A DATA STUDY BY 7TH SENSE RESEARCH

Driving the Future 02

v2.0 2020 Report

#02 Attitudes to Automation

7th Sense Research UK Ltd
+44(0)7769 935816
info@7thsr.co.uk
www.7thsr.co.uk

WLG02, Vox Studios,
1-45 Durham Street,
Vauxhall, London, SE11 5JH

loop
+44(0)1869 228766
info@loopagency.co.uk
www.loopagency.co.uk

Building 123, Bicester Heritage,
Buckingham Road, Bicester,
Oxon, OX27 8AL

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#02 Attitudes to Automation Introduction

Following on from #01 Transport Use, this next report in the 7th Sense/**loop** trilogy focuses on public attitudes to automation, and the consequences for the industry.

Driving the Future 02

While it is widely accepted that autonomous vehicles can sometimes seem challenging or even scary to a wide section of society, the scale of the issue and what needs to be achieved to bring about widespread acceptance – and therefore demand (and revenue) – is less well understood.

Last year we researched Driving the Future by surveying 3,000 UK transport users with our survey panel partners Made-in Surveys. For this follow-up we again partnered with Made-in and surveyed another 3,000 UK transport users to ask: what's happening now, how have things changed and what they think they'll be doing in the future? This is principally a study about Connected Autonomous Vehicles/Mobility (CAV/CAM). It was conducted by sending out surveys to a representative sample of UK households, and respondents completed the survey in return for a small incentive. The fieldwork for this second survey was completed in June 2020, and for the first survey in May 2019. We captured transport use, spend, attitudes to CAV, demographics and for survey two, there were various additional questions about how COVID-19 had altered travel patterns.

Our first report suggested there will be a major change in the UK's transport habits and that post-COVID mobility will see significant changes in use and demand. The question for the autonomy industry is: does that translate into a better case for CAV/CAM? Our study suggests it could, but right now most people still don't see the case as having been properly made and that as a result of COVID we see increased resistance. However, we also see some positives and offer a call to action...

There is one final instalment of the trilogy to come and all three will be published in the coming weeks so please visit: https://info.loopagency.co.uk/automotive-industry-report-2020

Fergus McVey
CEO, 7th Sense Research UK

7th Sense Research UK is a Consumer and Markets Insights agency based in London UK, which has quickly built a formidable reputation for helping clients understand market landscapes and consumer behaviours - especially where the situation is niche, complex or ground-breaking.

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loop is a specialist agency designed from the ground up to meet the evolving PR needs of the automotive industry. Its talented and award-winning team works with every size of business, from start-ups through to market leaders.

There are various descriptions of what age brackets fit which 'Generation' for this survey, so we have followed the Pew Research Centre's description:

- Gen-Z. Born between 1997 and 2012, those aged eight to 23
- Millennial: Born 1981-1996, ages 24-39
- Generation X: Born 1965-1980, ages 40-55
- Baby Boomers: 1946-1964, 56-74 years old
- Silent Generation: 1928-1945 75+

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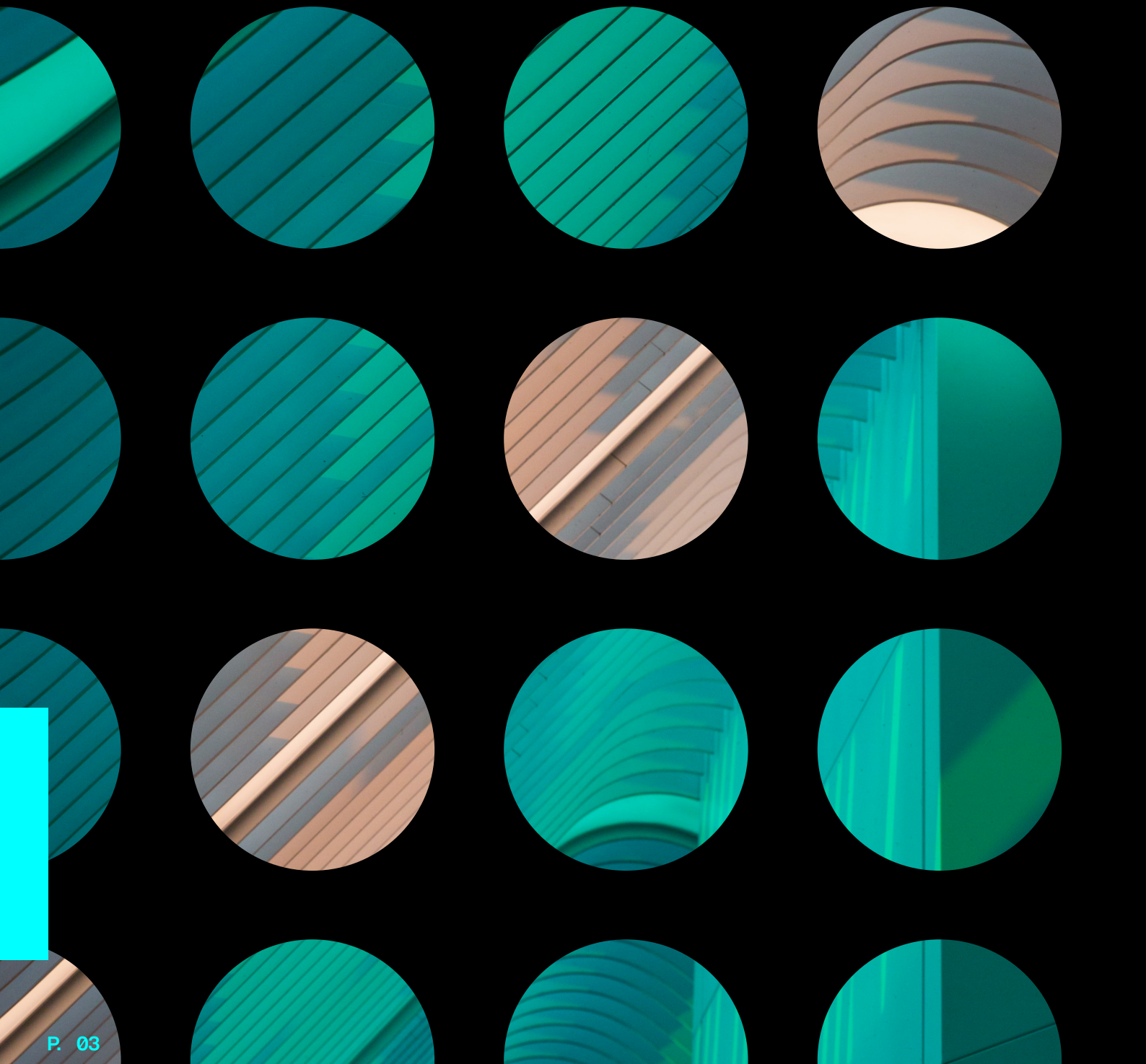


A

The road to autonomy

Ever since Johnny Cab picked up Arnie on Mars in the Arnold Schwarzenegger film Total Recall, the vision for autonomous vehicles has been roughly the same: a series of auto-piloted car-like machines delivering their riders from home to a work or leisure destination. The core idea has been to replace a boring, stressful, error-prone human experience with a new fast automatic service where workers can relax between high-powered business meetings and their tranquil, suburban, leisure-filled lives.

