



LEX AUTOLEASE



DRIVING TECHNOLOGY

How technology is
redefining the business fleet

DRIVING INTELLIGENCE

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SURVEY BACKGROUND

The statistics and insight shared in our Driving Intelligence series of reports are based on the findings of two surveys.

SURVEY OF DECISION-MAKERS

A survey of 288 people wholly or jointly responsible for managing the vehicle fleets of their organisation. The survey was conducted online by an independent research company and it took respondents around 15 minutes to complete the survey. The sample was a mix of those working for small, medium and large companies, with a corresponding mix of fleet sizes – 43% had 1-10 vehicles in their fleet; 9% had more than 250.

SURVEY OF DRIVERS

A survey of 1,007 employees who either drove a company car (501 people) or had a privately-owned car (506 people). The survey was conducted online by an independent market research company and took around 15 minutes for respondents to complete.

STATISTICAL DATA

Due to the rounding of figures, not all breakdowns added up to exactly 100%. Figures in corresponding charts within this report were therefore adjusted to ensure the totals added up to 100%.

ADDITIONAL RESEARCH

The report also draws on guidance and findings from a number of Government departments and other reputable sources.

INTRODUCTION TO DRIVING TECHNOLOGY

Vehicles and vehicle technologies continue to evolve and organisations must regularly assess their fleet to respond effectively. Fully electric vehicles, for example, are not only a reality now, but are becoming much more attractive to the business fleet.

We are also on the cusp of perhaps the biggest development within the motor industry – fully automated vehicles. The success of recent commercial trials, and the creation of test cities in both the US and the UK, means we can expect to see more and more fully autonomous vehicles within commercial and company car fleets in 10-20 years' time. This will impact the nature of driving and fleet management.

THE ROLE OF THE FLEET MANAGER

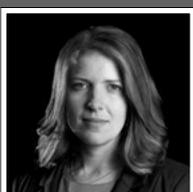
The wealth of new and enhanced technologies in recent years has greatly impacted the role of the fleet manager. Technologies such as **TELEMATICS** have created access to a wider range of vehicle data to help improve driver safety, enhance operational efficiency, reduce maintenance costs and create fuel efficiencies.

The temptation is to incorporate as many of the new technologies as possible. However, it is important to be clear which of these are right for the organisation and which are 'nice to have' but have little practical application. The right choice cuts costs and streamlines reporting. The wrong choice can result in paying a premium for functionality that is not used.

This report has been developed to create that clarity. We have analysed the impact of new technologies within seven key fleet management areas, considering the immediate and future effect on the business fleet and how the technologies can be successfully implemented within the organisation.

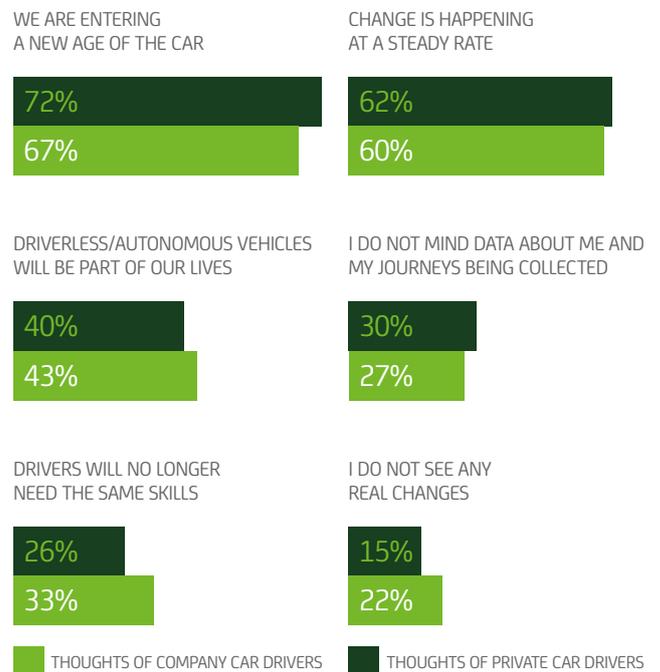
This report also provides guidance on how to respond to the challenges and risks created by technology. It is part of our commitment to encourage more effective fleet decision-making across the sector.

I hope you enjoy reading this Driving Technology report and if there are any areas you would like to discuss in more detail, please do get in touch.



Lauren Pamma
Head of Fleet Consultancy,
Lex Autolease

The report uses the findings of our **DRIVER AND FLEET DECISION-MAKER SURVEYS**. The results revealed the attitudes of organisations and individual drivers which may impact the implementation of technology in the short term. These included:



43%

OF BUSINESSES AND DRIVERS THINK DRIVERLESS VEHICLES WILL BE ON OUR ROADS WITHIN 10 YEARS

44%

OF BUSINESSES AND DRIVERS THINK AUTOMATED DRIVING WOULD MAKE SENSE ON MOTORWAYS

33%

OF FLEET MANAGERS/ DECISION-MAKERS SAY TECHNOLOGY IS DE-SKILLING THE JOB OF FLEET MANAGEMENT

HOW DATA IS CHANGING THE WAY WE DRIVE

Technology and data interpretation previously associated with Formula One cars is now a key component in the management of everyday vehicles. Telematics, the technology of gathering information on a vehicle, is increasingly being used by organisations to monitor driver behaviour, with 17% of organisations in our survey currently using it – 7% more than in 2015.

WHAT IS TELEMATICS?

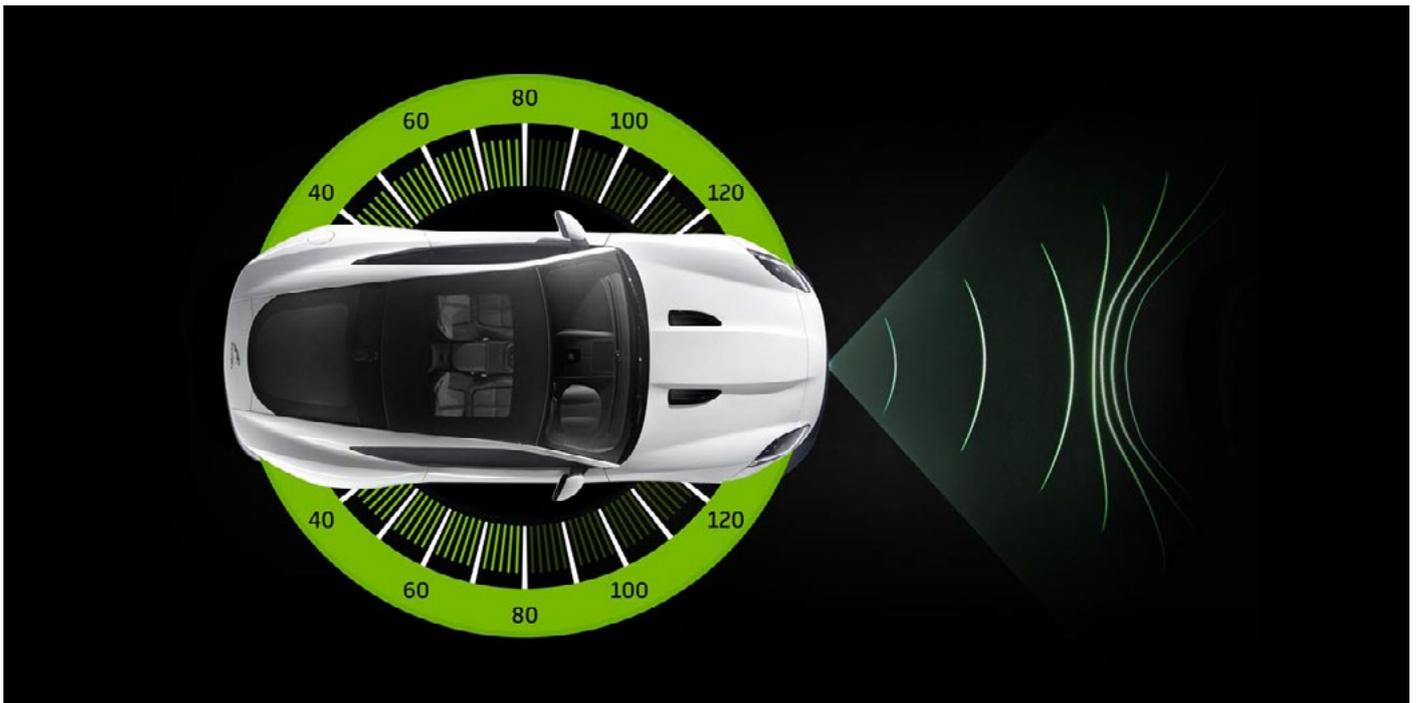
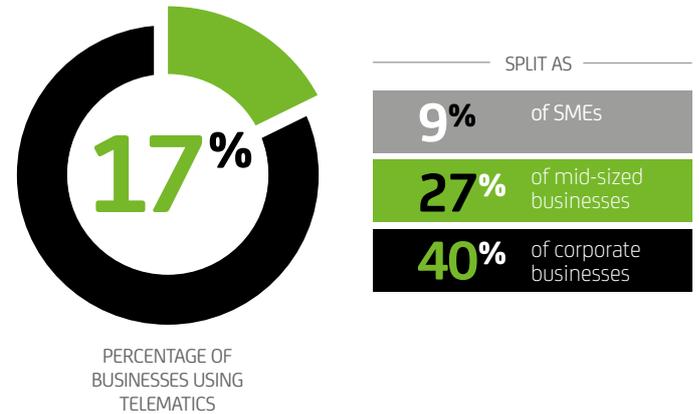
Telematic systems gather and record driving data from an organisation's cars and vans, then transmit that information for storage and interpretation.

