Technology Tracker: Wave 9

Report prepared for the Department for Transport

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Contents

1 Overview

Wave 9 of the Transport Technology Tracker series involved a survey of a representative sample of 3,162 people aged 16+ across England drawn from Ipsos' KnowledgePanel. The survey was conducted using random probability sampling and used an online methodology for data collection. Fieldwork took place between 30th June and 6th July 2022.

Although this is the 9th wave of the survey, due to a change in methodology at Wave 7, it is not possible to provide direct comparisons with Waves 1 to 6. More information about the methodology and sample can be found in the Appendix. The survey questionnaire is also included in the Appendix including the descriptions and images used to measure awareness and knowledge of several transport technologies.

1.1 Awareness and knowledge

Figure 1.1 below shows levels of awareness and self-reported knowledge for the range of transport technologies covered by Wave 9 (to note, the small proportions of respondents reporting 'a great deal' or 'a fair amount' of knowledge have been combined for the second group of technologies).

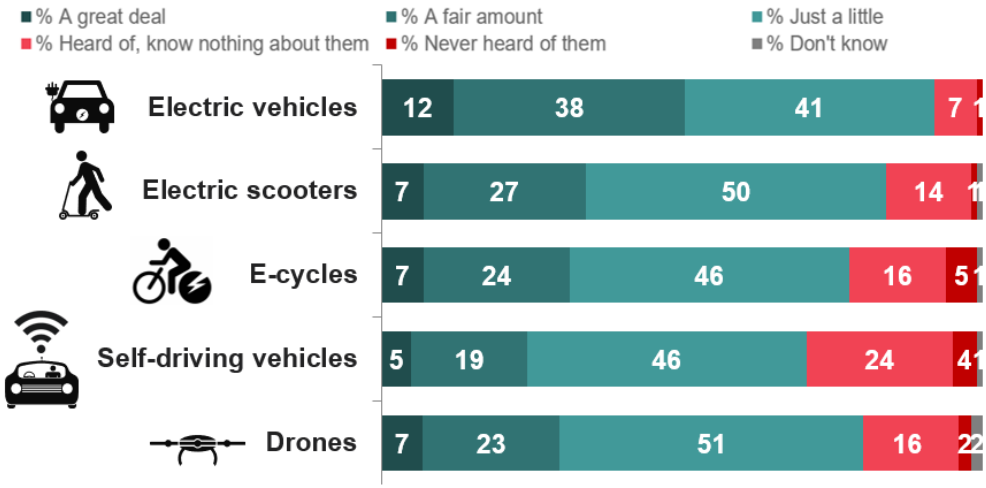
'Awareness' encompasses all respondents who had heard of a particular technology, including those who know nothing (but have heard of the technology), those who know just a little, a fair amount or a great deal. 'Knowledge' is confined to those who said that they know just a little, a fair amount or a great deal.

Individual sections of this report, and the summary sections at the start of each, describe awareness and self-reported knowledge for the technologies, and how these have changed over time. For example:

- There was an increase in self-reported knowledge of e-cycles between December 2021 (Wave 8) and June 2022 (Wave 9), which remained the highest across all technologies covered.
- There was also an increase in the proportion who said they know a great deal or a fair amount about electric vehicles.
- There was a decrease in self-reported knowledge of drones over the same period.

Flying taxis were included for the first time since June 2021 (Wave 7). More than half of people said they had never heard of these. A quarter had but knew nothing about them. Although self-reported awareness of self-driving vehicles and e-cycles is comparatively high, self-reported knowledge is lower for these technologies compared to others. Self-reported knowledge continued to be high for electric vehicles - the highest across all technologies covered.

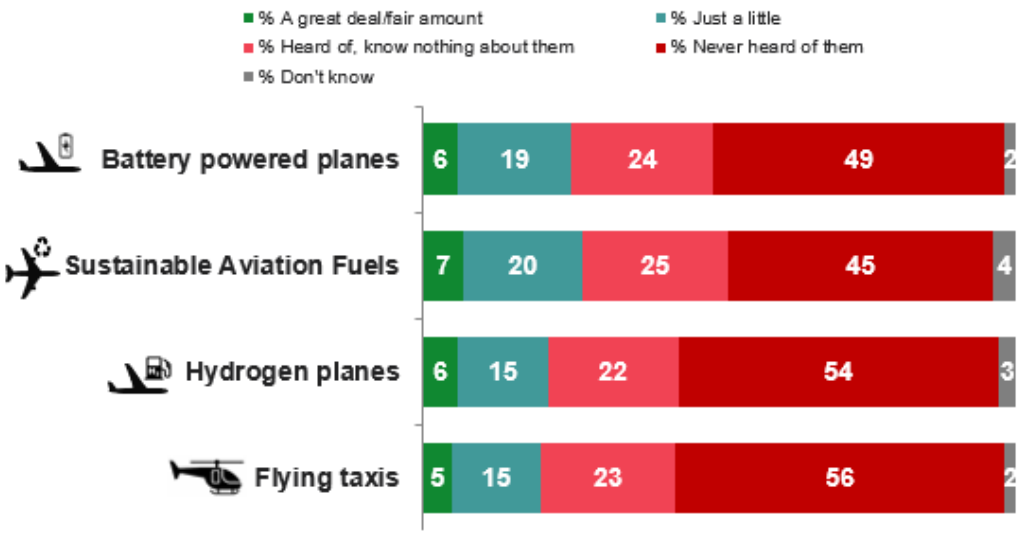
Figure 1.1 Knowledge and awareness by technology



	Knowledge*	Awareness**
Electric vehicles	91%	99%
Electric scooters	84%	98%
E-cycles	77%	93%
Self-driving vehicles	71%	95%
Drones	80	96

*Knowledge answer codes: A great deal, A fair amount, Just a little
**Awareness answer codes: A great deal, A fair amount, Just a little, Heard of, know nothing about them/it

Base: All 16+ in England Wave 9: (3162)
Fieldwork dates: Wave 9: 30 June-6 July 2022



	Knowledge*	Awareness**
Battery powered planes	26%	49%
Sustainable Aviation Fuels	26%	51%
Hydrogen planes	21%	43%
Flying taxis	20%	43%

*Knowledge answer codes: A great deal/fair amount, Just a little
**Awareness answer codes: A great deal/fair amount, Just a little, Heard of, know nothing about them/it

Base: All 16+ in England Wave 9: (3162)
Fieldwork dates: Wave 9: 30 June-6 July 2022

1.2 Report structure

The remainder of this report covers each of the transport technologies covered in Wave 9, describing levels of awareness and self-reported knowledge of each in June 2022 as well as changes over time. Additional questions covering attitudes towards technologies and their use included in Wave 9 are also covered.

Summary boxes have been included at the start of each section to present key findings and trends. These signpost where further information is available and full survey data is available at: https://www.gov.uk/government/publications/transport-and-transport-technology-public-attitudes-tracker

2 Car access and purchase intentions

Summary

- Overall levels of car ownership and access to a car or van held steady between December 2021 (Wave 8) and June 2022 (Wave 9) but there was a decrease of three percentage points from 47% to 44% in the proportion of people who live in households with two or more cars (see **section 2.1**). Similarly, 3% of people reported reducing the number of cars or vans in their household as a way of reducing expenditure in the three months up to June 2022 (see **section 10.1**).
- People's expectation of the type of vehicle they will buy or lease next changed the further ahead they looked. Among those who expected to purchase within one year, 13% expected to purchase an electric vehicle, 29% a hybrid and 56% a petrol or diesel vehicle. In contrast, among those expecting to purchase or lease in five or more years' time, 26% expected it to be an electric vehicle, 29% a petrol or diesel vehicle and 35% a hybrid (see **section 2.2**).

2.1 Ownership of licences and cars

Levels of licence-holding were stable compared to previous waves. In June 2022 (Wave 9), 80% of people said they held a full driving licence, 7% held a provisional licence and 12% did not hold a valid UK driving licence.

In line with previous waves, a majority, 84%, said they personally owned or had continuous use of at least one car or van and a minority; 16%, did not.

In June 2022 (Wave 9), 44% of people said their household owned or had continuous use of two or more cars or vans, down from 47% in December 2021 (Wave 8). As described later in this report (**section 10.1**), 3% of people said that they had reduced the number of cars or vans in their household as a way of reducing the amount they spend on fuel and motoring.

2.2 Purchase intentions

In line with previous waves, a majority said they will personally buy, lease or replace a car or van, either new or second hand, in the future. In June 2022 (Wave 9), seven in ten, 71%, said they would do this next within five years and a further 14% said they would in more than five years' time. One in ten, 9%, said they had no intention to buy, lease or replace a car or van, and 6% answered 'don't know'.

- The oldest age groups were more likely to have said they had no intention to buy or replace a car or van. Two in ten of those aged 75 or over (22%) had no intention to do this compared to lower proportions of 16-24-year-olds (5%) and those aged between 45 and 64 (7%).
- Three in ten of those in households who said they did not own or have continuous use of a car or van said they did not intend to buy or lease one in the future (31%).

People's expectations of when they expect to next buy, lease or replace a car or van were in line with previous waves. In June 2022 (Wave 9), 32% of people said that they intended to do this within the next two years, including 14% who thought this would happen in the next year. Just under four in ten, 38%, expected to do this in the next two to five years and 14% said they would in more than five years' time.

- Younger age groups holding a driving licence were as likely as middle age groups to expect to buy, lease or replace a car or van in the next two years. As noted previously, the main difference was the increased likelihood of older age groups not intending to change their vehicle in the future.

- Almost a fifth of those in households earning between £52,000 and £99,999 per year (18%) and those in the highest household income bracket with annual earnings of £100,000 or above (19%), intended to buy, lease or replace a car or van next within the next year. This was a higher proportion than the equivalent among the two lowest household income brackets with annual earnings up to £51,999 (11%).

- Rural residents were more likely to have said they intend to wait to buy, lease or replace their next car or van compared to urban residents; 18% said they plan to do this in more than five years' time, compared to 14% of urban residents.

Among those intending to buy or lease a car or van at some point in the future, the proportion who expected this to be a 'new' one, remained stable compared to previous waves. This was 27% in June 2022 (Wave 9) while seven in ten (71%) said their next vehicle would more likely be 'second-hand'.

- 25-34-year-olds were less likely to have said they would be likely to purchase or lease a new car or van (18%) than those aged 65-74 (31%) and 75 or over (40%).

- Those in the highest household income bracket with annual earnings of £100,000 or above (45%) were more likely to have said they would be likely to buy 'new' compared to those in the lowest income group earning less than £25,999 (19%).

- Just over a third, 35%, of those 'living comfortably' said they would be more likely to purchase or lease a new car or van compared to 18% of those who said they were 'finding it very difficult' living on their present income.

- Eight in ten living in households 'without' access or ownership of a car or van (81%) said they would be more likely to purchase or lease a second-hand car or van, compared to 68% of those in households that owned or had continuous use of three or more cars or vans.

As shown in **Figure 2.1**, the proportion of people who indicated that their next car or van would be electric/battery only (19%) was the same as it was in December 2021 (Wave 8) but higher than it had been in June 2021 (Wave 7) (14%).

In line with intentions in December 2021 (Wave 8), just over a third, 35%, said that their next purchase or lease was likely to be a hybrid car or van, higher than 32% in June 2021 (Wave 7). Similarly, in June 2022 (Wave 9), four in ten, 40%, expected to purchase a petrol or diesel car or van, in line with December 2021 but lower than 49% in June 2021 (Wave 7).

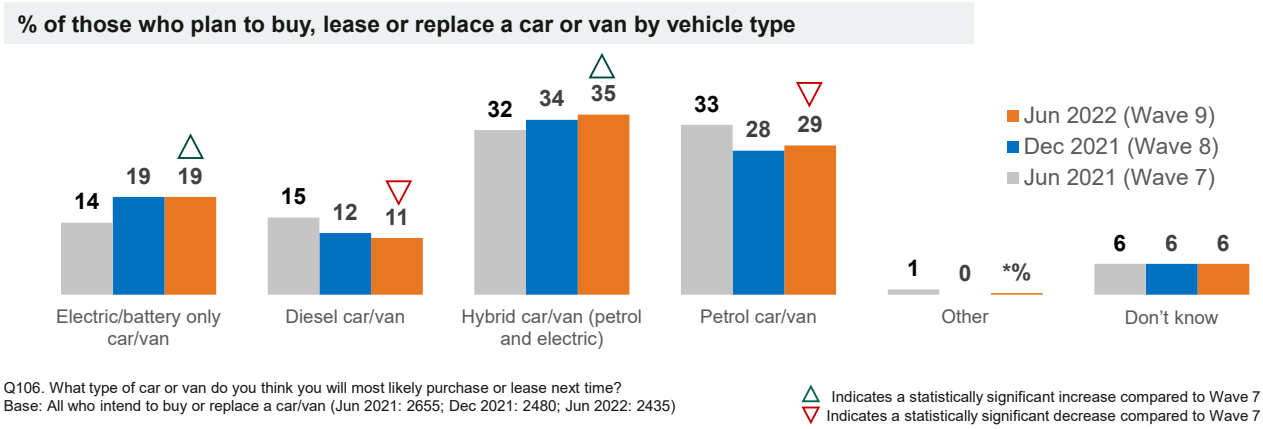
- 16-24-year-olds were more likely to have said that they would purchase or lease a petrol car or van next time (41%) than other age groups, particularly 55-64-year-olds (24%), but were no less likely than other age groups to expect to purchase or lease an electric/battery only vehicle.

- Higher income was associated with a greater likelihood of choosing electric vehicles and a lower likelihood of choosing petrol or diesel vehicles. A third of those in the highest income bracket with annual earnings of £100,000 or more planned to purchase or lease an electric/battery only car or

van next time (33%) compared to one in ten of those in the lowest income group earning less than £25,999 (10%). They were also less likely to choose a petrol vehicle next time; 23% compared to 36%.

- Similarly, 38% of those who said they were finding it 'very difficult' on their present income said they would purchase or lease a petrol car or van next compared to 23% of those who said they were 'living comfortably'. Expectations of purchasing or leasing an electric car or van were much higher among those 'living comfortably' (28%) than those finding it 'very difficult' living on their present income (8%).

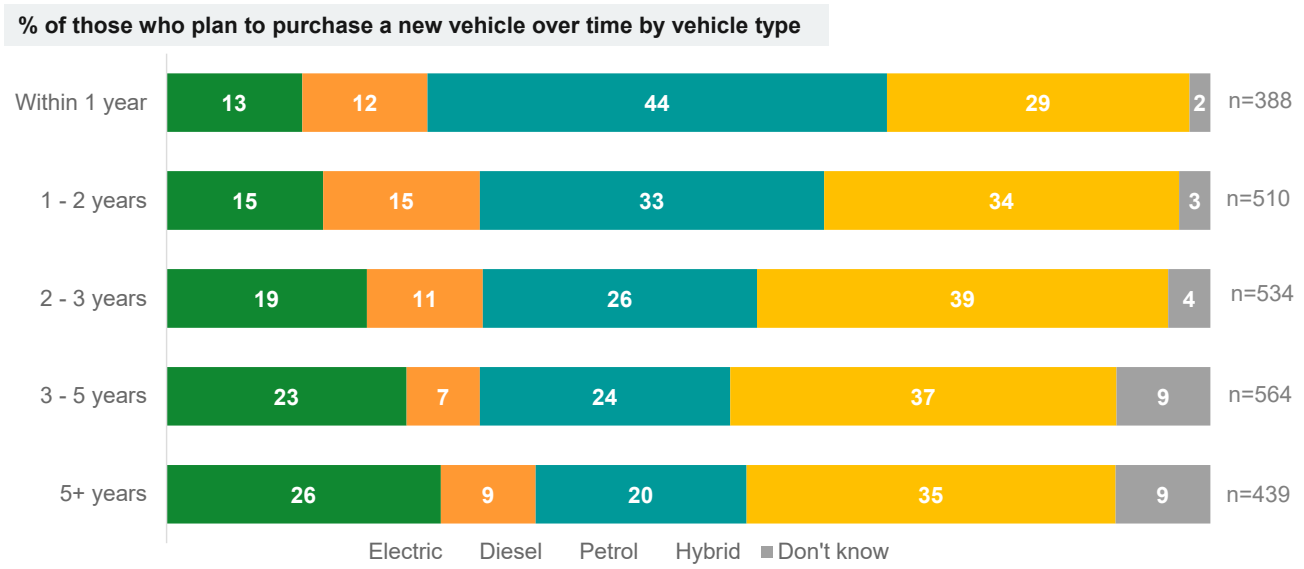
Figure 2.1 - Purchase intention



People's expectation of the vehicle type of their next purchase changed the further ahead they looked. Among those expecting to purchase within one year, 13% expected to purchase an electric/battery only vehicle, 29% a hybrid and 56% a petrol or diesel vehicle. In contrast, among those expecting to purchase in five or more years' time, 26% expected to purchase an electric vehicle, 29% a petrol or diesel vehicle and 35% a hybrid.

As shown in **Figure 2.2**, hybrid cars or vans were a more popular option than an electric vehicle in the short-term, but the gap narrowed as people looked further into the future. However, uncertainty also increases - those who said they don't know what type of vehicle they would purchase or lease next, was 2% in the short-term but 9% in the longer-term.

Figure 2.2 - Vehicle type purchase intentions by year of expected purchase



Q106. What type of car or van do you think you would purchase or lease next time? (%)
Base: All who intend to buy or replace a car or van (Jun 2022: 2435).

Q104: When, if at all, do you think you will personally next buy, lease or replace a car or van, either new or second hand?
Base: All with a UK driving licence (Jun 2022: 2866).

3 Electric vehicles

Summary

- Levels of self-reported knowledge of electric vehicles continue to be high - the highest across all technologies covered by the survey - and there are some signs that knowledge may be deepening. There was a small but significant increase since December 2021 (Wave 8) in the proportion reporting that they know a great deal or a fair amount (see **section 3.1**).
- Mentions of 'cost to buy' as a disadvantage increased between June 2021 (Wave 7) and June 2022 (Wave 9), but so too have the proportions selecting 'no need to visit petrol stations to top-up fuel' and 'recharging is easier/more convenient than re-fuelling' as advantages (see **sections 3.4** and **3.5**).
- Having fallen since December 2021 (Wave 8), levels of self-reported awareness of the plan to end the sale of new petrol, diesel and hybrid vehicles were like those in June 2021 (Wave 7) (see **section 3.6).**
- Those who intend to purchase or lease an electric/battery only car or van next time were more likely to have said they know a great deal/fair amount about electric vehicles than those who intended to purchase a petrol vehicle next.

3.1 Awareness and knowledge

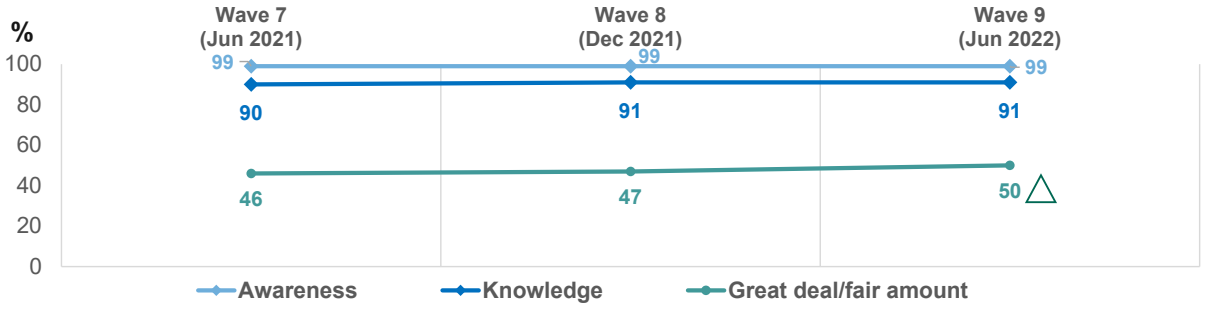
In June 2022 (Wave 9), levels of awareness and self-reported knowledge of electric cars or vans were in line with those of December 2021 (Wave 8) and June 2021 (Wave 7), as shown in **Figure 3.1**. Almost everyone, 99%, claimed that they had at least heard of electric vehicles including 7% who said that they had heard of electric vehicles but know nothing about them.

- One in ten, 11%, of those in the lowest income households earning less than £25,999 annually said that they had heard of electric vehicles but know nothing about them, twice the proportion of those in the highest income households earning over £100,000 annually (5%).