The reduction in congestion, accidents and pollution that automation promises is attractive, as is the removal of the hassle of car ownership and the acres of idle machines parked in driveways. Only the dyed-in-the-wool petrolhead might argue against those benefits, but is the car-buying public willing to give up the freedom, convenience and status that car ownership provides? Is the replacement of highly personal transportation with highly impersonal transportation really what people born after the launch of the first iPhone in 2007 demand from those planning this? There are still many questions to answer.

We followed up the 2019 survey of UK 3,000 transport users – car owners, bus riders, train passengers, cyclists *et al* – with a further national poll of 3,000 people to investigate how times have changed and whether the COVID-19 crisis has impacted people's needs, expectation and acceptance of autonomy.

Are the young desperate to jump into sleeker, blander versions of boomer age products? Do they think a 'self-driving car' is really the best use of autonomous tech? Is the transition from urban connectedness in the form we have today to seamless intercity transportation pods and car-free cities just a matter of waiting for the luddites to shuffle off while we develop the tech?

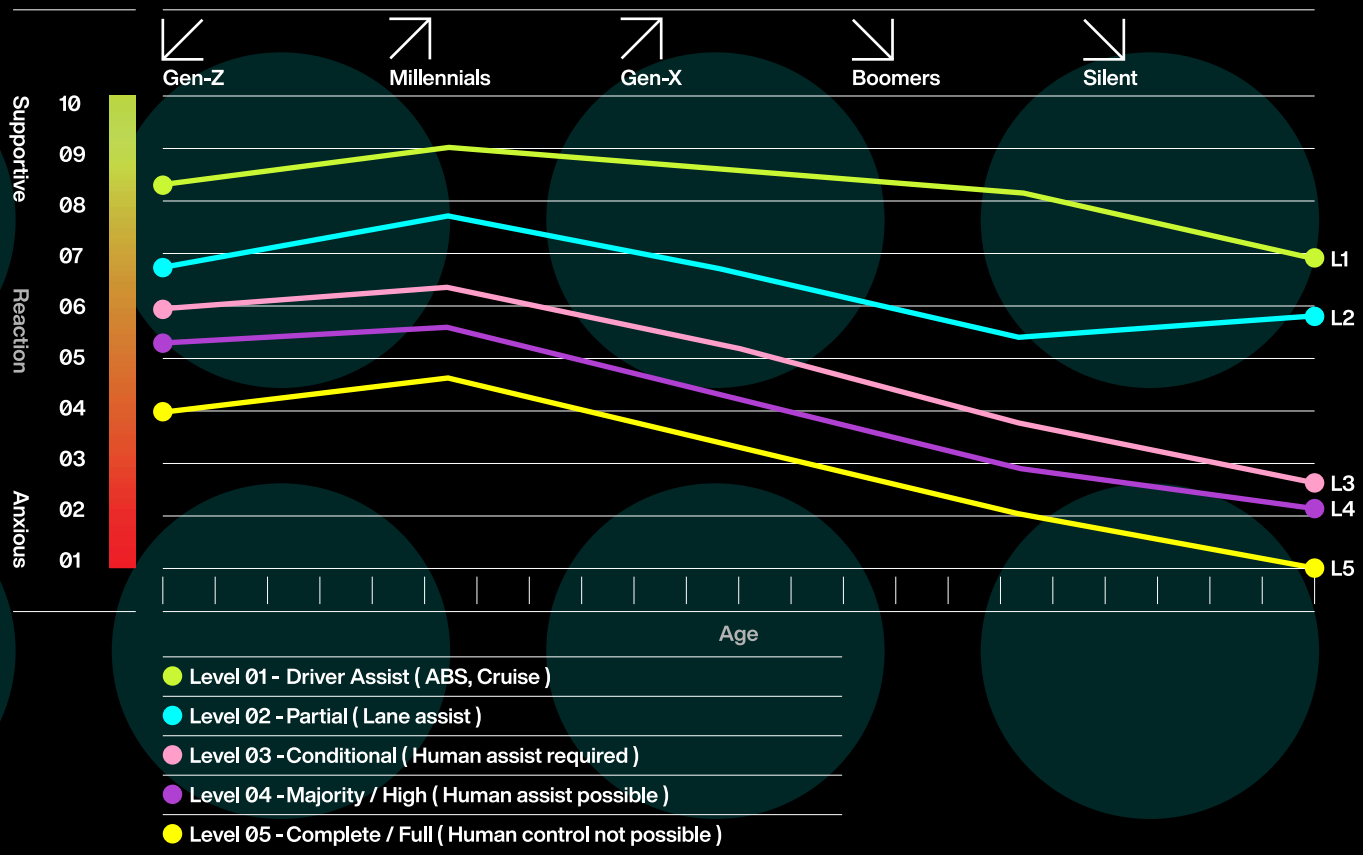
As you might impart from the tone of the rhetoric, the answer is no... or at least, not yes.

B

Automatic acceptance acceleration

Many observers assume, with good reason, that resistance to Connected Autonomous Vehicles/Mobility/Transportation is more prevalent in older people than 'digital natives'. The thinking being that those born living with tech, rather than seeing it invented, are far more likely to embrace autonomy and shared ownership as liberating and inevitable. While our study broadly supports this, we do not see a straight line of accelerating acceptance from old to young.

Acceptance of Autonomy 2020



Q "How comfortable are you with vehicles operating at each of these levels right now?"

