Market Report

The evolution of the car

AutoTrader

March 2019

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Introduction

Nathan Coe, CFO and COO, Auto Trader

Welcome to the seventh edition of the Auto Trader Market Report, a biannual review of the UK's new and used car markets and how consumer buying and selling behaviours are changing, based on data from Auto Trader, the UK's largest automotive marketplace.

In this edition of the Report we're focusing on the future. Specifically, on the evolution of the car, and the market implications of the current automotive space race. It's a popular topic. However, our aim is to cut through the noise to determine what's really on the horizon, how consumers are feeling about these developments, and what are the opportunities for the industry.

Last year revealed a growing appetite for alternatively fuelled vehicles[1](AFV), highlighted by the 20.9%[2] increase in new car sales, 26.9%[3] in used, and over 40% growth in searches on Auto Trader. And with nearly 71% of the 3,000 consumers we spoke to for this Report already considering an electric vehicle (EV) for their next car (an almost three-fold increase from 25% in September 2017), the future's looking positive for the ultra-low emission market.

However, there remain major obstacles for mass adoption, not least price. In fact, of the three in ten motorists not considering an EV, nearly half (46%) identify the upfront expense as their main reason for not making the switch from an internal combustion engine (ICE).

For this reason, the UK Government's decision to scrap the grant for new plug-in hybrids and to cut the discount on all-electric cars from £4,500 to £3,500 has the potential to slow adoption on a large scale and threaten, its 2040 ambitions. Our research revealed that 41% of those consumers who had heard the grant was available and were looking to buy an AFV in the next three years are now less likely to do so as a result of the amendments.

We're already likely to see the price of new EVs increase slightly as a result of exchange rates, inflation and volume, but without the grants helping to offset the added cost of bespoke chassis,

Last year revealed a significant increase in consumer appetite for alternatively fuelled vehicles (AFV)

1. Defined as a vehicle that runs on substances other than conventional petrol or diesel.
2. Society of Motor Manufacturers and Traders new car registrations, January 2019
3. Society of Motor manufacturers and Traders used car transactions, February 2019

highly engineered parts, and the skilled technicians to assemble them, the price for British car buyers could be even more.

However, the industry is working hard to reduce costs by developing shared electric platforms, such as Volkswagen's modular electric drive matrix (MEB), which will be key to producing 'attractive models at affordable prices'. We'll see the first EV based on the platform next year: the VW I.D.

Manufacturers are also taking steps to drive demand by offering a greater choice of AFVs. More than 80 new generation models will be launched in 2019, 31 of which will be plug-in electrics boasting seriously impressive range capabilities. 'Range anxiety' remains a deep-rooted concern, but with 99.3%[4] of UK journeys now within current EV ranges, this should become less of an issue, especially with the new models boasting at least twice the range of their predecessors – something that needs to be more prominent in marketing and sales.

Whilst battery technology is extending ranges dramatically, before consumers take the plunge on a new EV, they need to know they can charge it. 56% of those consumers who wouldn't consider an electric vehicle as their next car said a lack of infrastructure was their primary reason for not doing so. The reliance on third-party networks makes it a challenge outside of most manufacturers' hands, however with the number of connectors in the UK increasing at a precipitous rate (51% increase from November 2017 to February 2019[5]), the outlook is positive.

Based on our projections from our Retail Price Index, along with the planned ambitions of relatively new players on the market, such as Volkswagen, Hyundai, Honda and Mercedes, we predict by 2025 the average sticker-price of an AFV will match a petrol or diesel car. This price parity will mark the start of a mass transition from fossil to electric, with sales of new AFVs overtaking their ICE counterparts by 2030.

By the end of the next decade, we predict AFVs will make up 16% of the UK car parc. However, our data suggests that on the current trajectory, sales of AFVs will still only account for 75% of new car sales even by 2040. If there is not a step change in adoption rates, the government's Road to Zero targets just won't be met. The consumer appetite is clearly there but relying on the industry alone to drive adoption will not be enough; the evidence shows the government must do more.

This projected growth represents an exciting opportunity for the whole industry, but it does come with a hefty price tag. Conservative estimates put the current industry investment at upwards of £300 billion. Volkswagen alone has committed $50 billion (the market capitalisation of Tesla) on new plants, electric cars, autonomous driving and mobility services from this year to 2023. As we'll come to explore, there are long-term, overarching steps required to realise the full-potential of a mass transition from fossil to electric, but there are also a range of much smaller, immediate steps that retailers, manufacturers and their agencies can take to capitalise.

For one, retailers should ensure their stock and facilities reflect this growing demand, particularly in large cities where not only is the appetite strongest, but the host of clean-air zones coming into force will further accelerate adoption. London's Ultra Low Emission Zone (ULEZ), launching on 8th April, will charge drivers of non-compliant cars a daily fee of £12.50 or a £160 fine.

With 71% of car buyers now considering an electric, consumers don't view AFVs as a niche anymore, but rather as a viable alternative to petrol or diesel. It's vital therefore, that brands and retailers consider them in the same way, and market and sell them alongside their ICE counterparts rather than as a separate category.

The growing interest in AFVs reflects a wider trend of an increased consumer appetite for more advanced automotive technologies including semi-autonomous functionality and driver assistance features. As recently as March 2017, 49% of consumers claimed not to be interested in fully autonomous technology and 17% said that even semi-autonomous cars wouldn't be available in their lifetime. Today, 31% of consumers say they have at least one semi-autonomous feature in their car, and 78% said they used it regularly.

It hints at an exciting opportunity for retailers and brands. Encouragingly, of those with semi-autonomous features in their car, more than half (51%) said they would make them more likely to buy from the same brand again and 80% would be willing to pay extra for them in their next car. However, despite this huge opportunity to upsell and build loyalty, the use of complicated marketing jargon, unclear pricing and a lack of frontline education means the industry is missing out on the full potential.