Self-reported knowledge of electric vehicles - people knowing a great deal, a fair amount or just a little - was 91%, unchanged since previous waves. However, in June 2022 (Wave 9), the proportion who said they know a great deal or a fair amount was 50%, an increase of three points since 47% in December 2021 (Wave 8) and four points since 46% in June 2021 (Wave 7).

- Two-thirds of men said they know a 'great deal/fair amount' (66%), double the proportion of women (33%). This gap has widened since December 2021 (Wave 8) when 61% of men said they know a great/deal fair amount compared to 34% of women.

Figure 3.1 - Awareness and knowledge of electric vehicles



*Knowledge answer codes: A great deal, A fair amount, Just a little
**Awareness answer codes: A great deal, A fair amount, Just a little, Heard of, know nothing about them/it

Q108. Before today, how much, if anything, would you say you knew about electric cars or vans?
Base: All 16+ in England (Jun 2021: 3392; Dec 2021: 3219; Jun 2022: 3162)

△ Indicates a statistically significant increase compared to Wave 7
▽ Indicates a statistically significant decrease compared to Wave 7

Questions about the advantages and disadvantages of electric vehicles were asked in two ways. Firstly, respondents were asked an unprompted question to gauge their top-of-mind responses before a second question which allowed them to select from a list of potential responses.

3.2 Advantages – unprompted

In line with previous waves, more than three-quarters, 78%, of people in June 2022 (Wave 9) said they could think of at least one advantage of electric over petrol and diesel cars or vans without being shown a list. One in ten, 11%, said they could not think of any advantages, unprompted, and a further 7% said they did not believe there were any.

- The proportion of people who said they could think of at least one advantage of electric vehicles over petrol or diesel cars or vans was higher among those aged 25-34 (87%) than among those aged 75 or over (69%).

- One in ten in the lowest annual household income bracket with earnings of less than £25,999 annually (10%) said they could not think of any advantages and were more likely to have said this than those in the highest household income bracket earning more than £100,000 (3%).

- The proportion of people able to think of at least one advantage was higher among white respondents (79%) than ethnic minority respondents (72%). This represents a shift since December 2021 (Wave 8) when white respondents were *less* likely to think of at least one advantage (76%) than ethnic minority respondents (81%).

3.3 Advantages – prompted

As was the case at previous waves, when shown a list of potential advantages of electric vehicles over petrol or diesel cars or vans, 'environmental benefits (e.g. reduced pollution)' was the advantage selected most frequently. This was chosen by 80% in June 2022 (Wave 9), as shown in **Figure 3.2**.

'Reduced road tax' (56%) and 'less noisy' (51%) were among other frequently selected advantages. These were followed by electric vehicles being 'cheaper to run or maintain' (43%) and 'no need to visit petrol stations to top-up fuel' (39%).

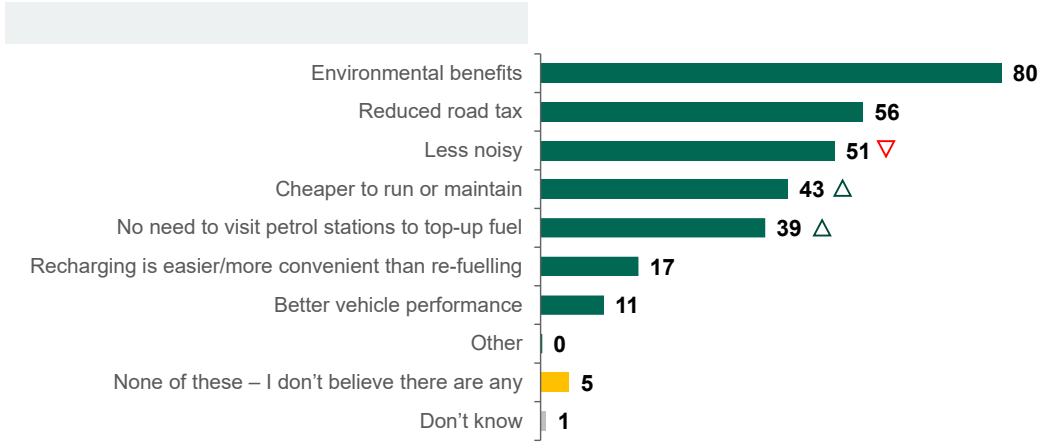
The proportion that said electric vehicles are 'cheaper to run or maintain' increased five percentage points from 38% in June 2021 (Wave 7) to 43% in June 2022 (Wave 9). Over the same period, there was

an increase in three points in the proportion who selected 'recharging is easier/more convenient than refuelling', from 14% to 17%, and 'no need to visit petrol stations to top-up fuel', from 32% to 39%.

- Some age groups were more likely to select 'cheaper to run or maintain' as an advantage - for example, 49% of those aged 25-34 selected this, and 63% of the same age group selected 'reduced road tax'. A quarter of 16-24-year-olds and 25-34-year-olds selected 'recharging is easier/more convenient than re-fuelling' - 25% and 23% - twice the proportion of 65-74-year-olds (12%).

- People in the highest household income bracket earning more than £100,000 a year were more likely to select electric vehicles being 'cheaper to run or maintain' as an advantage (58%) than those in the lowest household income bracket earning less than £25,999 (32%).

Figure 3.2 - Advantages of electric vehicles



	Dec 2021 W8 (%)	Jun 2021 W7 (%)
Environmental benefits	81	82
Reduced road tax	55	57
Less noisy	49	53
Cheaper to run or maintain	40	38
No need to visit petrol stations to top-up fuel	39	32
Recharging is easier/more convenient than re-fuelling	16	14
Better vehicle performance	12	12
Other	0	0
None of these – I don't believe there are any	4	5
Don't know	2	2

Q111. Which of the following, if any, do you think are advantages of fully electric over petrol or diesel cars or vans?
Base: All 16+ in England (Jun 2021: 3392; Dec 2021: 3219; Jun 2022: 3162)

△ Indicates a statistically significant increase compared to Wave 7
▽ Indicates a statistically significant decrease compared to Wave 7

3.4 Disadvantages – unprompted

In line with previous waves, just over eight in ten people, 83%, said they could think of at least one disadvantage of electric vehicles over petrol or diesel vehicles without being shown a list. One in ten, 10%, said they could not think of any disadvantages, while 4% said that they did not believe there were *any* disadvantages.

- Those aged 55-64-years-old were more likely to think of at least one disadvantage of electric over petrol or diesel vehicles (89%) than those aged over 75 (77%) and those aged 16-24-years-old (73%).

- Those aged 16-24-years-old were more likely to have said they could not think of *any* disadvantages (17%) than other age groups, particularly those aged 55-64 (5%).

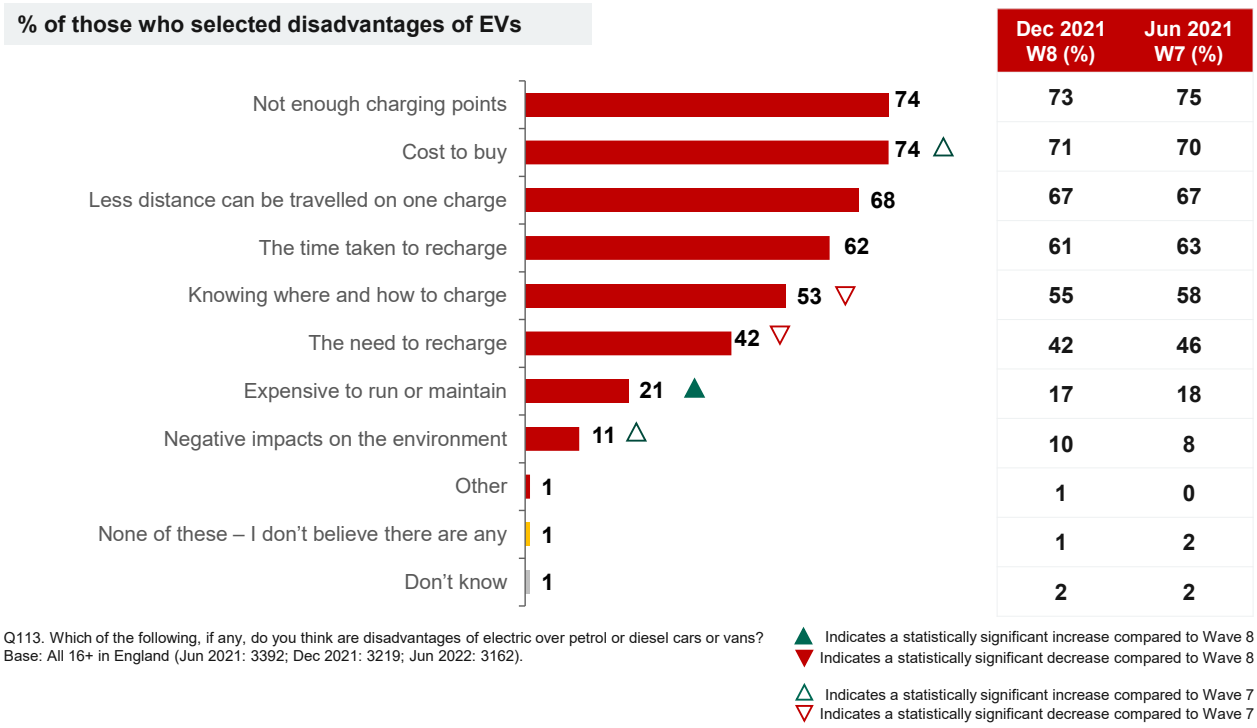
3.5 Disadvantages – prompted

As seen in **Figure 3.3**, when shown a list of potential disadvantages of electric over petrol or diesel vehicles, 'cost to buy' was selected as a disadvantage by 74% in June 2022 (Wave 9), a higher proportion than the 70% in June 2021 (Wave 7). 'Expensive to run or maintain' was selected as a disadvantage by 21%, an increase of four percentage points since 17% in December 2021 (Wave 8) and three points since 18% in June 2021 (Wave 7).

In line with previous waves, high proportions selected 'not enough charging points' (74%), 'less distance can be travelled on one charge' (68%) and 'the time taken to recharge' (62%). Compared to June 2021 (Wave 7), there was a fall in the proportion who chose 'knowing where and how to charge' by five percentage points to 53%, and 'the need to recharge' by four points to 42%.

- A higher proportion of those aged 16-24 chose 'expensive to run or maintain' as a disadvantage (30%) than those aged over 75 (12%).
- Those living in rural areas were more likely to select 'less distance can be travelled on one charge' (75%) than those living in urban areas (66%).

Figure 3.3 - Disadvantages of electric vehicles



3.6 Government plan to end the sale of petrol and diesel vehicles by 2030 and hybrid vehicles by 2035 – awareness

Respondents were provided with an outline of the Government's plan to end the sale of new petrol, diesel and hybrid cars and vans as follows:

> The Government plan to end the sale of new petrol and diesel cars and vans by 2030. Some new hybrid cars and vans (which run on petrol and electric) will be available to buy until 2035. Petrol and diesel cars and vans can continue to be sold on the second-hand market.

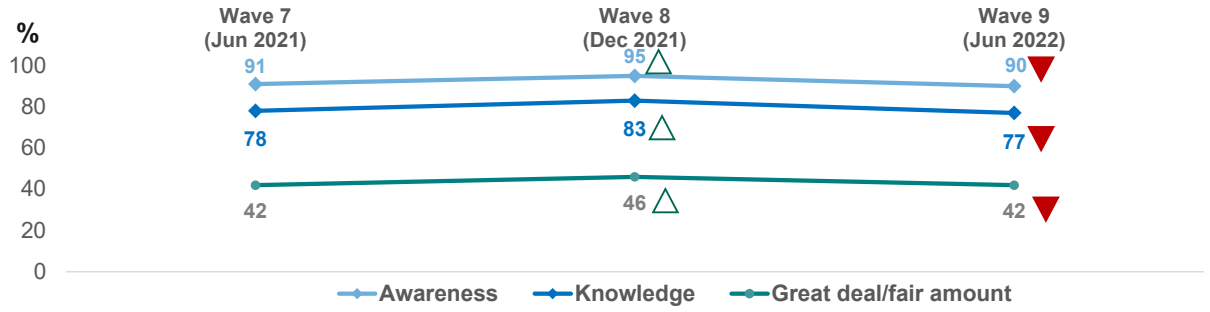
As seen in **Figure 3.4**, self-reported knowledge of the plan remained high in June 2022 (Wave 9) and 77% said they know at least just a little. This was lower than it had been in December 2021 (Wave 8) when the equivalent was 83% but was similar to 78% in June 2021 (Wave 7).

Almost one in ten, 9%, said they had never heard of the plan in June 2022 (Wave 9), more than double the 4% in December 2021 (Wave 8).

The proportion that said they know a great deal about the plan in June 2022 (Wave 9), 12%, was similar to the 11% in December 2021 (Wave 8) but higher than 9% in June 2021 (Wave 7). Similarly, the proportion that reported to know a great deal or a fair amount was 42%, unchanged from June 2021 (Wave 7) but lower than it had been in December 2021 (Wave 8) when it was 46%.

- Those aged 65-74 were more likely to have said they know a great deal or a fair amount (49%) than those aged 16-24-years-old (32%).
- Those who intend to purchase or lease an electric/battery only car or van next time were more likely to have said they know a great deal/fair amount about electric vehicles (64%) than those who intended to purchase a petrol vehicle next (44%).

Figure 3.4 – Awareness and knowledge of the plans to end the sale of new petrol, diesel and hybrid cars and vans



*Knowledge answer codes: A great deal, A fair amount, Just a little
**Awareness answer codes: A great deal, A fair amount, Just a little, Heard of, know nothing about the proposal

Q114. Before today, how much, if anything, would you say you knew about the plan to end the sale of new petrol, diesel and hybrid cars and vans?
Base: All 16+ in England (Jun 2021: 3392; Dec 2021: 3219; Jun 2022: 3162).

▲ Indicates a statistically significant increase compared to Wave 8
▼ Indicates a statistically significant decrease compared to Wave 8

△ Indicates a statistically significant increase compared to Wave 7
▽ Indicates a statistically significant decrease compared to Wave 7

4 Self-driving vehicles

Summary

- Though awareness of self-driving vehicles (SDVs) is high, self-reported knowledge of them is low compared to other transport technologies. SDVs continue to be the technology with the largest gap between awareness and knowledge (see **section 4.1** and **Overview**).
- In line with previous waves, people selected disadvantages of self-driving vehicles from a list more readily than they selected advantages from another list. Perceived disadvantages related to 'over-reliance in the technology', the 'technology is still unproven' and road and personal safety issues (see **section 4.3**).
- These issues were evident in responses to a question asking respondents to indicate how they would expect to spend their time when travelling in self-driving vehicles. The most common theme was 'watching the road/other users' while 'staying alert/paying attention to the car' and being 'worried/anxious/scared/couldn't relax' were also common responses, although some anticipated being able to work or relax (see **section 4.5**). More people responded with 'don't know' or 'not sure' than anything else, reflecting low levels of knowledge about what is allowed when travelling in self-driving vehicles.
- Knowledge of what behaviours are possible in a SDV when it is in self-driving mode (following changes to the Highways Code) is patchy. Knowledge was highest in relation to needing to be fit to drive, and lowest for understanding who was responsible for how the vehicle drives (see **section 4.5**).

4.1 Awareness and knowledge

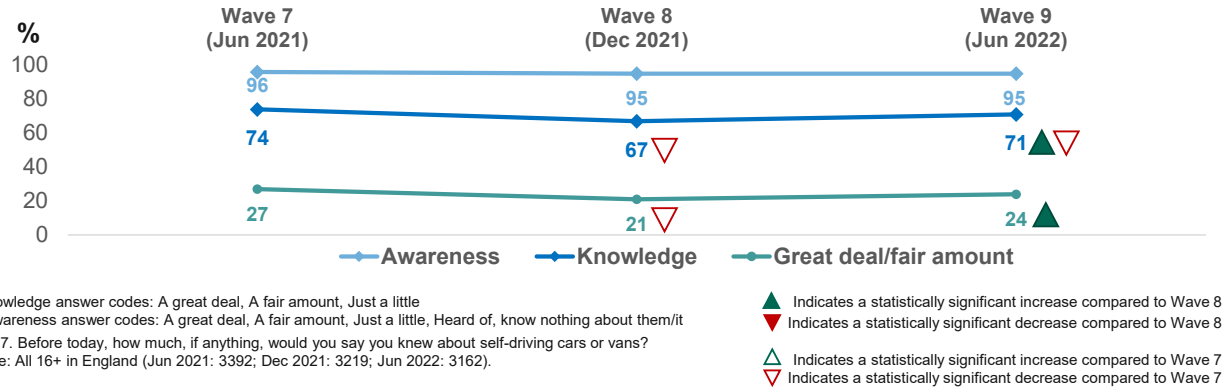
In June 2022 (Wave 9), almost everyone, 95%, claimed that they had at least heard of SDVs. Levels of awareness were in line with those of December 2021 (Wave 8) and June 2021 (Wave 7), as shown in **Figure 4.1**.

- Whilst awareness was high across all age groups, those aged 65 or over were more likely than average to be aware of self-driving vehicles (99%).

There is not yet a clear trend in relation to levels of self-reported knowledge of SDVs. Self-reported knowledge of SDVs - knowing a great deal, a fair amount or just a little - was 71%, an increase of four percentage points since 67% in December 2021 (Wave 8). Awareness at both waves was, though, lower than it had been in June 2021 (Wave 7) (74%).

- Eight in ten of those in the highest household income bracket earning more than £100,000 per year said they know a great deal, a fair amount or just a little about self-driving vehicles (80%), a much higher proportion than that among those in the lowest annual household income bracket with earnings of less than £25,999 annually (64%).

Figure 4.1 – Awareness and knowledge of self-driving vehicles



*Knowledge answer codes: A great deal, A fair amount, Just a little
**Awareness answer codes: A great deal, A fair amount, Just a little, Heard of, know nothing about them/it
Q117. Before today, how much, if anything, would you say you knew about self-driving cars or vans?
Base: All 16+ in England (Jun 2021: 3392; Dec 2021: 3219; Jun 2022: 3162).

▲ Indicates a statistically significant increase compared to Wave 8
▼ Indicates a statistically significant decrease compared to Wave 8
△ Indicates a statistically significant increase compared to Wave 7
▽ Indicates a statistically significant decrease compared to Wave 7

4.2 Advantages – prompted

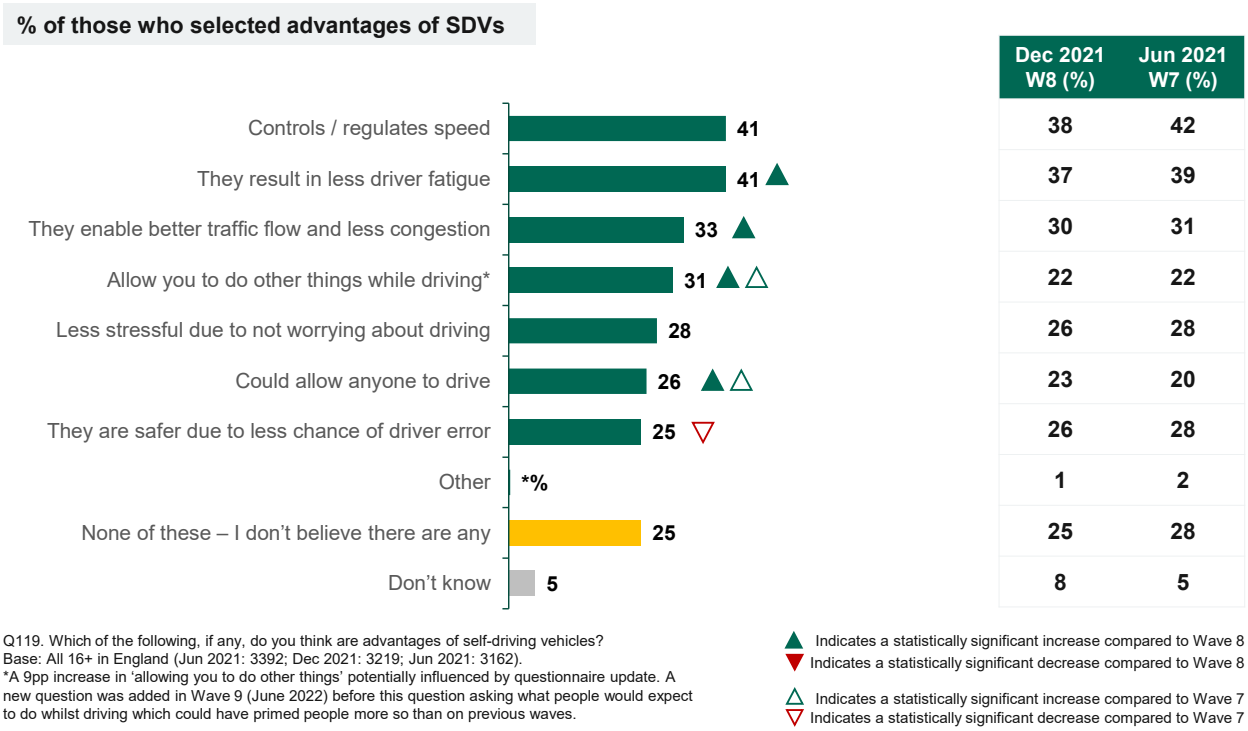
In line with previous waves, when shown a list of potential advantages of SDVs, 'controls/regulates speed' and 'they result in less driver fatigue' were the advantages selected most frequently, both chosen by 41%, as shown in **Figure 4.2**. 'They enable better traffic flow and less congestion' (33%) and 'allow you to do other things while driving' (31%) were also frequently selected advantages.

