RAC Foundation

Mobility • Safety • Economy • Environment

# Connected Drivers

## A public attitude survey

Chris Rigby, Victoria Harkness and Ben Marshall
Ipsos MORI Social Research Institute
December 2015

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.

RAC Foundation
89–91 Pall Mall
London
SW1Y 5HS

Tel no: 020 7747 3445
www.racfoundation.org

Registered Charity No. 1002705

RAC Foundation

Mobility • Safety • Economy • Environment

# Connected Drivers

## A public attitude survey

Chris Rigby, Victoria Harkness and Ben Marshall
Ipsos MORI Social Research Institute
December 2015

Ipsos MORI

# About the Authors

**Chris Rigby** is a Senior Research Executive within the Ipsos MORI Social Research Institute. He joined Ipsos MORI's North office in Manchester three years ago and has since managed a wide range of quantitative research projects on behalf of local government and transport sector clients.

**Victoria Harkness** is a Research Director within the Ipsos MORI Social Research Institute, where she has worked for over seven years. She heads up the Local Government and Transport teams. Prior to this Victoria worked in research and policy roles for the London Borough of Camden and City of London, and as a consultant for the public policy and economic development agency, Shared Intelligence Ltd.

**Ben Marshall** is a Research Director within the Ipsos MORI Social Research Institute, where he has worked for nine years. He has directed projects on transport for numerous clients including the Department for Transport, several of its executive agencies, and numerous local authorities. Ben has also led research projects for the RAC Foundation on topics including congestion, road user charging, graduated driver licences, road safety, and transport policy priorities.

# Acknowledgements

Ipsos MORI would like to thank Elizabeth Box and Philip Gomm from the RAC Foundation for their assistance during this project. We would also like to thank the 2,175 participants who took the time to complete the survey.

# Disclaimer

This report has been prepared for the RAC Foundation by Ipsos MORI. Any errors or omissions are the authors' sole responsibility. The report content reflects the views of the authors and not necessarily those of the RAC Foundation.

This work was carried out in accordance with the requirements of the international quality standard for market research, ISO 20252:2006, and with the Ipsos MORI Terms and Conditions which can be found at www.ipsos-mori.com/terms.

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 is therefore subject to the advance approval of Ipsos MORI. Such approval will only be refused on the grounds of inaccuracy or misrepresentation.

# Contents

# Foreword

There was a time when transport connectivity referred solely to how easy it was to get from A to B: how well were places 'connected'?

More recently the discussion has been about the 'connected car': how are motor vehicles connecting with other vehicles and the infrastructure around them?

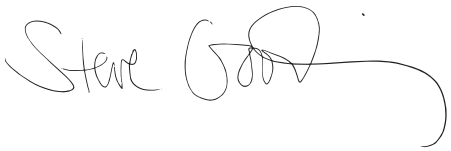
But there is an element missing. What about the 'connected driver'? What technologies do motorists bring with them to the wheel? And what do they want these devices and applications to do for them?

We commissioned Ipsos MORI to find out.

Some of the findings are intriguing, some surprising. All are interesting for anyone working in this field.

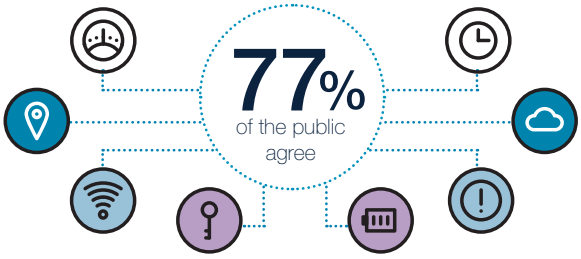
The driverless car is approaching somewhere over the horizon. But before it arrives we must ensure the systems the responsible motorist is increasingly demanding of, and dependent on, are reliable, appropriate and safe for the road.

Steve Gooding

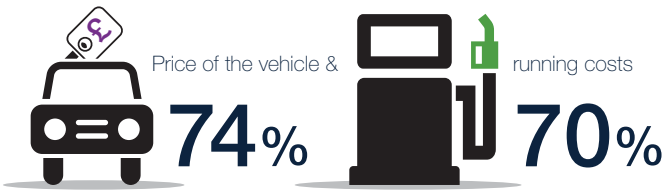


Director, RAC Foundation

## Technology generally makes life better




## Most important factor in vehicle purchasing decision...*




9% selected connected driving technologies as an important factor in the decision

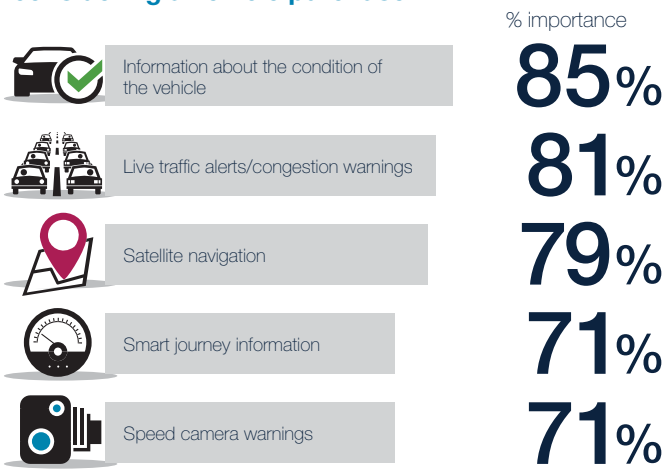
## 3 in 5...

Say they try to keep up with technology

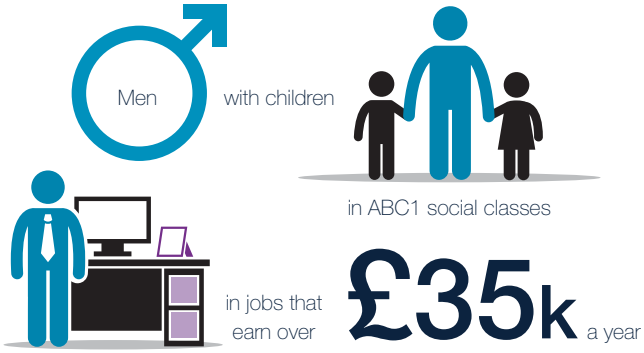
Say their current lifestyle means they need a vehicle

Who drive, or are looking to purchase a car or van soon are interested in 'connected driving technologies'

## Importance of connected driving features when considering a vehicle purchase*




## Individual groups most likely to be engaged with connected driving technologies...




## Connected driving going forward*

**69%** Agree technologies that connect the driver to the outside world could distract people from driving safely

**60%** Would be happy to use a 'vehicle safe mode' on external devices in cars

**Almost half** of drivers who use connected driving features agree that these technologies have improved their overall driving experience

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

# 1. Summary of Findings


In September 2015, independent researchers Ipsos MORI were commissioned by the RAC Foundation to undertake research with the public on the subject of the 'connected driver'. The online survey of 2,175 members of the general public of Great Britain aimed to ascertain the usage of and attitudes towards so-called 'connected technologies' in vehicles, and what this might start to mean for regulators and manufacturers in the future.

The research shows that amongst the general public there is a strong appetite for using technology more generally. Over three quarters (77%) of the public agree that technology generally makes life better, while three in five (62%) say that they try to keep up with technology. One in four (23%) would even describe themselves as being usually the first among their friends to try out new forms of technology.

Cars and other vehicles are an essential part of life for a large majority of the British public: three in five (59%) say that their current lifestyle means they need a vehicle. Whilst most people are not all that engaged with what new cars have to offer, a sizeable minority of the British public – around a quarter (26%) – say that they like to keep up with the latest developments about new cars.

So what does this mean for appetite and engagement with technology in the car – connected technologies, which are increasingly connecting the driver to their vehicle (for example, by displaying fuel usage), to the journey (by giving traffic alerts, for instance) and to the outside world (by enabling text messages, phone calls and the like)?

The research suggests that there is interest in connected driving technologies generally amongst drivers. When we pose a question, briefly explaining what is meant by 'connected driving technologies', to those who currently drive and those who are thinking about buying a new or used vehicle in the next one to two years, asking how interested they are in such technologies, three in five (61%) say that they are interested, with one in five (19%) proclaiming themselves *very* interested. Only slightly more than a third (36%) say they are not interested.

When drilling down further into the *kinds* of connected driving features that drivers would be interested in if they were buying a new or used vehicle, it is features which connect the driver to the car and to the journey that are thought to be of higher importance than those connecting them to the outside world. The most popular wished-for features include information about the condition of the vehicle (e.g. tyre pressure, oil, brake fluid) (cited by 85% of current drivers and those considering buying a vehicle in the next one to two years), live traffic alerts / congestion warnings (81%), satellite navigation systems (79%), smart journey information (71%) and speed camera warnings (also 71%).

This said, when it comes to buying a new or used vehicle, price and running costs are still the most important considerations for drivers (with 74% and 70% of current drivers and those considering buying a vehicle in the next one to two years saying that these would be the factors most important in their decision, respectively). In contrast, "connected driving technologies" ranks just 11$^{th}$ out of 13 factors asked about in the survey (being selected by just 9%). This is a response that is useful to bear in mind as the context against which to read the rest of the findings.