We found that brands and retailers that explain the features of the car see higher conversion, higher prices and higher return visits for both maintenance and next car purchases. But importantly, rather than talking about features in technical terms, customers are twice as likely to pay for features that are explained in ways that will help them to understand not the technology of the feature itself, but its tangible personal benefit, such as added passenger safety. At a time when the industry is facing unprecedented challenges, these technologies represent a very real opportunity for growth.

This is an exciting time for the industry, however, it's not without cost. New technologies need huge investment to support mass adoption from manufacturers, retailers, and crucially, government too. At a time of political and economic uncertainty, rapidly evolving automotive technology offers a genuine opportunity to drive car sales, and build long-lasting relationships with car buyers. For the opportunities to be truly realised it requires massive investment today, as well as dramatic changes in the ways of working, including more of a focus on the consumer, and greater collaboration between brands and the wider industry.

The sales of AFVs will still only account for 75% of new car sales even by 2040

4. KPMG Mobility 2030 analysis
5. Zap Map Charging point statistics

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Key findings

2025
AFVs will reach price parity with petrol and diesel by 2025

16%
AFVs will make up 16% of the UK car parc by 2030

71%
of consumers are considering an EV for their next car

33%
of consumers may delay buying a car because of government uncertainty around Brexit

80%
of consumers would be wary of using a car, taxi or bus without the safety net of a human driver

2030
The sale of new EVs will overtake petrol and diesel by 2030

41%
of consumers planning on buying an AFV in the next three years are less likely to do so following the amendments to government grants

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Market overview: a turning point?

Unprecedented challenges

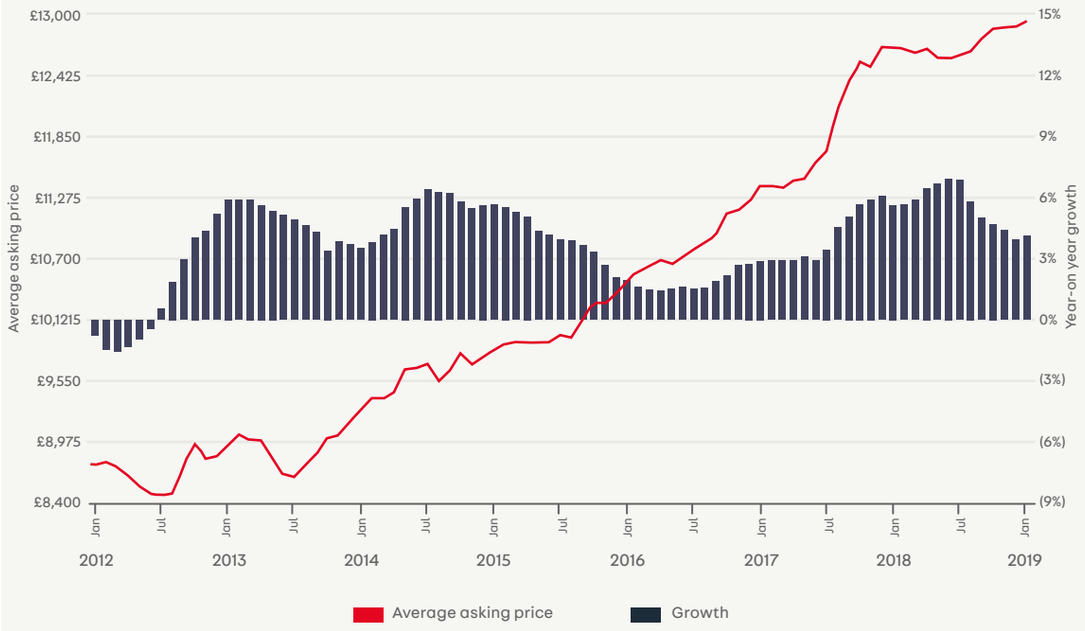
It's hard to imagine a more disruptive and unstable time for the industry. Last year retailers and manufacturers faced unprecedented challenges from the ongoing anti-diesel rhetoric, the introduction of Worldwide Harmonised Light Vehicle Test Procedure (WLTP) regulations and of course Brexit. The impact of these factors cannot be overstated and has resulted in severe confusion and uncertainty amongst car buyers.

With 55 million multi-platform visits a month, Auto Trader is the UK's largest marketplace for new and used cars. Accordingly, our data offers an accurate barometer of not only consumer purchase intention but also market activity. We believe the outlook for transactions looks positive, because whilst there remains uncertainty, consumers still want exclusive access to a car. So, at the end of their personal contract purchase (PCP) agreement, even if their desired vehicle isn't available, such as an EV, the average consumer will still need to 'buy' another car, or face being without one.