There was an increase in the proportion selecting several advantages between December 2021 (Wave 8) and June 2022 (Wave 9). For example, selection of 'allow you to do other things while driving' increased from 22% to 31%, although this was likely to have reflected the inclusion of additional questions on this topic this wave which may have primed respondents to answer this question (see **sections 4.4** and **4.5**). Over the same period, however, there was also an increase by three percentage points in the proportion who selected 'could allow anyone to drive' which moved from 23% to 26%.

- The proportion believing there are no advantages of self-driving vehicles increased with age. For example, just 12% of those aged 16-24 years old took this view, compared to 36% of 65-74-year-olds and 42% of those aged over 75.

- People in car-owning households were also more likely to believe there are no advantages of self-driving vehicles (28%) than those who didn't live in car-owning households (15%).

Figure 4.2 – Advantages of self-driving vehicles



	Dec 2021 W8 (%)	Jun 2021 W7 (%)
Controls / regulates speed	38	42
They result in less driver fatigue	37	39
They enable better traffic flow and less congestion	30	31
Allow you to do other things while driving*	22	22
Less stressful due to not worrying about driving	26	28
Could allow anyone to drive	23	20
They are safer due to less chance of driver error	26	28
Other	1	2
None of these – I don't believe there are any	25	28
Don't know	8	5

Q119. Which of the following, if any, do you think are advantages of self-driving vehicles?
Base: All 16+ in England (Jun 2021: 3392; Dec 2021: 3219; Jun 2021: 3162).
*A 9pp increase in 'allowing you to do other things' potentially influenced by questionnaire update. A new question was added in Wave 9 (June 2022) before this question asking what people would expect to do whilst driving which could have primed people more so than on previous waves.

▲ Indicates a statistically significant increase compared to Wave 8
▼ Indicates a statistically significant decrease compared to Wave 8
△ Indicates a statistically significant increase compared to Wave 7
▽ Indicates a statistically significant decrease compared to Wave 7

4.3 Disadvantages – prompted

As seen in **Figure 4.3**, technology and safety are key themes in terms of potential disadvantages of self-driving vehicles.

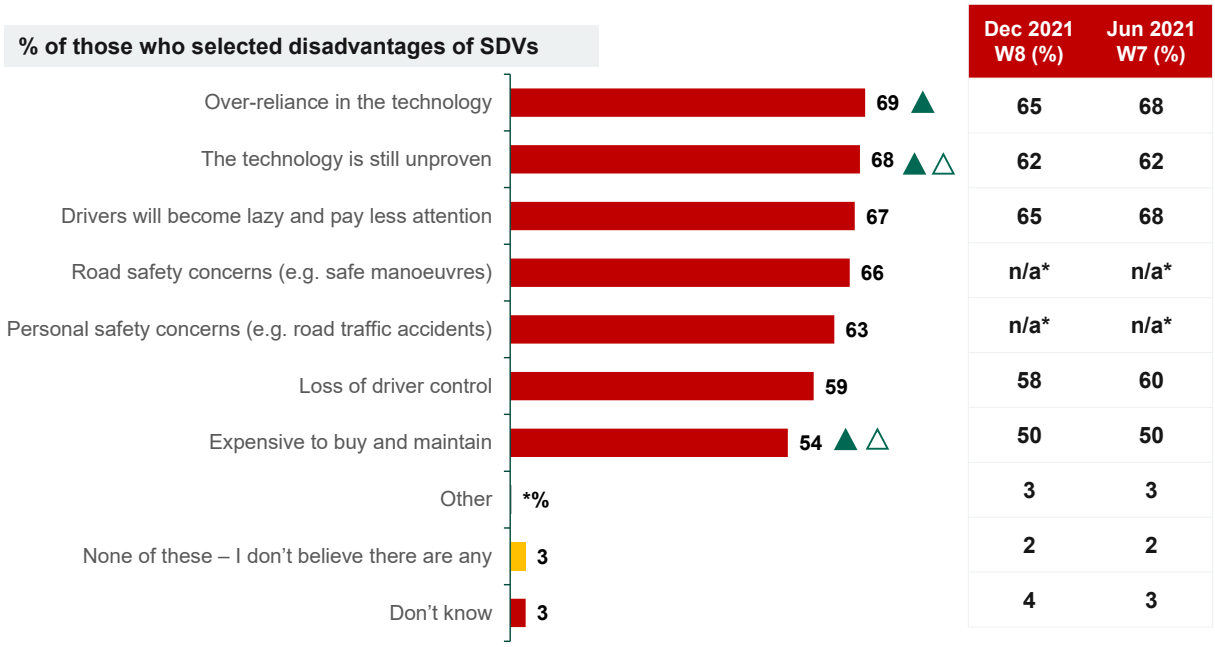
'Over-reliance in the technology' was selected as a disadvantage by 69% in June 2022 (Wave 9), a higher proportion than the 65% in December 2021 (Wave 8) but in line with 68% in June 2021 (Wave 7). 'The technology is still unproven' was selected as a disadvantage by 68% of people, an increase of six percentage points since 62% since both December 2021 (Wave 8) and June 2021 (Wave 7). In line with previous waves, high proportions also selected 'drivers will become lazy and pay less attention' (67%).

In June 2022 (Wave 9) 'road safety concerns (e.g. safe manoeuvres)' was selected as a disadvantage by 66% of people and 63% chose 'personal safety concerns (e.g. road traffic accidents)'. Safety concerns were split out in Wave 9 into 'road safety' and 'personal safety' having previously been measured in a single code in December 2021 (Wave 8). Then, 'safety concerns' were selected as a disadvantage by 70% of people.

Compared to June 2021 (Wave 7) and December 2021 (Wave 8), there was an increase in the proportion who chose 'expensive to buy and maintain'. This increased by four percentage points from 50% in December 2021 (Wave 8) to 54% in June 2022 (Wave 9).

- Car owners selected more disadvantages than non-car owners. For example, 74% of this group selected 'over-reliance in the technology' compared to 56% of non-car owners.

Figure 4.3 – Disadvantages of self-driving vehicles



Q121. Here are some disadvantages other people have specified of self-driving vehicles. Which of the following, if any, do you think are disadvantages?
Base: All 16+ in England (Jun 2021: 3392; Dec 2021: 3219; Jun 2022: 3162).

*Safety concerns were split out in Wave 9 into road safety and personal safety. In the previous wave (Wave 8) safety concerns in general were selected as a disadvantage by 70% of people.

▲ Indicates a statistically significant increase compared to Wave 8
▼ Indicates a statistically significant decrease compared to Wave 8
△ Indicates a statistically significant increase compared to Wave 7
▽ Indicates a statistically significant decrease compared to Wave 7

4.4 Knowledge of rules and regulations

In June 2022 (Wave 9), respondents were shown a set of four statements, as shown in **Table 4.1**, and asked if they believed each of them to be true or false. They were asked about a scenario '*when using a self-driving vehicle as a driver and the self-driving mode is 'on'*.

Table 4.1 - Statements relating to self-driving vehicles

When using a self-driving vehicle as a driver and the self-driving mode is 'on':	Correct answer
I am **not** responsible for how the vehicle drives	TRUE
I am **allowed** to use built-in screens to watch TV (i.e., the infotainment system)	TRUE
I do **not** have to be fit to drive (e.g., I can sleep and drink alcohol)	FALSE
I am **allowed** to use a mobile phone	FALSE

Very few people, just 2%, answered all four statements correctly. As seen in **Figure 4.4** people were most likely to identify that 'I do not have to be fit to drive' was a false statement with 85% getting this right. Half of people correctly identified 'I am allowed to use a mobile a mobile phone' as false (51%) although just under two in ten (19%) responded 'don't know', although our question did not specify

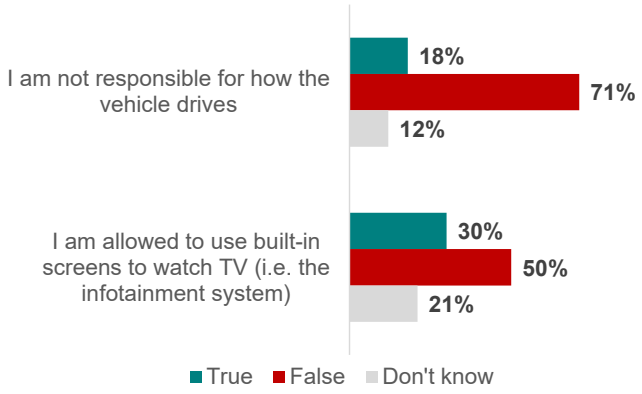
whether the phone was hand-held (illegal) or connected to the infotainment system (legal), something which will be amended in future survey waves.

Three in ten (30%) were correct that 'I am allowed to use built-in screens to watch TV' and just two in ten (18%) were correct that 'I am not responsible for how the vehicle drives'. Seven in ten incorrectly saw this as false (71%) and just over one in ten answered 'don't know' (12%).

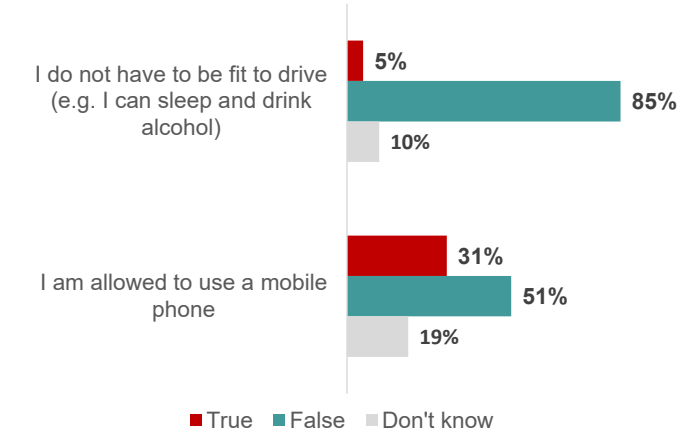
- Those aged 16-24-years-old were more likely to correctly identify 'I am not responsible for how the vehicle drives' as true (30%) than those aged 65-74 (9%) and 75 or over (11%).

To note that the Highway Code changed on 1st July, which set out the legality of these behaviours. This was in between the fieldwork dates from 30th June – 6th July 2022. Therefore, it is possible that the respondents' knowledge of the rules was influenced by the timing of this.

Figure 4.4 - Statements relating to self-driving vehicles



Rule	True %	False %	DK %
I am not responsible for how vehicle drives (TRUE)	18	71	12
I am allowed to use infotainment system (TRUE)	30	50	21



Rule	True %	False %	DK %
I do not have to be fit to drive (FALSE)	5	85	10
I am allowed to use a mobile phone (FALSE)	31	51	19

Q302. Here are some statements about self-driving vehicles. For each one, please select whether you think it is true or false, or whether you don't know. (A) I am not responsible for how the vehicle drives. (B) I am allowed to use built-in screens to watch TV (i.e. the infotainment system). (C) I do not have to be fit to drive (e.g. I can sleep and drink alcohol). (D) I am allowed to use a mobile phone.
Base: All 16+ in England: (Jun 2022: 3162).

4.5 Anticipated use of time in self-driving vehicles – unprompted

Respondents were asked how they would expect to use their time whilst travelling in a self-driving vehicle. This was an open-ended question, and verbatim responses were coded into core themes, as shown in **Figure 4.5**.

A higher proportion of people responded with 'don't know' or 'not sure' than anything else (26%). The most common theme was 'watching the road/other users' which accounted for 18% of responses. One in ten mentioned 'staying alert/paying attention to the car' (11%) and being 'worried/anxious/scared/couldn't

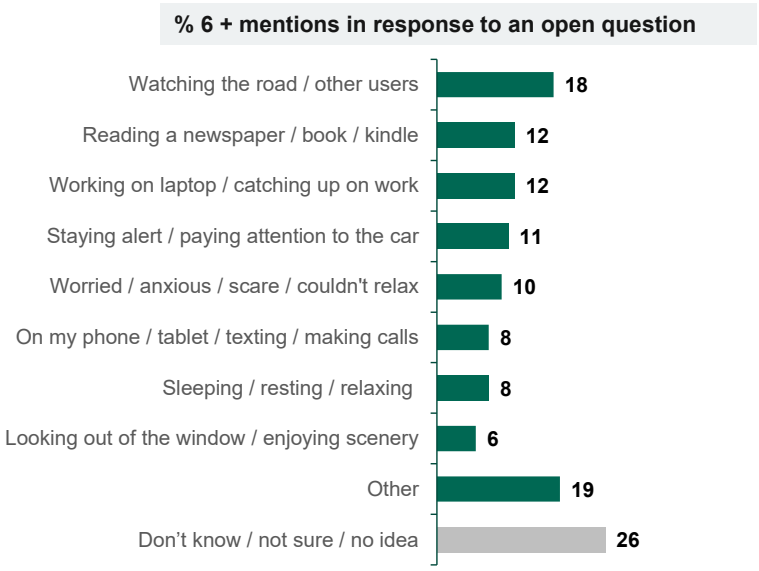
relax' (10%). A similar proportion of people mentioned 'reading a newspaper/book/kindle' (12%) and 'working on a laptop/catching up on work' (also 12%).

- A quarter (24%) of those aged 75 or over said they would be 'worried/anxious/scared/couldn't relax' while travelling in a self-driving vehicle compared to 3% of those aged 16-24.

The verbatim responses shown below illustrate one or more of the themes described above.

> *To begin with, probably watching, making sure the journey is going correctly. Once I became used to it, I would probably either speak more to those in the car or look at my phone (provided looking at your phone in a self-driving vehicle is allowed!).*
>
> *Listening to the radio and looking at the passing scene.*
>
> *Keeping a look out for danger. Perhaps trying to work but not feeling that confident about doing so. Could be bored not driving.*
>
> *Probably no differently than in any ordinary motor vehicle because I don't know how safe I would feel in that situation. I think it could take some getting used to.*

Figure 4.5 - Perceptions on using a self-driving vehicle – unprompted



Q301. Imagine that self-driving vehicles were available on UK roads – how would you expect to use your time whilst travelling in a self-driving vehicle?
Base: All 16+ in England (Jun 2022: 3162).

NB: This was an open question, later coded in to themes as part of the analysis

5 E-scooters

Summary

- Levels of awareness and self-reported knowledge of e-scooters continue to be high and higher than all other transport technologies except for electric vehicles (see **section 5.1** and **Overview**).
- There has been a small increase in ownership over time but, overall, only a small proportion of people owned or had used a privately-owned or rental e-scooter in June 2022 (see **section 5.2**). Ownership and use continued to be higher than average among younger age groups and those in households without access to a car, but also among those with three or more cars.
- There was an increase in the proportion who selected advantages of e-scooters between December 2021 (Wave 8) and June 2022 (Wave 9), returning to levels seen in June 2021 (Wave 7). E-scooters being 'quicker to get around than walking' and 'convenient for shorter journeys' were selected as advantages from a list more often than others (see **section 5.3**).
- There was little change in the identification of disadvantages. Safety risks and 'lack of regulation (e.g. no licence/insurance/helmet required)' continued to be among the top disadvantages (see **section 5.4**).

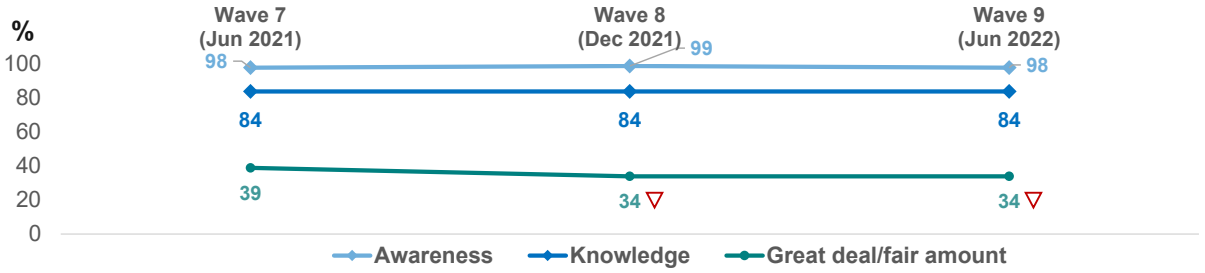
5.1 Awareness and knowledge

In June 2022 (Wave 9), levels of awareness and self-reported knowledge of e-scooters were in line with those of December 2021 (Wave 8) and June 2021 (Wave 7), as shown in **Figure 5.1**. Almost everyone, 98%, claimed that they had at least heard of e-scooters.

Self-reported knowledge - people knowing a great deal, a fair amount or just a little - remained unchanged since previous waves (84%). A third said they know a great deal or fair amount (34%), also unchanged since December 2021 (Wave 8) but this was five percentage points lower than it had been in June 2021 (Wave 7) (39%).

- 16-24-year-olds were more likely to report knowing a great deal/fair amount about e-scooters (48%) than those aged 75 or over (22%).
- Those living in urban areas were more likely to know a great deal/fair amount (35%) than those living in rural settings (28%).
- A higher proportion of people who don't own a car said they knew a great deal/fair amount (37%) than those who own a car (33%).

Figure 5.1 - Awareness and knowledge of e-scooters



*Knowledge answer codes: A great deal, A fair amount, Just a little
**Awareness answer codes: A great deal, A fair amount, Just a little, Heard of, know nothing about them/it

△ Indicates a statistically significant increase compared to Wave 7
▽ Indicates a statistically significant decrease compared to Wave 7

Q122. Before today, how much, if anything, would you say you knew about electric scooters
Base: All 16+ in England (Jun 2021: 3392; Dec 2021: 3219; Jun 2022: 3162)

5.2 Ownership and usage

In line with previous waves, reported ownership of e-scooters was low. Only one in fifty people, 2%, said they owned one. The proportion of people using a privately-owned e-scooter at least once a year was also low (6%), although this had increased slightly by two percentage points since June 2021 (Wave 7), as shown in **Figure 5.2**.

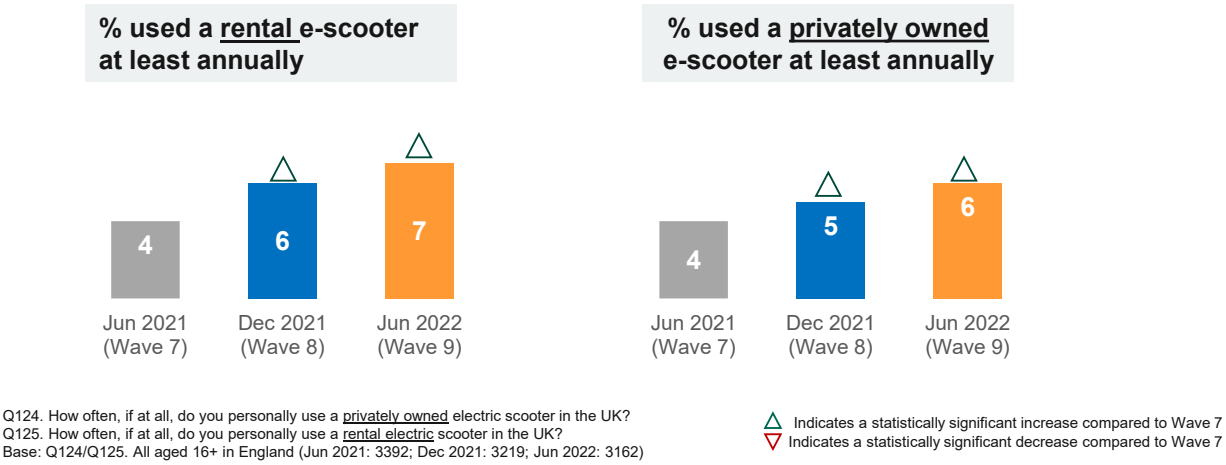
- 16-24-years-old were more likely to own an e-scooter (6%) than those aged 56-64 (1%). Related to this, ownership was highest among full-time students (7%).
- Ownership of e-scooters was slightly higher than average among those without access to a car in the household (3%), but also among those with three or more cars (5%).