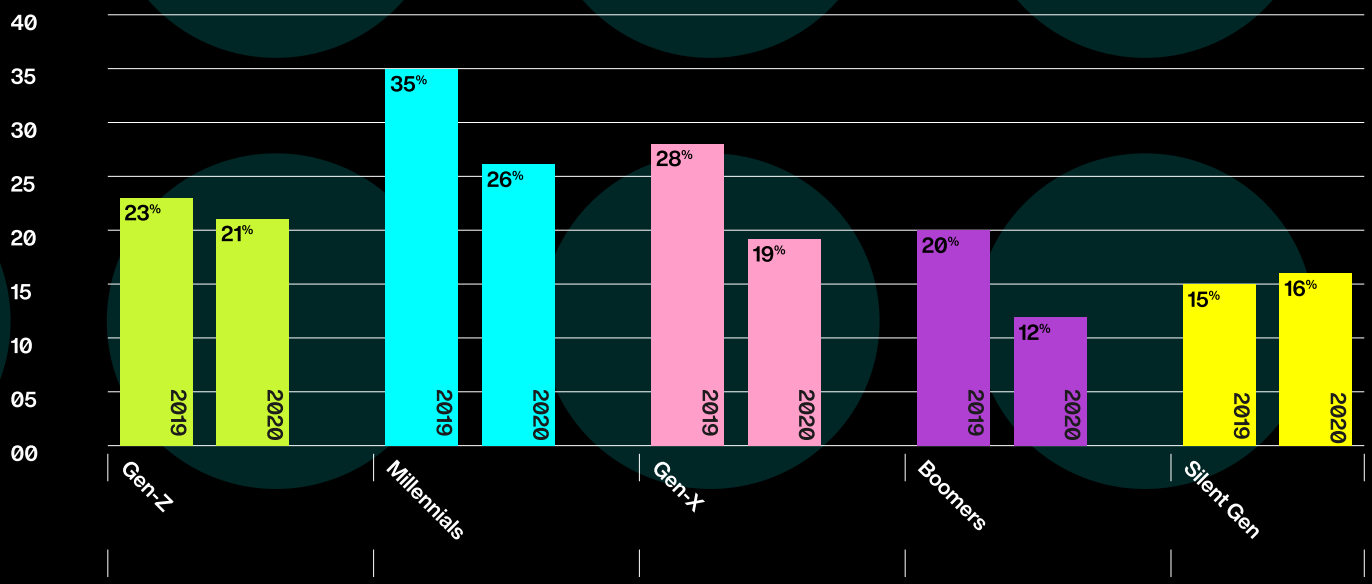
Gen-Z are not going to simply embrace, or even accept tech, just because it is tech. They appear more sceptical perhaps because of, not despite, their greater tech knowledge. Increasingly we see Gen-Z asking not to be taken for granted by big business. Their trust in technology and large corporations should not be assumed, but earned.

The appeal of Level 5 Autonomy (fully self-driving transportation) is at a point that, if we were undertaking traditional product research, we would advise a client to consider dropping the concept and perhaps seek specific areas that they found favourable. Evidence shows that full autonomy is unpopular among all ages, and therefore the business case for it struggles. However, it must be stressed that we presented the technology, not its benefits, deliberately, since this is the issue with autonomy as it stands. It has been developed on the 'because we can' basis, and we are attempting to reach what we believe may be within our grasp. If nobody wants it however, who will pay for it, and where will the fantastic valuations of tech be to certain OEMs if there is no customer base for it?

It is to be noted that this year's results are consistent with last year. We saw a similar dip in support from to Gen-Z compared to Millennials. This is not then an anomaly but significant and consistent and does not support the Automatic Acceleration of Acceptance that many assume from the younger generation. Across two surveys that's a clear and significant trend. With 6,000 people surveyed it's a finding the industry must address if it is to avoid missing its brave targets. Please ask for further analyses.

Autonomous vehicles as a good idea/interesting

When we gave people an open forum to discuss "What do you think about cars being able to drive themselves in the near future?", and analysed the sentiment within their responses, we again saw the deficit for Gen-Z compared to Millennials – consistent with 2019. We also saw quite a large dip compared to last year's study for Millennials and Gen-X and Boomers, compared to 2019, A worrying trend from those most likely to be travelling the most.



Q "What do you think about cars being able to drive themselves in the near future?"

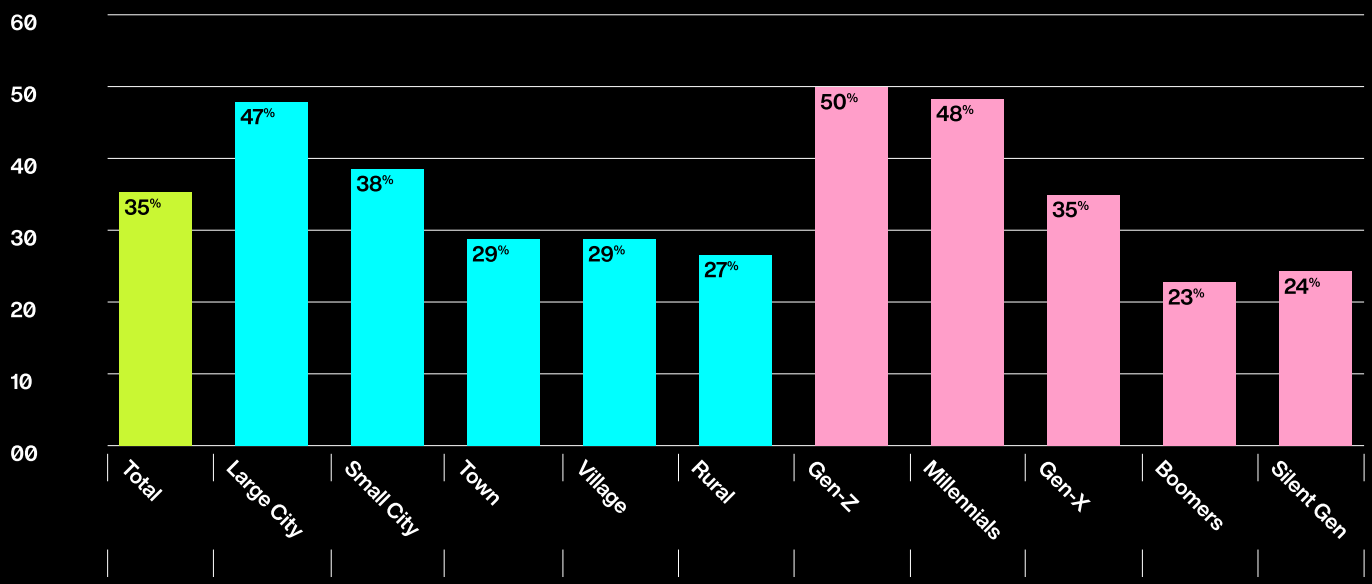
It is possible to speculate on the reasons behind this with quite logical and anecdotally supported reasoning. Mostly, people think we should be doing other more important stuff right now than making self-driving cars but, interestingly, it is the Silent Generation and Gen-Z who have barely changed their attitude. Despite clear evidence from the previous 2019 survey that, given the opportunity to say *anything*, fewer than 1 in 4 have anything positive to say about "cars driving themselves".

When asked directly, "Has the COVID-19 situation made driverless concepts more appealing to you, *because there is less need for direct human interaction?*" on average 35% say it has. Further, as we look at those who are more exposed to crowded situations – city dwellers and those who tend to have less access to personal transport such as younger age groups – we see even higher levels of positivity to this question.