In terms of current usage, almost two thirds (64%) of current drivers who have at least one vehicle in their household have at least one connected driving feature in their vehicle. The most prevalent features are satellite navigation systems – either built into the vehicle or brought in from the outside using external devices – (owned by 38% of current drivers), 'smart' journey information and Bluetooth connectivity (both at 33%), the ability to take calls (28%), and information about the condition of the vehicle (25%). Along with in-car music streaming services (owned by 8% of current drivers), the last four of these features (i.e. excluding satellite navigation) are also the features likely to be used the most frequently (i.e. at least once a week). Far fewer have the following features in their main vehicle: online gaming, telematics insurance, the ability to locate car park spaces using software, specialist apps for news and sports, and the ability to send emails (all mentioned by 5% or fewer of these drivers).

In terms of *who* amongst the population is more likely to be engaged with connected technologies, the research points to distinct segments of society: men, people in work, those from higher socioeconomic classes and/or higher earners (generally defined as those earning over £35,000 a year), and also those with children in the household. It is probably no

coincidence that this is a similar demographic to those members of the public who say that they are interested in technology more generally. Along with young people, these groups are more likely to already be using connected technologies, and are also more likely to cite them as being important factors when making a new or used vehicle purchase. Arguably, in thinking about future regulation and the connected technologies market generally, it is these groups who may be able to offer the best insights.

What, then, does the move towards more connected technology in the vehicle mean for regulators and manufacturers?

Members of the public are fairly evenly split as to whether car and journey information that is provided whilst driving could distract people from driving safely. They are slightly more inclined to *disagree* than agree that "information provided about the car (e.g. fuel usage) could distract people from driving safely" (34% vs 30%), or that "information provided about the journey" could have this effect (by a rather larger margin, 39% vs 26%). In fact, when asked the question, a sizeable proportion simply does not have a view either way (29% and 28% respectively for these two statements).

There is rather clearer sentiment when it comes to information provided from *outside* the car (e.g. text messages, phone calls). A sizeable majority (69%) are clear that this has the potential to distract people from driving safely, with only 7% disagreeing, which provides a clear statement in terms of expected behaviours of drivers when utilising such technologies.

In thinking about promoting safer driving behaviours, it is encouraging that there is a strong appetite for using a 'vehicle safe mode' on devices (such as a mobile phone) used in cars, meaning a mode which would prevent the device doing anything that could distract people from driving safely. Of current drivers and those considering buying a vehicle in the next one to two years, 60% agree that they would be happy to use such a device. Furthermore, the appetite for such devices is generally higher among those who are already 'tech-savvy', and who already display an active interest in using connected driving technologies.

Drivers and those considering buying a vehicle in the next one to two years are less likely to be willing to pay extra for certain connected driving services (e.g. parking availability, live traffic alerts) – just 29% would do this, although this increases among those drivers who are already using connected driving technology and whose current lifestyle means that they need a vehicle.

Finally, it is worth mentioning that, of drivers who use connected driving features already, virtually half (49%) feel that these technologies have improved their overall driving experience.

# 2. Background


In September 2015, independent researchers Ipsos MORI were commissioned by the RAC Foundation to undertake research with the public on the subject of the 'connected driver'. The research covers a range of technologies that help connect drivers to their cars ( for example, by displaying fuel usage), to the journey (by giving traffic alerts, for instance) and to the outside world (by enabling text messages, phone calls and the like).

The objectives of this research were to measure:

- the public's interest in the connected car concept;
- the demand amongst the public for the various services that connected cars offer;
- what features members the public would most like within their vehicles;
- the extent to which drivers already have some connected car functionality; and
- whether these features are being used to their full capacity.

The research will also be used to inform some of the RAC Foundation's policy discussions on the future implications of connected driving technologies, such as how regulators and manufacturers may be able to influence the usage of these features.

In partnership with the RAC Foundation, Ipsos MORI designed an online self-completion questionnaire, ensuring that the data collected via the survey met the overall project objectives.

Fieldwork was conducted between 5 October and 8 October 2015. The final survey results consisted of 2,175 responses from members of Ipsos MORI's online panel aged 18 to 75, collected through its online omnibus service, i:omnibus.

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

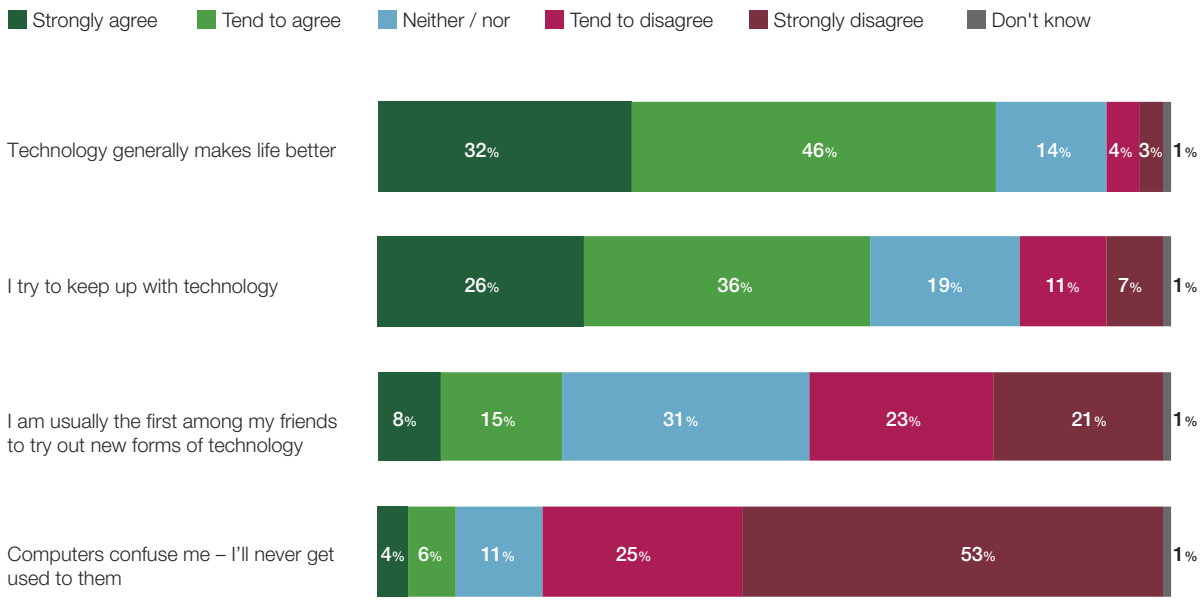

## 3.1 Attitudes towards technology

To provide context to the main theme of connected driving technology, participants were first asked a series of questions about their attitudes towards technology.

Over three quarters (77%) of the general public agree that technology generally makes life better, while three in five (62%) say that they try to keep up with technology (see Figure 3.1, and refer to the notes in Appendix A when interpreting the results presented graphically in this report). Almost a quarter (23%) agree that they are usually the first among their friends to try out news forms of technology. A mere 11% agree that "computers confuse me – I'll never get used to them", whereas over three quarters of the public (77%) disagree with this statement.

**Figure 3.1: Attitudes towards technology**

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




Base: 2,175 British adults aged 16-75 (5-8 October 2015)

There are number of significant differences across each of the statements by both demographic and attitudinal subgroups. In particular, it is those from younger age groups and from better-off and more educated backgrounds who are more likely to be 'tech-savvy', and males rather than females:

- These groups are more likely to agree that **technology generally makes life better** – for example, those aged 16–24 (of whom 84% agree that technology generally makes life better vs 74% of those aged 55–75), those in higher social grades[1] (82% of ABC1s vs 72% of C2DEs) and those earning £35,000+ per year (83% vs 70% of those earning less than £20,000). As for level of education, those with at least a degree are also more likely to agree with the statement (81% vs 73% of those whose highest qualifications are GCSEs or equivalent, and 62% of those with no formal qualifications).
- They are also more likely to **try to keep up with technology.** For example, those aged 16–34 (71% agree with the statement "I try to keep up with technology" vs 53% of those aged 55–75), those in higher social grades (66% of ABC1s vs 57% of C2DEs), those in work (65% vs 57% of those not working) and those earning £55,000+ per year (73% vs 55% of those earning less than £20,000). We also find that men (66% vs 59% of women), and those living in London (69% vs 62% in Great Britain as a whole) are more likely than average to say that they try to keep up with technology.

1 Please see Appendix A for social grade definitions.

- They are more likely to be the **"first among my friends to try out new forms of technology".** For example, males (27% vs 19% of females), those aged 16–44 (29% vs 13% of those aged 55–75), those in work (26% vs 18% of those not working), and those earning £55,000+ per year (31% vs 19% of those earning less than £20,000). Again, those living in London are also more likely to agree with the statement than average (29% vs 23% in Great Britain as a whole).
- Conversely, but reinforcing this pattern, when we come to the statement **"computers confuse me – I'll never get used to them"**, those more likely to *agree* with this sentiment include those in lower social grades (13% of C2DEs vs 9% of those in ABC1), those earning less than £20,000 (13% vs 7% of those earning £55,000+) and those with no formal qualifications (22% vs 8% of those with at least a degree).

In terms of attitudinal differences, somewhat intuitively, those who try to keep up with technology and the latest developments about cars, and those who are interested in connected driving technologies, are more likely to be positive about the statements concerning technology.