Vehicles are usually fitted with an on-board device (OBD) that tracks its location via GPS and records information on areas such as braking, acceleration, maximum speed, journey time and out of hours usage.

WHAT ARE THE BENEFITS FOR FLEET MANAGERS?

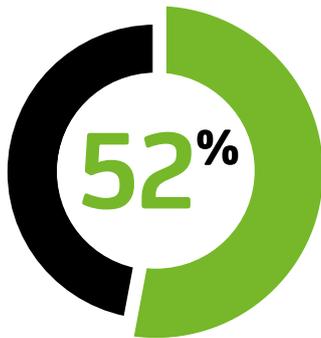
Telematics data can reveal driving habits that are costing the organisation money or even placing drivers at risk. For example, it may reveal that drivers are leaving their engine running while making a delivery, leading to higher fuel costs, or that they are regularly breaking speed limits.

Fleet managers can also track journey times and use the information to plot more efficient routes, or warn drivers about using expensive petrol stations. Telematics can even be used to identify recurrent mechanical problems or links between driver behaviour and excessive tyre wear. Furthermore, insurance companies typically offer a discount on premiums for vehicles fitted with telematic devices.



ADOPTING TELEMATICS

Adding telematics to a vehicle fleet could save fuel, cut maintenance costs, reduce insurance premiums and improve driver safety, and many businesses admit telematics would improve the behaviour of their drivers.



OF BUSINESSES SAY
TELEMATICS WOULD
IMPROVE DRIVER
BEHAVIOUR

Despite this, just 19% of businesses think it is an important part of their fleet management and only 27% of businesses plan to bring in the technology over the coming two years.



OF BUSINESSES PLAN
TO BRING IN THE
TECHNOLOGY OVER
THE COMING TWO YEARS

OF BUSINESSES AGREE
THAT TELEMATICS WOULD
IMPROVE MANAGEMENT
INFORMATION



Cost, privacy issues and the interpretation of raw data may explain any reluctance to use telematics. However, technology trends suggest that costs will reduce as telematics becomes more embedded within the sector, while improved clarity about the legality of data collection and storage may also increase take-up. The software which interprets raw data and flags any driving behaviour to correct will also improve, becoming more user-friendly.

WHAT SOLUTION IS RIGHT FOR MY ORGANISATION?

The cost of telematics tends to be a monthly subscription and there may be an initial installation fee, depending on the service used. A more expensive option is to pay for a perpetual licence with no follow-up subscription fee. The range of service providers and options allows an organisation to choose what is best for their purposes.

The most basic options come with location tracking and simple analytics tools, but higher end solutions offer servicing and fault monitoring.

It is important for organisations to choose the package that is right for their needs, as there is no point paying for extras that will not be used. It is also important that they take into account potential hidden costs, such as contract termination fees or roaming charges when the vehicle leaves the country.

It is also worth noting that cars are increasingly 'connected' and collect data without the need for an on-board device. At the time of writing manufacturers, drivers and lease companies are discussing who 'owns' this data and how it can be used, but once resolved there is no doubt that even more vehicles will have automatic data collection.

The rise of data collection systems built into a vehicle by the manufacturer also means that plug-in telematic devices could become obsolete in the long-run. However, the benefits of a plug-in system is that it can be used across a variety of different manufacturers and models to collect data in a consistent format.



CREATING THE RIGHT PROGRAMME

The six step process to ensuring the right telematics programme.

- 1. UNDERSTANDING YOUR GOALS** – it is important to clearly identify what is needed from a telematics system. Is it monitoring driver behaviour, analysing travel and routes taken, capturing mileage or live route planning? The needs will often differ between vehicles.
- 2. APPOINTING THE SUPPLIER** – a telematics supplier should outline the risks, benefits and available technology, then detail a roadmap to show their implementation process. They should also ensure the organisation's dedicated project manager has a strong understanding of the telematics data being created.
- 3. CHECKING PLANS** – with the support of the telematics supplier, organisations should identify whether the goals and KPI ambitions identified in step 1 are being met, and that expensive or over-complicated systems which produce vast amounts of data the organisation will not use has not been recommended.
- 4. DESIGN AND BUILD** – working with the telematics supplier, an organisation should decide the best way to implement the scheme and the level and type of data they want to identify.
- 5. PILOT** – organisations should ideally launch a telematics programme on a limited number of vehicles first, to help their team test and evaluate the process. This will also highlight any changes that may be needed before the scheme is rolled out across the organisation.
- 6. PROGRAMME LAUNCH** – when formally launching a telematics programme, an organisation should ensure their administrative team have easy access to support from the telematics supplier. They should also develop ongoing support for when the programme becomes 'business as usual'.

WHAT FLEET MANAGERS NEED TO DO

19% OF FLEET MANAGERS/DECISION-MAKERS SEE THE MONITORING OF TELEMATICS AS AN IMPORTANT PART OF THEIR FUEL MANAGEMENT PRIORITIES



There is little point in installing telematics unless the data they provide is acted upon. Although automated management information (MI) software will interpret data, fleet managers must use it to monitor and train drivers on how driving behaviour can be made safer and more efficient.

More importantly, if data reveals that an employee is driving dangerously but no action is taken to prevent this, the organisation could be held partially liable if the driver is then involved in an accident.

EXCEPTION REPORTING

The key differentiator between the many telematics systems is its practical application within the organisation. Telematics can produce vast amounts of raw data, so it is key to have a system that ignores all but the most important data required. If monitoring driver speeds, for example, exception reports should only flag instances of speed limits being broken.

TELEMATICS TO SUPPORT VEHICLE DECISION-MAKING

Telematics can be used by organisations considering electric vehicles within their fleet. Analysis of the typical range a vehicle drives within a day, and where they could charge, can be used to assess whether the journey patterns and types are suitable for a pure electric or plug in hybrid vehicle. This information can also be used to calculate the correct number of recharging points needed at work locations, helping avoid the cost of fitting unnecessary charge points.

Heatmaps can also be created to highlight areas where vehicles are parked for extended times, ensuring charge points are installed and positioned in the most convenient or suitable places.

MAINTENANCE TODAY

The introduction of telematics is demanding new skills from fleet managers, such as data interpretation and enhanced computer literacy. The combination of telematics and variable servicing is making maintenance far more cost effective, with problems being quickly identified and the potential for parts to be replaced only when necessary.