Please get in touch for more details.

D

Has COVID-19 made driverless concepts more appealing?



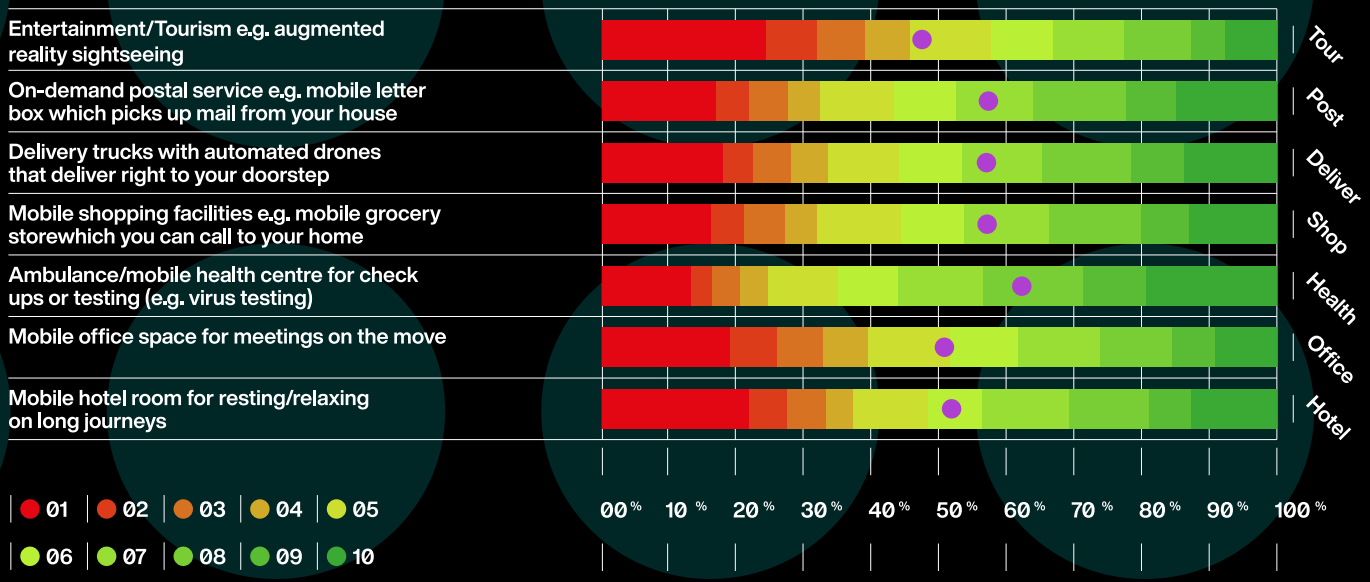
Q "Has the COVID-19 situation made driverless concepts more appealing to you, because there is less need for direct human interaction?"

This slightly more positive reaction to autonomy is found after respondents are shown various potential autonomous concepts, alongside the addition of the human interaction factor - see question and chart on the next page. This shows that education on the benefits of autonomy has a clear impact on approval and acceptance of it.

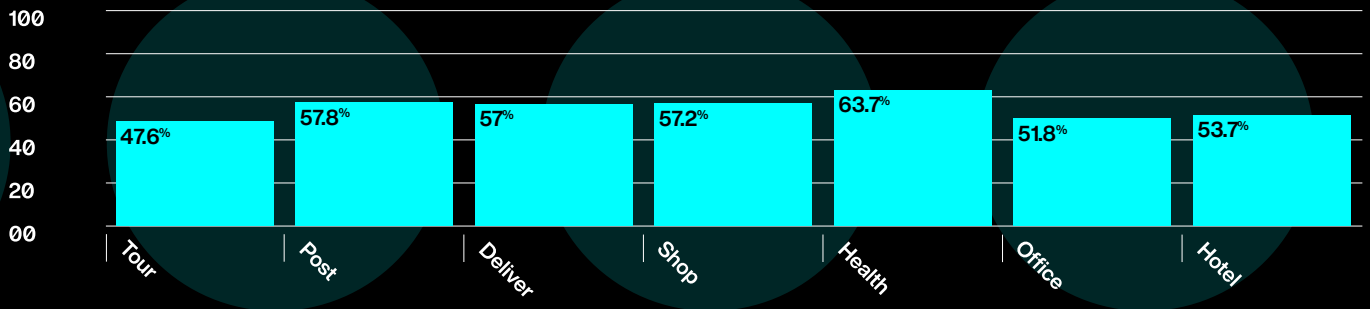
F

Autonomous Concepts

Individual appeal



Q "On a scale of 1 – 10 where 1 is low and 10 is high, how appealing are each of these autonomous concepts?"



The mean average scores for these concepts – if seen in a typical New Product Development (NPD) project would be alarmingly low. If a product is not making an average above 7.0 we don't believe it possible to reach a *positive* Net Promoter Score – i.e. would they recommend it to others? - which, while crude, is at least a reflection of general positivity.

This kind of rating would cause 'significant rethinking' (i.e. panic in an automotive clinic situation. The distribution of scores is also quite enlightening. What is clear from the distribution of results is that there is no consensus. The 'middling' mean scores do not indicate a 'middling' idea, but one which is polarising. There is little agreement one way or the other.

There are clear groupings, some giving extremely low scores. Scores of 1s and 2s are quite rare in market research when describing new, helpful technologies - showing that there is a stubbornly alarmed segment who are actually *frightened* of autonomy. There are also a large number in the middle who just don't know, and finally a group who are very strong supporters. This question results in a slightly better overall sentiment than the first open-ended question which asked simply whether autonomous technology, as a concept, was a good thing. This shows the benefits, and thus gains better acceptance.