There was an increase in three percentage points in the use of a rental e-scooters at least once a year between June 2021 (Wave 7) and June 2022 (Wave 9), from 4% to 7%.

- Men used rental e-scooters more often than women; 10% used one at least once a year compared to 5% of women.
- Young people aged 16-24 used rental e-scooters more often than other age groups - for example 21% of this younger age group reported using them at least once a year compared to 1% of those aged 55-64.
- Those living in urban areas were more likely to have used rental e-scooters at least once a year (8%) than those in rural areas (3%).
- Ethnic minority groups were more likely to use rental e-scooters at least once a year (16%) than white respondents (6%).

Frequency of use also increased - for example, the proportion of people using rental e-scooters at least monthly increased by two percentage points from 2% in June 2021 (Wave 7) and December 2021 (Wave 8) to 4% in June 2022 (Wave 9).

Figure 5.2 – Frequency of use of privately-owned and rental e-scooters



Q124. How often, if at all, do you personally use a privately owned electric scooter in the UK?
Q125. How often, if at all, do you personally use a rental electric scooter in the UK?
Base: Q124/Q125. All aged 16+ in England (Jun 2021: 3392; Dec 2021: 3219; Jun 2022: 3162)

△ Indicates a statistically significant increase compared to Wave 7
▽ Indicates a statistically significant decrease compared to Wave 7

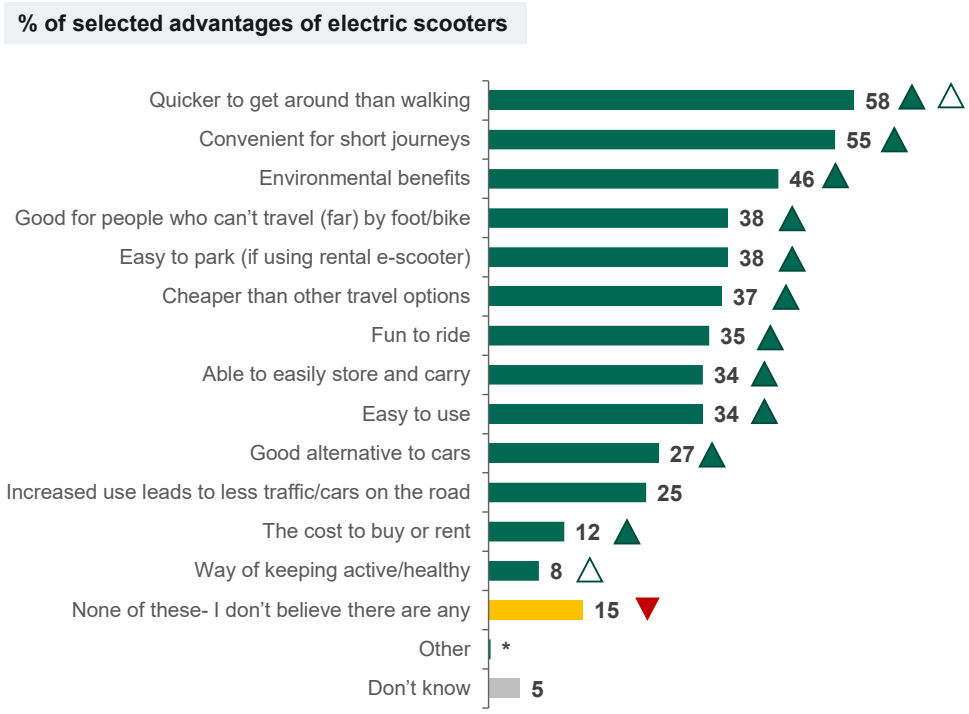
5.3 Advantages – prompted

The advantages selected most frequently have remained consistent across waves. E-scooters being 'quicker to get around than walking' was the advantage selected most frequently from a list of potential advantages, chosen by 58% in June 2022 (Wave 9), as shown in **Figure 5.3**. 'Convenient for short journeys' (55%) and 'environmental benefits (e.g. reduced pollution)' (46%) were the next most frequently selected advantages. These were followed by e-scooters being 'good for people who can't travel (far) by foot/bike' (38%) and 'easy to park (if using a rental e- scooter)' (38%).

There was a general increase in the proportion of people who selected advantages of e-scooters between December 2021 (Wave 8) and June 2022 (Wave 9) but this represented a return to levels in June 2021 (Wave 7).

- Almost three in ten urban residents selected e-scooters as a 'good alternative to cars' (28%) compared with two in ten rural residents (21%).
- A higher proportion of car owners selected 'easy to park (if using a rental e-scooter)' as an advantage (41%) than non-car owners (33%).

Figure 5.3 - Advantages of e-scooters - prompted



Dec 2021 W8 (%)	Jun 2021 W7 (%)
52	55
46	54
41	46
33	41
32	37
29	35
31	36
29	36
28	35
21	27
23	29
9	13
6	*
19	18
*	1
*	4

Q127. Which of the following, if any, do you think are advantages of electric scooters?
Base: All 16+ in England (Jun 2021: 3392; Dec 2021: 3219; Jun 2022: 3162)

▲ Indicates a statistically significant increase compared to Wave 8
▼ Indicates a statistically significant decrease compared to Wave 8
△ Indicates a statistically significant increase compared to Wave 7
▽ Indicates a statistically significant decrease compared to Wave 7

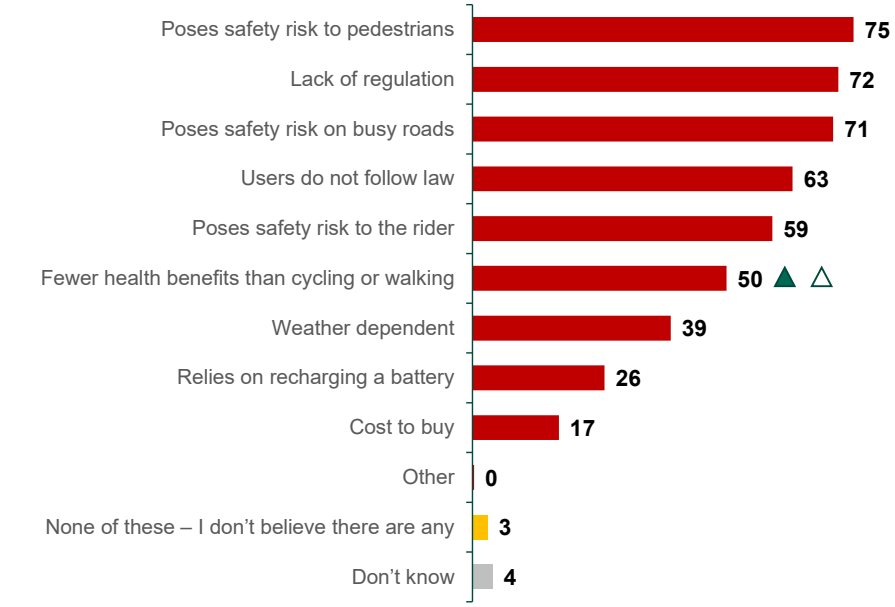
5.4 Disadvantages – prompted

The disadvantages selected most frequently by people have also remained consistent across waves, As seen in **Figure 5.4**, 'pose a safety risk to pedestrians (e.g. on the road, pavements)' was the most frequently selected response, selected by three-quarters of people in June 2022 (wave 9) (75%). Around seven in ten selected 'lack of regulation (e.g. no licence/insurance/helmet required)' (72%) and 'poses a safety risk on busy roads' (71%) as disadvantages. Around six in ten chose 'users do not follow the law' (63%) and 'poses safety risk to the rider' (59%).

A higher proportion of people selected 'fewer health benefits than cycling or walking' in June 2022 (Wave 9) (50%) than in either December 2021 (Wave 8) (42%) or June 2021 (Wave 7) (46%). Otherwise, the proportions selecting all other disadvantages was similar across the three waves.

- In line with previous waves, 55-64-year-olds, 65-74-year-olds, and those aged 75 or over were more likely to select safety-related disadvantages. For example, 'poses safety risk to pedestrians' was chosen by 90% of those aged 75 or over compared to 52% of 16-24-year-olds.

Figure 5.4 - Disadvantages of e-scooters - prompted



	Dec 2021 W8 (%)	Jun 2021 W7 (%)
Poses safety risk to pedestrians	75	76
Lack of regulation	70	71
Poses safety risk on busy roads	73	73
Users do not follow law	62	63
Poses safety risk to the rider	59	57
Fewer health benefits than cycling or walking	42	46
Weather dependent	38	37
Relies on recharging a battery	25	25
Cost to buy	17	15
Other	3	3
None of these – I don't believe there are any	3	3
Don't know	5	3

Q129. Which of the following, if any, do you think are disadvantages of electric scooters?
Base: All 16+ in England (Jun 2021: 3392; Dec 2021: 3219; Jun 2022: 3162)

▲ Indicates a statistically significant increase compared to Wave 8
▼ Indicates a statistically significant decrease compared to Wave 8

△ Indicates a statistically significant increase compared to Wave 7
▽ Indicates a statistically significant decrease compared to Wave 7

6 E-cycles

Summary

- Awareness of e-cycles did not change between December 2021 (Wave 8) and June 2022 (Wave 9). However, levels of self-reported knowledge increased over this period although they largely returned to those seen in June 2021 (Wave 7) (see **section 6.1**).
- The use of e-cycles increased between December 2021 (Wave 8) and June 2022 (Wave 9) although it remained low overall. Usage was higher among younger age groups and those in car-less households. It was also higher among people without a health condition than among those with one (see **section 6.2**).
- 'Less effort required than a normal bike' was the advantage selected most often, and the proportion choosing this increased between June 2021 (Wave 7) and June 2022 (Wave 9). Most of the advantages were selected by higher proportions than at previous waves (see **section 6.3**).
- Disadvantages were also selected by higher proportions than seen previously. 'They are expensive to buy' remained the most selected disadvantage followed by 'likely to be stolen' and 'relies on recharging a battery' (see **section 6.4**).

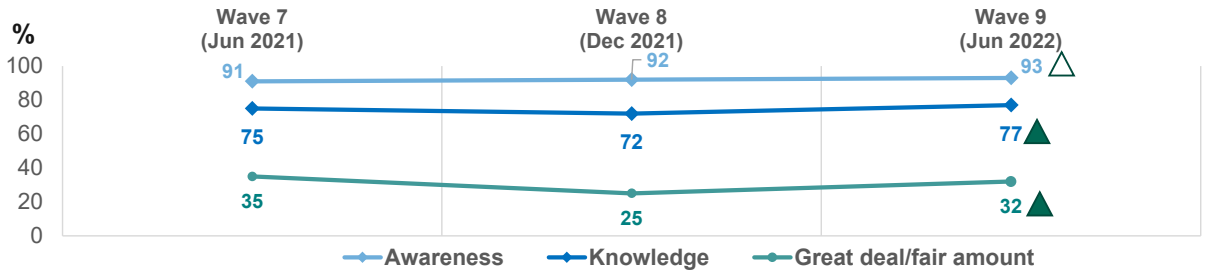
6.1 Awareness and knowledge

In June 2022 (Wave 9), awareness of e-cycles was in line with previous waves (93%). Awareness was higher among those living in households which owned a car (95%) than those without a car (86%).

Self-reported knowledge increased to 77% from 72% in December 2021 (Wave 8) and was also higher than June 2021 (Wave 7) (75%). A third of people said they know a great deal/fair amount about e-cycles in June 2022 (Wave 9) (32%), an increase of seven percentage points from 25% in December 2021 (Wave 8), but this was lower than it had been in June 2021 (Wave 7) (35%).

- A third of those living in households with a car said they know a great deal/fair amount (33%) about e-cycles, compared to a quarter of those without a car (26%).

Figure 6.1 - Awareness and knowledge of e-cycles



***Knowledge** answer codes: A great deal, A fair amount, Just a little
****Awareness** answer codes: A great deal, A fair amount, Just a little, Heard of, know nothing about them/it

Q137. Before today, how much, if anything, would you say you knew about e-cycles?
Base: All 16+ in England (Jun 2021: 3392; Dec 2021: 3219; Jun 2022: 3162)

▲ Indicates a statistically significant increase compared to Wave 8
▼ Indicates a statistically significant decrease compared to Wave 8

△ Indicates a statistically significant increase compared to Wave 7
▽ Indicates a statistically significant decrease compared to Wave 7

6.2 Usage

Use of e-cycles increased slightly in June 2022 but remained low overall. In June 2022, nine in ten said they had never used an e-cycle or had done so less often than once a year (91%). This proportion was lower than it had been in December 2021 (Wave 8) and June 2021 (Wave 7) (94%).

The proportion who used an e-cycle at least once a year increased by three percentage points, from 6% to 9%, between December 2021 (Wave 8) and June 2022 (Wave 9), possibly reflecting seasonal effects, although daily, weekly, and monthly use remained unchanged.

- The proportion who used an e-cycle at least once a year was higher among 16-24-year-olds (17%) than older age groups such as those aged 75 years old and older (5%).
- Those in households not owning a car were more likely to use e-cycles at least annually (11%) than those with a car or cars (8%).
- People without a health condition which reduced their activity were more likely to use e-cycles at least once a year (10%) than those with a health condition (6%).

Figure 6.2 Usage of e-cycles

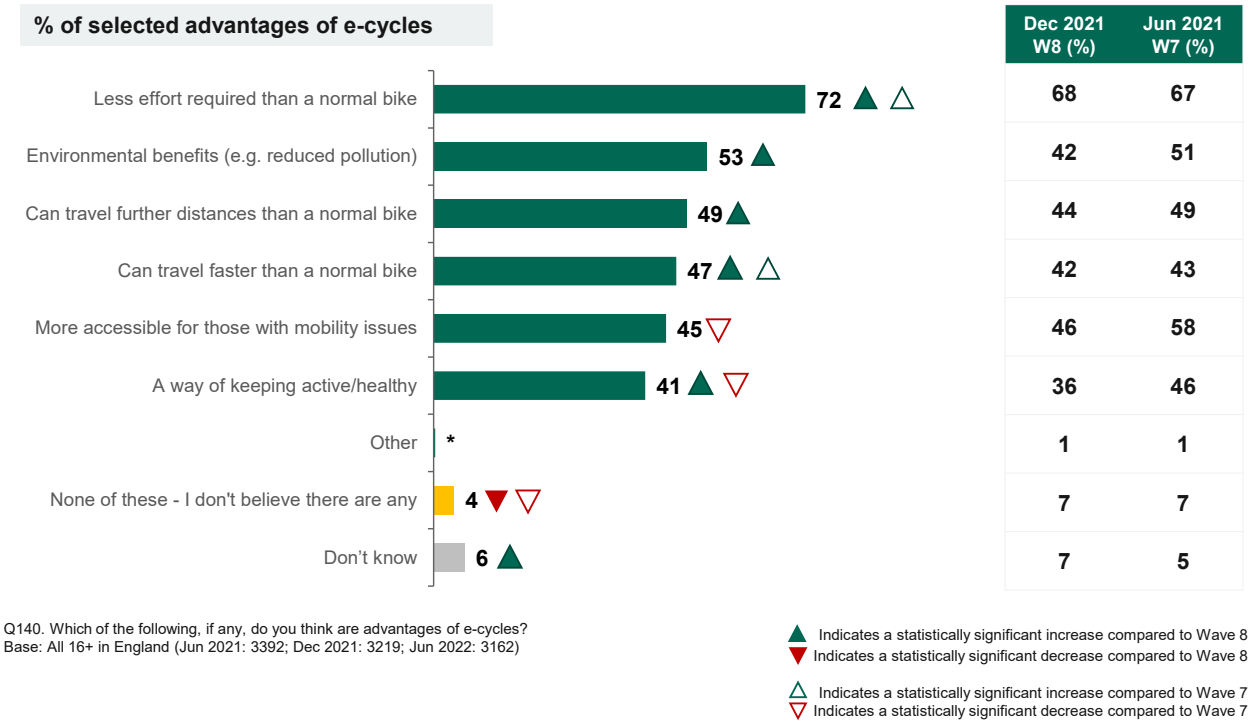
6.3 Advantages – prompted

As was the case in previous waves, the advantage selected most frequently from a list was 'Less effort required than a normal bike', as shown in **Figure 6.3**. This was chosen by 72% in June 2022 (Wave 9), a higher proportion of people than in December 2021 (Wave 8) (68%) and June 2021 (Wave 7) (67%).

'Environmental benefits (e.g. reduced pollution)' was selected by 53% of people and 'can travel further distances than a normal bike' by 49%. These were selected by higher proportions than in December 2021 (Wave 8) but by similar proportions as in June 2021 (Wave 7). By contrast, 'can travel faster than a normal bike' was selected by 47% in June 2022 (Wave 9), higher than 42% in December 2021 (Wave 8) and 43% in June 2021 (Wave 7).

'More accessible for those with mobility issues' was selected as an advantage by 45% of people in June 2022 (Wave 9) which was similar to the proportion in December 2021 (Wave 8) (46%) but 13 percentage points lower than it had been in June 2021 (Wave 7) (58%).

Figure 6.3 Advantages of e-cycles - prompted



	Dec 2021 W8 (%)	Jun 2021 W7 (%)
Less effort required than a normal bike	68	67
Environmental benefits (e.g. reduced pollution)	42	51
Can travel further distances than a normal bike	44	49
Can travel faster than a normal bike	42	43
More accessible for those with mobility issues	46	58
A way of keeping active/healthy	36	46
Other	1	1
None of these - I don't believe there are any	7	7
Don't know	7	5

Q140. Which of the following, if any, do you think are advantages of e-cycles?
Base: All 16+ in England (Jun 2021: 3392; Dec 2021: 3219; Jun 2022: 3162)

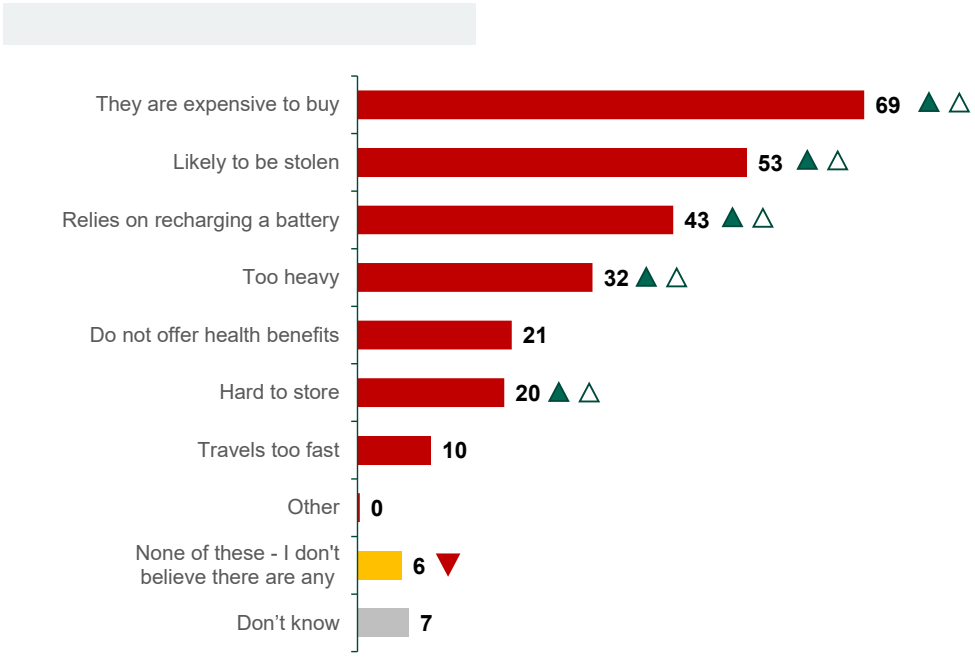
▲ Indicates a statistically significant increase compared to Wave 8
▼ Indicates a statistically significant decrease compared to Wave 8
△ Indicates a statistically significant increase compared to Wave 7
▽ Indicates a statistically significant decrease compared to Wave 7

6.4 Disadvantages – prompted

As seen in **Figure 6.4**, 'they are expensive to buy' was the disadvantage selected most frequently from a list. This was chosen by 69%, up by eight percentage points since December 2021 (Wave 8) (61%) and ten points since June 2021 (Wave 7) (59%). More than half of people selected 'likely to be stolen' (53%), with mentions of this disadvantage up by six points since December 2021 (Wave 9) (47%) and ten points since June 2021 (Wave 7) (43%).