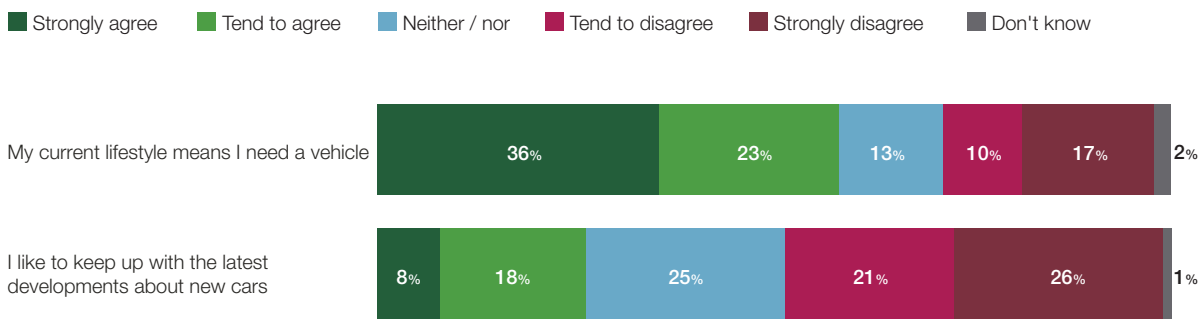
## 3.2 Attitudes towards cars

Participants were also asked about their level of interest in cars and how dependent they are on vehicles in their day-to-day life.

Overall, three in five (59%) members of the public agree that their current lifestyle means they need a vehicle (see Figure 3.2). However, far fewer – a quarter of the public (26%) – agree that they like to keep up with the latest developments about new cars. Around half disagree with this statement (47%).

**Figure 3.2: Attitudes towards cars**

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




Base: 2,175 British adults aged 16-75 (5-8 October 2015)

As with attitudes towards technology, it is a similar group of people who tend to be more interested in and/or reliant upon cars – men, those in work, those from higher social grades, and those with higher levels of income – as are those with children in the household.

- Those more likely to agree that **"my current lifestyle means I need a vehicle"** include those aged 45–75 (64% vs 49% of those aged 16–24), to a marginal extent those in higher social grades (61% of ABC1s vs 59% overall), those in work (64% vs 50% of those not in work), those earning £35,000+ per year (67% vs 44% of those earning less than £20,000) and those with children in the household (65% vs 48% of single-person households). Those in the Midlands are more likely than average to agree that they need a vehicle for their current lifestyle (64%), whereas those in London are less likely to agree (38%).
- Groups more likely to say that they **try to keep up with the latest developments about new cars** include males (35% vs 18% of females), those in work (29% vs 21% of those not working), those earning £35,000+ per year (32% vs 18% of those earning less than £20,000) and those with children in the household (32% vs 26% overall). Those who try to keep up with technology and those who are interested in connected driving technologies are both more likely than average to agree with the statement (36% and 44% respectively, as compared with 26% overall).

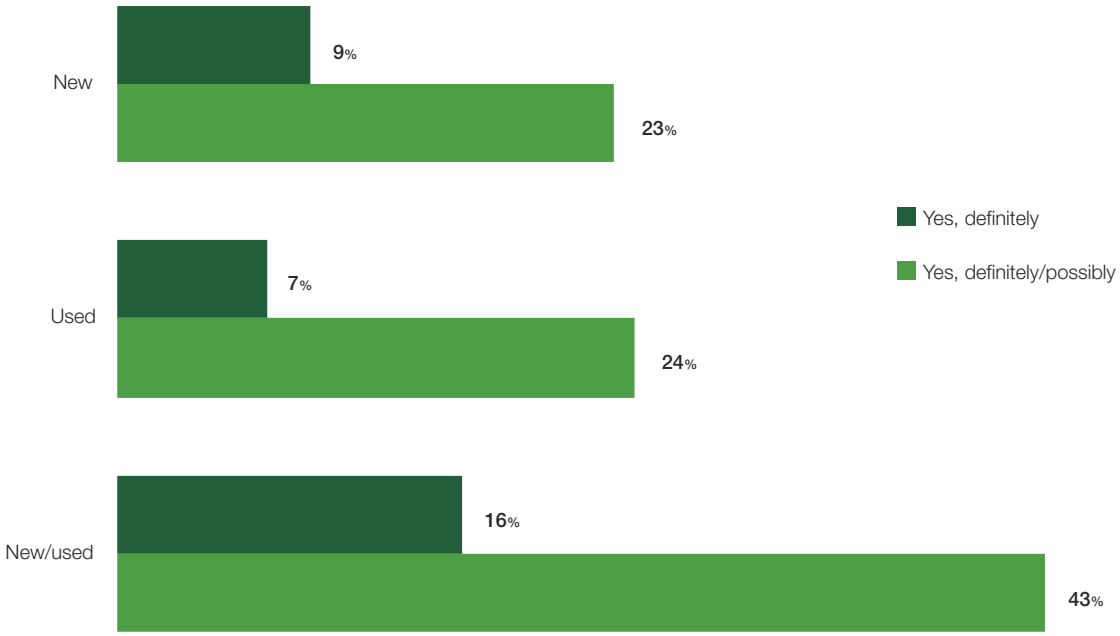
## 3.3 Considering buying a vehicle

To ensure that questions were asked only to those for whom they were relevant, participants were asked a screener question about whether they were personally looking to buy a car or van at the moment, or whether they will be looking to buy one in the next one to two years. Overall, two in five (43%) members of the public are currently considering, or will be considering buying a vehicle in the next year or two, including 23% who are considering a **new vehicle** and 24% who are considering a **used vehicle**; 16% say that they will *definitely* be buying a car or van in the next one to two years (see Figure 3.3).

Please note that the proportion saying they are definitely/possibly considering a new or used vehicle, either at the moment or in the next one to two years (43%), is not simply the sum of those saying they are definitely/possibly considering a new car, and those definitely/possibly considering a used car. This is because the question allowed participants to select more than one option (e.g. possibly a used car *and* possibly a new car); only unique responses have been included in the combined figure.

**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: 2,175 British adults aged 16-75 (5-8 October 2015)

Groups more likely to say that they will definitely/possibly be buying a new or used vehicle in the next one to two years include:

- males (46% vs 39% of females);
- ABC1s (46% vs 38% of C2DEs);
- those in work (48% vs 34% of those not in work);
- those earning £35,000+ (53% vs 32% of those earning less than £20,000);
- those with children in the household (52% vs 39% of those without children in the household, and 37% of single-person households); and
- those with at least a degree (49% vs 35% of those whose highest levels of qualifications are GCSEs or equivalent, and 28% of those with no formal qualifications).

Also more likely to be considering a new or used vehicle are those who like to keep up with the latest developments about new cars (64%) and those whose current lifestyle means that they need a car (53% vs 43% of the public overall).

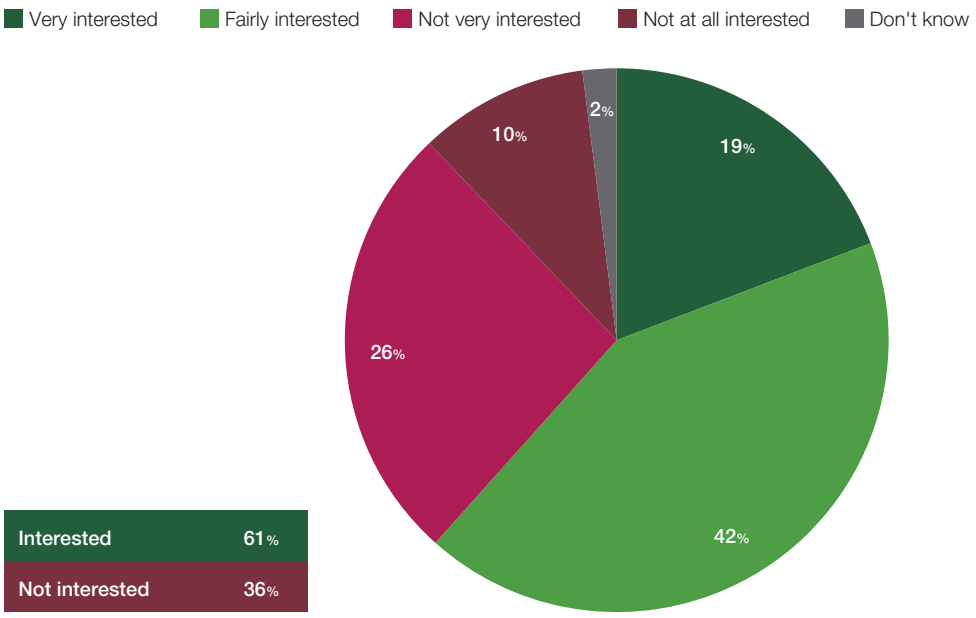
## 3.4 Interest in connected driving technologies

Current drivers and those who are considering buying a vehicle in the next one to two years were asked a series of questions about their interest in connected driving features, as well as how important these features would be when making a decision about a new or used vehicle.