G

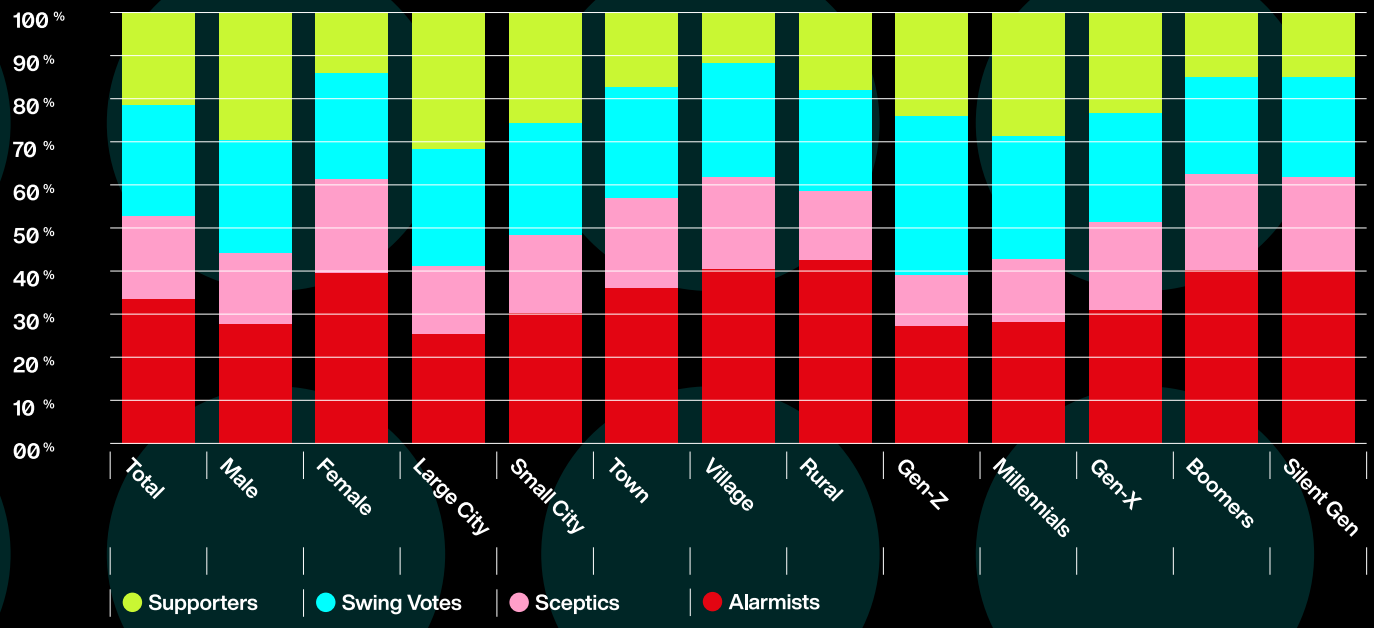
Variance in acceptance

As can be seen from Chart B, there is no continuous link between age and acceptance of autonomy. It's not the case that it is just old people who hate it and there is no evidence to suggest that, as the resistant older population shrinks, so the market will come good. There are significant nuances to understand in public perception of Connected Autonomous Vehicles/Mobility/Transport (CAV/M/T) so we took people's initial reaction to Q16 and divided people into one of four camps:

1. Alarmists – people for who autonomy is actually frightening
2. Sceptics – these people are not convinced but are thinking about the issues
3. Swing voters – interested but a little unsure
4. Supporters – all out in favour of autonomy

What we see are some key geodemographic influences on overall opinion and these are perhaps predictable and could be stereotypical of assumed tech adoption/rejection factors.

Geodemographic Attitudes to CAV/M/T

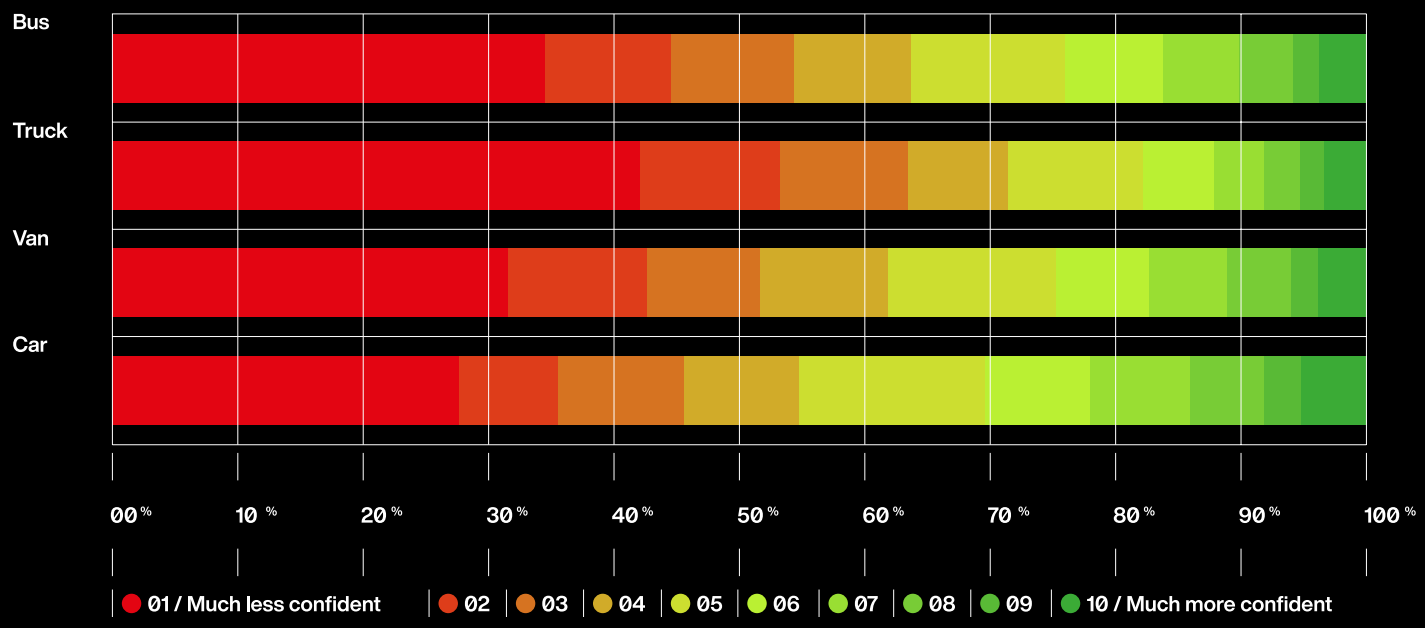


Q "What do you think about cars being able to drive themselves in the near future?"

While around half on average are broadly in favour of autonomous vehicles, we can see very clear variations in distribution e.g. 'Supporters' are more likely to be a male Millennial in a large city, 'Alarmists' on the other hand tend to be female, boomer/silent and in a village/rural location.

So, while we might stereotype Supporters quite easily - for example they are three times more likely than average to already own an electric scooter (please ask for further details) - what is clear is that most 'Supporters' are already well served for transport, both public and via cabs/ride sharing. They are also not as likely as older, female or rural respondents to be either excluded from public transport due to proximity, and not to have experienced widely reported unpleasant interactions while using it. Their support of autonomy isn't driven by 'need'. Conversely Alarmists – who are often the people that 'need' these services most are equally not seeing the benefit of autonomy in delivering such services to them. It is the Alarmists who ought to benefit most and the Supporters who need it least.

Confidence around CAVs



Q "How much more or less confident would you be around autonomous versions of these vehicles?"