'Relies on recharging a battery' was selected as a disadvantage by 43%, being 'too heavy' by 32% and 'hard to store' by 20%. In all cases, these were selected by higher proportions compared to December 2021 (Wave 8) and June 2021 (Wave 7). 'Do not offer health benefits' was selected by 21%, in line with both previous waves.

Figure 6.4 Disadvantages of e-cycles - prompted



	Dec 2021 W8 (%)	Jun 2021 W7 (%)
They are expensive to buy	61	59
Likely to be stolen	47	43
Relies on recharging a battery	39	39
Too heavy	29	26
Do not offer health benefits	21	22
Hard to store	16	11
Travels too fast	11	13
Other	3	3
None of these - I don't believe there are any	8	11
Don't know	8	6

Q142. Which of the following, if any, do you think are disadvantages of e-cycles?
Base: All 16+ in England (Jun 2021: 3392; Dec 2021: 3219; Jun 2022: 3162)

▲ Indicates a statistically significant increase compared to Wave 8
▼ Indicates a statistically significant decrease compared to Wave 8
△ Indicates a statistically significant increase compared to Wave 7
▽ Indicates a statistically significant decrease compared to Wave 7

7 Drones

Summary

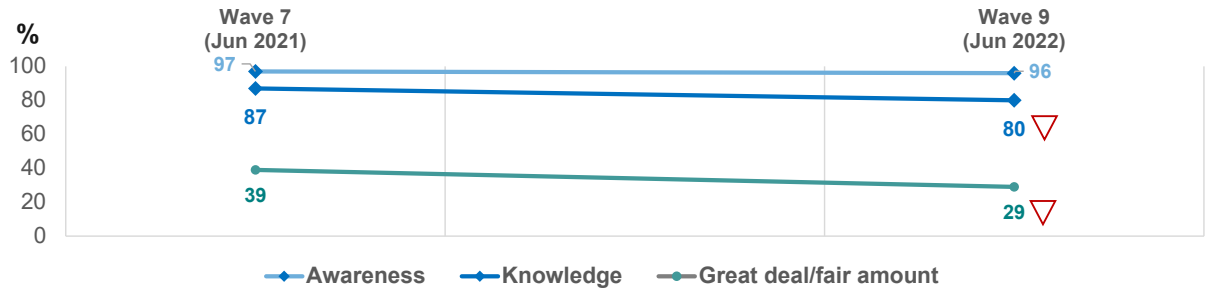
- Levels of awareness of drones did not change between June 2021 (Wave 7) (97%) and June 2022 (Wave 9) (96%). Self-reported knowledge fell by seven percentage points from 87% to 80% over the same period (see **section 7.1**).
- There was also a fall in the proportion of people who said they had at least one concern about the use of drones, a drop of six percentage points from 67% to 61%, although, when prompted, seven in ten had concerns about the privacy or intrusion and potential misuse of drones (see **section 7.5**).
- As in previous waves, concerns about privacy and intrusion were more strongly felt among older age groups and those living in rural areas.
- Levels of public support for the different uses of drones were similar to previous waves. Support was strongest for their use in emergency response and weaker for delivering retail packages (see **section 7.4**).

7.1 Awareness and knowledge

Awareness of drones was largely in line with that in June 2021 (Wave 7), as shown in **Figure 7.1** (this topic was not covered in Wave 8). In June 2022 (Wave 9), 96% of people were aware of drones compared to 97% previously.

Self-reported knowledge of drones fell sharply between June 2021 (Wave 7) and June 2022 (Wave 9). Over this period, the proportion of people who said they know a great deal, a fair amount or just a little dropped seven percentage points from 87% to 80%. The proportion of people who said they know a great deal/fair amount about drones also fell, from 39% to 29%.

Figure 7.1 Awareness and knowledge of drones



Knowledge answer codes: A great deal, A fair amount, Just a little
Awareness answer codes: A great deal, A fair amount, Just a little, Heard of, know nothing about them/it
Q130. Before today, how much, if anything, would you say you knew about drones?
Base: All 16+ in England (Jun 2021: 3392; Jun 2022: 3162)

△ Indicates a statistically significant increase compared to Wave 7
▽ Indicates a statistically significant decrease compared to Wave 7

7.2 Personal use

The proportion of people who have ever used a drone (15%) has remained consistent with June 2021 (Wave 7) (16%). Similar to June 2021, in June 2022 (Wave 9), 15% of people said they had used a drone before. This included 14% who had done this for personal use and 1% for commercial or work-related reasons.

- Younger age groups were more likely than older ones to have ever used a drone before. For example, 26% of 16-24-year-olds had done this, compared to 4% of those aged 75 or over.

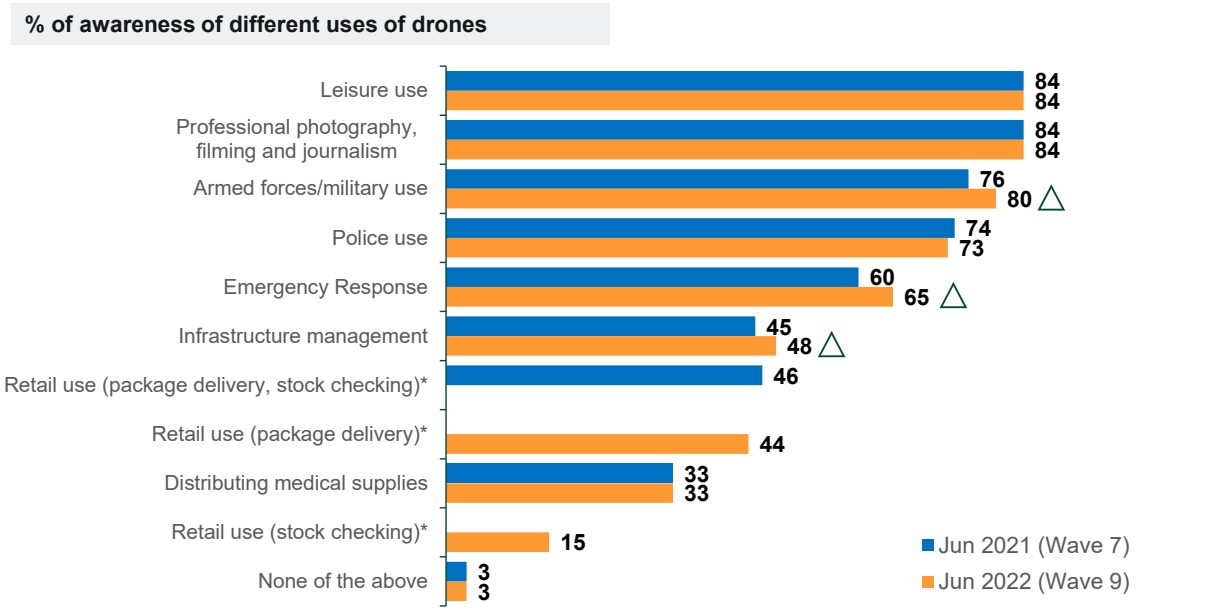
- Those living in the lowest annual household income bracket with earnings of less than £25,999 annually (11%) were less likely those in the highest income bracket earning £100,000 and above (20%) to have used a drone before.

7.3 Awareness of different uses

In line with previous waves, leisure use, professional photography, filming and journalism were the most common uses of drones people had heard of. Both were selected from a list by 84%, as shown in **Figure 7.2**. These were followed by armed forces/military uses (80%) which had risen from 76% in June 2021 (Wave 7), possibly due to media coverage of the conflict in Ukraine.

There were increases in awareness of some other uses. For example, awareness of the use of drones for emergency response increased from 60% to 65% and awareness of use for infrastructure management (e.g. building/bridge inspection, monitoring crops/livestock) increased from 45% to 48%. Awareness of the use of drones was lower for distributing medical supplies (33%) and retail purposes (stock checking) (15%)[1].

Figure 7.2 - Awareness of use of drones



7.4 Support for different uses

Levels of public support for the different uses of drones were similar in June 2022 (Wave 9) to previous waves, as shown in **Figure 7.3**. As before, support was strongest in terms of emergency response; 92% of people supported the use of drones for this reason. Levels of support were also high for infrastructure

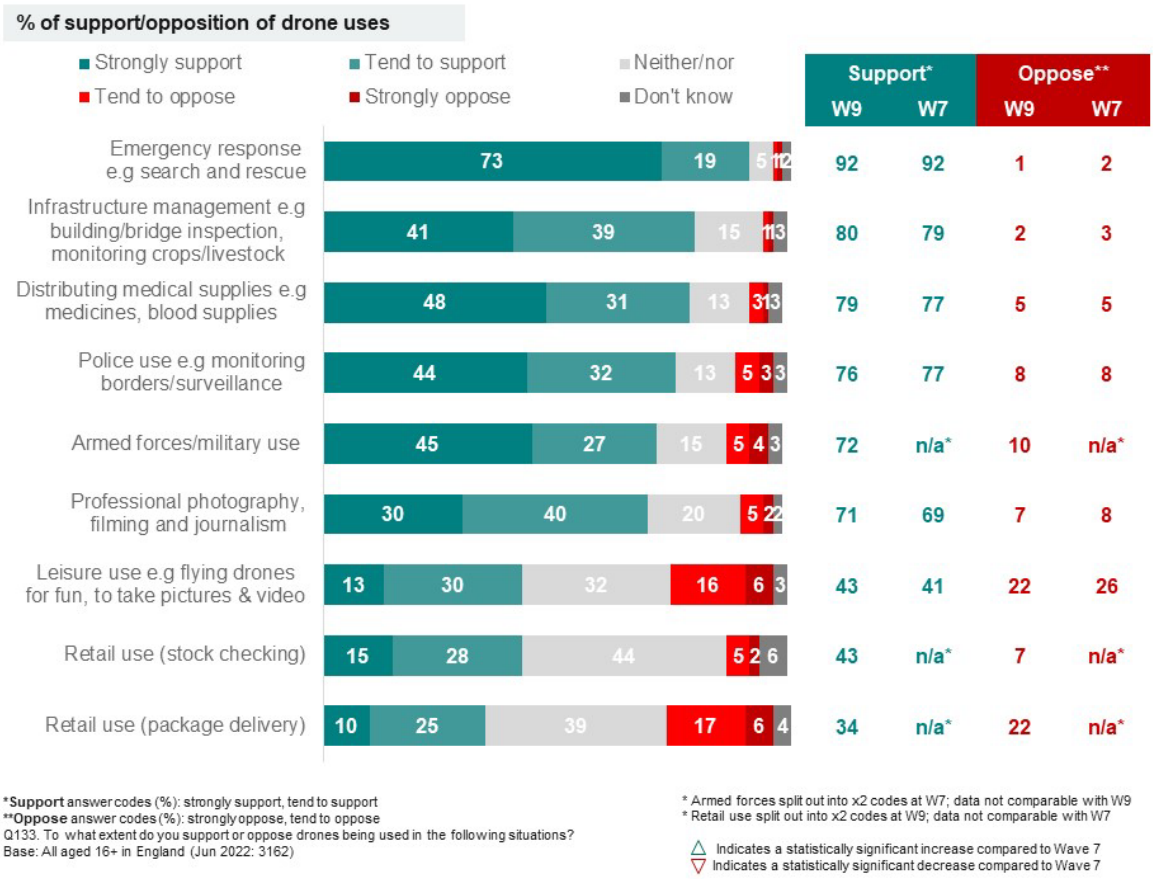
[1] In June 2022 (Wave 9), use of drones for retail was split into two distinct codes: package delivery and stock checking, which differed from June 2021 (Wave 7) where a single combined code was presented.

management (80%), distributing medical supplies (79%) use for policing (e.g. monitoring borders/surveillance) (76%), armed forces/military purposes (72%) but also professional photography, filming and journalism (71%).

As was the case in June 2021 (Wave 7), support for their use for leisure (e.g. flying drones for fun, to take pictures and video) was weaker (43%) in June 2022 (Wave 9). The same proportion supported the use of drones for retail stock-checking, but support was lower for delivery of packages (34%).

There was some uncertainty about support in relation to some specific uses of drones, reflecting the associated levels of awareness. For example, 50% answered 'don't know' or neither supported nor opposed the use of drones for stock-checking. There was also some opposition - in particular, 22% were opposed to the use of drones for leisure and a similar proportion opposed their use to deliver packages.

Figure 7.3 - Support for different uses of drones



*Support answer codes (%): strongly support, tend to support
**Oppose answer codes (%): strongly oppose, tend to oppose
Q133. To what extent do you support or oppose drones being used in the following situations?
Base: All aged 16+ in England (Jun 2022: 3162)

* Armed forces split out into x2 codes at W7; data not comparable with W9
* Retail use split out into x2 codes at W9; data not comparable with W7

△ Indicates a statistically significant increase compared to Wave 7
▽ Indicates a statistically significant decrease compared to Wave 7

7.5 Concerns – unprompted and prompted

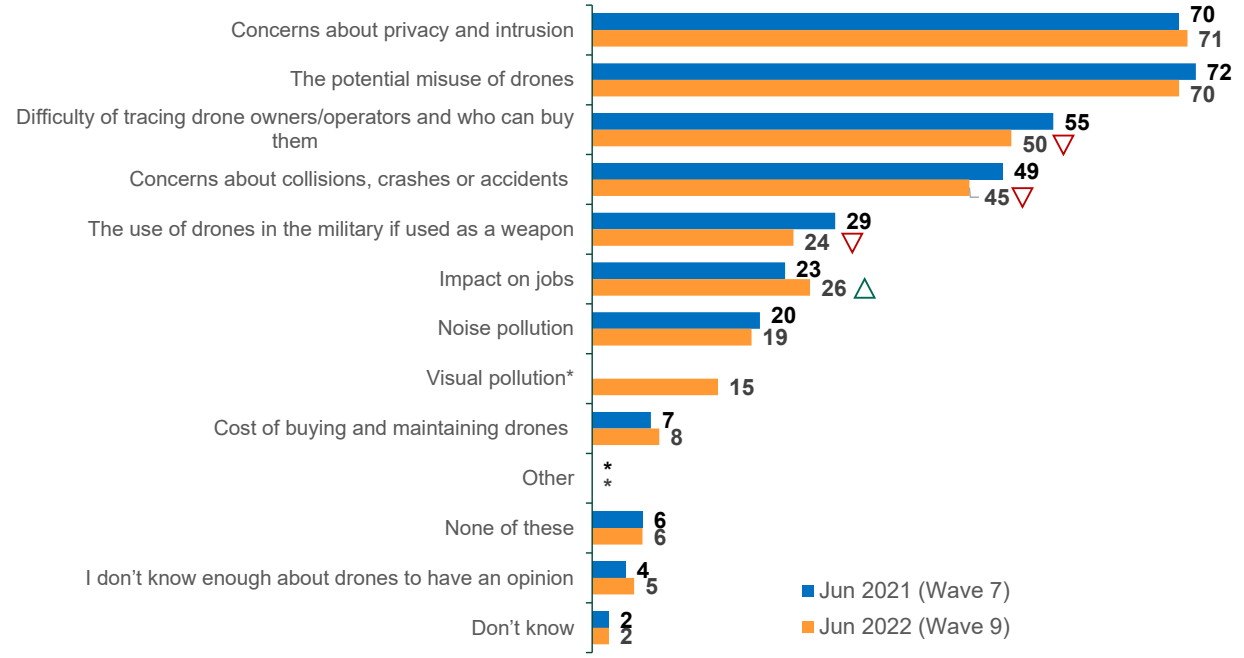
In June 2022 (Wave 9), 61% of people said they had at least one concern about the use of drones without being shown a list, a drop of six percentage points since June 2021 (Wave 7) (67%), as shown in **Figure 7.4**. Over the same period, the proportion who said they had no concerns increased by five percentage points from 29% to 34%.

In line with June 2021 (Wave 7), seven in ten people said they had concerns about privacy or intrusion (71%) and the potential misuse of drones (70%) when presented with a list. Half of people (50%) were concerned about the difficulty of tracing drone owners/operators; this proportion had fallen by five percentage points since June 2021 (Wave 7) (55%). Concerns about collisions, crashes or accidents fell

by a similar amount, from 49% to 45%, and concern about the use of drones as military weapons also dropped, from 29% to 24%.

- Concerns about privacy and intrusion were more strongly felt by older age groups. For example, this was a concern for eight in ten 65-74-year-olds (82%) but fewer than six in ten 16-24-year-olds (56%).
- People living in rural areas were more concerned about privacy and intrusion (79%) than those in urban areas (70%).

% of concerns of drone use



*New code for W9 Jun 2022
Q135. Which of the following concerns, if any, do you have about the use of drones?
Base: All 16+ in England (Jun 2021: 3392; Jun 2022: 3162)

△ Indicates a statistically significant increase compared to Wave 7
▽ Indicates a statistically significant decrease compared to Wave 7

8 Flying taxis

Summary

- More than half of people said they had never heard of flying taxis, and a quarter had, but said they know nothing about them. Awareness and self-reported knowledge of flying taxis remained low although awareness had increased a little since June 2021 (see **section 8.1**).
- People were more likely to identify disadvantages than advantages to flying taxis (see **sections 8.2** and **8.3**).
- The advantage of flying taxis that people selected most frequently was 'More convenient/quicker than other modes of transport' and the most frequently selected disadvantage was 'collisions, crashes or accidents' (see **sections 8.2** to **8.5**).
- Two in ten people said they were either fairly or very likely to use flying taxis if they were proven and available to use. More than half of people said they were either fairly or very unlikely to use a flying taxi in future (see **section 8.6**).

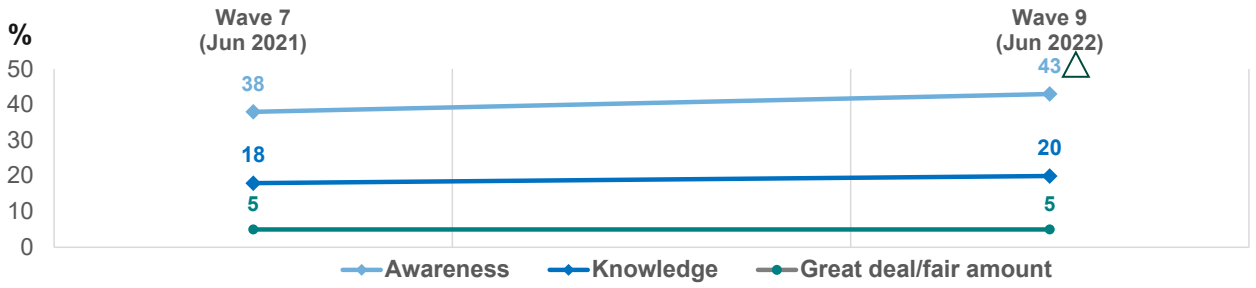
8.1 Awareness and knowledge

In June 2022 (Wave 9), levels of awareness and self-reported knowledge of flying taxis remained low although awareness had increased since June 2021 (Wave 7), as shown in **Figure 8.1**.

Four in ten people had some awareness of flying taxis (43%), an increase of five percentage points since June 2021 (Wave 7) (38%). More than half, 56%, said they had never heard of them, and almost a quarter (23%) had heard of them but knew nothing about them.

Self-reported knowledge of flying taxis was 20% in June 2022 (Wave 9), in line with 18% in June 2021 (Wave 7). However, just one in twenty, 5%, said they know a great deal or a fair amount, which was unchanged since June 2021 (Wave 7).

Figure 8.1 - Awareness and knowledge of flying taxis



Knowledge answer codes: A great deal, A fair amount, Just a little
Awareness answer codes: A great deal, A fair amount, Just a little, Heard of, know nothing about them/it

Q304. Before today, how much, if anything, would you say you knew about flying taxis?
Base: All 16+ in England (Jun 2021: 3392; Jun 2022: 3162)

△ Indicates a statistically significant increase compared to Wave 7
▽ Indicates a statistically significant decrease compared to Wave 7

8.2 Advantages – unprompted and prompted

In June 2022 (Wave 9), over half of people said they could think of at least one advantage of flying taxis without being shown a list (53%). Two in ten said they could not think of any advantages (20%) and one in ten did not believe there were any advantages (10%).