Those who currently drive or are considering buying a vehicle in the next one to two years were given a brief definition of connected driving technologies covering connectedness with the vehicle, the journey and the outside world. Based on this definition, three in five (61%) say that they are interested in connected driving technologies, with one in five (19%) going so far as to say they are *very* interested; 36% say they are not interested, including one in ten (10%) who are not interested at all (see Figure 3.4).

**Figure 3.4: Interest in connected driving technologies**

*Q7. Technologies are increasingly connecting the driver to their vehicle (e.g. fuel usage), 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: 1,651 British adults aged 16-75 who currently drive or are considering buying a vehicle in the next one or two years (5-8 October 2015)

Somewhat intuitively, both those who try to keep up with technology and those who like to keep up with cars are more likely than average to be interested in connected driving technologies (73% and 83% respectively vs 61% of drivers and those who are considering buying a vehicle in the next one to two years overall).

Similarly, when it comes to demographic profile, it is those same groups of people who are more likely to be interested in technology and cars more generally, who are also more likely

to be interested in connected driving technologies specifically, namely:

- males (64% vs 58% of females);
- younger people (69% of 25- to 34-year-olds vs 54% of those aged 55–75);
- those in higher social grades (65% of ABC1s vs 57% of C2DEs);
- those in work (65% vs 53% who are not working);
- those earning £35,000+ per year (70% vs 50% of those earning less than £20,000);
- those with children in the household (70% vs 61% overall); and
- those in London (70% vs 61% in Great Britain as a whole).

Also more interested are those who *already have* connected driving features and use them (72% vs 61% overall), and those who agree that using these features have improved their overall driving experience (85% vs 53% who disagree that this is the case). Those who are considering buying a vehicle in the next one to two years are also more interested in connected driving technologies (71%), in particular those considering a *new* vehicle in the next one to two years (77% vs 61% overall).

## 3.5 Importance of connected driving features

Current drivers and those considering buying a vehicle in the next one to two years were asked how important a range of connected driving features would be if they were considering buy a new vehicle. These features covered three broad themes:

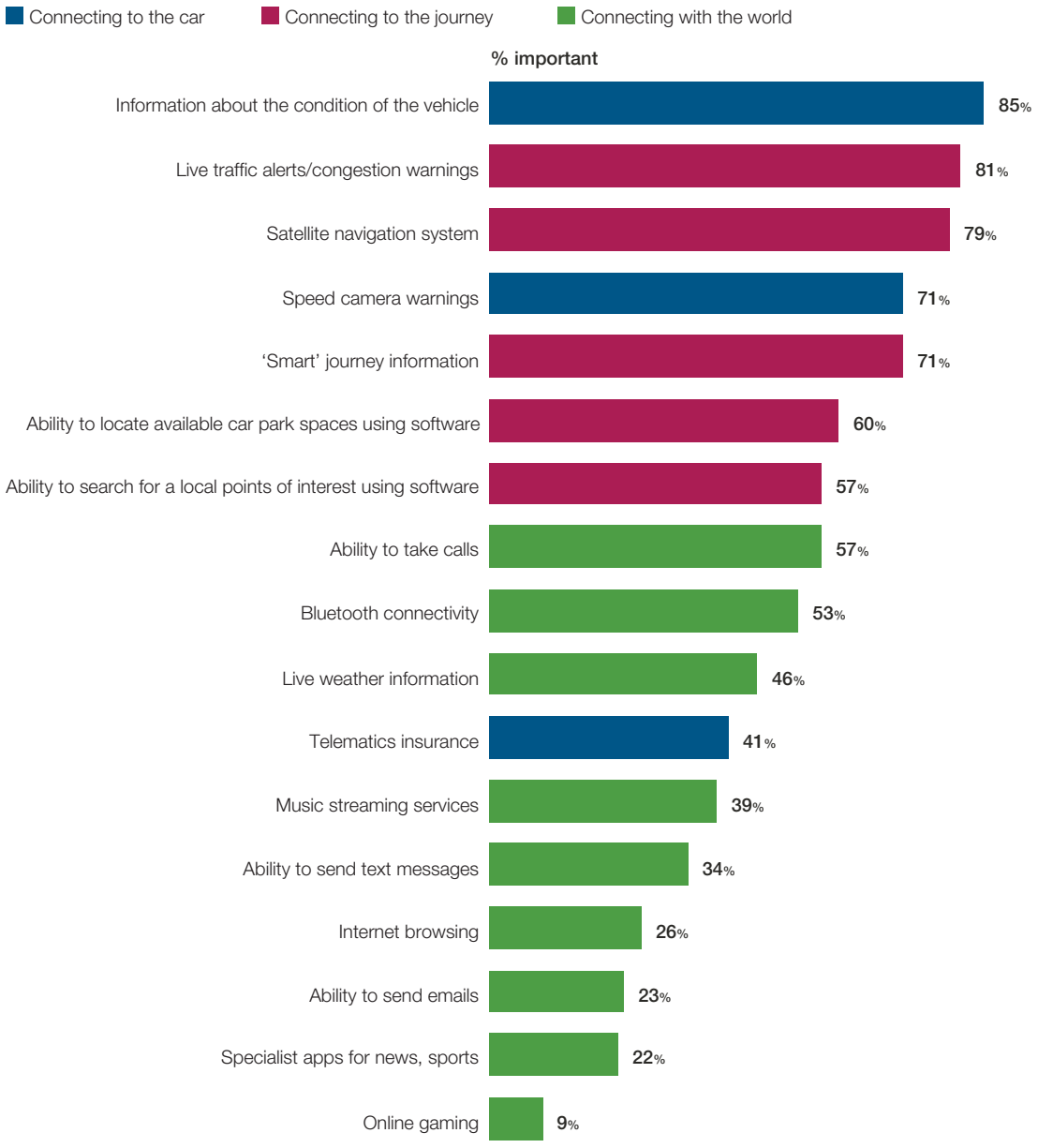
- connecting to the car (vehicle insight);
- connecting to the journey (navigation);
- connecting with the outside world (information and entertainment).

Overall, the features considered most important (see Figure 3.5) include **information about the condition of the vehicle** (85% of current drivers and those considering buying a vehicle in the next one to two years think this would be important), **live traffic alerts / congestion warnings** (81%), **a satellite navigation system** (79%), **'smart' journey information** (71%) and **speed camera warnings** (71%).

The least important of those asked about are seen to be online gaming (cited by just 9% of drivers and those considering buying a vehicle in the next one to two years), specialist apps for news and sports (22%), the ability to send emails (23%) and Internet browsing (26%).

**Figure 3.5: Importance of connected driving features (overall)**

*Q8. Here is a list of potential features that could be built into a vehicle, or that a vehicle could be ready to receive. How important, if at all, would each of these features be to you if you were looking to buy a new or used vehicle?*



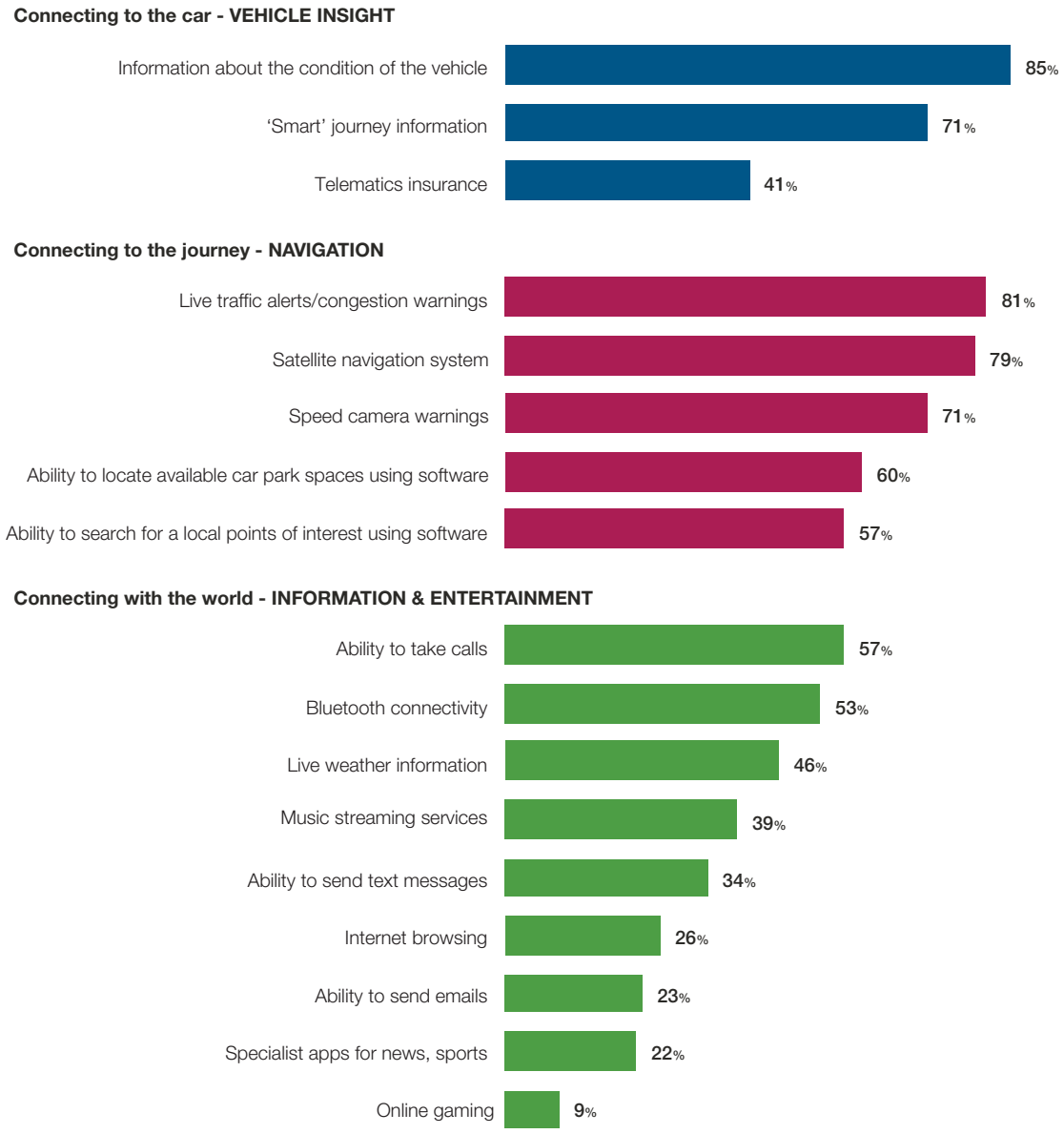

Base: 1,651 British adults aged 16-75 who currently drive or are considering buying a vehicle in the next one or two years (5-8 October 2015)