While the safety capability of most mature autonomous systems are extremely high - higher often than human piloted vehicles - half the general public, and around 60% of women, are as yet unconvinced. CAVs are scary because computers go wrong too.

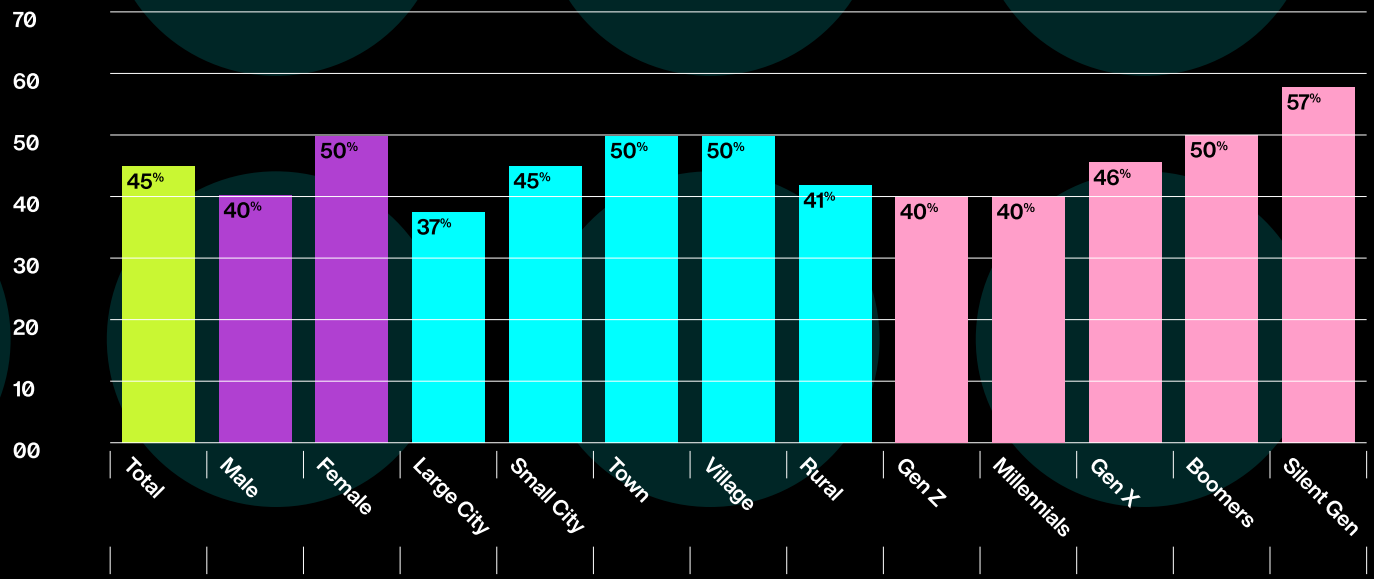
With more than 2 out of 4 of all people saying they would feel less confident (scoring 1 to 5 out of 10) around autonomous vehicles, this is 70% for cars and a massive 82% for trucks. This is a clear demonstration of a lack of public trust in the technology. However, it is also worth noting that this represents a significant fall in confidence from last year's survey where low confidence was: 51% Car, 62% Van, 71 Truck, 65% Bus, showing that significant variations in public attitudes can happen quickly – thus effective education/communication may have a positive impact.

We should assume that perceptions around questions on 'confidence' in public spaces may have been significantly altered by the current crisis. Yet this clearly shows that despite representing an ideal replacement for crowded mass transit systems, CAVs have become even less enticing to the public. The key driver behind this appears to be that people simply don't value the loss of freedom and choice that automation appears to represent. Very large proportions don't ever see a time where all their transport requirements can be met by CAVs.

H

Post Autonomy Vehicle Demand

I will always drive myself

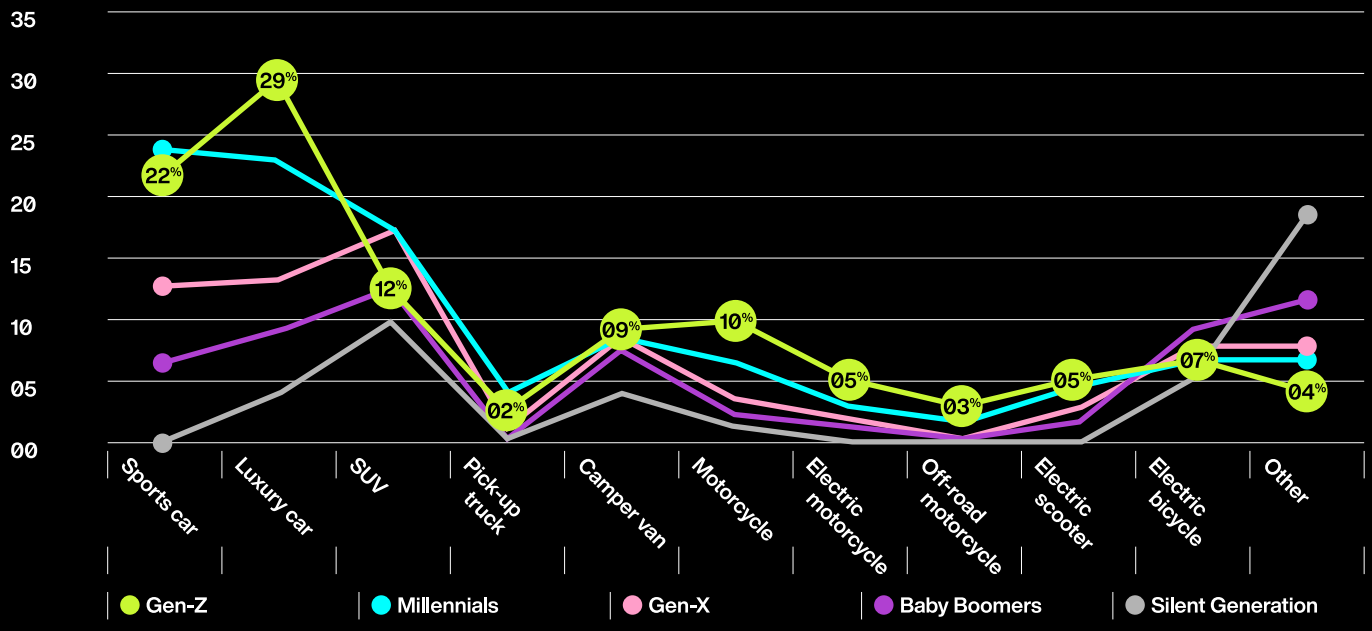


Q "If your everyday transport needs could be covered affordably by CAVs (connected and autonomous vehicles), which of the following would you still want to own for recreational use?"