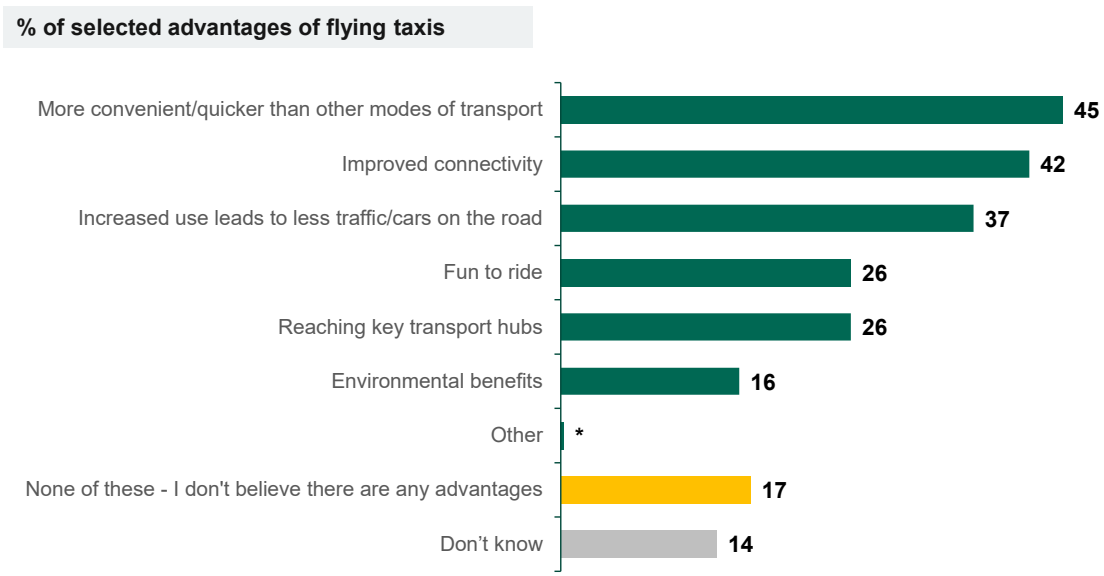
- Those in higher income households - those earning £52,000 to £99,999 (63%) and £100,000 and above (71%) - were more likely than those in lower income households to have said that they could think of advantages.

In June 2022 (Wave 9), when shown a list of potential advantages of flying taxis, 'more convenient/ quicker than other modes of transport' was the advantage selected most frequently. This was chosen by 45% in June 2022 (Wave 9), as shown in **Figure 8.2**.

'Improved connectivity' (42%) and 'increased use leads to less traffic/cars on the road' (37%) were among other frequently selected advantages. These were followed by 'fun to ride' (26%) and 'reaching key transport hubs (e.g. train stations, airports)' (26%). The least frequently selected advantage was 'environmental benefits' (16%).

- Those living in rural areas were more likely to select 'improved connectivity' (47%) and 'increased use leads to less traffic/cars on the road' (44%) than those in urban areas where 41% and 36% selected these as advantages.

Figure 8.2 - Advantages of flying taxis



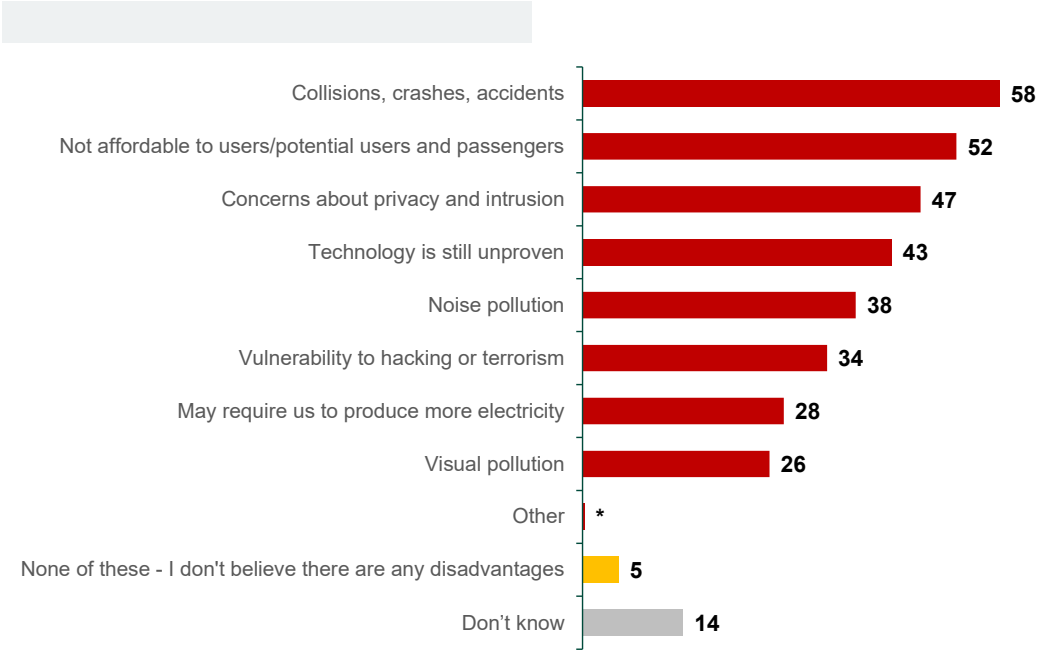
Q306. Which of the following, if any, do you think are advantages of flying taxis?
Base: All 16+ in England (Jun 2022: 3162)

8.3 Disadvantages – unprompted and prompted

In June 2022 (Wave 9), six in ten people said they could think of at least one disadvantage of flying taxis without being shown a list (64%) while 14% said that they could not think of any disadvantages and 5% said they did not believe there were any disadvantages.

When shown a list of potential disadvantages of flying taxis, 'collision, crashes or accidents' was selected most frequently, by 58% of people, as shown in **Figure 8.3**. This was followed by 'not affordable to users/potential users and passengers' (52%) and 'concerns about privacy and intrusion' (47%).

Figure 8.3 - Disadvantages of flying taxis



Q308. Which of the following, if any, do you think are disadvantages of flying taxis?
Base: All 16+ in England (Jun 2022: 3162)

8.4 Likelihood of use

In June 2022 (Wave 9), 22% of people said they were either very or fairly likely to use flying taxis if they were proven and available to use.

- This proportion was higher among people living in urban areas (23%) - especially London (28%) - compared to those living in rural areas (16%).

Just over half of people said they were either very or fairly *unlikely* to use flying taxis (54%).

- Older age groups were more likely to have said they were unlikely to use a flying taxi in future - 65-74-year-olds (67%) and those aged 75 or over (72%).

9 Sustainable aviation

Summary

- Levels of awareness and self-reported knowledge of **sustainable aviation fuels** were low in comparison to most other transport technologies. Nearly half of people said that they had never heard of them. A quarter have some level of knowledge (see **section 9.1**).
- While there was more support than opposition for the principle of paying additional costs for flights using sustainable aviation fuels, many people were either neutral or said they don't know (36%) (see **section 9.2**).
- People's stated likelihood of paying additional charges for flights using sustainable aviation fuels decreased as the proposed cost increased. This was particularly the case among those finding it 'difficult' or 'very difficult on their present income (see **section 9.3**).
- Awareness and self-reported knowledge of **battery-powered electric planes** remained low, although these had increased between June 2021 (Wave 7) and June 2022 (Wave 9). Concerns about battery-powered electric planes in June 2022 (Wave 9) were consistent with those raised in June 2021 (Wave 7). These related mainly to battery life and safety, although many people did not provide a response (see **sections 9.4** and 9.5).
- Awareness of **hydrogen-powered planes** increased between June 2021 (Wave 7) and June 2022 (Wave 9) although it remained low. The most common concerns about these related to safety issues but most people did not provide a response (see **sections 9.6** and **9.7**).

9.1 Awareness and knowledge of sustainable aviation fuels

In June 2022 (Wave 9), questions on sustainable aviation fuels were added to the Tracker for the first time, and respondents were provided with the following definition:

> Sustainable aviation fuels are greener alternatives to aviation fuels currently in use, produced from sources such as household and industrial waste.

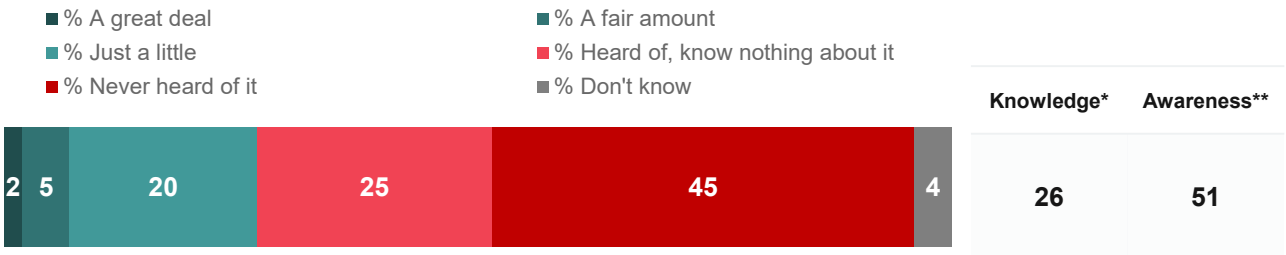
Half of people claimed to have at least heard of sustainable aviation fuels (51%) while 45% said that they had never heard of them, as shown in **Figure 9.1**.

- Two-thirds of men said they had at least heard of sustainable aviation fuels (65%), higher than awareness among women (38%).
- Awareness was higher than average among 65-74-year-olds, 58% of whom had at least heard of sustainable aviation fuels.

A quarter of people said they have some knowledge of sustainable aviation fuels (26%) including 7% who said that they knew either a great deal or a fair amount.

- Those who said they knew a great deal or fair amount about sustainable aviation fuels, were more likely to be aged between 16-24 (18%) than all other age groups.

Figure 9.1 - Awareness and knowledge of sustainable aviation fuels



Knowledge answer codes (%): A great deal, A fair amount, Just a little
Awareness answer codes (%): A great deal, A fair amount, Just a little, Heard of, know nothing about them/it

Q310. Before today, how much, if anything, would you say you knew about sustainable aviation fuels?
Base: All 16+ in England (Jun 2022: 3162)

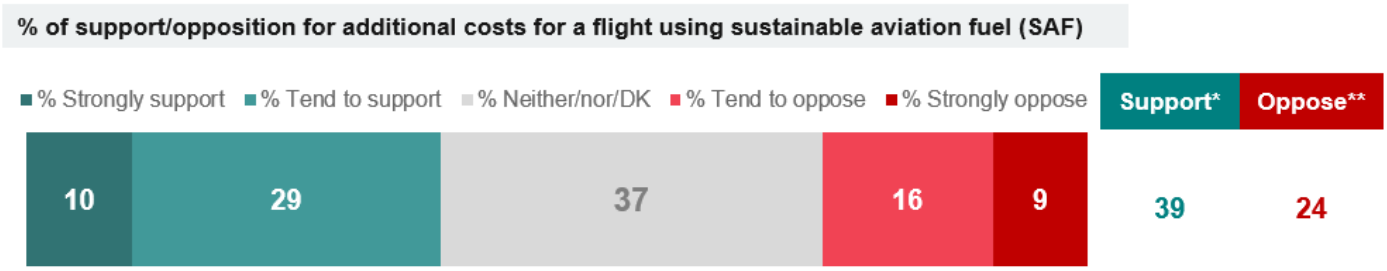
9.2 Support for airline charges for sustainable aviation fuels

In June 2022 (Wave 9), there was more in principle support than opposition for airlines charging higher fares for a flight using sustainable aviation fuels, as shown in **Figure 9.2.** Four in ten said they would strongly support or tend to support the measure (39%) while a quarter were opposed (24%). However, two in five said that they neither supported nor opposed the measure or responded 'don't know' (37%).

- The more comfortable people were finding living on their present income, the more likely they were to support the proposal. Half of those who said they were 'living comfortably' (49%) said that they would support the measure, in contrast to 22% of those finding it 'very difficult at present'.

- Half of those who said they had some knowledge of sustainable aviation fuels also said they would in principle support increasing airline fares for flights using them (50%), compared to just a third of those who had never heard of them (33%).

Figure 9.2 - Support for airline charges for sustainable aviation fuels



*Support answer codes (%): strongly support, tend to support
**Oppose answer codes (%): strongly oppose, tend to oppose
Q311. In principle, to what extent would you support or oppose airlines charging higher fares for journeys using sustainable aviation fuel?
Base: All aged 16+ in England (Jun 2022: 3162)

9.3 Likelihood to pay for sustainable aviation fuels

In June 2022 (Wave 9), respondents were asked about the likelihood of paying an extra charge for a £100 short haul flight using greener alternatives, with three cost options presented. Respondents were randomly selected to answer about one of the cost options only - £5, £10, or £20. This was to avoid

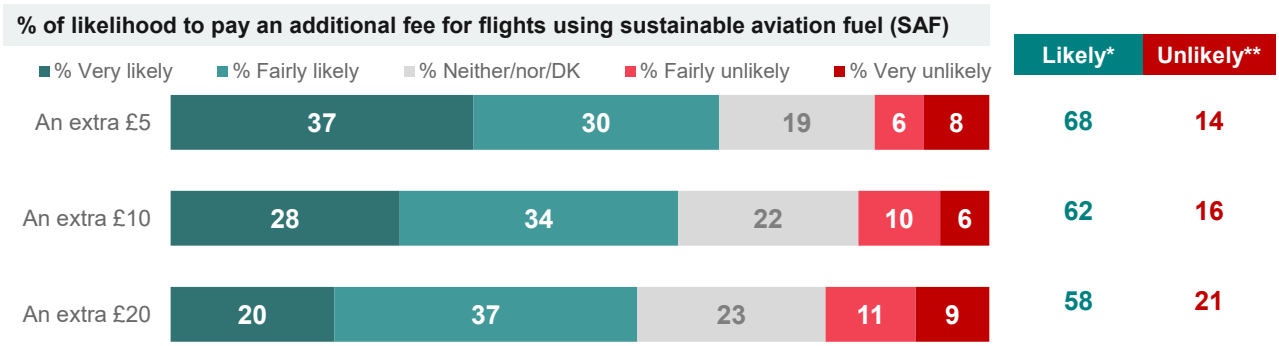
respondents being influenced by which order they saw the responses (order effects), or which price they had seen first (anchoring effects).

The stated likelihood of being willing to pay extra for flights using sustainable aviation fuels or a hydrogen-powered plane decreased as the potential extra cost increased, as shown in **Figure 9.3**. Just over two-thirds said that they would be likely to pay an extra £5 (68%). This fell with the prospect of an extra £10 (to 62%) and an extra £20 (58%), but higher proportions of people were more likely than unlikely to pay extra regardless of the cost increase.

- Peoples' current financial situation had an impact on their willingness to pay extra for such flights. Those 'living comfortably' were more likely to be willing to pay extra than those finding it 'very difficult'. For example, more than three-quarters of those 'living comfortably' (78%) said that they would likely pay an extra £5 compared to just half of those finding it 'very difficult' (50%).

- Two-thirds of those intending to take a trip by plane in the next 12 months said that they would be likely pay an extra £20 (66%) compared to just under half of those who said they did *not* expect to fly at all in the next year (48%).

Figure 9.3 - Sustainable aviation fuel - likelihood to pay



***Likely** answer codes (%): very likely, fairly likely
****Unlikely** answer codes (%): fairly unlikely, very unlikely
Q312. How likely or unlikely do you think you would personally be to pay extra for a flight that was made using greener alternatives such as sustainable aviation fuel or a hydrogen-powered plane if you were charged: an extra £5, an extra £10, an extra £20?
Base: All aged 16+ in England (Jun 2022: 3162 – split sample - £5 (1033), £10 (1050), £20 (1079)

9.4 Battery-powered electric planes – awareness and knowledge

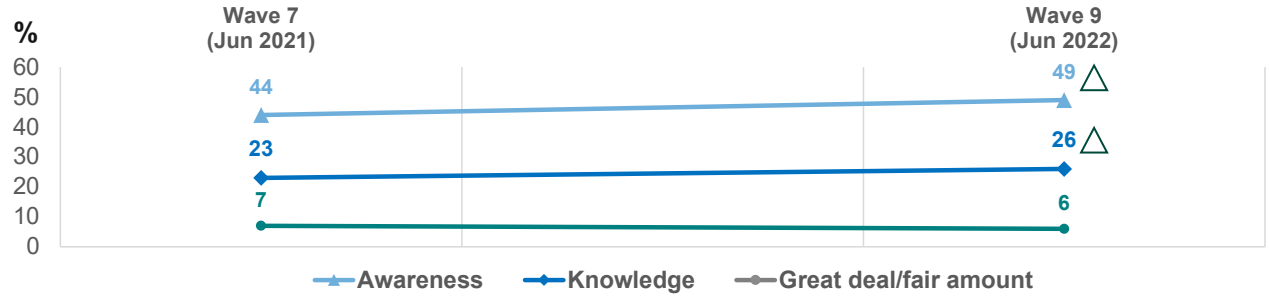
In June 2022 (Wave 9), levels of awareness and self-reported knowledge of battery-powered electric planes had increased since June 2021 (Wave 7), as shown in **Figure 9.4**. Half of people, 49%, claimed that they had heard of the technology, an increase of five percentage points since June 2021 (Wave 7) (44%). The same proportion had never heard of the technology (49%).

- Just over half in the lowest income households earning less than £25,999 annually said they had never heard of battery-powered electric planes (53%), a higher proportion than all other income groups, including the highest income households earning over £100,000 (38%).

Self-reported knowledge of battery-powered electric planes - people knowing a great deal, a fair amount or just a little - was 26%, an increase of three percentage points since June 2021 (Wave 7) (23%). The proportion who said they know a great deal or fair amount (6%), was in line with that of June 2021 (Wave 7) (7%).

- Younger age groups reported higher levels of knowledge of battery-powered electric planes then older age groups. Around one in ten 16-24-year-olds (12%) and 25-34-year-olds (10%) said they know a great deal or fair amount, compared to just 4% of those aged 65-74 and 2% of those aged 75 or over.

Figure 9.4 - Battery-powered electric planes - awareness and knowledge



Knowledge answer codes (%): A great deal, A fair amount, Just a little
Awareness answer codes (%): A great deal, A fair amount, Just a little, Heard of, know nothing about them/it
Q146. Before today, how much, if anything, would you say you knew about battery-powered electric planes?
Base: All 16+ in England (Jun 2021: 3392; Jun 2022: 3162)

△ Indicates a statistically significant increase compared to Wave 7
▽ Indicates a statistically significant decrease compared to Wave 7

9.5 Battery-powered electric planes – unprompted concerns

When asked about their concerns relating to battery-powered electric planes in an open-ended question, a majority said that they either did not have any concerns (35%) or responded 'don't know' (25%). The verbatim responses were coded into core themes.

Concerns related to battery life and range, safety and the environment.

> *'Making batteries uses many essential raw materials which have to be mined or processed which is just as harmful to the planet as burning petrol. It may seem 'to be a cleaner way of producing energy, but it isn't.'*

Issues around battery life and running out of power were mentioned by 12% of people.

> *'Would the electric plane have enough battery power to travel the required distance? Last thing you want is to lose power at high altitude.'*

A further 7% said they were concerned about the reliability of the battery or potential for malfunctions and 6% questioned the range of batteries and distance that could be travelled.

> *'They are unnecessary, the technology is unproven, and they would probably be extremely unsafe.'*

9.6 Hydrogen-powered planes – awareness and knowledge

Levels of awareness of hydrogen-powered planes increased five percentage points from 38% to 43% between June 2021 (Wave 7) and June 2022 (Wave 9), as shown in **Figure 9.5**.