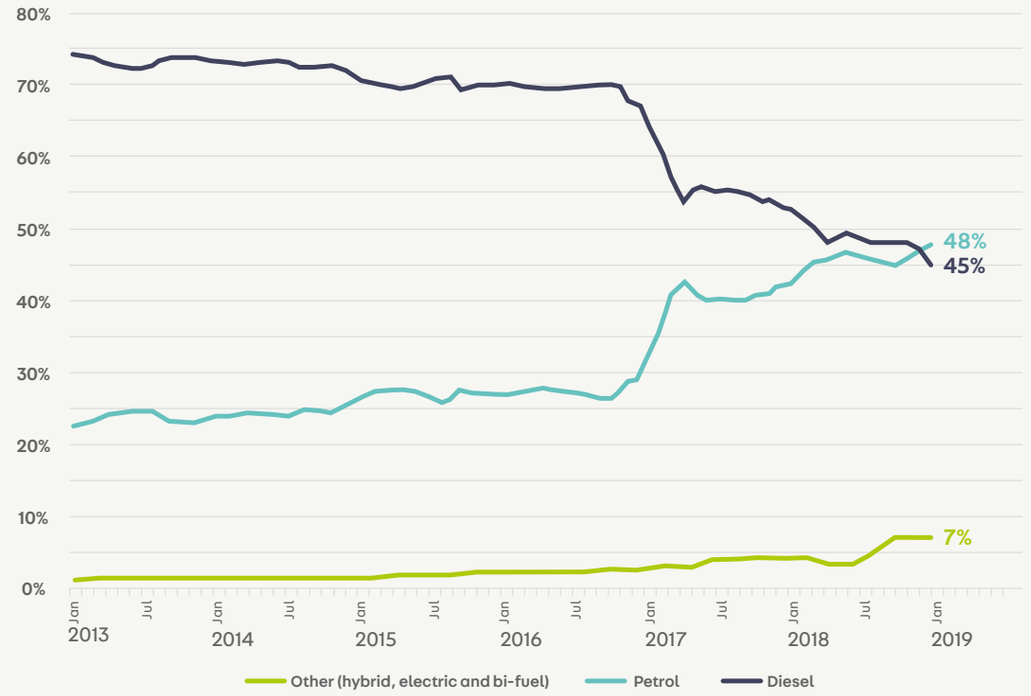
The impact of Brexit uncertainty and fuel type confusion

I believe Brexit will lead to general price increases	68%
Government uncertainty around Brexit may delay me buying a car	33%
I don't understand the latest information on fuel types	45%
Messages on fuel types make the car buying process more challenging	49%

Auto Trader Retail Price Index (all vehicles)



Percentage of fuel searches on Auto Trader



However, we can see evidence of how these factors are affecting consumer behaviour, particularly around fuel type. In November 2016, the High Court's ruling that the government wasn't doing enough to tackle air pollution sparked tough words from Westminster, including the potential introduction of a nation-wide diesel scrappage scheme. Since then, we've seen the percentage of fuel related searches attributed to diesel on Auto Trader fall from circa 71% in late 2017, to a record low of just 45% in January 2019, marking the first time ever it's fallen below petrol, which now accounts for 48%; a jump from 26% in November 2016.

Despite the negative rhetoric surrounding the fuel debate, even diesels held their value in 2018

The significant volume of consumer research carried out on Auto Trader obviously parallels actual purchase intention very closely. According to the Society of Motor Manufacturers and Traders (SMMT), new diesel sales declined 29.6%[6] in 2018. And whilst the government has been quick to demonise diesel, arguably it hasn't done enough to counteract its argument by providing compelling reasons for consumers to switch to an AFV. The knock-on effect has been dramatic, particularly to the new car market which saw a 6.8%[7] decline in registrations last year.

However, our intention for this Report is not to highlight the challenges, but rather to focus on the opportunities. Whilst 2018 saw its share of problems, it also saw positives. Not only did used car prices grow (5%[8]), but transactions also remained positive. And despite the negative rhetoric surrounding the fuel debate, even diesels held their value in 2018, growing 3% annually. This resilience was reflected in the 0.3%[9] growth in second-hand diesel transactions in 2018.

Last year also saw the growing popularity of Sports Utility Vehicles (SUVs) which helped provide some much-welcomed stability for the market. 4x4s and 'cross-overs' are consistently within the top three body types searched for on our marketplace, and they've topped the list as the fastest selling used car more often than any other type in 2018. In fact, for three consecutive years an SUV has taken the top spot as the annual fastest selling used car, with the Vauxhall Mokka taking the crown in 2018, ending the Kia Sportage's two-year reign.

Fastest selling used cars nationally in 2018

1

2015 Vauxhall Mokka
SUV Petrol Automatic

26 days to sell

2

2015 Renault Captur
SUV Diesel Automatic

27 days to sell

3

2016 Mercedes-Benz
A Class Hatchback
Petrol Manual

27 days to sell

6 & 7. Society of Motor Manufacturers and Traders new car registrations, January 2019

8. Auto Trader Retail Price Index, data from December 2018
9. Society of Motor Manufacturers and Traders used car transactions: February 2019

The year of meaningful appetite for EVs?

However, last year's most significant bright spot was undoubtedly the growth in AFVs. Every metric indicates a significant increase in consumer appetite for low emission vehicles. In the new car market AFVs recorded a 20.9%[10] spike in registrations, and 26.9%[11] in used transactions. The trend has continued into the new year, with new AFV registrations recording an annual growth of 26.3%[12] in January, albeit from a very low base of fewer than 9,000 during the same period last year.

On Auto Trader, the percentage of fuel related searches for AFVs increased 40% on 2017, and 130% on 2016. And in terms of prices, the average cost of a used AFV grew 6% annually. What's more, in July 2018 we saw the first fully electric vehicle, a Renault Zoe, top the list as the UK's fastest selling used car.

In July 2018 we saw the first fully electric vehicle, a Renault Zoe, top the list as the UK's fastest selling used car

10. Society of Motor Manufacturers and Traders new car registrations: January 2019
11. Society of Motor Manufacturers and Traders used car transactions: February 2019
12. Society of Motor Manufacturers and Traders new car registrations: February 2019

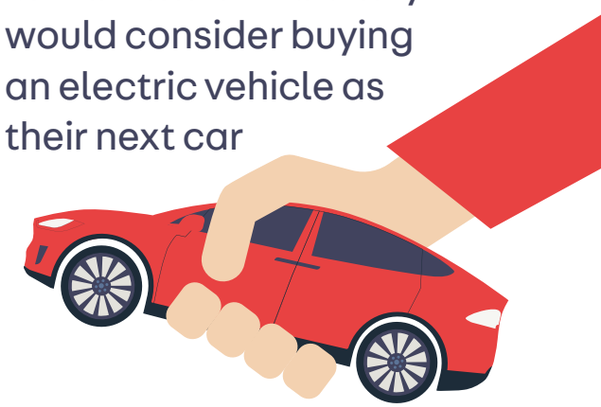
The consumer research for this Report revealed that nearly three quarters (71%) of car owners said they would consider buying an electric vehicle as their next car, which is a huge leap from the 25% that answered positively to the same question in September 2017. Such is the change in perception, that 50% of car owners (who don't already own an AFV) expect to own their first AFV within the next three years: this figure increases to 57% for under 35s, and 56% for men.