OF FLEET MANAGERS/
DECISION-MAKERS THINK
AUTONOMOUS CARS WILL
IMPROVE VEHICLE EFFICIENCY



In some ways, identifying a requirement for maintenance has never been easier. Over the past decade, technology has evolved to automatically detect faults such as low oil levels, blown light bulbs or low tyre pressures.

Regular vehicle checks and risk assessments remain important though, as technology still cannot tell whether tyres are damaged and/or worn, and windscreen wipers need replacing, for example.

Although vehicles can detect many faults they cannot fix them, so it is important to remind drivers of their responsibility to act upon dashboard warnings. This includes topping up Ad Blue in the majority of new diesel engines, as the vehicle will not re-start once it has run out. These responsibilities should be made clear in driver policies.

VARIABLE SERVICING

Traditional or 'fixed' servicing requires the vehicle to be taken off the road for oil changes and parts replacements after a fixed period of time or number of miles. In-engine sensors now allow for 'variable' servicing, where the car detects when parts need to be replaced or when the oil needs to be changed, for example.

Variable servicing may reduce the frequency of services for careful and/or short-distance drivers, and ensures that parts are only replaced when absolutely necessary. However, variable servicing relies on drivers reacting to the service count downs and warning information on their dashboard – failing to take the vehicle in for servicing promptly could invalidate the manufacturer warranty or leasing agreement.

Variable servicing could also mean taking the vehicle off the road more often, sometimes at short notice, as and when parts wear out. Overall maintenance costs may be reduced, but the cost of hiring vehicle replacements may be higher. In some cases, servicing all components at once after a fixed period may still be more convenient.

CALL TO ACTION

- Drivers should be reminded to carry out simple procedures such as checking tyre pressures and topping up the windscreen wash, and of the need to regularly perform these checks.
- An organisation's driver policy document should include the need for drivers to act upon dashboard warning messages, for example by topping up the oil or arranging for the vehicle to be serviced.
- An organisation should consider whether installing telematics will reduce maintenance costs. This can only be achieved if the telematics data is being interpreted and acted upon, with drivers trained to avoid wasteful or unsafe driving habits.

MAINTENANCE TOMORROW

The move towards increased automation of maintenance procedures is set to continue as vehicles more effectively detect problems with parts before they break. Such 'preventive maintenance' should in theory result in fewer breakdowns. With technologies improving and the use of electric vehicles becoming more widespread, organisations will also be able to benefit from the lower maintenance costs typically associated with fully electric drivetrains.

As new technologies are introduced, an organisation's driving policy will need to be regularly reviewed. For example, some cars are starting to be fitted with an 'eco' mode that provides better fuel efficiency. If an organisation is paying a vehicle's fuel use in full, use of the 'eco' mode should be made obligatory.

The policy should also make clear that personal modifications to the vehicle, such as engine remapping, are not permitted unless it is with the agreement of the organisation and the relevant leasing company. Some fleet operators are already remapping engines for fuel efficiency reasons, such as installing rev limiters, supporting the actions of nearly 1 in 5 of the organisations in our survey.



OF BUSINESSES ARE LIKELY TO INTRODUCE DEVICES ON VEHICLES TO RESTRICT MAXIMUM REVS ON VEHICLES IN THE NEXT TWO YEARS



OF BUSINESSES ARE LIKELY TO RESTRICT THE MAXIMUM SPEED OF THEIR VEHICLES IN THE NEXT TWO YEARS

ELECTRIC VERSUS PETROL/DIESEL

The popularity of electric vehicles within business fleets is likely to grow in coming years despite their initial purchase or leasing costs being higher than traditional petrol or diesel models. This will mainly be down to tax incentives, but the greatly reduced number of moving parts and simpler design of electric vehicles means that organisations can also benefit from reduced maintenance costs. When combined, these make the electric vehicles' whole lifetime cost attractive.

PREVENTIVE MAINTENANCE

As telematics becomes ever more refined and integrated into every part of the vehicle, early warnings could allow a part to be replaced before it goes wrong, thus preventing serious damage to the engine. A number of manufacturers have already brought this technology in and as its use becomes more widespread, this preventive maintenance should reduce the time fleet vehicles are off the road. As with variable servicing, however, this could also result in more frequent interventions.

The amount of data generated by vehicles will continue to grow, with servicing data being circulated between vehicle owners, garages, manufacturers and fleet managers. Likewise, car manufacturers may start to share telematics data with leasing firms, so organisations can expect a more accurate idea of the wear and tear associated with different vehicles.

CALL TO ACTION

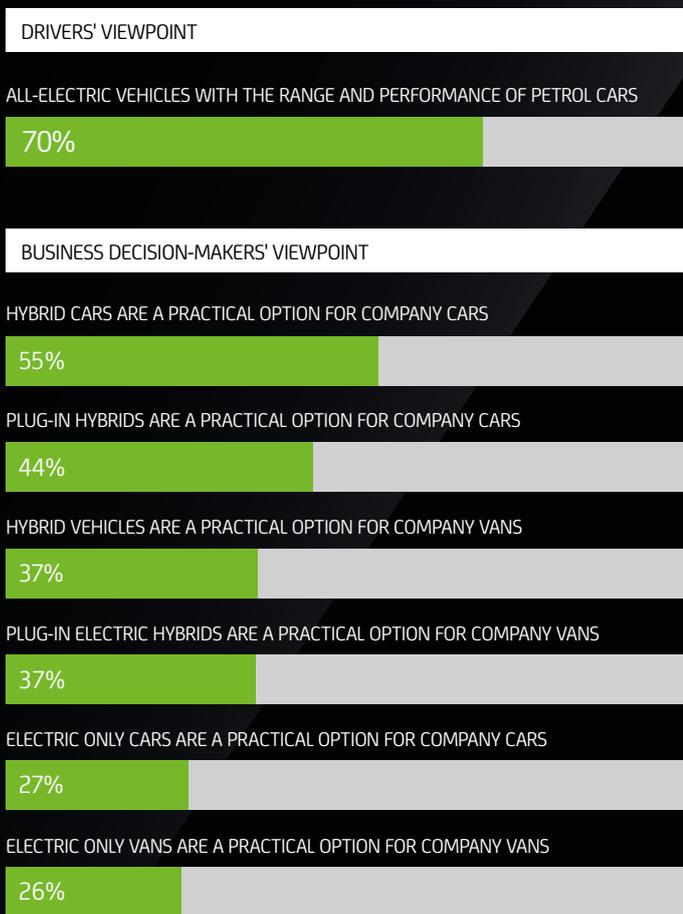
- Organisations should consider what their fleet needs will be in the future. That will direct the make-up of the future fleet and determine whether fully electric vehicles can be incorporated to enable the organisation to benefit from maintenance and tax savings, on top of providing environmental benefits.

- Driver policies should be modified to take into account new technologies, such as prohibiting any unauthorised modifications, for example engine remapping.
- With technology reducing a lot of the traditional fleet administration, the role of the fleet manager will change. Skills will be focussed on mobility management and interpreting data to deliver cost savings.

FUEL USE TODAY

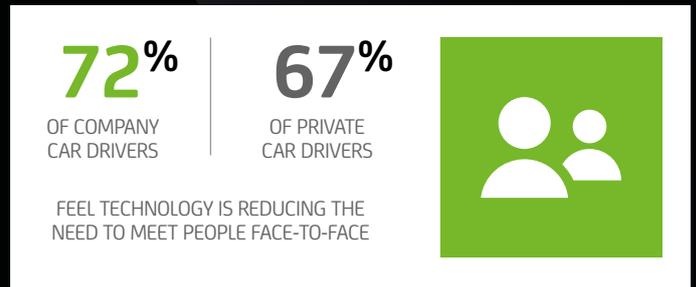
Inefficient fuel use can have a significant impact on bottom line figures. Switching to more fuel-efficient vehicles can cut costs, but further savings can be made by educating drivers to ensure they drive in a fuel-efficient way.