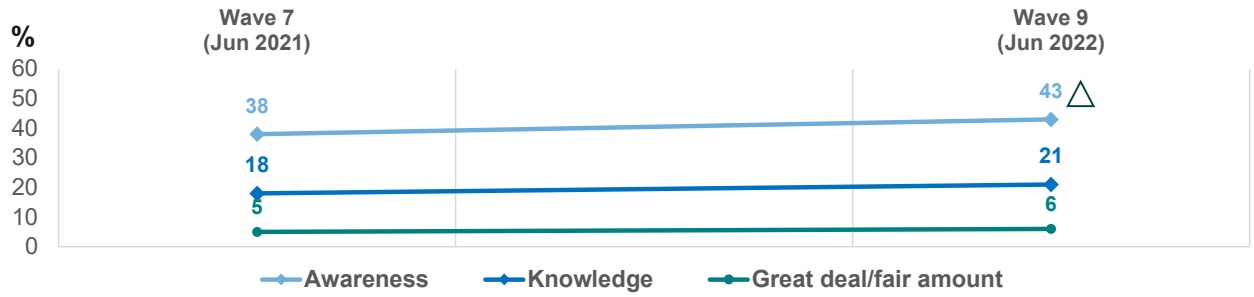
Self-reported knowledge of hydrogen-powered planes - people knowing a great deal, a fair amount or just a little - was 21% in June 2022 (Wave 9) which was similar to the level in June 2021 (18%). The

proportion who said they know a great deal or a fair amount (6%), was in line with that of June 2021 (Wave 7) (5%).

- Those aged 16-24 (16%) were more likely than all other age groups to have said that they know a great deal or fair amount about the technology - five times as likely as those aged 75 or over (3%).

- Higher proportions of people in the highest income households earning over £100,000 (29%) and between £52,000- £99,999 (27%) reported knowing at least a little about the technology compared to those in the lowest income households earning less than £25,999 (19%).

Figure 9.6 - Hydrogen-powered planes - awareness and knowledge



Knowledge answer codes (%): A great deal, A fair amount, Just a little
Awareness answer codes (%): A great deal, A fair amount, Just a little, Heard of, know nothing about them/it

Q148. Before today, how much, if anything, would you say you knew about hydrogen-powered planes?
Base: All 16+ in England (Jun 2021: 3392; Jun 2022: 3162)

△ Indicates a statistically significant increase compared to Wave 7
▽ Indicates a statistically significant decrease compared to Wave 7

9.7 Hydrogen-powered planes – unprompted concerns

When asked to give their concerns relating to hydrogen-powered planes in an open-ended question, a majority said that they either had no concerns (40%) or responded 'don't know' (34%). Verbatim responses to this question were coded into core themes.

Concerns related mainly to safety and accidents, as well as the unproven nature of the technology.

> *'We have no infrastructure to create enough hydrogen. We would need to treble our current renewable energy target to provide enough capacity. Handling and storing large amounts of extremely dangerous gas. Needs to be kept at -200 and 800atms. Basically, a very cold flying bomb. Just stop flying.'*

Flammability and the potential fire hazards associated with hydrogen as the source of power were mentioned by 8% of people.

> *'Isn't hydrogen highly volatile and liable to quickly burn or explode; wasn't that the fuel first used in the balloon airships like the Hindenburg with disastrous consequences?'*

A further 6% were concerned that this type of plane was dangerous and unsafe, and 3% had concerns about the unproven nature of the technology.

> *'It's new technology, so I would not use until the safety of these planes is proven.'*

10 Cost of living

Summary

- In June 2022, most people had taken action to reduce the amount they spent on fuel or motoring, particularly making fewer trips, reducing the speed they drive or driving more efficiently, although a third had taken no action (see **section 10.1**).
- Higher proportions of people said they were likely to reduce the amount they spent on fuel and motoring in the next six months than had already done this in the previous three months up to June 2022 (see **section 10.2**).
- Few people had taken actions related to vehicle ownership or purchasing to reduce the amount they spent on fuel or motoring, although one in ten said they were likely to do these things in the next six months (see **sections 10.1** and **10.2**).

10.1 Fuel and motoring – past behaviours

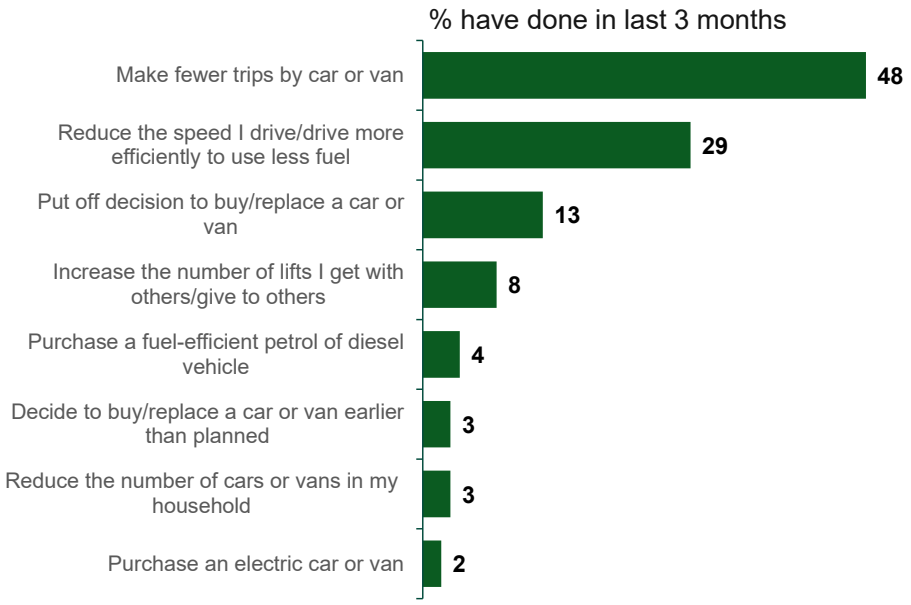
In June 2022 (Wave 9), a quarter of people said that they were finding it either 'difficult' or 'very difficult' on their present household income (24%). Seven in ten reported 'living comfortably' or 'coping' (72%). Older generations and higher income groups were more likely than others to report being 'comfortable'.

Almost half of people said that they had made fewer trips by car or van in the past three months to reduce the amount spent on fuel or motoring (48%), as shown in **Figure 10.1**. Three in ten said they had driven more efficiently to use less fuel or had reduced their driving speed (29%). Just over one in ten said that they had put off a decision to buy or replace a car (13%). A further 8% had increased the number of lifts they get with others or give to others.

- Those 'finding it very difficult' at present (21%) were twice as likely as those living comfortably (10%) to have put off a decision to buy or replace a car or van recently.

A third of people said they had taken none of these actions in the past three months to reduce the amount they spent on fuel or motoring (32%).

Figure 10.1 - Actions taken in the past 3 months



Q315. Below are some actions people may have taken to reduce the amount they spend on fuel or motoring. Which of these, if any, have you done in the last 3 months?
Base: All aged 16+ in England (Jun 2022: 3162)

10.2 Fuel and motoring – future behaviours

Higher proportions of people said they were very or fairly likely to reduce the amount they spend on fuel and motoring in the next six months than had already done this in the previous three months, as shown in **Figure 10.2**. For example, while 48% said they had made fewer trips by car or van in the past three months, 57% said they were very or fairly likely to do this in the next 6 months.

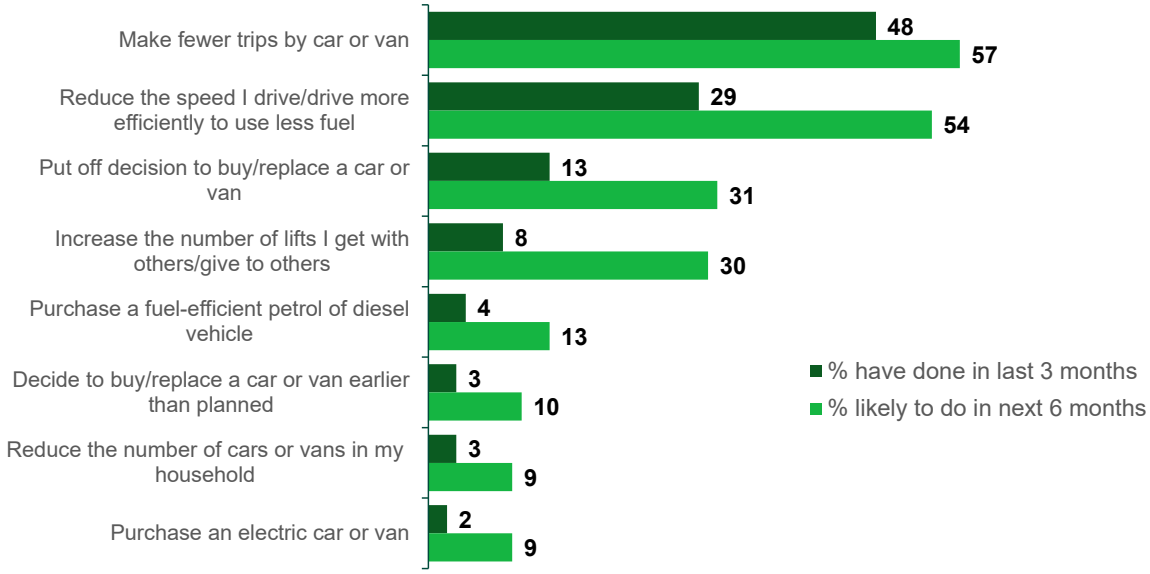
A majority of people in June 2022 (Wave 9) said they were very or fairly likely to reduce the speed they drive or to drive more efficiently to use less fuel in the next 6 months (54%). Three in ten said they were likely to put off a decision to buy or replace at car or van in the next six months (31%) and the same proportion said they were likely to increase the number of lifts they get with others or give to others (30%).

One in ten said they were likely to purchase an electric vehicle or van (9%) and reduce the number of cars in their household (also 9%). The same proportion said they were likely to buy or replace a car or van earlier than planned (10%) and a similar proportion (13%) said they were likely to purchase a fuel-efficient petrol or diesel car (13%).

- Those ‘finding it difficult’ on their present income were almost twice as likely to have said that they planned to put off buying or replacing a vehicle in the next 6 months (42%) than those who said they were ‘living comfortably’ (22%).

- Those with more cars in the household were more likely to have said they planned to increase the number of lifts they get with others or give to others. Just over a third of those in households with three or more cars (36%) and with two cars (35%) said this, twice the proportion in car-free households (16%).

Figure 10.2: Actions taken in the past 3 months/likely to be taken in the next 6 months



Q315. Below are some actions people may have taken to reduce the amount they spend on fuel or motoring. Which of these, if any, have you done in the last 3 months?
Q316. How likely or unlikely are you to do the following, if any, in the next 6 months in order to reduce the amount you spend on fuel or motoring?
Base: All aged 16+ in England (Jun 2022: 3162)

11 Appendix

11.1 Methodology

The Department for Transport (DfT) commissioned Ipsos to undertake a biannual survey to measure public awareness, attitudes and behaviours in relation to existing and emerging transport technologies, aiming to:

- fill gaps in knowledge about what the public know and think via a survey representative of those aged 16+ living in England; and
- identify and analyse differences between population subgroups.

DfT's Technology Tracker series involved a biannual face-to-face omnibus survey up from 2017 until Wave 5, conducted in December 2019. Due to the Coronavirus pandemic and the halt to face-to-face in-home interviewing, the survey moved to an online methodology for Wave 6, in August 2020, with a small number of respondents interviewed over the phone. All previous wave data can be found here: https://www.gov.uk/government/publications/transport-and-transport-technology-public-attitudes-tracker

On behalf of DfT, Ipsos used its UK KnowledgePanel for the Technology Tracker series for the first time for Wave 7, conducted in June 2021, and this entirely online methodology has been used since. Due to a change in methodology, it is not possible to provide direct comparisons with previous waves. This comparison is not possible because:

- The survey wording has changed from previous waves so will not allow for direct comparison.
- The methodology change from face-to-face to online may cause selection effects, i.e. the different individuals taking part in the survey as a result of the change in sampling approach.
- The change in interview mode may also cause measurement effects, i.e. the difference in response given by respondents will not be like-for-like considering the change in method.

Due to this methodological change, Wave 7, Wave 8 and Wave 9 also included a survey design phase, including cognitive testing of the questionnaire through telephone depth interviews - further details of which can be found in Section 8.3 of this appendix.

A representative sample of 3,162 people aged 16+ across England completed the survey between 30th June and 6th July 2022. Wave 9, like Wave 7 and Wave 8, involved random probability sampling, meaning that quotas were not used. Instead, Ipsos stratified KnowledgePanel sample to account for over-/under-representation of groups and geographies within the composition of the panel as well as different response rates, before inviting panel members to take part.

To allow comparisons between ethnic minority groups and white respondents, the Department for Transport requested that Ipsos boosted the number of respondents from ethnic minority backgrounds in Wave 7 (resulting in an additional sample of 432) but this was not done in Wave 8 or Wave 9.

A full list of Waves and sample sizes can be seen below:

Wave	Fieldwork dates	Sample size (total, including boost)	Ethnic minority boost
Wave 7	24th – 30th June 2021	3,392	432
Wave 8	9th – 15th December 2021	3,219	N/A
Wave 9	30th June – 6th July 2022	3,162	N/A

Each of these waves used a fresh sample of KnowledgePanel members.

Data are weighted by age, gender, region, Index of Multiple Deprivation quintile, education, ethnicity and number of people aged 16+ in the household in order to reflect the profile of the population of those aged 16+ in England.

This report focuses on the following demographic groups: age, ethnicity, urbanity, and household income based on the following categories: <£25,999, £26,000-£51,999, £52,000-£99,999, £100,000+.

Commentary focuses on significant differences *between* sub-groups in the same category (e.g. different age groups) based on a 95% confidence interval. Lack of reference to other groups and geographies does not mean there are not statistically significant differences – for example, men's claimed levels of awareness and knowledge tend to be higher than women's, and there are some differences between regions. Data tables of the full Wave 9 dataset are available on request and are published alongside this report.

The total sum of answer codes may appear to be higher/lower than 100% and combinations might not sum to their constituent parts (e.g. 'agree' relative to 'strongly agree'/'tend to agree'). This is due to the rounding of results to the nearest whole number.

11.2 KnowledgePanel methodology

Panellists are recruited via a random probability unclustered address-based sampling method. This means that every household in the UK has a known chance of being selected to join the panel. Letters are sent to selected addresses in the UK (using the Postcode Address File) inviting them to become members of the panel. Invited members are able to sign up to the panel by completing a short online questionnaire or by returning a paper form. Up to 2 members of the household are able to sign up to the panel. Members of the public who are digitally excluded are able to register to the KnowledgePanel either by post or by telephone, and are given a tablet, an email address, and basic internet access which allows them to complete surveys online.

The survey was designed using a 'mobile-first' approach, which took into consideration the look, feel and usability of a questionnaire on a mobile device. This included: a thorough review of the questionnaire length to ensure it would not over burden respondents from focusing on a small screen for a lengthy period, avoiding the use of grid style questions (instead using question loops which are more mobile friendly, and making questions 'finger-friendly' to they're easy to respond to. The questionnaire was also compatible with screen reader software to help those requiring further accessibility.

The KnowledgePanel is a random probability survey panel. Therefore, the KnowledgePanel does not use a quota approach when conducting surveys. Instead invited samples are stratified when conducting waves to account for profile skews within the panel.

Two members per household are allowed to register on the KnowledgePanel. Therefore, we employ a design weight to correct for unequal probabilities of selection of household members.

Calibration weights are also applied using the latest population statistics relevant to the surveyed population.

- Calibration weighting was applied using the following variables: Region and an interlocked variable of Gender by Age. Both use ONS 2020 mid-year population estimates as the weighting target.

- Demographic weights were then applied to correct for imbalances in the achieved sample; the data was weighted on: Education, Ethnicity, Index of Multiple Deprivation (quintiles), and number of people aged 16+ in the household. Estimates from the ONS 2020 mid-year population estimates and Annual Population Survey were used as the weighting target.

11.3 Cognitive testing

As part of the questionnaire development, cognitive testing of specific questions in the survey took place between 23rd - 27th May 2022. A total of 7 interviews were completed, following sampling criteria that took into account gender, age, social grade, educational attainment, urbanity and car ownership.

The objective of this exercise was to test understanding of both question wording – for example, terminology relating to “typical” behaviours or defining “local area” – and scales used, and to understand the thought processes of respondents when answering these questions. As a result of the cognitive testing, questions were developed in line with the findings to ensure respondents were able to understand and answer questions accurately.

11.4 Questionnaire

The first set of questions are asked on behalf of the Department for Transport. The questions are about the different types of transport that you may use and your plans for the future.

ASK AGED 17+ ONLY
SINGLE CODE
Q101
Do you hold a valid UK car driving licence?
This includes international permits or other foreign licences valid in the UK.
Please select one option only

1. Yes, full licence for car
2. Yes, provisional licence for car
3. Currently disqualified
4. No, I do not hold a valid UK driving licence

998. Don’t know

ASK ALL
SINGLE CODE
Q102
How many cars or vans does <u>your household</u> own or have continuous use of at present?
Please include company cars if available for your private use. Please also include any broken-down cars or vans which may be in use within the next month.
Please select one option only

1. 1
2. 2
3. 3 or more
4. None

998. Don't know

ASK ALL WITH CARS/VANS IN HOUSEHOLD OR HAVE USE OF THEM (CODES 1-3 AT Q102)
SINGLE CODE
Q103
Do you <u>personally</u> own or have continual use of a car or van?
Please include company cars if available for your private use. Please also include any broken-down cars or vans which may be in use within the next month.
Please select one option only

1. Yes
2. No

998. Don't know

ASK ALL WITH A VALID UK DRIVING LICENCE [CODES 1-3 AT Q101]
SINGLE CODE
Q104
When, if at all, do you think you will <u>personally</u> next buy, lease or replace a car or van, either new or second hand?
Please select one option only

1. Within the next year
2. In more than 1 year, but up to 2 years
3. In more than 2 years, but up to 3 years
4. In more than 3 years, but up to 5 years
5. In more than 5 years
6. I don't intend to ever buy or replace a car/van

998. Don't know

ASK ALL WHO INTEND TO BUY OR REPLACE A CAR/VAN- (CODES 1-5 AT Q104)
SINGLE CODE
Q105
And is the car or van that you intend to buy or lease in the future more likely to be new or second hand?
Please select one option only

1. More likely to be a new car/van
2. More likely to be a second-hand car/van

998. Don't know

ASK ALL WHO INTEND TO BUY OR REPLACE A CAR/VAN (CODES 1-5 AT Q104)
SINGLE CODE
Q106
What type of car or van do you think you will most likely purchase or lease next time?
If you would buy more than one type, please select which one you would use for your main vehicle.
Please select one option only
RANDOMISE CODES 1-4

1. Petrol car or van
2. Hybrid car or van (petrol and electric)
3. Diesel car or van
4. Electric/battery only car or van
5. Other **PLEASE SPECIFY [FIX]**

998. Don't know **[FIX]**

ASK ALL WHO WILL MOST LIKELY PURCHASE A HYBRID CAR/VAN (CODE 2 AT Q106)
SINGLE CODE
Q107
What type of hybrid car or van do you think you will most likely purchase or lease next time?
Please select one option only
RANDOMISE CODES 1-2

1. A plug-in hybrid (that plugs in to an external power source to recharge)
2. A non-plug-in hybrid (that recharges while driving and is ultimately fuelled by petrol or diesel – it cannot be plugged in to an external power source)
3. Undecided **[FIX]**

998. Don't know **[FIX]**

ASK ALL
SINGLE CODE
Q108
Unlike hybrid cars or vans, battery electric vehicles run fully off electricity. These fully electric cars or vans plug in to an external power source to recharge.
Before today, how much, if anything, would you say you knew about electric cars or vans?
Please select one option only

1. A great deal
2. A fair amount
3. Just a little
4. Heard of, know nothing about them
5. Never heard of them

998. Don't know

ASK ALL
SINGLE CODE
Q110
Would you personally say there are any advantages of fully electric over petrol or diesel cars or vans, or not?
Please select one option only

1. Yes, I can think of some advantages / at least one advantage
2. No, I cannot think of any advantages
3. I don't believe there are any advantages

998. Don't know / need further information

ASK ALL
ALLOW MULTICODE 1-8
Q111
Which of the following, if any, do you think are advantages of fully electric over petrol or diesel cars or vans?
Please select all that apply
RANDOMISE CODES 1-7

1. Environmental benefits (e.g. reduced pollution)
2. Cheaper to run or maintain
3. Less noisy
4. Reduced road tax
5. Better vehicle performance (e.g. speed, handling, size, looks)
6. No need to visit petrol stations to top-up fuel
7. Recharging is easier / more convenient than re-fuelling
8. Other **(SPECIFY) FIX**
9. None of these – I don't believe there are any advantages **FIX, EXCLUSIVE**
998. Don't know **FIX, EXCLUSIVE**