Looking at the results by theme, features connecting the driver **to the car** and **to the journey** are generally thought to be of higher importance than those that connect the driver to the outside world. In particular, information about the car (the condition of the vehicle, smart journey information) and the road network (traffic alerts / congestion warnings, satellite navigation) are considered most important by those considering buying a vehicle in the next one to two years (see Figure 3.6).

Despite being of lower importance, two features within the theme of connecting the driver **to the outside world** are still considered important by over half of the public – the ability to take calls (cited by 57% of current drivers and those considering buying a vehicle in the next one to two years) and Bluetooth connectivity (53%).

**Figure 3.6: Importance of connected driving features (by theme)**

*Q8. Here is a list of potential features that could be built into a vehicle, or that a vehicle could be ready to receive. 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: 1,651 British adults aged 16-75 who currently drive or are considering buying a vehicle in the next one or two years (5-8 October 2015)

Again, the same demographic groups place higher importance on a number of connected driving features, reflecting their higher levels of interest in technology generally: those aged 16–34, those in work, those in higher social grades (ABC1), those with an income of £55,000+, and those with children in the household.

## 3.6 Factors influencing a vehicle purchase

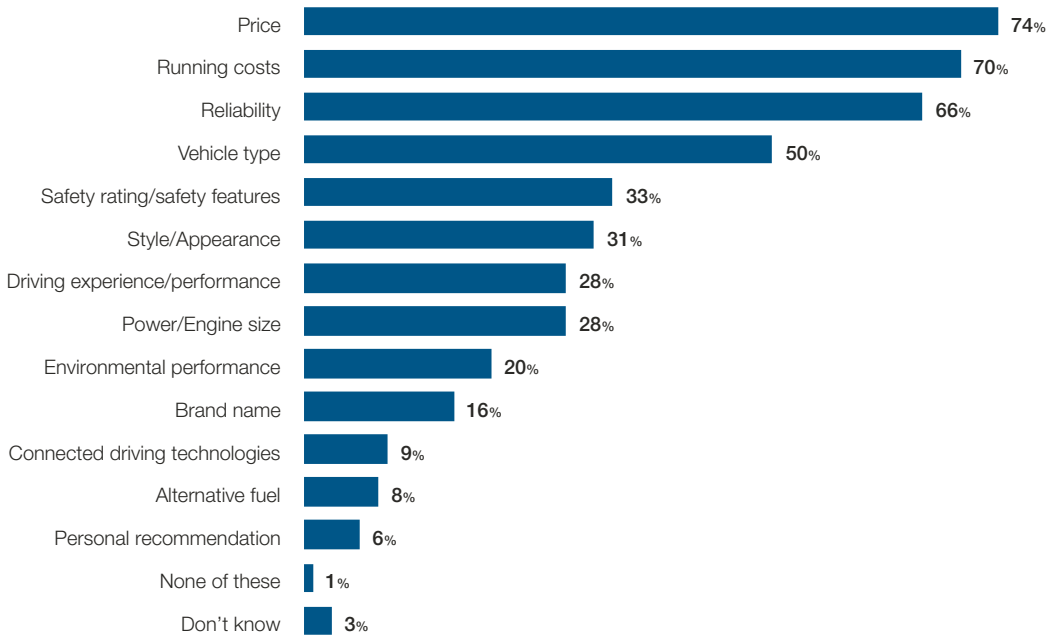
In order to contextualise the importance attributed to various connected driving features, those who currently drive or who are considering buying a vehicle in the next one to two years were then asked what factors would be the most important in making their decision if they were to buy a new or used vehicle.

The most important factors (see Figure 3.7) are considered to be **price** (selected by 74% of current drivers and those considering buying a vehicle in the next one to two years), **running costs** (70%), **reliability** (66%), **vehicle type** – size, practicality, comfort (50%), and **safety rating/features** (33%).

'Connected driving features' specifically ranks just 11th out of 13 in the list provided with the question (selected by 9%), with only alternative fuel and personal recommendations considered of lower importance.

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

*Q9. 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: 1,651 British adults aged 16-75 who currently drive or are considering buying a vehicle in the next one or two years (5-8 October 2015)

It is those drivers who are more likely to keep abreast of the latest technology and cars more generally who are more likely to place importance on connected driving features, although the proportions are still relatively low (12% and 16% respectively vs 9% of drivers and those who are considering buying a vehicle in the next one to two years overall), and this is reinforced when we consider which demographic groups are more likely to place importance on connected driving technologies, namely:

- males (11% vs 7% of females);
- those in A and B social grades (18% and 11% respectively vs 9% of those who currently drive or who are considering buying a vehicle in the next one to two years);
- those earning £55,000+ per year (16% vs 9% of drivers and those who are considering buying a vehicle in the next one to two years overall); and
- those in the North of England (12%), in particular the North West (15%).

For those who are considering buying a vehicle in the next one to two years, connected driving technologies are more important for those who are considering a new vehicle (15%) compared to those considering a used vehicle (6%).

Those who already have connected driving features in their main vehicle are also more likely to consider them to be important (12%), in particular those who believe that connected technologies have improved their overall driving experience (19% vs 9% overall).

## 3.7 Current connected driving features

Current drivers who have at least one vehicle in their household were asked a series of questions about the connected driving features that they currently have in their main vehicle, about whether these are built in to the car or brought in from outside, and about how often they are used.

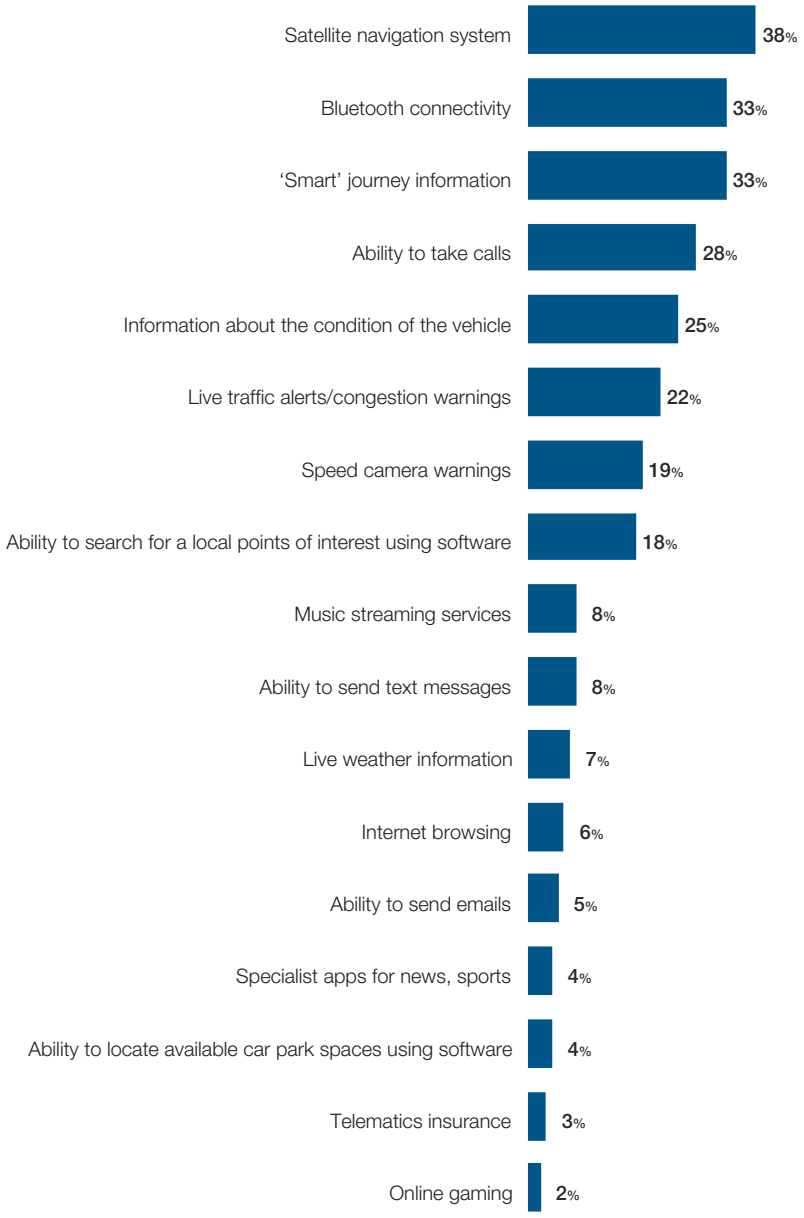
Participants were presented with a list of 17 features and asked which they currently have in their main vehicle. Of these drivers with at least one vehicle in their household, 64% have at least one connected driving feature in their vehicle. The most prevalent connected driving features (see Figure 3.8) are **satellite navigation systems** (owned by 38% of current drivers who have at least one vehicle in their household), **Bluetooth connectivity** (33%), **smart journey information** (33%), the **ability to take calls** (28%), and **information about the condition of the vehicle** (25%).