This reflects that it's not only the car that is evolving, but also the mindset of the consumer: indeed, we can see that car buyers are becoming increasingly agnostic in their search behaviour. 77% of car owners said that in searching for their next car, they would consider electric or hybrid, as well as petrol or diesel.

What's more, nearly half (47%) would consider both new and used in general, and specifically for an AFV. It highlights that today's consumer is simply looking for their next car, be that new, used, petrol, diesel or electric.

71%

of car owners said they would consider buying an electric vehicle as their next car



Industry insights:

What actions can retailers, manufacturers and their advertising agencies take to drive EV adoption and improve profitability?

- Retailers should begin to make provisions for the accelerating demand of AFVs, such as have EV charging points available, train sales teams to articulate the benefits and latest capabilities of electric vehicles, as well as consider service centre process changes
- Manufacturers and retailers should market/position AFVs alongside any other car to help consumers view them as part of the mainstream
- Manufacturers should alleviate cost perception by making finance a central message/focus in AFV marketing
- Manufacturers and retailers should adapt to increasing consumer agnosticism towards new, used, finance, and fuel types by removing the confusion and simplifying the car buying process

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The surge of electric

Whilst consumer attitudes and consideration of electric vehicles are evolving alongside the advancements in technology, we're a long way from mass adoption. That's because for a true electric revolution the choice of EVs available on forecourts will have to be significantly higher, prices will have to come down, and they will need to be marketed at comparable values to their ICE counterparts.

EVs were once almost the sole reserve for environmentally conscious early adopters who were prepared to overlook range issues, uninspiring aesthetics and high costs for the sake of sustainability. However, as AFVs begin to reach a wider market, pollution is less of a motivator and cost is far more important, especially the upfront outlay.

The concern over the upfront cost of electric vehicles is a legitimate one. Consumers may be searching for AFVs in the same way as their petrol or diesel equivalents, but there remains a huge disparity in their respective sticker prices. A new Renault Zoe costs from £21,920 whilst prices for a similar sized Renault Clio (diesel) start at £15,695. And consumers face a similar challenge in the second-hand market. In 2018 the average price of a used AFV was £20,078, and a used EV was £17,744. In contrast, the average price of a used diesel was £14,390 and a petrol was £10,550.

Finance will play an important role in making AFVs more affordable. PCP also leaves the residual value risk with the finance house, so can be equally useful in alleviating consumer concerns. Based on the huge steps being undertaken by the industry to fuel demand and to reduce production costs, we believe the price of AFVs will match their ICE counterparts by 2025. Along with dramatically improved

Finance will play an important role in making AFVs more affordable

Driving EV adoption

Steve Hood, Director Electrified Vehicles, Ford of Europe

What opportunities do EVs present to the auto industry?
The auto industry is able to offer a local zero emission product with unlimited access to restricted areas. It also helps to achieve CO^2 emission and other tailpipe emission targets.

How can we drive adoption among consumers?
EVs provide a local zero emission option and the guaranteed access to restricted areas in cities. For many people and in particular (smaller) companies, the positive image and marketing effect is one of the biggest drivers to consider the purchase of an EV. With regards to economic aspects, cost of maintenance and, depending on further developments of taxation, cost of ownership is still lower than for conventional vehicles while the purchasing price is higher in most cases. One of the biggest pain points is range anxiety but this is being addressed and worked on by establishing more and more charging stations including fast charging opportunities. Once people experience the direct response and torque of an EV while accelerating, most of them love to drive them. And Ford also provides a variety of hybrids including plug-in hybrid vehicles which offer a pure electric range sufficient for the average daily usage while being a non-compromise vehicle with unlimited range.

Cost of EV ownership is still lower than for conventional vehicles

How will the industry reduce the cost of EVs – increasing their appeal to consumers?
One of the major cost drivers is always low volumes. As the demand for EVs and thus batteries are increasing, volumes grow and help to lower the overall costs for purchasing an EV. Cost of maintenance and ownership are lower than for conventional vehicles.

What role will government play in driving EV uptake?
Incentive programmes are usually one instrument to influence the purchasing considerations for people. Another important aspect is the taxation of energy for charging stations which needs to be stable. Many governments are taking an active role in developing more charging stations and this needs to continue and be expanded.

Where do you see the tipping point for the EV uptake compared to ICE vehicles?
Manufacturers are going to introduce a record number of all-electric vehicles in the coming years, which will continue to aid consumer interest and awareness. We believe that a strong market will develop for battery electric vehicles when the majority of options meet an attainable price point. Additionally, we feel that providing customers a better driving experience, including increased performance and capability, will bolster demand, and that is what we will deliver in 2020 and beyond. With continued investment in charging facilities, we will hopefully see a situation where adoption of EVs becomes more and more easy for most consumers.

As AFVs reach a wider market, pollution is less of a motivator and cost becomes more important – particularly upfront investment

infrastructure and a wider choice of vehicles, this will mark the starting gun consumers have been waiting for and will fuel a mass transition from fossil to electric, with sales of zero emission vehicles overtaking petrol and diesel in the following years and by no later than 2030.

