where the candidate will be asked to follow directions from a DVSA-supplied satnav. To what extent do you support or oppose the use of a satnav to provide route information to candidates in future driving tests, or do you have no feelings either way?

- ○ Strongly support
- ○ Tend to support
- ○ No feelings either way
- ○ Tend to oppose
- ○ Strongly oppose
- ○ Don't know

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