The features that are least prevalent are online gaming (2%), telematics insurance (3%), the ability to locate car park spaces using software (4%), specialist apps for news and sports (4%) and the ability to send emails (5%).

One third (33%) of current drivers who have at least one vehicle in their household say that they have *none* of the features listed in their current vehicle.

**Figure 3.8: Connected driving technologies in main vehicle (overall)**

*Q10. Which of the following features, if any, do you have in this vehicle?*




Base: 1,490 British adults aged 16-75 who are drivers and have at least one vehicle in their household (5-8 October 2015)

Table 3.1 shows the demographic groups more likely than the average driver to report having *each* feature in their main vehicle.

**Table 3.1: Current connected 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 |
| Satellite navigation system | 38% | Aged 55–75 (42%)<br>Earning £55,000+ (48%) |
| 'Smart' journey information (e.g. miles per gallon, average speed, fuel usage) | 33% | Males (37%)<br>Aged 55–75 (39%)<br>Earning £55,000+ (44%) |
| Bluetooth connectivity | 33% | Males (37%)<br>Earning £55,000+ (47%) |
| Ability to take calls | 28% | Males (31%)<br>Aged 55–75 (32%)<br>Earning £55,000+ (43%) |
| Information about the condition of the vehicle (e.g. tyre pressure, oil, brake fluid) | 25% | Aged 55–75 (30%) |
| Live traffic alerts / congestion warnings | 22% | Males (24%)<br>Aged 55–75 (26%)<br>Earning £55,000+ (28%) |
| Speed camera warnings | 19% | ABC1s (21%) |
| Ability to search for local points of interest (e.g. restaurants, places to visit, petrol stations) using software | 18% | Males (21%)<br>ABC1 (20%)<br>Earning £55,000+ (23%) |
| Music streaming services | 8% | Earning £35,000–£54,999 (11%) |
| Ability to send text messages | 8% | Aged 25–34 (11%)<br>Earning £55,000+ (15%) |
| Live weather information | 7% | – |
| Internet browsing | 6% | Aged 25–34 (11%)<br>Earning £55,000+ (10%) |
| Ability to send emails | 5% | Aged 25–34 (9%)<br>Earning £55,000+ (9%) |
| Ability to locate available car park spaces using software | 4% | – |
| Specialist apps for news/sports | 4% | Males (5%)<br>Earning £55,000 (6%) |
| Telematics insurance (e.g. paying insurance costs per mile, or allowing insurance companies to set premiums based on how safely you are driving) | 3% | Aged 16–24 (7%)<br>Working (4%) |
| Online gaming | 2% | Aged 25–34 (5%) |

Base: All drivers who have at least one vehicle in their household (1,490)

Again, reflecting the higher levels of interest in technology and cars generally in certain demographic groups, those in work (66% vs 59% of those not working), those earning £55,000+ (75% vs 55% of those earning less than £20,000) and those with children in the household (69% vs 53% of single-person households) are more likely to have at least one connected driving feature (compared with 64% of the overall population of drivers with at least one vehicle in the household). Conversely, those living in Wales (49%) and those with no formal qualifications (45%) are more likely than average to say that they have *none* of the features listed (vs 33% of current drivers who have at least one vehicle in their household overall but have none of the features).

Those who try to keep up with technology, those who like to keep up with the latest developments about new cars and those who are interested in connected driving technology are all more likely than average to have at least one connected driving feature in their car (at 69%, 77% and 74%respectively).

Drivers were also asked whether each of the features they have in their main vehicle are built in to their vehicle, or brought in from outside via an external device (e.g. a mobile phone, tablet or portable satnav).

The five features most likely to be **built in** to the vehicle are:

- smart journey information (90% of current drivers who have at least one vehicle in their household and who have this feature say that it is built in);
- information about the condition of the vehicle (88%);
- Bluetooth connectivity (75%);
- ability to take calls (63%); and
- live traffic alerts / congestion warnings (56%).

The other features listed are most likely to be **brought in from the outside** using an external device (the most common external device for each feature is shown in bold):

- Internet browsing (with 86% doing so by using an external device – including 75% via **mobile phone**);
- the ability to send emails (83% using an external device – including 76% via **mobile phone**);
- online gaming (79% using an external device – including 64% via **mobile phone**);
- specialist apps for news/sports (78% using an external device – including 64% via **mobile phone**);
- the ability to send text messages (74% using an external device – including 69% via **mobile phone**);
- the ability to search for local points of interest using software (55% using an external device – including 34% via **portable satnav**);
- the ability to locate available car park spaces using software (55% using an external device – including 34% via **portable satnav**);
- music streaming services (69% using an external device – including 54% via **mobile phone**);
- speed camera warnings (65% using an external device – including 53% via **portable satnav**);
- live weather information (64% using an external device – including 54% via **mobile phone**);
- satellite navigation system (59% using an external device – including 48% via **portable satnav**); and
- telematics insurance (44% external device – including 20% via **other device**).

## 3.8 Frequency of features used

Participants were also asked how often, if at all, they use each of the features they have in their main vehicle.

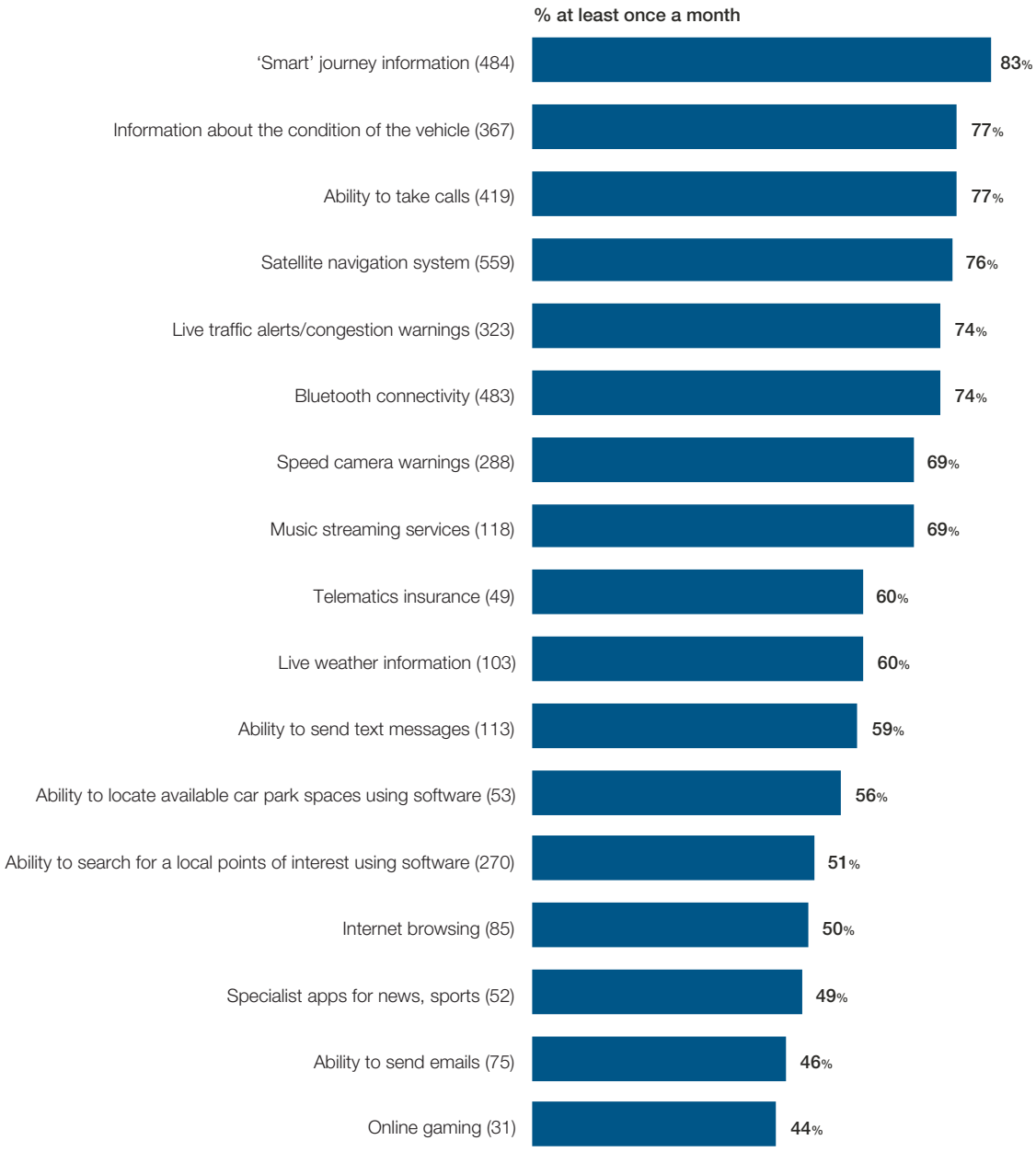
**Please note that for some of these features the base size is limited, and therefore the findings should be treated as indicative only.**

Figure 3.9 shows the proportion of current drivers who have at least one vehicle in their household and who say that they use a particular connected driving feature **at least once a month**. It illustrates that the features used most often are smart journey information (83% of those with this feature use it with this regularity), information about the condition of the vehicle (77%), the ability to take calls (77%), and satellite navigation systems (76%).