SUPPORT FOR TECHNOLOGY



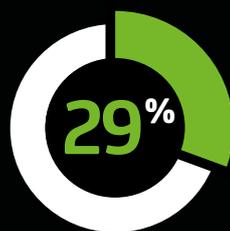
The figures to the left show that although organisations seek a more fuel efficient fleet, they feel fully electric vehicles are still not practical enough to support their needs. However, as battery range increases and costs fall over the coming years, their use will be much more widespread. In the meantime, organisations will still be reliant on petrol and diesel for the majority of their overall fuel needs.

Of course, the easiest way to save money on fuel is to avoid travel altogether and promote greater use of WebEx and other virtual meeting systems across the organisation. However, some travel will always be necessary.



TELEMATICS TRACKING

TELEMATICS can be used to identify inefficient driving practices, such as drivers who leave their engine running while making a drop off or frequently accelerate and decelerate harshly. In such cases, it is imperative that a fleet manager intervenes to educate drivers on more efficient driving behaviour, which might also include avoiding excessive use of the heater or air conditioning. That need has been identified by nearly a third of respondents to our survey.



OF BUSINESSES ARE LIKELY TO INTRODUCE TRAINING IN THE NEXT TWO YEARS ON MORE ECONOMICAL DRIVING

FUEL USE TOMORROW

As battery technology in electric vehicles continues to improve and the associated range of electric vehicles increases, their use in the fleets of tomorrow should increase. Future penalties for high emission vehicles and continued incentives for ULEVs should also encourage a greater uptake of electric vehicles, whilst improvements in satellite navigation systems will lead to more efficient journeys.

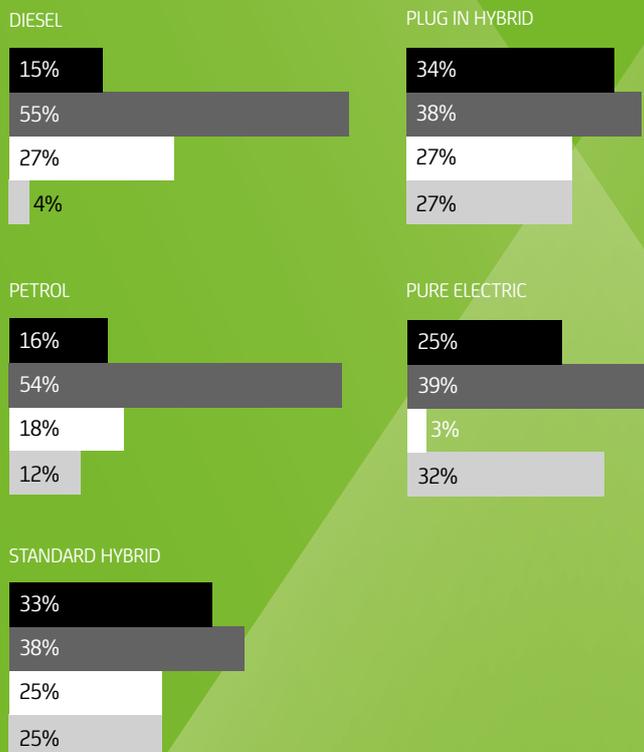
Organisations do not seem ready to commit to fully electric vehicles over the coming five years, and perhaps opinions about the distance these vehicles can achieve after a charge can explain this view. If organisations continue to rely on petrol and diesel fuels, there will be greater pressure on drivers to drive more efficiently to help keep rising fuel costs under control.

Satellite navigation is already used to plan efficient journeys, offer warnings of heavy traffic and highlight accidents on proposed routes. Improved technology will make these diversionary route plans even more dynamic to help avoid wasting fuel in traffic jams. This same technology may even suggest using the train or alternative transport which may be quicker. The same technology can also highlight electric vehicle charging points nearby.

FUTURE FLEET COMPOSITION

How do you expect the approximate percentage of each fuel type across your van fleet to change in the next five years?

■ Increase ■ Same ■ Decrease ■ Don't know



ELECTRIC VEHICLES

Over the next five years, the extension of the national charging network, improvements to the range of models available and the fuel and tax benefits associated with their use means fully electric vehicles will make up a much greater percentage of future fleets.

Any increase will be supported by forthcoming regulation announced in the Government's 2016 Autumn Budget announcement. This will see:

- the removal of salary sacrifice tax and employer NI advantages on all but Ultra Low Emission Vehicles (ULEVs) after April 2017
- lower tax bands for the lowest emitting ULEVs from April 2020
- an extra £80m of funding for the UK's charging infrastructure
- an additional £40m of grants to support charge points for electric vehicles, as well 100% capital allowances until at least March 2019 for those organisations installing them.

Some vehicles already offer a 250-mile range, while the latest Tesla models can travel for nearly 300 miles without charging. Other manufacturers have also invested heavily in research and development with a number of new electric vehicle models due to be launched in 2018 with improved performance. This includes the Jaguar I-PACE. Advances in battery technology should also improve distance and reliability.

Rapid AC and DC charging stations have also started to appear on an increasing number of service stations and other locations across the UK. These will gradually become even more common and already more than 640 rapid AC and over 1300 rapid DC charging stations are available (as at January 2017).

Many of these have been installed as part of a Government scheme which predicts electric charge point locations outnumbering traditional fuel stations by 2020, if not sooner. Rapid charging points can provide an 80% charge in under 30 minutes, thus making long-distance journeys in an electric car much more feasible, especially when supported by apps and satellite navigation which highlight charge points to help route planning.

CO₂ EMISSIONS

There are strict CO₂ emission targets for manufacturers to meet, gradually reducing all new vehicle models to zero emissions by 2050. This will eventually limit new vehicle choice to electric models, and potentially hydrogen fuel cell vehicles.

ENHANCED PERFORMANCE

Improved performance will also result from improvements to vehicle specifications and accessories. More efficient gearboxes already allow up to nine gears for cars, while improvements to lightweight materials and new and improved smart systems, such as stop/start alternators, will further enhance the ability to bring fully electric vehicles into a business fleet.

Organisations who continue to rely on petrol and diesel engines for their vehicles will need to keep an eye on [emission and taxation regulations set by the Government](#).

AUTONOMOUS VEHICLES

Automated driving technology will help improve fuel efficiency in a number of ways, primarily by reducing battery usage on fully electric vehicles and petrol/diesel on hybrids.

Automated vehicles will be programmed to consistently drive in a fuel efficient manner, avoiding speeding and excessive braking/acceleration. At a minor level, automated vehicles will be able to execute certain manoeuvres, such as parallel parking, first time. This eliminates the fuel wasted when a driver tries to achieve the same result in several attempts.

Connected technology and software will also help vehicles avoid traffic jams, find parking spaces more quickly, plot new and more efficient driving routes in real-time and generally eliminate the excessive use of fuel.

CALL TO ACTION

- An organisation needs to consider which fuel technology best meets its needs. Long distance driving might still be best suited to diesel, petrol or full hybrids, whereas electric will be more attractive for urban driving. Plug in Hybrid vehicles could be the best choice for a mixture of long and short distances.
- The electric charging network is expanding and the battery range of electric cars is increasing, so they will be a much more viable option for fleets in the near future.
- More efficient engines and self-driving aids will reduce fuel use and CO₂ emissions, but they still need to be supplemented with staff training in efficient driving behaviour.
- Drivers should be informed to source cheaper fuel if possible, perhaps by using satellite navigation to find the cheapest petrol locally.
- If the fleet contains plug in hybrid vehicles, drivers should be told to keep them topped up with electricity to reduce petrol/diesel use.
- Drivers may need education on how to optimise fuel through more efficient driving practices.
- Installing telematics could save money on fuel by providing information on inefficient driving habits, providing the opportunity to identify drivers who would benefit from training, and by giving access to optimised routing to help drivers avoid congestion in real time.

INSURANCE AND VEHICLE INCIDENTS TODAY

New technologies can help organisations better manage and reduce the number of vehicle incidents. Some technologies are helping to prevent accidents in the first place, while others are providing direct evidence of poor driving judgement or illegal driving behaviours which can then be rectified through a training programme before a serious incident occurs.