The industry is taking important steps to reduce overheads by developing versatile shared EV platforms. The capabilities of these hugely sophisticated platforms will be demonstrated with some of this year's pipeline of seriously impressive second-generation EVs, such as the Renault Zoe mk.2 capable of 250 miles on one charge. Scheduled for launch in August, it'll be the first to use a brand-new bespoke platform which allows for greater battery capacity and will be shared across the Renault-Nissan-Mitsubishi alliance.

It'll be a similar case for Volkswagen's MEB platform, which following the launch of the ID. later this year, will be rolled out across the group's brands on a wide range of EVs. However, potentially more indicative of where the production of electric vehicles is heading, Volkswagen recently said it would be prepared to share its new MEB architecture with other manufacturers, including Ford with whom it announced a wide-ranging alliance in November.

This type of collaboration will be key to unlocking the full potential of EVs and reducing the spiralling capex, which in turn will reduce prices for consumers.

Connecting to the grid

The new breed of battery powered cars will be vital in driving desirability and making EVs cheaper. Underpinning just how far AFVs have evolved, this year we'll see the launch of the Mini Cooper SE, tipped to be the very first all-electric hot-hatch. Whilst the range is still to be confirmed, if it's close to the new Zoe's 250-mile range per charge, it'll go some way in alleviating the other primary barrier to mass adoption – infrastructure.

Despite the huge advancements in battery technology, for those looking to make the switch from fossil within the next five years, 41% said good infrastructure would motivate them to buy an AFV today, a third more than current owners (27%). And for the three in ten (29%) consumers who wouldn't consider an electric vehicle as their next car, over half (56%) identified infrastructure, or lack thereof, as their biggest reason for not considering one. Whilst a minority, it does highlight the confusion that still surrounds AFVs and a need for greater consumer education.

According to Zap-Map[13], as of February 2019, there are approximately 6,800 locations across the UK which have a public charging point installed. The number has grown 35% between 2017 – 2018 and according to experts, not only will we see a significant increase in the number of rapid chargers this year, there'll also be major developments in the evolution of the chargers themselves, making it easier than ever to own an electric vehicle.

The number of charging points across the UK has grown 35% in the last year

Charging the future

Tom Callow, Director of Communications and Strategy, BP Chargemaster

In 2019, BP Chargemaster will begin to create a nationwide network of ultra-rapid chargers on BP forecourts, providing 150kW charging – three times faster than the current industry standard. Enabling ultra-rapid charging in prominent and convenient locations will help to accelerate the adoption of electric cars in the UK.

Ultra-rapid chargers will of course be used by drivers to extend their range on longer journeys, but importantly will also be used by those who cannot charge at home. While it is estimated that almost 60% of UK households have access to off-street parking, around 40% do not. A lack of home charging doesn't preclude anyone from driving an electric car. Indeed, drivers do not fuel their petrol or diesel cars at home today, so it is no different in that respect.

A lack of home charging doesn't preclude anyone from driving an electric car

13. https://www.zap-map.com

Impact of grant amendments: consumers who are aware of grants and looking to buy an AFV within the next three years

said they would be less likely to buy an AFV as a result of the changes to the grants

said they might not buy an AFV out of concern the government's AFV policy might change

said they're more likely to buy a petrol or diesel car instead

There are of course a variety of variables that could affect the point of price parity, and ultimately mass adoption. The government's decision to amend the available grants has been significant. As of October 2018, as well as slashing grants from £4,500 to £3,500, they're now only available to vehicles capable of travelling a minimum range of 70 miles on their battery, which means an end to subsidies for many of the most popular hybrid cars. As our data shows, the decision could prove to be a significant step-back in the government's ambitions.

The key to unlocking the potential without breaking the bank is collaboration; the industry needs to change ways of working on a variety of levels, not least with each other to reduce capex as in the case of VW and Ford, but also with governments, energy companies, infrastructure providers, and telecommunication companies.

Industry insights:

What actions can retailers, manufacturers and their advertising agencies take to drive EV adoption?

- Manufacturers and agencies should help alleviate range anxieties by promoting range capabilities and availability of charging points across the UK
- Retailers should stand out from the crowd by becoming an EV specialist / expert; look for industry certification such as the National Franchise Dealer Association's (NFDA) Electric Vehicle Approved (EVA) scheme
- Manufacturers should simplify the electric problem for the consumer. Long-term success in selling electric demands finding simple ways to help the consumer decide what is best for them
- Manufacturers and retailers should be transparent with the cost of AFV ownership, including finance. 78% of consumers find it difficult to work out the comparable costs of an AFV vs. a petrol or diesel
- Manufacturers, agencies and retailers shouldn't focus solely on the environmental benefits, but rather the cost savings and the avoidance of Ultra Low Emission Zone charges. Societal benefits don't impact car buyers as significantly as personal benefits, particularly cost savings

Making EVs easier to own

Charlie Jardine, Founder and CEO of EO Charging

Electric vehicles were once the preserve of eco-conscious early adopters, drivers that could look past the poor performance of these ugly duckling EVs in the name of sustainability. Now, they are becoming mainstream; a logical and cost-effective option for domestic and commercial drivers.

Changing consumer perceptions on driving electric has long been a challenge. Charging providers working closely with OEMs and dealers is the key to ensuring drivers understand that plugging-in isn't a complicated process. We also want to demonstrate that the perceived high cost of purchasing and installing a charger is, in fact, rooted in common misconception.

Grants offered by OLEV (Office for Low Emission Vehicles) significantly reduce the cost of installing a charger at home or at work. As of June 2019, all government funded home chargers for electric vehicles must use 'smart' technology - fulfilling commitments set out in the Road to Zero Strategy published in early 2018.

By ensuring consumers install a charger at home, retailers can be assured that EV drivers will have a positive experience and that the vehicle performs to its marketed claims in terms of range. It's estimated that almost 90% of vehicle charging is done at the home or workplace. The second consideration, however, comes when using public charging infrastructure – 'charging in the wild'.