The features least likely to be used this regularly are online gaming (44%), the ability to send emails (46%), specialist apps for news/sports (49%) and Internet browsing (50%).

**Figure 3.9: Usage of connected driving features at least once a month**

*Q12. 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 (5-8 October 2015)

Similarly, the features most likely to be used even more frequently – **at least once a week** – are smart journey information (77% with this feature use it with this regularity), the ability to take calls (69%), Bluetooth connectivity (69%), information about the condition of the vehicle (67%) and music streaming services (64%).

The small base sizes for some connected driving features limit the amount of subgroup analysis possible. However, there is some evidence in the data that male drivers, those aged 25–34 and those in work are all more likely than the average driver with the same features to use these connected driving technologies in their main vehicle more frequently, i.e. at least once a week.

## 3.9 Connected driving technologies and driver safety

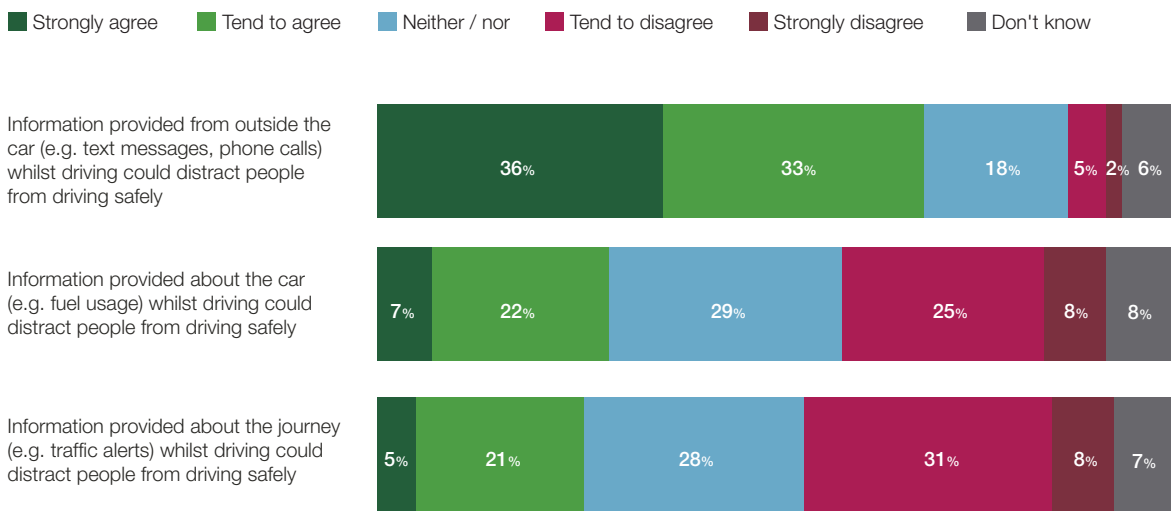
Participants were asked a series of questions about their views on some of the current policy discussions on the subject of connected driving technology, in particular about whether different forms of information could distract people from driving safely.

Members of the public are fairly evenly split as to whether car and journey information that is provided whilst driving could distract people from driving safely. They are slightly more likely (see Figure 3.10) to *disagree* than agree that **information provided about the car** (e.g. fuel usage) could distract people from driving safely (30% agree vs 34% disagree) and (by a rather larger margin) that **information provided about the journey** could have this effect (26% agree vs 39% disagree). A significant proportion has no view either way across both of these statements (29% and 28% respectively).

However, when asked about **information provided from *outside* the car** (e.g. text messages, phone calls), almost seven in ten (69%) members of the public agree that this has the potential to distract people from driving safely. Only 7% of the public disagree with this statement.

**Figure 3.10: Attitudes towards connected driving technologies (part 1)**

*Q13. To what extent do you agree or disagree with the following statements?*




Base: 2,175 British adults aged 16-75 (5-8 October 2015)

## 3.10 Value of connected driving technologies

Those who currently drive or who are considering buying a vehicle in the next one to two years were asked two questions about willingness to use a 'vehicle safe mode' on any devices used in the car, and their willingness to pay extra for certain connected driving services. In addition, drivers who use at least one connected driving feature in their main vehicle were asked a further question about the impact that it has had on their overall driving experience.

Certainly, there appears to be appetite for using a **vehicle safe mode** on devices used in vehicles (such as a mobile phone), which would prevent the device doing anything that could distract people from driving safely. Three in five (60%) current drivers and those considering buying a vehicle in the next one to two years agree that they would be happy to use such a device, with a quarter (23%) appearing indifferent and just 13% disagreeing (see Figure 3.11).

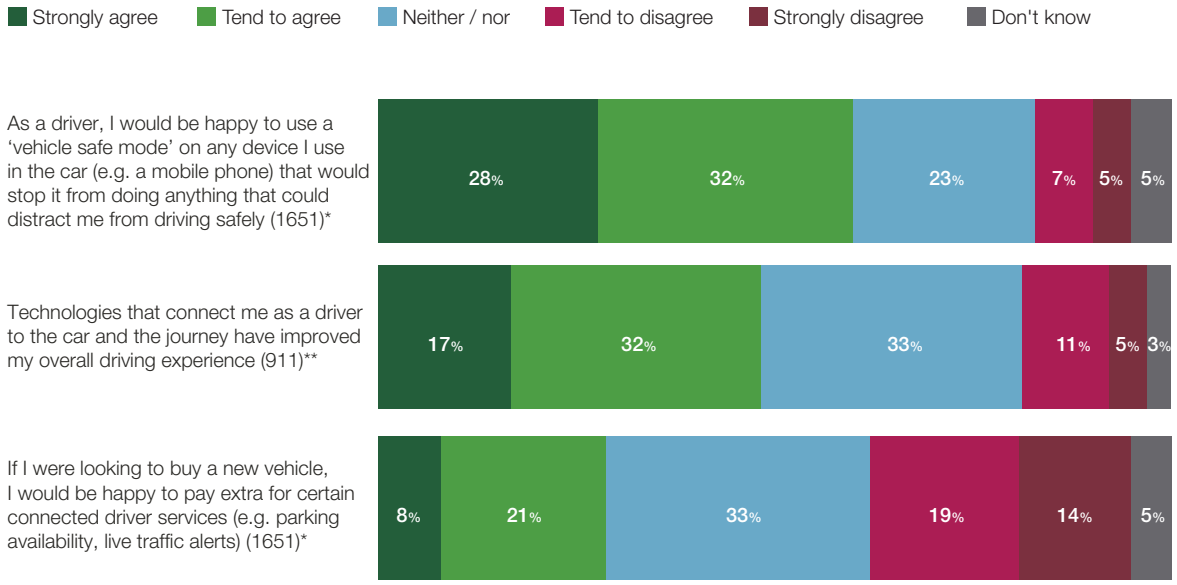
Appetite for using a vehicle safe mode is generally higher among those who are already tech-savvy, and who already display an active interest in using connected driving technologies. Perhaps encouragingly, it is also a little higher among younger drivers, with those aged 16–24 more likely than average to agree that they would be happy to use a vehicle safe mode (66% vs 60% of drivers overall).

Of those who are already using connected driving features in their main vehicle, around half (49%) agree that these **technologies have improved their overall driving experience**. A third (33%) have no views either way, while just 16% disagree. This is encouraging, and suggests that there is a sizeable proportion of drivers who have first-hand experience of using such technologies who genuinely find that they add value to the driver experience.

There also appears to be some limited appetite amongst current drivers and those considering buying a vehicle in the next one to two years to **pay extra for certain connected driving services** (e.g. parking availability, live traffic alerts), although opinion is fairly evenly split here, with three in ten (29%) agreeing that they would be happy to do this, a third (33%) stating no view either way, and the same proportion disagreeing (33%). Appetite for such services is higher among those drivers who are already using connected driving technology and whose current lifestyle means that they need a vehicle.