A remarkable 45% reject ever needing CAVs alone. There are predictable geodemographic variations but the fact that 40% of Gen-Z and Millennials want to retain non-autonomous driving, ought to be a significant point to ponder for those who assume that all driving is a chore best left to the robots.

When asked the same question and given specific options, it is interesting to see that far from being the leaders in disposing of silly old fashioned concepts like ownership or cars-as-status-symbols, Gen-Z are the most interested in owning a luxury vehicle, with Millennials a close second. This pattern was similar in our 2019 study and shows quite clearly that the expression, status and symbolism of the car is not lost on the younger generation but actually embraced for post-functional demand.

Post-Autonomy Recreational Vehicle Demand



Q "If your everyday transport needs could be covered affordably by CAVs (connected and autonomous vehicles), which of the following would you still want to own for recreational use?"

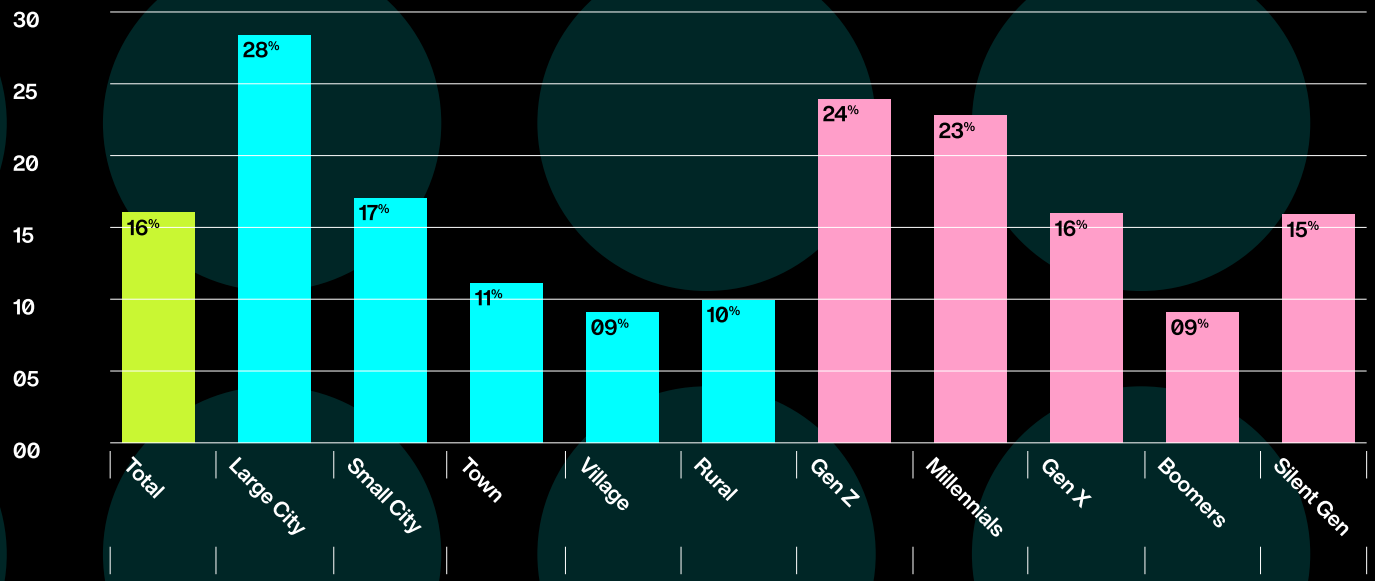
The reasoning behind this is fascinating and will be explored in further depth in **Driving the Future #03: Human After All**, the final instalment of our trilogy.

Autonomy; positives and payment

Some positives can be taken from this study, however. In report #01 we saw huge numbers planning to rethink their use of public transport, and further to that we saw above that the crisis has made driverless concepts more appealing for 35% of respondents. However, it is also a boost for various forms of autonomous public transport – most obviously bus. Despite only 16% of the general public agreeing that they would be more likely to use public transport if it were autonomous instead of human-operated, this rises sharply in the very locations where it is most likely to be introduced first.

Well over a quarter of large city respondents would be more likely. It is worth noting that quite often people in village/rural areas don't use public transport simply because it doesn't exist, and hence ways of introducing services in these locations due to autonomy is likely to increase positivity.

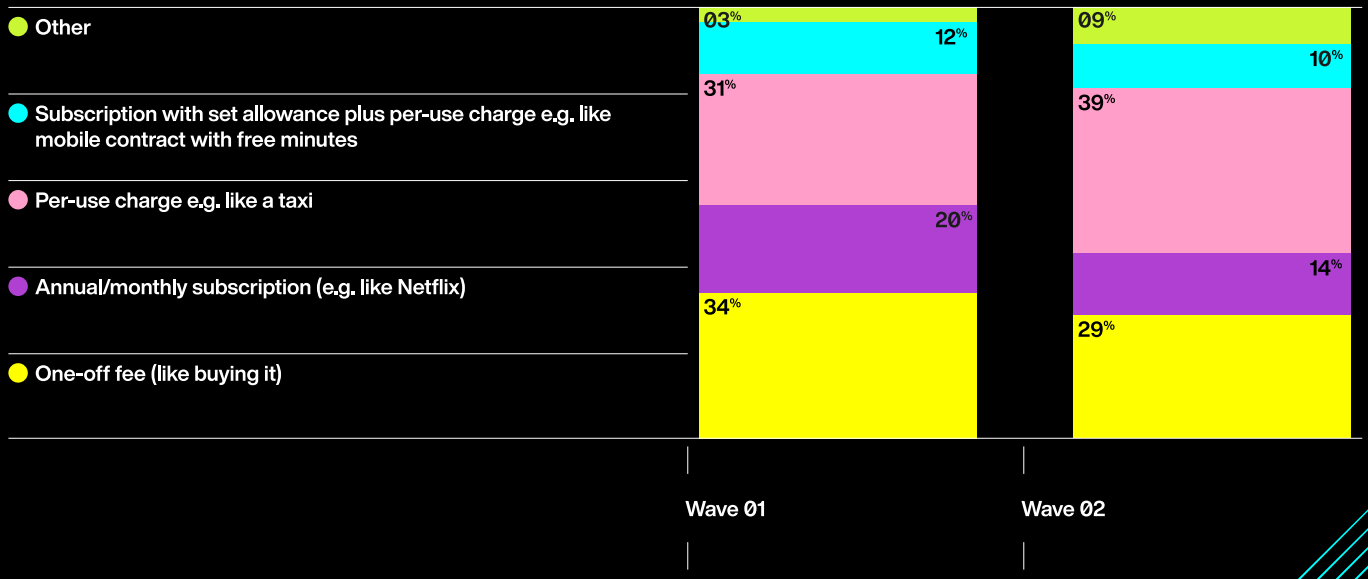
More likely to use public transport if it were Autonomous



Q Q "Would you be more likely to use public transport if it were autonomous instead of human-operated?"