When incidents do occur, innovations such as crumple zones are helping improve the safety of the driver and support an organisation's moral obligation to provide a safe working environment. However, although technology can support a safety focus it needs to be backed up by a strong driver policy that puts the wellbeing of the driver first.

TELEMATICS – SUPPORTING SAFER DRIVING



TELEMATICS can reveal unsafe driving behaviours, such as excessive cornering speeds or harsh braking/acceleration, and identify employees who are regularly driving for long hours. The resulting information provides fleet managers with evidence to show which drivers need additional driver training. This perhaps explains why more than a quarter of organisations are likely to introduce telematics over the coming two years, with a similar number being likely to introduce training on accident avoidance and safer driving in the same timeframe.



OF BUSINESSES ARE LIKELY TO INTRODUCE TRAINING ON ACCIDENT AVOIDANCE AND SAFER DRIVING IN THE NEXT TWO YEARS

Evidence resulting from telematics puts an onus on an organisation to act upon it immediately, as driver safety should be a key focus for any organisation that uses employees to drive on company business. This could be through driver training or changing the organisation's working patterns to reduce the amount of time spent driving.

If no action is taken despite clear evidence of dangerous driving behaviours, the organisation can be held partially liable if their driver is then involved in an accident.

TELEMATICS AND INSURANCE COMPANIES

When insurers require full fleet telematics as part of their policy, they may ask for evidence that driving behaviours are being monitored, drivers are being educated and safer driving practices are being followed. Proving this may require regular reports or data to be sent to the insurer, placing added burden on a fleet manager or nominated person.

DASHBOARD CAMERAS

Cameras are becoming increasingly popular as a way to reduce insurance premiums and provide evidence in the event of a crash. As well as outward-facing cameras, there is an increasing uptake of cameras pointed at the driver. These can prove a driver was not distracted or using a phone before an accident or incident. These cameras can also be fitted with fatigue alarms that monitor the driver's facial features to detect signs of alertness – and this is a built-in feature in some new vehicles.



33%

OF BUSINESSES ARE LIKELY TO INTRODUCE CAMERAS ON VEHICLES OVER THE NEXT TWO YEARS



37%

OF DRIVERS WOULD SUPPORT THE INSTALLATION OF CAMERAS ON THEIR CAR TO RECORD ANY INCIDENTS



3%

OF DRIVERS ALREADY HAVE CAMERAS INSTALLED ON THEIR VEHICLES

There is a feeling amongst organisations that technology is improving driver safety, an opinion supported by 58% of company car drivers and 54% of private car users. However, driver monitoring systems are only effective if the data is regularly checked and acted upon. If incidents are not identified or followed up by a line manager then drivers will quickly assume the systems are not monitored and could revert back to unsafe driving behaviours.

Telematics and dashboard cameras require education and communication programmes for staff. This includes fleet managers who will need to be trained in how to interpret the huge amounts of data these systems provide. Exception reporting is key to achieving this, as it quickly and effectively identifies only the drivers and behaviours that needs action.

Some employees may show some resistance to working with driver-monitoring technologies. Managers will therefore need to spend time explaining the benefits and use of the system.

In the event of an accident, the invisible witness can support a driver's explanation of what happened, and such technology is becoming more and more prevalent and important. In a recent trial, none of the 'expert witnesses' of an accident had been physically present at the scene. Instead they were called to testify about mobile phone usage and telematics to corroborate the driver's claims.

ACCIDENT-ANALYSIS TECHNOLOGY

Dashboard cameras – both inward and outward facing – can be invaluable when analysing the causes of an accident. Like telematics, they are subject to privacy and data-protection laws and should be treated accordingly.

Some modern vehicles also have built-in data recording, so they can detect details such as whether the horn was used or the brakes applied in the 30 seconds before an accident. In the case of a serious incident this information can be used for evidence in legal cases.

THE INVISIBLE WITNESS

The combination of a **TELEMATICS** system and dashboard cameras can act as an 'invisible witness' to accompany the driver at all times. Just the knowledge that they are being monitored can influence driver behaviour in a positive way.

THE PARADOX OF AUTOMATION

Vehicle safety technologies such as Electronic Stability Programme, ABS, collision-detection systems, fatigue alarms and lane departure warning systems can all help to reduce the number of incidents.

However, the risk with many of these technologies is that drivers may either feel their role in driving the vehicle is reduced or that they are better drivers than they actually are. Feeling secure due to the technology, drivers may regularly drive in an unsafe manner so if these technologies fail or are pushed beyond their limits, the resulting accidents are far worse than they would otherwise have been. Despite this, organisations do feel technology is helping improve driver behaviour.

ATTITUDES TO TECHNOLOGY

ALL THE TECHNOLOGICAL CHANGES ARE IMPROVING DRIVER SAFETY



58%

COMPANY CAR



54%

PRIVATE CAR



HEALTH AND SAFETY POLICIES

Managers seeking to make staff more safety aware should highlight safe driving rules in the driver policy, perhaps first making the policy more stringent by going beyond the legal requirements.

For example, although the use of hands-free phones is technically allowed while driving, they have been shown to provide a significant distraction to the driver. The driver policy might therefore ban mobile phone use completely while the vehicle is moving. This is supported by the results of our survey.



54%

OF DRIVERS THINK
MOBILE PHONES
ARE DISTRACTING



25%

THINK VOICE ACTIVATED
TECHNOLOGY IS
DISTRACTING



22%

THINK
SAT NAV IS
DISTRACTING

As an increasing number of semi-autonomous driving aids are added to vehicles, drivers may start to become too reliant on them. The driver policy should therefore emphasise that the driver remains in control and responsible for the vehicle at all times, even if it is partially driving itself.

It will therefore be important for organisations to keep an eye on legislation. They will need to understand and communicate to the drivers when they become legally 'in control' of the vehicle and when the fully autonomous system can be fully relied upon. Currently, the driver remains legally responsible for the vehicle and its use at all times.

CALL TO ACTION

- The organisation should adopt a 'driver first' mentality when it comes to vehicle enhancements and new technologies. These need to ensure driver safety is paramount.
- When telematics or other technologies are used to monitor driving behaviour, the information provided needs to be acted upon with follow-up training and education. Information is useless unless it achieves its ambition, such as eliminating unsafe driving behaviours in the future.
- Driver policies need to be reviewed to ensure that employees consent to the use of driver-monitoring technologies, such as dashboard cameras and telematics, as they are subject to privacy and data-protection laws. Organisations also need to be aware of their responsibilities when handling the recorded information.
- Drivers need to be trained and educated about new technologies, such as dashboard cameras and telematics. They may show some initial resistance to working with these systems, so the benefits must be explained to help engage them with the organisation's plans.
- Drivers must be made aware of their responsibilities when driving a vehicle, such as not using a handheld phone and only using a hands-free phone in an emergency.
- A full analysis of new technologies can determine how likely they are to prevent accidents and how much they would cost to replace in the event of an accident. To avoid higher repair costs, a major focus should be placed on giving drivers thorough training to support accident avoidance and safer driving behaviours.

INSURANCE AND VEHICLE INCIDENTS TOMORROW

The rise of partial and fully autonomous vehicles which allow themselves to avoid dangerous scenarios should mean accident numbers fall in the future. Until then, and as drivers become ever more reliant on technology, they may be ill-prepared to control their vehicle when something does go wrong.

The associated costs of an incident may be higher in coming years with the increasing amounts of technology needing to be repaired or replaced.

Various technologies that support safer driving, such as lane departure warnings or collision avoidance systems, are already available on some vehicles. These technologies will become more widespread over the coming years, potentially becoming necessary elements in order to obtain cheaper insurance and support duty of care to employees.

Employees will need to be trained to use these technologies effectively and be told to keep them switched on at all times – switching them off may invalidate an insurance policy or a leasing contract.

AUTONOMOUS, SELF-DRIVING VEHICLES

Autonomous vehicles are likely to have fewer accidents, but they will require a culture shift as drivers learn to hand over the responsibility of driving to a machine.