**Figure 3.11: Attitudes towards connected driving technologies (part 2)**

*Q13. To what extent do you agree or disagree with the following statements?*




Base: *1,651 British adults aged 16-75 who currently or are considering buying a vehicle in the next one to two years / **911 British adults aged 16-75 who have a vehicle with at least one form of connected driving technology and who have used it (5-8 October 2015)

# Appendix A: Notes on Methodology and Reliability

## Vehicles in household

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%). Two thirds (65%) said they do 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. Around half (52%) said they have one vehicle, almost two in five (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 82% driving at least once a week, and 54% driving daily. Again thinking about the main vehicle in the household, four in five (81%) use the vehicle as a **passenger**, with around half (48%) doing so at least once a week and 7% daily.

Using the responses to these questions, the term "**drivers with a vehicle in the household**" 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 socio-economic 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 due 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 non-response 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% ± |
| 2,175 (all participants) | 1.3% | 1.9% | 2.1% |
| 1,651 (all who currently drive or who are considering buying a vehicle in the next one to two years) | 1.4% | 2.2% | 2.4% |
| 1,490 (drivers with a vehicle in the household) | 1.5% | 2.3% | 2.5% |

For example, with a sample of 2,175 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

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 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.**

Do you or anyone else in your household drive a car or van at the moment? This includes vehicles owned outright, being rented or any other 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?

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.**

Technologies are increasingly connecting the driver to their vehicle (e.g. fuel usage), 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.**

Here is a list of potential features that could be built into a vehicle, or that a vehicle could be ready to receive. 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 |
|---|---|---|---|---|---|
| **Connecting to the car – 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) | ○ | ○ | ○ | ○ | ○ |
| Telematics insurance (e.g. paying insurance costs per mile, or allowing insurance companies to set premiums based on how safely you are driving) | ○ | ○ | ○ | ○ | ○ |
| **Connecting to the journey – NAVIGATION** | | | | | |
| Satellite navigation system | ○ | ○ | ○ | ○ | ○ |
| Live traffic alerts / congestion warnings | ○ | ○ | ○ | ○ | ○ |
| Speed camera warnings | ○ | ○ | ○ | ○ | ○ |
| Ability to locate available car park spaces using software | ○ | ○ | ○ | ○ | ○ |
| Ability to search for local points of interest (e.g. restaurants, places to visit, petrol stations) using software | ○ | ○ | ○ | ○ | ○ |
| **Connecting with the world – INFORMATION & ENTERTAINMENT** | | | | | |
| Music streaming services | ○ | ○ | ○ | ○ | ○ |
| Internet browsing | ○ | ○ | ○ | ○ | ○ |
| Online gaming | ○ | ○ | ○ | ○ | ○ |
| Specialist apps for news, sports | ○ | ○ | ○ | ○ | ○ |
| Live weather information | ○ | ○ | ○ | ○ | ○ |
| Bluetooth connectivity | ○ | ○ | ○ | ○ | ○ |
| Ability to take calls | ○ | ○ | ○ | ○ | ○ |
| Ability to send text messages | ○ | ○ | ○ | ○ | ○ |
| Ability to send emails | ○ | ○ | ○ | ○ | ○ |

**Question 9.**

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 5.)

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

## B – Prevalence

**Question 10.**

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.

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. smart phones or portable Sat Navs)

| | |
|---|---|
| **Connecting to the car – 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) |
| ☐ | Telematics insurance (e.g. paying insurance costs per mile, or allowing insurance companies to set premiums based on how safely you are driving) |
| **Connecting to the journey – NAVIGATION** | |
| ☐ | Satellite navigation system |
| ☐ | Live traffic alerts / congestion warnings |
| ☐ | Speed camera warnings |
| ☐ | Ability to locate available car park spaces using software |
| ☐ | Ability to search for local points of interest (e.g. restaurants, places to visit, petrol stations) using software |
| **Connecting with the world – INFORMATION & ENTERTAINMENT** | |
| ☐ | Music streaming services |
| ☐ | Internet browsing |
| ☐ | Online gaming |
| ☐ | Specialist apps for news, sports |
| ☐ | Live weather information |
| ☐ | Bluetooth connectivity |
| ☐ | Ability to take calls |
| ☐ | Ability to send text messages |
| ☐ | Ability to send emails |
| ☐ | None of these |
| ☐ | Don't know |

**Question 11.**

Of the features you said you have in [your/this] vehicle, which of these are built-in to your vehicle, and which use devices that are brought in from outside (e.g. portable Sat Nav, mobile phone)?

Only options selected in Question 10 display in Question 11.

| | Built-in to my vehicle | Mobile Phone (including (smart phones) | Portable Sat Nav (e.g. TomTom) | Tablets (e.g. iPad) | Other | Don't know |
|---|---|---|---|---|---|---|
| **Connecting to the car – 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) | ○ | ○ | ○ | ○ | ○ | ○ |
| Telematics insurance (e.g. paying insurance costs per mile, or allowing insurance companies to set premiums based on how safely you are driving) | ○ | ○ | ○ | ○ | ○ | ○ |
| **Connecting to the journey – NAVIGATION** | | | | | | |
| Satellite navigation system | ○ | ○ | ○ | ○ | ○ | ○ |
| Live traffic alerts / congestion warnings | ○ | ○ | ○ | ○ | ○ | ○ |
| Speed camera warnings | ○ | ○ | ○ | ○ | ○ | ○ |
| Ability to locate available car park spaces using software | ○ | ○ | ○ | ○ | ○ | ○ |
| Ability to search for local points of interest (e.g. restaurants, places to visit, petrol stations) using software | ○ | ○ | ○ | ○ | ○ | ○ |
| **Connecting with the world – INFORMATION & ENTERTAINMENT** | | | | | | |
| Music streaming services | ○ | ○ | ○ | ○ | ○ | ○ |
| Internet browsing | ○ | ○ | ○ | ○ | ○ | ○ |

| | Built-in to my vehicle | Mobile Phone (including (smart phones) | Portable Sat Nav (e.g. TomTom) | Tablets (e.g. iPad) | Other | Don't know |
|---|---|---|---|---|---|---|
| Online gaming | ○ | ○ | ○ | ○ | ○ | ○ |
| Specialist apps for news, sports | ○ | ○ | ○ | ○ | ○ | ○ |
| Live weather information | ○ | ○ | ○ | ○ | ○ | ○ |
| Bluetooth connectivity | ○ | ○ | ○ | ○ | ○ | ○ |
| Ability to take calls | ○ | ○ | ○ | ○ | ○ | ○ |
| Ability to send text messages | ○ | ○ | ○ | ○ | ○ | ○ |
| Ability to send emails | ○ | ○ | ○ | ○ | ○ | ○ |

**Question 12.**

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

Only options selected in Question 10 display in Question 12.

| | 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) |
|---|---|---|---|---|---|---|---|
| **Connecting to the car – 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) | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Telematics insurance (e.g. paying insurance costs per mile, or allowing insurance companies to set premiums based on how safely you are driving) | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| **Connecting to the journey – NAVIGATION** | | | | | | | |
| Satellite navigation system | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Live traffic alerts / congestion warnings | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Speed camera warnings | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| | **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) |
|---|---|---|---|---|---|---|---|
| Ability to locate available car park spaces using software | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Ability to search for local points of interest (e.g. restaurants, places to visit, petrol stations) using software | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| **Connecting with the world – INFORMATION & ENTERTAINMENT** | | | | | | | |
| Music streaming services | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Internet browsing | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Online gaming | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Specialist apps for news, sports | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Live weather information | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Bluetooth connectivity | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Ability to take calls | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Ability to send text messages | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Ability to send emails | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

## C – Policy

**Now for some questions about technologies that connect drivers to their car, the journey and the outside world.**

**Question 13.**

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 |
|---|---|---|---|---|---|---|
| Information provided about the car (e.g. fuel usage) whilst driving could distract people from driving safely | ○ | ○ | ○ | ○ | ○ | ○ |
| Information provided about the journey (e.g. traffic alerts) whilst driving could distract people from driving safely | ○ | ○ | ○ | ○ | ○ | ○ |
| Information provided from outside the car (e.g. text messages, phone calls) whilst driving could distract people from driving safely | ○ | ○ | ○ | ○ | ○ | ○ |
| If Section A was answered, this question is asked: | | | | | | |
| As a driver, I would be happy to use a 'vehicle safe mode' on any device I use in the car (e.g. a mobile phone) that would stop it from doing anything that could distract me from driving safely | ○ | ○ | ○ | ○ | ○ | ○ |
| If any driving technology is selected in Question 10 and Options 1-5 are selected for at least one of these in Question 12, this question is asked: | | | | | | |
| Technologies that connect me as a driver to the car and the journey have improved my overall driving experience | ○ | ○ | ○ | ○ | ○ | ○ |
| If Section A was answered, this question is asked: | | | | | | |
| If I were looking to buy a new vehicle, I would be happy to pay extra for certain connected driver services (e.g. parking availability, live traffic alerts) | ○ | ○ | ○ | ○ | ○ | ○ |


**Mobility • Safety • Economy • Environment**

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.

RAC Foundation
89–91 Pall Mall
London
SW1Y 5HS

Tel no: 020 7747 3445
www.racfoundation.org

Registered Charity No. 1002705


Designed and printed by
The Javelin Partnership Ltd
Tel: 0118 907 3494

Produced on paper from a managed sustainable source which is FSC certified as containing 50% recycled waste.

Main proofreader:
Beneficial Proofreading Services
Tel: 07979 763116