Public infrastructure has dramatically improved over the last few years and figures from Zap-Map suggest that there's around 20,000 individual charging sockets spread across over 6,800 charging locations in the UK. Whilst reliability has improved, drivers still face the ongoing stresses of charging network memberships or RFID cards. In an attempt to alleviate this barrier to charging, we created the EO Pay – a full open public charger that uses contactless payment. Drivers can simply tap-and-go!

I believe that electric vehicle chargers are more than 'just a plug', they're the gateway to the future of mobility and a vital piece of the electrification puzzle. By building a brand that consumers trust and ensuring a positive customer experience from installation through to aftercare we're confident that concerns around driving electric will ease.

05

Trusted brands

What brands do consumers trust to deliver the future?

With the industry working hard to remove the existing barriers to entry, consumer appetite for AFVs and more technologically advanced cars is only set to accelerate. But with both traditional automotive manufacturers and technology companies investing billions of pounds in a race to develop increasingly sophisticated vehicles, which brands do consumers trust to deliver them?

Despite being seen as more innovative than car manufacturers, technology brands are not as widely trusted to develop autonomous or electric vehicles.
Mercedes-Benz, Audi, BMW and Ford are the most trusted to develop an EV; only 64% of people trust Tesla and 48% trust Dyson.

Lower score — Higher score

See this as an innovative brand	
Google	75%
Dyson	74%
Apple	73%
Audi	70%
Toyota	70%
BMW	68%
Mercedes-Benz	66%
Amazon	66%
Honda	65%
Volkswagen	59%
Nissan	58%
Hyundai	58%
Volvo	56%
Ford	53%
Land Rover	48%
Kia	46%
MINI	44%
Vauxhall	42%
Peugeot	41%
Renault	41%
Citroen	38%
SEAT	36%
Skoda	35%
Fiat	30%

Trust this brand to develop an electric car	
Audi	82%
Mercedes-Benz	82%
BMW	81%
Ford	80%
Toyota	79%
Honda	78%
Volvo	78%
Nissan	77%
Volkswagen	73%
Hyundai	70%
Land Rover	73%
Vauxhall	69%
MINI	68%
Peugeot	65%
Renault	64%
Tesla	64%
Kia	65%
SEAT	60%
Skoda	59%
Citroen	58%
Fiat	58%
Dyson	48%
Google	46%
Amazon	43%
Apple	42%

Trust this brand to develop autonomous driving features	
Mercedes-Benz	79%
Audi	78%
BMW	78%
Toyota	75%
Honda	74%
Volvo	74%
Nissan	72%
Volkswagen	72%
Ford	70%
Land Rover	69%
Hyundai	68%
Dyson	67%
Google	67%
Apple	66%
Vauxhall	65%
Amazon	64%
MINI	64%
Kia	59%
Peugeot	59%
Citroen	57%
Renault	57%
SEAT	56%
Fiat	51%
Skoda	55%

Trust this brand to develop a fully autonomous car	
Audi	81%
Mercedes-Benz	80%
BMW	79%
Toyota	75%
Honda	74%
Volvo	74%
Volkswagen	72%
Nissan	72%
Ford	70%
Land Rover	69%
Hyundai	68%
Dyson	67%
Google	67%
Apple	66%
Vauxhall	65%
Amazon	64%
MINI	64%
Kia	59%
Peugeot	59%
Citroen	57%
Renault	57%
SEAT	56%
Skoda	55%
Fiat	51%

The semi-autonomous safety features of advanced driver assistance systems (ADAS) and lane assist offer an exciting and profitable opportunity for the industry

06

The rise of autonomous

The automotive industry is undergoing a technological revolution of which AFVs are just one strand. We'll see more innovation during the next decade than we've seen in total since the first Model T rolled off the production line. Today's increasingly sophisticated advanced driver assistance systems (ADAS) will be the forerunners of driverless technologies that will redefine future mobility systems.