In this transition between human drivers and autonomous vehicles, there could be a stage where the driver is not too sure what is expected of them or what they need to do in certain circumstances. This risk needs to be managed during this transition stage.

For example, although some cars already offer self-parking, the driver still has control of the brake and accelerator, and is legally responsible if the car hits something.

As vehicle technologies continue to develop, driver policies must be updated to confirm that drivers still have overall responsibility for the vehicle and must be ready at all times to intervene if a technology fails. For the time being, and until legislation is changed, this means drivers should not be performing tasks, such as using a mobile phone, even if the vehicle is driving itself.

CARS THAT NEVER HAVE ACCIDENTS

It has long been expected that when vehicles become fully autonomous, accidents will become a thing of the past – and if they do occur, it will be solely down to human error. The technology is currently limited by a number of factors; legislation being perhaps the biggest barrier. As mentioned previously, there is likely to be some confusion when autonomous vehicles share road space with traditionally-driven vehicles.

SUPPORT FOR CAR AUTOMATION

NUMBER OF BUSINESSES SUPPORTING
THE INTRODUCTION OF CERTAIN TECHNOLOGIES

**WARNING
SYSTEMS**
THAT SENSE
WHEN DRIVERS
ARE ASLEEP

84%

**HEAD-UP
DISPLAYS**
TO REPLACE
TRADITIONAL
INSTRUMENTS

44%

**AUTOMATIC
BRAKING SYSTEMS**
THAT TAKE-OVER
IN AN IMMINENT
ACCIDENT

71%

**AUTOMATED
SYSTEMS**
THAT TAKEOVER
ALL ASPECTS OF
MOTORWAY DRIVING

41%



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AUTONOMOUS VEHICLES – INSURANCE IMPLICATIONS

As vehicles move from partial to full autonomy, there will be a 15-20 year period in which a mix of those vehicles will share road space. Currently, there is uncertainty as to where blame would lie should there be an accident between a fully autonomous and manually driven vehicle.

In the same way drivers can make poor driving decisions, so software can come with glitches and bugs which would impact the autonomous vehicles' driving procedures, so it cannot be taken as read that the driver would be at fault.

This could mean manufacturers of the systems operating the vehicle being held accountable for any accidents, rather than the vehicle's occupants. Insurance could therefore be linked to the reliability of the systems, and, like any other industry, manufacturers will need to ensure their systems and features keep up with those of their rivals in order to remain competitive.

The Government is currently consulting on the matter as there is a fear that road sharing will create a high potential for confusion and unprecedented scenarios.

DASHBOARD CAMERAS



33%

OF BUSINESSES ARE LIKELY TO INTRODUCE CAMERAS ON VEHICLES OVER THE NEXT TWO YEARS



The prevalence of dashboard cameras in the UK is expected to increase over the coming years. However, the privacy issues they raise could lead to legislation which may either prohibit their use, as has happened in Austria, Luxembourg and some other European countries, or set limits to how the content can be used and where it can be published, as has happened in Germany.

Although unlikely, UK legislation could set limits on the use of dashboard cameras in the future, while any organisation using its vehicles overseas needs to be aware of the different legislation in other countries so as to avoid potentially breaking local laws.

ADVANCED SAFETY TECHNOLOGIES

More and more safety technologies are likely to be introduced in the foreseeable future, such as improved collision avoidance technology, radars and sensors. These can make the actual cost of an accident rise substantially, as the components often mounted in the grill or bumpers may need repairing or replacing.

In future, seatbelts that monitor the driver's heart rate might also become more common. This could prevent accidents by letting the car take over driving in the event that the driver has a heart attack, and the technology could even call the emergency services to potentially save the driver's life.

Blink sensors to monitor the alertness of drivers will also help deliver improved driver safety in the future. These sense if a driver is falling asleep at the wheel and emit a warning signal to provoke a response.

These technologies could, however, also trigger negative reactions from some users who perceive it as a further invasion of privacy. Some may also perceive this as being discriminatory against older drivers. Assurances against such discrimination will need to be included in driver policies.

FUTURE ADVANCES IN ACCIDENT PREVENTION

Radar-assisted automatic braking systems will improve and become more widespread over the coming years, so most cars will soon be able to automatically avoid many collisions.

Connectivity is seen as the next big safety feature. Vehicles will be able to send signals to each other, so one doing an emergency stop or rapid braking manoeuvre can let the vehicles behind know about the hazard, enabling them to take similar action.

Vehicle-to-infrastructure technology will also see vehicles communicating with roadside furniture such as traffic lights, which could send a warning signal when they are about to change to red. Satellite navigation will also provide more accurate, real-time information about accidents, traffic jams and unsafe conditions, so drivers can avoid incidents more easily.

Other near-future advancements could include airbags that deploy underneath vehicles to slow them down seconds before an inevitable collision, and dashboard technology that can jam a mobile phone if it detects one being used by the driver.

FUTURE DRIVER POLICIES

Driver safety policies will need to be continually reviewed to keep them relevant. Policies on health and wellbeing as well as accident prevention will be important, especially as the UK population ages.

Telematics will become even more linked to an organisation's health and safety policies, and drivers will need to be engaged with this technology for it to be fully effective. However, the myriad of different warnings, together with other connected technologies, could mean distractions for the driver. Driver policies must therefore firmly state that the driver is responsible for the vehicle at all times, even if it is ostensibly driving itself, and this will remain the case until legislation changes.

CALL TO ACTION

- A strong driver policy is needed to ensure drivers have all safety features switched on and meet the needs of insurers, while knowing exactly what is expected of them when in control of a company car or business fleet vehicle.
- Drivers should be told that technologies such as self-parking and cruise control still place full responsibility on them in the event of an accident or incident.
- Vehicles and technologies will continue to evolve, with more autonomous elements likely to feature in future vehicles. However, driving will continue to be a 'brain on' scenario for the foreseeable future, so drivers should remain alert and ready to take full control at all times.
- Dashboard cameras are likely to become more common in the UK, so their use will need to be referenced in driver policies.
- Drivers must be fully aware of all the safety technologies on their vehicle and fully engaged with the benefits they provide.
- Future driver-safety policies will need to be regularly reviewed to ensure they remain relevant to technological advances.
- When vehicles come to the end of their cycle, organisations must be aware of any upcoming legal changes in terms of health and safety that might affect their choice of vehicle.
- Some technologies that are currently an added extra, such as automatic braking, could become legal requirements or necessary under insurance or leasing agreements. This needs to be managed when vehicles are being replaced.

FIT FOR PURPOSE VEHICLES TODAY

Organisations should periodically review the make-up of their fleet to ensure it remains fit for purpose and is aligned to business strategy. For urban driving, switching to electric vehicles could reduce maintenance and fuel costs and contribute to air quality improvements within the local area, while plug in hybrid vehicles can combine the fuel savings of electric cars with the long range of petrol-driven cars if used correctly.

THE RIGHT VEHICLE FOR THE JOB

Vehicles have to be appropriate for the user and for the job. For example, large 4x4s may not be the best option for town driving and come with higher fuel costs, but they may be essential for driving off road in rural areas.

Electric vehicles offer significant cost savings in terms of maintenance and fuel when compared to diesel and petrol vehicles, although are typically a higher initial outlay. If drivers are mostly doing short trips in urban areas, switching part or all of the fleet to electric vehicles may be possible.

If occasional long-distance trips are needed, a plug in hybrid vehicle might prove more efficient, although these vehicles will have maintenance costs more comparative to conventionally fuelled vehicles and if not charged regularly can lead to overall higher fuel costs. A traditionally-fuelled daily rental vehicle might be a more cost effective option for those occasional long journeys.

It is important to think about who will be driving the vehicle, as well as what it will be used for. If the employee lives in an eighth-floor flat, for example, it could be impossible for them to charge an electric car at their home.

Vehicle choice must also take account of benefit-in-kind (BIK) taxation, which is applied to employee benefits such as company cars. The tax rate rises in accordance with the CO₂ emission levels of the car, so vehicles with more efficient engines or that run on alternative fuels can offer tax breaks as well as greater fuel efficiency.