ASK ALL
SINGLE CODE
Q112
Would you personally say there are any disadvantages of electric over petrol or diesel cars or vans, or not?
Please select one option only

1. Yes, I can think of some disadvantages / at least one disadvantage
2. No, I cannot think of any disadvantages
3. I don't believe there are any disadvantages
998. Don't know / need further information

ASK ALL
ALLOW MULTICODE 1-9
Q113
Which of the following, if any, do you think are disadvantages of electric over petrol or diesel cars or vans?
Please select all that apply
RANDOMISE CODES 1-8

1. Less distance can be travelled on one charge
2. Not enough charging points
3. Expensive to run or maintain
4. Knowing where and how to charge
5. The time taken to recharge
6. Cost to buy
7. The need to recharge
8. Negative impacts on the environment
9. Other **(SPECIFY) FIX**
10. None of these – I don't believe there are any disadvantages **FIX, EXCLUSIVE**
998. Don't know **FIX, EXCLUSIVE**

ASK ALL
SINGLE CODE
Q114
The Government plan to end the sale of <u>new</u> petrol and diesel cars and vans by 2030. Some <u>new</u> hybrid cars and vans (which run on petrol and electric) will be available to buy until 2035. Petrol and diesel cars and vans can continue to be sold on the second-hand market.
Before today, how much, if anything, would you say you knew about the plan to end the sale of new petrol, diesel and hybrid cars and vans?
Please select one option only

1. A great deal
2. A fair amount
3. Just a little
4. Heard of, know nothing about the proposal
5. Never heard of the proposal
998. Don't know

ASK ALL
SINGLE CODE
Q117
Now a few questions about self-driving cars or vans, sometimes referred to as automated or autonomous cars or vans.
Self-driving vehicles are not yet available for everyday use in the UK – but we expect them to be available for use on roads later this year.
Before today, how much, if anything, would you say you knew about self-driving cars or vans?
Please select one option only

1. A great deal
2. A fair amount
3. Just a little
4. Heard of, know nothing about them
5. Never heard of them
998. Don't know

ASK ALL
OPEN QUESTION
W9 SDV Q301
Imagine that self-driving vehicles were available on UK roads – how would you expect to use your time whilst travelling in a self-driving vehicle?
Please write your answer in below

OPEN TEXT BOX

998. Don't know **[EXCLUSIVE]**

ASK ALL
ALLOW MULTICODES 1-8
Q119
Which of the following, if any, do you think are advantages of self-driving vehicles?
Please select all that apply
RANDOMISE CODES 1-7

1. They are safer due to less chance of driver error
2. Allow you to do other things while driving
3. They result in less driver fatigue
4. They enable better traffic flow and less congestion
5. Could allow anyone to drive
6. Less stressful due to not worrying about driving
7. Controls / regulates speed
8. Other **(SPECIFY) FIX**
9. None of these – I don't believe there are any advantages **FIX, EXCLUSIVE**
998. Don't know **FIX, EXCLUSIVE**

ASK ALL
ALLOW MULTICODES 1-7
Q121
Which of the following, if any, do you think are disadvantages of self-driving vehicles?
Please select all that apply
RANDOMISE CODES 1-7

1. Personal safety concerns (e.g. road traffic accidents)
2. Road safety concerns (e.g. vehicles' ability to safely complete a manoeuvre)
3. Loss of driver control
4. Drivers will become lazy and pay less attention
5. Over-reliance on technology
6. The technology is still unproven
7. Expensive to buy and maintain
8. Other **(SPECIFY) FIX**
9. None of these – I don't believe there are any disadvantages **FIX, EXCLUSIVE**
998. Don't know **FIX, EXCLUSIVE**

ASK ALL
W9 SDV Q302
Self-driving vehicles are vehicles that are capable of safely and legally driving themselves in some circumstances and situations.

For the foreseeable future, they will have self-driving features, which means the vehicle will switch between the *vehicle being in control* (self-driving mode 'on') and the *driver being in control* (self-driving mode 'off').

Here are some statements about self-driving vehicles. For each one, please select whether you think it is true or false or whether you don't know.

When using a self-driving vehicle as a driver and the self-driving mode is 'on'
LOOP, SINGLE CODE PER ROW, RANDOMISE ROWS

A. I am **not responsible** for how the vehicle drives
B. **I am allowed** to use built-in screens to watch TV (i.e. the infotainment system)
C. I **do not have to be fit to drive** (e.g. I can sleep and drink alcohol)
D. **I am allowed** to use a mobile phone

1. True
2. False
998. Don't know

ASK ALL
SINGLE CODE
Q122
An electric or motorized scooter is a scooter with a small engine or electric motor. An electric scooter is commonly referred to as an e-scooter. E-scooters can be purchased for private use or hired in a number of locations across the country.
Before today, how much, if anything, would you say you knew about electric scooters?

Please select one option only

1. A great deal
2. A fair amount
3. Just a little
4. Heard of, know nothing about them
5. Never heard of them

998. Don't know

ASK ALL
SINGLE CODE
Q123
Do you <u>personally</u> own an electric scooter?
Please select one option only

1. Yes
2. No

998. Don't know

ASK ALL
SINGLE CODE
Q124
How often, if at all, do you personally use a <u>privately owned</u> electric scooter in the UK?
Please select one option only

1. At least once a day
2. 5 or 6 times a week
3. 3 or 4 times a week
4. Once or twice a week
5. Less than that but more than twice a month
6. Once or twice a month
7. Less than that but more than twice a year
8. Once or twice a year
9. Less than once a year
10. Never

ASK ALL
SINGLE CODE
Q125
How often, if at all, do you personally use a rental electric scooter in the UK?
Please select one option only

1. At least once a day
2. 5 or 6 times a week
3. 3 or 4 times a week
4. Once or twice a week
5. Less than that but more than twice a month
6. Once or twice a month
7. Less than that but more than twice a year
8. Once or twice a year
9. Less than once a year
10. Never

ASK ALL
ALLOW MULTICODES 1-14
Q127
Which of the following, if any, do you think are advantages of electric scooters?
Please select all that apply
RANDOMISE CODES 1-13

1. Environmental benefits (e.g. reduced pollution)
2. Quicker to get around than walking
3. Easy to use
4. Cheaper than other travel options
5. Able to easily store and carry (e.g. onto other forms of transport, into work)
6. Good alternative to cars
7. Convenient for short journeys
8. Increased use leads to less traffic/cars on the road
9. Fun to ride
10. Easy to park (if using rental e-scooter)
11. Good for people who can't travel (far) by foot/bike
12. The cost to buy or rent
13. A way of keeping active/healthy
14. Other **(SPECIFY) FIX**
15. None of these – I don't believe there are any advantages **FIX, EXCLUSIVE**
998. Don't know **FIX, EXCLUSIVE**

ASK ALL
ALLOW MULTICODES 1-10
Q129
Which of the following, if any, do you think are disadvantages of electric scooters?
Please select all that apply
RANDOMISE CODES 1-9

1. Poses safety risk on busy roads
2. Poses safety risk to pedestrians (e.g. on the road, pavements)
3. Users do not follow law
4. Poses safety risk to the rider
5. Relies on recharging a battery
6. Fewer health benefits than cycling or walking
7. Weather dependent
8. Lack of regulation (e.g. no licence/insurance/helmet required)
9. Cost to buy
10. Other **SPECIFY, FIX**
11. None of these – I don't believe there are any disadvantages **FIX, EXCLUSIVE**

998. Don't know **FIX, EXCLUSIVE**

ASK ALL
SINGLE CODE
Q137
An electric cycle or e-cycle, commonly referred to as an e-bike, is one that is powered by electricity as well as propelled by pedals.
Before today, how much, if anything, would you say you knew about e-cycles?

Please select one option only

1. A great deal
2. A fair amount
3. Just a little
4. Heard of, know nothing about them
5. Never heard of them

998. Don't know

ASK ALL
SINGLE CODE
Q138
How often, if at all, do you personally use an e-cycle?
Please select one option only

1. At least once a day
2. 5 or 6 times a week
3. 3 or 4 times a week
4. Once or twice a week
5. Less than that but more than twice a month
6. Once or twice a month
7. Less than that but more than twice a year
8. Once or twice a year
9. Less than once a year
10. Never

ASK ALL
ALLOW MULTICODES 1-7
Q140
Which of the following, if any, do you think are advantages of e-cycles?
Please select all that apply
RANDOMISE CODES 1-6

1. Environmental benefits (e.g. reduced pollution)
2. A way of keeping active/healthy
3. Less effort required than a normal bike
4. Can travel further distances than a normal bike
5. Can travel faster than a normal bike
6. More accessible for those with mobility issues
7. Other **SPECIFY, FIX**
8. None of these – I don't believe there are any advantages **FIX, EXCLUSIVE**

998. Don't know **FIX, EXCLUSIVE**

ASK ALL
ALLOW MULTICODES 1-8
Q142
Which of the following, if any, do you think are disadvantages of e-cycles?
Please select all that apply
RANDOMISE CODES 1-7

1. They are expensive to buy
2. Too heavy
3. Likely to be stolen
4. Travels too fast
5. Hard to store
6. Do not offer health benefits
7. Relies on recharging a battery
8. Other **SPECIFY, FIX**
9. None of these – I don't believe there are any disadvantages **FIX, EXCLUSIVE**

998. Don't know **FIX, EXCLUSIVE**

ASK ALL
SINGLE CODE
Q130
A drone is an unmanned aerial vehicle guided by remote control or on-board computers.

Before today, how much, if anything, would you say you knew about drones?
Please select one option only

1. A great deal
2. A fair amount
3. Just a little
4. Heard of, know nothing about them
5. Never heard of them

998. Don't know

ASK ALL
ALLOW MULTICODES 1-2
Q131
Have you ever personally used a drone?
Please select all that apply

1. Yes, used one personally
2. Yes, used one for commercial or work-related reasons
3. No **EXCLUSIVE**

998. Don't know **EXCLUSIVE**

ASK ALL WHO HAVE HEARD OF DRONES BEFORE TODAY – CODES 1-4 at Q130
ALLOW MULTICODES 1-8
Q132
Here are a number of examples of things that drones have been used for.
Which of these uses of drones have you personally heard of before today? Please select all that apply.
Please select all that apply
RANDOMISE CODES 1-8

1. Leisure use (e.g. flying drones for fun, to take pictures & video)
2. Armed forces/military use (e.g. surveillance, airstrikes)
3. Police use (e.g. monitoring borders, surveillance)
4. Professional photography, filming and journalism
5. Emergency response (e.g. search and rescue)
6. Retail use (package delivery)
7. Retail use (stock checking)
7. Infrastructure management (e.g. building/bridge inspection, monitoring crops or livestock)
8. Distributing medical supplies (e.g. medicines, blood supplies)
9. None of the above **[EXCLUSIVE]**

ASK ALL
SINGLE CODE
Q133
To what extent do you support or oppose drones being used in the following situations?
Please select one option only
RANDOMISE CODES A – I

a) Leisure use (e.g. flying drones for fun or to take pictures & video)
b) Armed forces/military use (surveillance, air strikes)
d) Police use (e.g. monitoring borders, surveillance)
e) Professional photography, filming and journalism
f) Emergency response (e.g. search and rescue)
g) Retail use (package delivery)
H) Retail use (stock checking)
h) Infrastructure management (e.g. building/bridge inspection, monitoring crops or livestock)
i) Distributing medical supplies (e.g. medicines, blood supplies)

REVERSE SCALE 1-5

1. Strongly support
2. Tend to support
3. Neither support nor oppose
4. Tend to oppose
5. Strongly oppose
998. Don't know **[FIX]**

ASK ALL
SINGLE CODE
Q134
Would you say you personally have any concerns about the use of drones, or not?
Please select one option only

1. Yes, I have some concerns / at least one concern
2. No, I do not have any concerns
998. Don't know / need further information

ASK ALL
ALLOW MULTICODES 1-10
Q135
Which of the following concerns, if any, do you have about the use of drones?
Please select all that apply
RANDOMISE CODES 1 - 9

Concerns about privacy and intrusion
Concerns about collisions, crashes or accidents
The potential misuse of drones (e.g. hacking, terrorism, used by criminals)
Difficulty of tracing drone owners/operators and who can buy them
Noise pollution
Visual pollution
Impact on jobs (e.g. if drones take over human job roles)
The use of drones in the military if used as a weapon
Cost of buying and maintaining drones
Other (please specify) **[FIX]**
None of these **[EXCLUSIVE, FIX]**
I don't know enough about drones to have an opinion **[EXCLUSIVE, FIX]**
998. Don't know **[EXCLUSIVE, FIX]**

ASK ALL
SINGLE CODE
W9 FLY Q304

Flying taxis are aircraft that can fly passengers on short journeys, for example, within or between cities, towns and villages in the UK. The following questions are about piloted flying taxis.
Before today, how much, if anything, would you say you know about flying taxis?
Please select one option only

1. A great deal
2. A fair amount
3. Just a little
4. Heard of, know nothing about them
5. Never heard of them

998. Don't know

ASK ALL
SINGLE CODE
W9 FLY Q305
Would you personally say there are any advantages of flying taxis, or not?
Please select one option only

1. Yes, I can think of some advantages / at least one advantage
2. No, I cannot think of any advantages
3. I don't believe there are any advantages

998. Don't know / need further information

ASK ALL
ALLOW MULTICODES 1-14
W9 FLY Q306
Which of the following, if any, do you think are advantages of flying taxis?
Please select all that apply
RANDOMISE CODES 1-13

1. Environmental benefits (e.g. reduced pollution)
2. Fun to ride
3. Increased use leads to less traffic/cars on the road
4. More convenient/quicker than other modes of transport
5. Improved connectivity (e.g. between cities or rural areas)
6. Reaching key transport hubs (e.g. train stations, airports)
7. Other (please specify) **[FIX]**
8. None of these – I don't believe there are any advantages **FIX, EXCLUSIVE**

998. Don't know **FIX, EXCLUSIVE**

ASK ALL
SINGLE CODE
W9 FLY Q307
Would you personally say there are any disadvantages of flying taxis, or not?
Please select one option only

1. Yes, I can think of some disadvantages / at least one disadvantage
2. No, I cannot think of any disadvantages
3. I don't believe there are any disadvantages
998. Don't know / need further information

ASK ALL
ALLOW MULTICODES 1-8
W9 FLY Q308
Which of the following, if any, do you think are disadvantages of flying taxis?
Please select all that apply
RANDOMISE CODES 1 – 8

1. Concerns about privacy and intrusion (e.g. flying over private property at low altitude)
2. Collisions, crashes or accidents
3. Vulnerability to hacking or terrorism
4. Technology is still unproven
5. Noise pollution
6. Visual pollution
7. Not affordable to users/potential users and passengers
8. May require us to produce more electricity
9. Other (please specify) **[FIX]**
10. None of these – I don't believe there are any disadvantages **[EXCLUSIVE, FIX]**

998. Don't know **[EXCLUSIVE, FIX]**

ASK ALL
SINGLE CODE
W9 FLY Q309
If flying taxis were proven and available for use, how likely or unlikely would you be to use one?
REVERSE SCALE FOR HALF OF RESPONDENTS
Please select one option only

1. Very likely
2. Fairly likely
3. Neither likely or unlikely
4. Fairly unlikely
5. Very unlikely

998. Don't know

ASK ALL
SINGLE CODE
Q146
Battery-powered electric planes use electricity rather than fuel for power.
Before today, how much, if anything, would you say you knew about battery-powered electric planes
Please select one option only

1. A great deal
2. A fair amount
3. Just a little
4. Heard of, know nothing about them
5. Never heard of them

998. Don't know

ASK ALL
OPEN ENDED QUESTION
Q146
What concerns, if any, do you have about battery-powered electric planes?
Please write your answer in below

OPEN TEXT BOX

998. Don't know **[EXCLUSIVE]**

1. I do not have any concerns **[EXCLUSIVE]**

ASK ALL
SINGLE CODE
Q148
Hydrogen planes are powered by hydrogen fuel. They are powered either by converting hydrogen into electricity or by directly burning hydrogen fuel.
Before today, how much, if anything, would you say you knew about hydrogen-powered planes?
Please select one option only

1. A great deal
2. A fair amount
3. Just a little
4. Heard of, know nothing about it
5. Never heard of it
998. Don't know

ASK ALL
OPEN ENDED QUESTION
Q149
What concerns, if any, do you have about hydrogen-powered planes?
Please write your answer in below

OPEN TEXT BOX

998. Don't know **[EXCLUSIVE]**
1. I do not have any concerns **[EXCLUSIVE]**

ASK ALL
SINGLE CODE
W9 SAF Q310
Sustainable aviation fuels are greener alternatives to aviation fuels currently in use, produced from sources such as household and industrial waste.
Before today, how much, if anything, would you say you knew about sustainable aviation fuels?
Please select one option only

1. A great deal
2. A fair amount
3. Just a little
4. Heard of, know nothing about it
5. Never heard of it
998. Don't know

ASK ALL
SINGLE CODE
W9 SAF Q311
Sustainable aviation fuels are greener alternatives to aviation fuels currently in use, however, they are currently more expensive.
In principle, to what extent would you support or oppose airlines charging higher fares for journeys using sustainable aviation fuel?

1. Strongly support
2. Tend to support
3. Neither support or oppose
4. Tend to oppose
5. Strongly oppose

998. Don't know

SAMPLE SPLITTING INTO 3 CELLS, RANDOM ALLOCATION WITH EACH RESPONDENT VIEWING ONE OPTION A/B/C
SINGLE CODE
W9 SAF Q312
Imagine you're about to book a short haul flight, that is a flight of three hours or less and the fare was £100.
How likely or unlikely do you think you would personally be to pay extra for a flight that was made using greener alternatives (such as sustainable aviation fuel or a hydrogen-powered plane) if you were charged:

A. An extra £5
B. An extra £10
C. An extra £20

Please select one option only

1. Very likely
2. Fairly likely
3. Neither likely or unlikely
4. Fairly unlikely
5. Very unlikely

998. Don't know

ASK ALL
SINGLE CODE
W9 SAF Q313
How many trips, if any, do you expect to make by plane in the next 12 months? Please count the outward and return flight, and any transfers as one trip.

1. One
2. Between 2 – 4
3. Between 5 – 10
4. More than 10
5. Won't do this

998. Don't know

ASK ALL
SINGLE CODE
W9 COL Q314
From this list, which of these phrases comes closest to describing your feeling about your household income these days?

1. Living comfortably on present income
2. Coping on present income
3. Finding it difficult on present income
4. Finding it very difficult on present income

998. Don't know **[FIX]**

ASK ALL
MULTI CODE
W9 COL Q315
Below are some actions people may have taken to reduce the amount they spend on fuel or motoring. Which of these, if any, have you done in the last 3 months?
Please select all that apply
RANDOMISE ORDER 1 - 8

1. Put off decision to buy/replace a car or van
2. Made a decision to buy/replace a car or van earlier than planned
3. Purchased an electric car or van
4. Purchased a fuel-efficient petrol or diesel vehicle
5. Reduced the number of cars or vans in my household
6. Reduced the speed I drive/driven more efficiently to use less fuel
7. Made fewer trips by car or van
8. Increased the number of lifts I get with others/give to others
9. None of these **[FIX, EXCLUSIVE]**
10. Don't know **[FIX, EXCLUSIVE]**

ASK ALL
SINGLE CODE
W9 COL Q316
How likely or unlikely are you to do the following, if any, in the next 6 months in order to reduce the amount you spend on fuel or motoring?
Please select all that apply
RANDOMISE ORDER 1 - 8

1. Put off decision to buy/replace a car or van
2. Decide to buy/replace a car or van earlier than planned
3. Purchase an electric car or van
4. Purchase a fuel-efficient petrol or diesel vehicle
5. Reduce the number of cars or vans in my household
6. Reduce the speed I drive/drive more efficiently to use less fuel
7. Make fewer trips by car or van
8. Increase the number of lifts I get with others/give to others

a) Very likely
b) Fairly likely
c) Fairly unlikely
d) Very unlikely
e) Don't know
f) Not applicable

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Ipsos' standards and accreditations provide our clients with the peace of mind that they can always depend on us to deliver reliable, sustainable findings. Our focus on quality and continuous improvement means we have embedded a "right first time" approach throughout our organisation.

ISO 20252

This is the international market research specific standard that supersedes BS 7911/MRQSA and incorporates IQCS (Interviewer Quality Control Scheme). It covers the five stages of a Market Research project. Ipsos was the first company in the world to gain this accreditation.

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ISO 9001

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ISO 27001

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