The crisis has also affected how people view their long-term planning. Figures around preferred payment methods for Connected Autonomous Mobility show a movement toward single-use and away from annual subscription – as we saw in report #01, which means season tickets are under significant threat, and business models that rely on annual subscriptions will likely be subject to significant pressure.

Best ways to pay



Q "Which one of these would be the most appealing way to pay for access to autonomous transport?"

A 6% overall reduction represents just under a third moving away from annual subscription, with a big increase in those thinking that a per-use charge makes most sense. It is clear that there are still a very large number that think owning their own CAV is their preferred route yet there are few providers who propose this solution.

The answers to why this is the case and what else people still crave from motoring will be examined in Driving the Future part #03 – Human After All. In that report we will see that even if a zero ownership, homogenous, on-demand fleet undoubtedly makes the most sense, it is still the case that - as with the climate crisis and reactions to lockdown (and beer and burgers) - what's best for humanity is not often what we *want*. And it certainly isn't what we choose to pay for.

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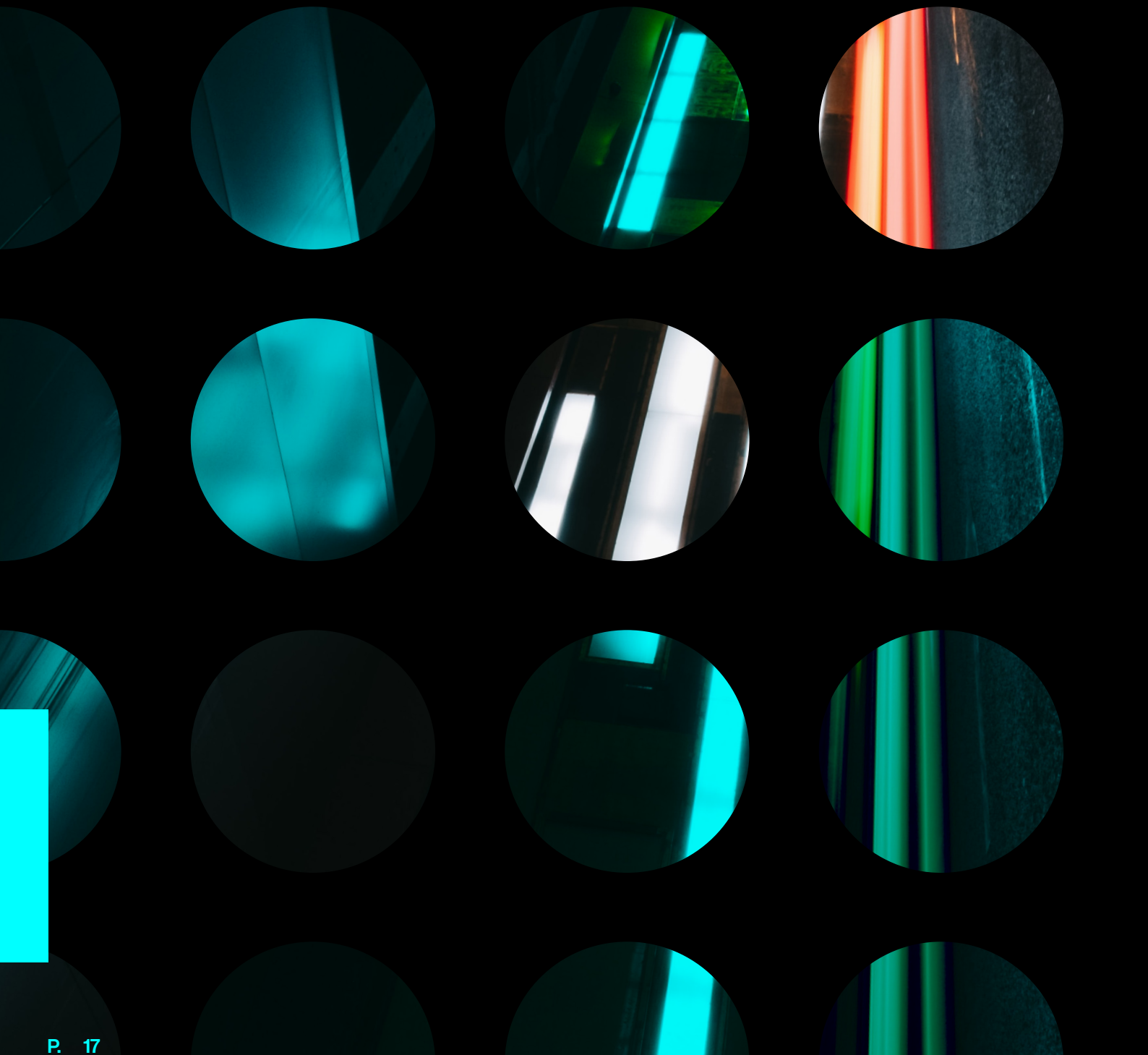

Conclusion

Autonomous vehicles clearly offer potential solutions to important questions but there is a significant lack of demand. Many don't see a clear advantage, CAVs are answering a question most people aren't asking.

While there are many more young people in favour of autonomy than old people, there are more who, while unlikely to have experienced the mixed blessing of owning a luxury car, very clearly aspire to it. OEMs and CAM operators that can fulfil that need are going to capitalise on a market that those who focus on anonymous, public transport-esque people-moving will miss. Autonomy is coming but the people who will most likely live with it – and pay for it - want something more than 'mere' mobility.

To many the car still means freedom, even to those such as Gen-Z and Millennials who often don't own one. So, what does it mean if it is autonomous and thus not capable of delivering freedom? Appealing to our desires and aspirations is going to be much more effective than simply reducing driving to an inconvenience to be replaced with yet more hours in front of a screen.

As can be seen in Driving the Future Report #01 the COVID-19 crisis will make significant, permanent changes to how we live, work and travel, and the autonomy industry represents a multi-faceted opportunity not only to provide abundant, safe transportation but also jobs and economic activity during the recovery. However, any messaging that is being undertaken is not cutting through and currently the entire concept of autonomy finds itself in a worse position than before the crisis, despite being offering multiple obvious benefits. Now is clearly the time for a co-ordinated conversation about the purpose of autonomy coupled with a refocus on the benefits over the technology.

Established in 2002, 7th Sense is a premier market research company that specialises in unearthing insights and bringing them to life. Offering some of the most experienced research specialists in the business, 7th Sense blends both innovative and foundational approaches to qualitative, ethnographic, quantitative, and mixed-method research.

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