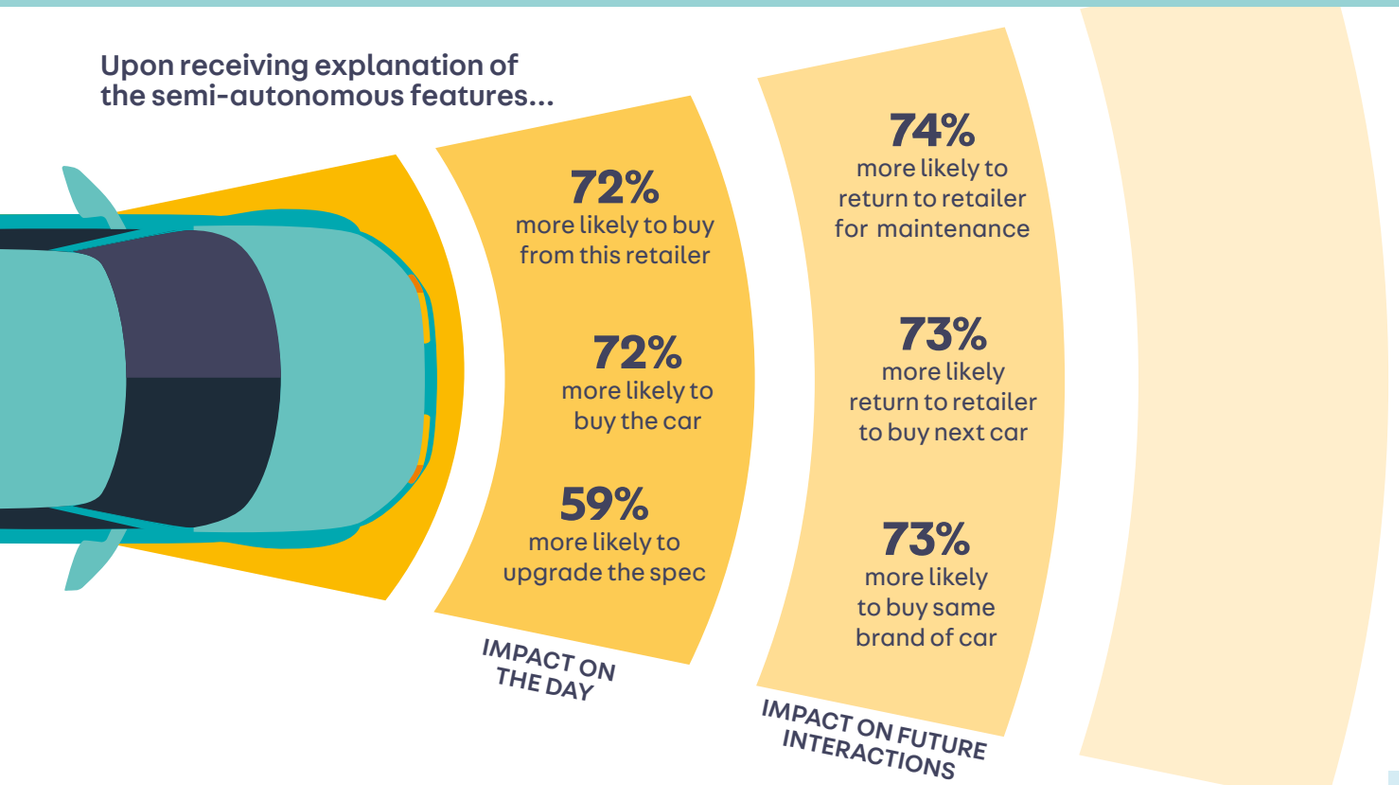
However, contrary to the speculation of some commentators, the development of autonomous vehicles far from signals the death knell of retail. Quite the contrary. Level 3 and even Level 4 autonomy will increasingly become stand out features for brands and retailers to market. And whilst Level 5 may initially be limited to one off trips in largely urban environments, which can support the required complex infrastructure for them to operate, they certainly won't spark a wholesale disruption of private ownership. Exclusive access and easy usership of a car will remain key.

Today, there remains a lack of consumer demand for full autonomy. Our research showed that 8 in 10 people would be wary of using a car (84%), taxi (83%) or bus (82%) without the safety net of a human driver, though this is less of a concern for trams and trains (72%). In fact, when asked whether they'd use a self-driving car that they couldn't take control of, nearly half (48%) said they 'absolutely wouldn't use this vehicle'. However, it's perhaps not surprising - if for many drivers the switch from fossil to electric is a leap of faith, it is at least a leap into widely tried and tested technology. The transition to self-driving cars is a leap into science fiction.

The evolutionary jump in self-driving capabilities displayed at the Consumer Electronics Show (CES) recently is

80%

of people would be wary of using a car, taxi or bus without the safety net of a human driver



staggering. However, their application in a real-world scenario will be incredibly challenging and in order for them to become a reality on our roads, the deep-rooted silos that we as an industry tend to work in will need to be addressed.

Whilst many argue the government's cuts to grants demonstrate a lack of understanding of the complexities of the automotive industry, those on the other side of the fence could say the commitment to driverless technology shows a misunderstanding of the huge challenges and disruption it will cause. Consider High Speed 2 (HS2): by the time phase one is completed in 2026, it would have taken a highly committed consortium 25 years and potentially over £56 billion to implement. Introducing the necessary infrastructure to support potentially millions of self-driving vehicles across the UK will require huge scale collaboration between the manufacturers and technology companies that create them, the governments that define the policies, the telecommunication companies that develop the wireless networks to connect them, transport system providers, and the power companies which fuel them. Cutting through these silos to enable true collaboration, partnership and engagement between them will bring huge benefits for all stakeholders.

35%

of car buyers said the features were clearly explained to them during the sales process

On the immediate horizon though, we believe the semi-autonomous technology that many cars already feature offer a far more exciting and profitable opportunity for the industry. One which is currently being largely overlooked.

Our research illustrates a clear correlation between consumer understanding of this technology and the opportunity to upsell and build all-important brand loyalty. Whilst most car buyers don't fully understand the technology (61% of car owners believe a rear-view camera is an autonomous feature, and 74% believe lane departure warning also is) when explained to them during the sales process, the immediate and long-term impact can be significant.

However, underlining the scale of the missed opportunity, just 35% of car buyers whose car has semi-autonomous features said these were clearly explained to them during the sales process, and only a third (33%) received a demonstration. But it's not just the front end of retail where consumers are being put off: the use of highfalutin marketing jargon and acronyms is also an issue. In fact, when presented with the various manufacturing brand names for their sophisticated semi-autonomous features, the majority of car buyers either miscategorised its function, or simply failed to appreciate its advanced capabilities. Far more effective is language that clearly explains how the features help them in their everyday lives.

Cutting through the jargon

Cason Grover, Senior Group Manager, Vehicle Technology Planning, Hyundai (Motor America)

The myriad of systems now available on new vehicles is confusing to the consumer and this confusion is exacerbated by each manufacturer having its own terminology for their respective autonomous safety systems.

That's why when we launched our SmartSense driver assistance system, we made the conscious decision to explain the system in terms the consumer can understand i.e. the functions rather than the system name.

This approach also needs to be taken in the way that we as an OEM communicate these systems to dealers, how the dealer explains to the consumer and even down to how the technology itself communicates to the driver. By successfully implementing this we anticipate that consumer trust in these systems will rapidly grow and lead to greater uptake.