The new BIK taxation coming into force in 2020 recognises the benefit of zero emission driving capability and hence all vehicles with a CO₂ emission level of 50g/km or below will have the opportunity to reduce the levels of tax based on their zero emission range capability, i.e. how far they can travel in electric mode on a single charge.

WHICH TECHNOLOGIES ARE RIGHT FOR THE ORGANISATION?

Various add-on technologies are available when a vehicle is purchased, all of which have a cost implication. There should be consideration as to whether these technologies are essential, simply 'nice to have' or of no benefit. A careful cost analysis should also be performed to work out how much the organisation could save by using the system versus how much it would cost to purchase, implement and maintain.

Creating a Whole Life Cost (WLC) model could be key. WLC is a financial model to show the true cost of running a vehicle and goes beyond the basic cost of funding and maintaining a vehicle to take into account taxation, fuel and other operating costs. These include the cost of different technologies.

A third party, such as a leasing company, can compare the WLC impact of different fuels, or compare the cost of adding certain technologies against the expected savings.

IMPORTANT FEATURES FOR A CAR



72%

MILEAGE RANGE IN LINE WITH PETROL CAR



49%

ELECTRIC POWER SYSTEM

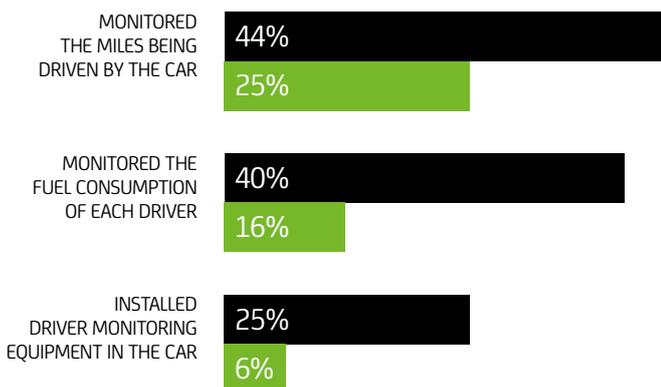


41%

LOCATION BASED SERVICES

Organisations should also work out the major advantages and disadvantages of each new piece of technology. For example, dashboard cameras could potentially reduce insurance premiums and prove that an accident was not a driver's fault, but they also raise privacy issues, and drivers may resent being monitored.

WOULD YOU BE HAPPY IF YOUR EMPLOYER DID THE FOLLOWING / DOES CURRENTLY



The organisation's rules concerning these technologies must therefore be clearly highlighted in the drivers' policy.

CALL TO ACTION

- It is important to choose fuels/ technologies that are appropriate for the use of the vehicle. If drivers mostly cover short distances in urban areas, the organisation could save money by switching to fully electric vehicles. Telematics can help pinpoint this ability, as mentioned in the **TELEMATICS** chapter.
- The driver's needs and situation should be considered when choosing a vehicle – they will need somewhere to charge an electric vehicle, for example.
- Decision-making should be supported by a thorough whole life cost analysis: how much does the technology cost to buy, maintain and replace versus how much it will save?
- New technologies can be exciting, but they need to be appropriate for the organisation. Their major benefits and disadvantages need to be evaluated.



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FIT FOR PURPOSE VEHICLES **TOMORROW**

Improved connectivity will make it easier to evaluate a vehicle's appropriateness to an organisation's needs. Data on fuel consumption, reliability and maintenance will become easier to obtain, but this increased connectivity also comes with risks from hacking. Fuel choices will also become ever more important, as environmental concerns continue to grow in significance.

BARRIERS TOWARDS REACHING AUTONOMOUS VEHICLES

CYBER SECURITY

71%

OWNERSHIP OF DATA

71%

THE CHANGE TO AUTONOMOUS DRIVERS

71%

USING A MIX OF HUMAN AND AUTONOMOUS DRIVERS AT THE SAME TIME

68%

WILLINGNESS AND SPEED AT WHICH PEOPLE ADAPT TO CHANGE

65%

INSURANCE CHANGE FROM THE 'PERSON' TO THE 'VEHICLE'

53%

CORPORATE INSURANCE

53%

FUTURE TRENDS AND RISKS

There is a growing trend towards vehicles with added connectivity – devices and systems which can connect with each other both in the car and externally. Telematics systems can already connect the vehicle with an organisation's head office in real time, showing where the driver is and whether they are moving or stationary. In the future, cars will also be able to connect with each other and with roadside infrastructure such as signs and traffic lights, while sourcing information on optimal routes, traffic congestion or potential hazards.

Vauxhall OnStar gives a glimpse of the connected future. It turns the car into a Wi-Fi hotspot, provides vehicle diagnostics, tracks the vehicle if it is stolen, calls the emergency services if the car is involved in a crash and can be controlled via a smartphone app. In the US, it can be linked to a MasterCard so that drivers can pay for petrol without leaving the vehicle, or order coffee on the move. Jaguar and Shell, for example, recently linked up to provide drivers with a safe, secure way of paying for fuel. This uses the vehicle's touchscreen to select how much fuel is required and then submits the payment details.

The Vauxhall OnStar system also uses machine learning to analyse a driver's style and provides information on a display that is appropriate to their location.

Such developments are exciting, but any benefits should be weighed up against the cost as well as the risks involved. For example, how safe is the vehicle's data? Could connected systems be hacked remotely? How much protection is there to stop fraudulent use of the driver's payment details?



FLEET MANAGERS AND DECISION-MAKERS VIEW ON TECHNOLOGY

TECHNOLOGY IS IMPROVING MI ON THE **CAR FLEET**

71%

AGREE

TECHNOLOGY IS IMPROVING MI ON THE **VAN FLEET**

56%

AGREE

EMPLOYEES ARE INCREASINGLY MANAGING **THEIR CAR** THROUGH ONLINE SERVICES

41%

AGREE

EMPLOYEES ARE INCREASINGLY MANAGING **THEIR VAN** THROUGH ONLINE SERVICES

28%

AGREE

CHOOSING THE RIGHT VEHICLE

The increased use of connectivity could make it easier for organisations to evaluate their vehicles for appropriateness to their needs. Continuous monitoring through telematics and fuel expenditure will help to pinpoint the most cost-effective vehicles for each individual and working role.

This could result in organisations switching to a different fuel type, such as diesel, when a current leasing agreement is set to expire. Fuel choice will become ever more important as awareness of environmental impacts grows, and the organisation's fleet will need to reflect legislative and environmental concerns as well as their own financial ones.

CALL TO ACTION

- New technologies must fit with the organisation's needs. They must be proven to save money, time or lives, rather than just being something that looks good but has little practical application.
- Improved connectivity will offer greater efficiency and safety, but it also comes with risks of remote hacking, data theft and increased distraction for the driver.
- Telematics data can be leveraged to decide whether a vehicle is right for the organisation.
- There will be growing focus on legislation and environmental concerns, as well as financial ones, and an organisation's fleet needs to reflect this.

DRIVERS' NEEDS TODAY

Giving staff the right technology in their commercial vehicle or company car can boost their productivity during the working day, while helping them feel valued as an employee. The right technologies incorporated within their vehicles can therefore support staff retention and attraction strategies – a key focus for many businesses.

TECHNOLOGY TO SUPPORT DRIVER NEEDS

In our recent survey, company car and private car drivers were asked to rate the importance of different technologies when choosing their vehicle. Unsurprisingly, it was those technologies that support the employee's working role – such as Bluetooth to allow for mobile phone calls and Sat Nav to find meeting or delivery addresses – that were most important to company car drivers. These were also the most popular technologies for private car users, although the level of importance was slightly lower.