For us, consumer trust in these systems is key. Web content, demos at car shows and pilot programmes certainly help in exposing the consumer to ADAS, but a hands-on demo by a dealer is the key to exposing consumers to the functionality of these systems. What we are seeing is that, after a successful demo and purchase, consumers who opt for these systems will seek to have more in their next vehicle purchase.

The future of autonomy

Graeme Smith, CEO, Oxbotica

It's an exciting time to be involved in the automated technology industry. Although there is still some way to go before we reach Level 5 autonomy – a truly autonomous system – the progress made in the last year alone is a sure indicator that we are moving in the right direction.

When developed in the right way, the beauty of autonomous software is that it can be applied in limitless ways. While it is clear that the technology is disrupting the automotive industry and will make roads safer for both drivers and pedestrians, its reach extends much further. It can make any type of vehicle autonomous, across a diverse range of industries and environments – whether that's on a road, down a mine, in a warehouse or around a port or airport.

With software at its core, the developments that are driving the transport industry forward today will unlock infinite opportunities across industries and society.

> When developed in the right way, the beauty of autonomous software is that it can be applied in limitless ways

Industry insights:

Forget the future, the semi-autonomous features in today's cars offer brands and retailers much more opportunity to build loyalty, upsell and make more meaningful relationships with car buyers:

- Retailers should explain the features of the car during every stage of the sales process (including decision-making, customer handover, and post-delivery) as consumers are prepared to pay more for them and return to the same retailer for aftersales
- Manufacturers and their agencies should simplify the message – over use of branded jargon and acronyms is alienating and confusing car buyers
- Retailers should sell and market semi-autonomous technology to those who already have them as customers will actively look for the same or similar features in their next car search
- Retailers should explain the cost difference of these technologies in finance terms as a small increase to the monthly price will be less likely to put consumers off than an increase in the total cost

- Manufacturers and retailers should not talk about features of the car in technical terms – instead focus on safety, ease of use and the tangible benefits

07

The benefits of CASE

The evolution of the car is a very broad theme. The advances in battery powered vehicles and autonomous technology are part of a wider narrative of Connected, Autonomous, Sharing, Electric (CASE), which has far broader implications than simply consumer convenience and running costs. It offers huge benefits to society, cities and the environment, not least in terms of personal safety, mobility and health.

Whilst we have touched on some of the long-term changes in this Report, we have tried to narrow our focus to highlight the more immediate and short-term benefits some of the CASE trends offer retailers, manufacturers and wholesalers. Ultimately, whilst there may be degrees of disruption that come as part of any major change, we believe the advances in technology will create even stronger affection for cars in the future as they evolve to better meet our needs. In our last Market Report[14] we revealed that contrary to speculation, millennials still love the driving experience as much as their parents' generation. The more we can enhance the buying and driving experience by focusing on technology that genuinely meets consumer needs, the more we can unlock this desire and grow the value of the car market.

14. *Auto Trader Market Report: The future of car ownership, September 2018*

A view of the future

Charlie Simpson, Partner and Head of Mobility2030, KPMG

The broader vision for our future global transport environment, or what KPMG describes as 'Mobilty2030', has implications well beyond the car and into the wider environmental, city landscape and socio-political arenas. Our ways of thinking about the car-centric transport environment have arguably not evolved significantly in almost 100 years. Whilst the car has been at the heart of economic growth in developed markets, the dis-benefits of scaling up personal car ownership and usage are now starting to be felt, particularly at political and environmental levels.

This positive vision of a future smart, green, connected and more efficient transport system can in our view bring real and tangible benefits. Not only through better air quality (the negative impacts of NOx on the lung health of city inhabitants is now becoming very clear) but also through reduced congestion leading to reduced time wasted in traffic jams and falling delivery costs, freed up city parking spaces that can be re-deployed for greener urban spaces or affordable housing, and better connected integrated public-private transport.

This may be a somewhat utopian view of the future, but we believe that the tipping points in consumer perception, government attitudes, technological development and economic user cases are close at hand.

This is a hugely exciting time in the world of future mobility, there will be significant disruption across the industry, but in our view the automotive industry has the opportunity to sit at the centre of this revolution and will play a vital strategic view in building our Mobility2030 future.

Research methodology

Consumer research

Auto Trader partnered with Join the Dots, an award-winning consumer insight agency, to uncover and analyse attitudes towards evolving car technology and to explore the impact of legislative changes on car buying behaviours, among a nationally representative sample of over 3,000 UK adults aged 18+.

Auto Trader marketplace search data

Auto Trader extracted data from its marketplace to analyse the movements of used car prices and report on the search behaviours of UK car buyers. The data used in this Report includes specified search behaviour for fuel types and extracts from the Auto Trader Retail Price Index.

Auto Trader Retail Price Index

The Auto Trader Retail Price Index combines and analyses data from c.500,000 trade used car listings every day, as well as additional dealer forecourt and website data, OEM, fleet and leasing disposal prices, and pricing data from over 3,000 car dealership websites. All ensuring the Index is an accurate reflection of the live retail market.

About Auto Trader

Auto Trader Group plc is the UK and Ireland's largest digital automotive marketplace. Auto Trader sits at the heart of the UK's vehicle buying process and its primary activity is to help vehicle retailers compete effectively on the marketplace in order to sell more vehicles, faster. Auto Trader listed on the London Stock Exchange in March 2015 and is now a member of the FTSE 100 Index.

The marketplace brings together the largest and most engaged consumer audience. Auto Trader has over 88% prompted brand awareness and attracts an average of 55 million cross platform visits a month, with circa 70% of visits coming through mobile devices.

The marketplace also has the largest pool of vehicle sellers (listing more than 450,000 cars each day). Over 80% of UK automotive retailers advertise on autotrader.co.uk

For more information, please visit:
https://plc.autotrader.co.uk/press-centre

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For the latest news, views and insight for the automotive retail community, follow @ATInsight on Twitter and LinkedIn.