IMPORTANT FACTORS FOR COMPANY CAR DRIVERS WHEN CHOOSING A VEHICLE

MARKS OUT OF 10

AIR CONDITIONING	BLUETOOTH	SAT NAV
8.1	7.7	7.4
DIGITAL RADIO	PARKING SENSORS	TEXT MESSAGING
7.1	7.0	4.3

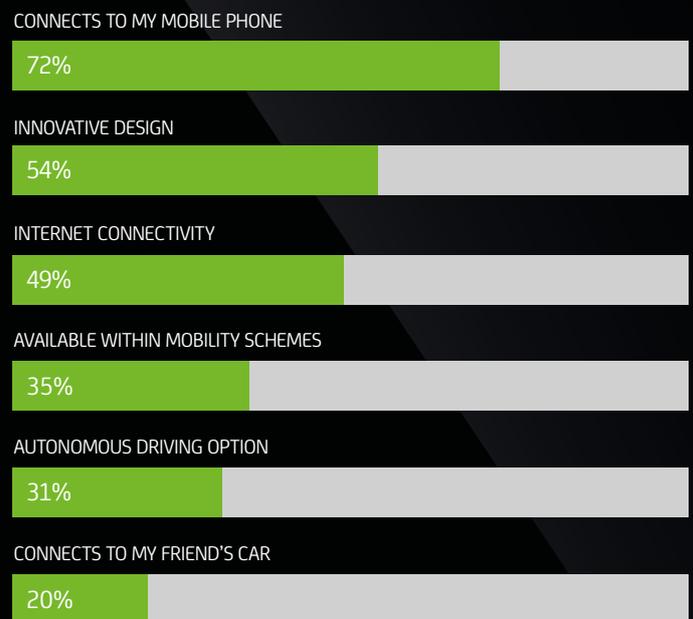
IMPORTANT FACTORS FOR PRIVATE CAR DRIVERS WHEN CHOOSING A VEHICLE

MARKS OUT OF 10

AIR CONDITIONING	DIGITAL RADIO	PARKING SENSORS
7.1	6.4	6.0
SAT NAV	BLUETOOTH	TEXT MESSAGING
6.0	5.7	4.1

As well as being asked about technologies that support their working role, company car drivers were also asked about important features they expected in their car.

IMPORTANT FEATURES FOR A CAR



INCORPORATING DRIVERS' NEEDS

The technologies revealed in our survey results above may make the company vehicle a more attractive model to drive, but individual employee requirements have to be balanced with the needs of the organisation itself or else cost can increase significantly.

DO DRIVERS SUPPORT THE FOLLOWING TECHNOLOGIES:

WARNING SYSTEMS
THAT SENSE WHEN DRIVERS ARE ASLEEP

84%

AUTOMATIC STEERING SYSTEMS
DESIGNED TO STOP CARS WANDERING OUT OF THEIR LANE

68%

DRIVERLESS CARS
THAT REQUIRE NO HUMAN INPUT

26%

AUTOMATIC BRAKING SYSTEMS
THAT TAKE-OVER IN AN IMMINENT ACCIDENT

71%

HEAD-UP DISPLAYS
TO REPLACE TRADITIONAL INSTRUMENTS

44%

ALL-ELECTRIC VEHICLES
WITH THE RANGE AND PERFORMANCE OF PETROL

70%

AUTOMATED SYSTEMS
THAT TAKEOVER ALL ASPECTS OF MOTORWAY DRIVING

41%

COMPANY CAR POLICIES

Keeping an up-to-date company car policy is key to overcoming the challenges raised by technology. This will need to explain what technologies can be included in a vehicle choice, while also highlighting the driver's responsibilities. This could include mobile phone usage or other technologies being used while driving.

A focus needs to be placed on providing drivers with the technologies that support their comfort, safety and a pleasurable driving experience, rather than ones that may be high-tech and innovative, but are rarely used or provide the organisation/driver with little to no benefit. Incorporating non-essential technologies can also add to the number of potential distractions to the driver.



54%

OF DRIVERS THINK MOBILE PHONES ARE DISTRACTING



25%

THINK VOICE ACTIVATED TECHNOLOGY IS DISTRACTING



22%

THINK SAT NAV IS DISTRACTING

SUPPORTING GREEN AMBITIONS

A growing ambition for many drivers is having access to a business vehicle or company car that demonstrates their environmental credentials. They will therefore want access to a fully electric or hybrid vehicle as part of their environmental lifestyle choices.

However, their needs must be balanced with practical considerations. If they are expecting to regularly drive long distances in these vehicles, then current vehicle choices may not always match their preference.

Employees wishing to use electric or electric-hybrid vehicles will also need to have fairly easy access to a charging point, which may preclude those who live in flats or have only road-side parking.

STAFF ATTRACTION AND RETENTION

Many drivers feel their car is a 'visual pay packet in the driveway' and a tool to emphasise and reflect their salary and career. That's why a company car scheme, and access to the right vehicles and technologies within it, remains an important tool for staff recruitment and retention. Future technologies and a shift in attitudes to vehicle ownership may impact the use of company car schemes in the future, though.

In our survey, nearly two-thirds of company car drivers say the vehicle was an important part of their decision to take the job, and almost half of all drivers see a company car as a mark of achievement.



61%

OF COMPANY CAR DRIVERS AGREE THAT THEY SHOULD BE ABLE TO CHOOSE THE EXACT CAR THEY WISH



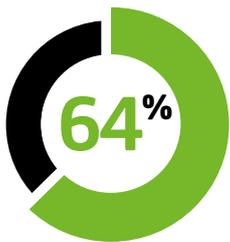
47%

SEE HAVING A COMPANY CAR AS A MARK OF ACHIEVEMENT



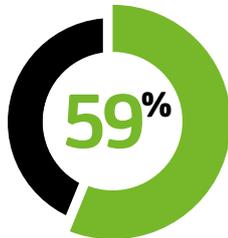
39%

SEE A CAR AS AN IMPORTANT EXPRESSION OF THEIR PERSONALITY



OF CURRENT COMPANY CAR DRIVERS SEE BEING OFFERED A COMPANY CAR AS AN IMPORTANT PART OF THEIR DECISION TO TAKE A JOB

SEE THE COMPANY CAR'S VALUE AS IMPORTANT



59%



72%

SEE THE LEVEL OF VEHICLE CHOICE AS IMPORTANT

CALL TO ACTION

- Company cars and the technologies available through them continue to be a strong staff retention tool as part of a balanced remuneration package.
- In-car technologies can support increased productivity and further enhance the company car as a staff retention tool, but they should support the comfort, safety and driver experiences, rather than being purchased just because they are high-tech or innovative.
- Providing electric or hybrid vehicles within the business fleet or company car scheme can help support an organisations' and employees' aim for more environmentally friendly technologies and lifestyles.
- Employees wishing to have 'greener' company cars must ensure the vehicle can match their driving needs and that they have regular access to charging points etc.

DRIVERS' NEEDS TOMORROW

When selecting vehicles and technologies for the business fleet or company car scheme, there are a number of factors that may change the policies supporting them.

CULTURAL CHANGE

Society's increasing focus on environmental concerns means that a growing number of organisations may need to embrace electric-only or hybrid vehicles as part of their business fleet and company car scheme. This is highlighted in our survey which reveals the need for organisations to offer a range of ultra low or zero emitting electric vehicles.

62%

OF COMPANY CAR DRIVERS THINK IT IS VITAL THAT SOCIETY REDUCES THE ENVIRONMENTAL IMPACT CAUSED BY CARS

Manufacturers are also responding to cultural changes by enhancing their vehicle specifications and options to better reflect the gender equality of drivers on UK roads. While some manufacturers have focussed on gender neutral vehicles, others have created vehicle specifications aimed solely at one gender or the other. Vehicle choices within the commercial fleet and company car scheme will therefore need to better reflect this gender equality.

GENERATION Y & Z – THE IMPACT ON COMPANY CAR SCHEMES

Perhaps the biggest cultural change concerns vehicle 'ownership' as a whole. The next generation of employees will be more used to leasing technology, such as mobile phones and accompanying software, rather than owning them outright.

This could affect how a company car scheme operates – drivers may want access to a wider pool of cars, rather than a single vehicle which they can call their own. With this option, they would be able to match their vehicle with the specific type of travelling taking place.

Similarly, better travel management systems could mean employees actually have no need for access to an individual vehicle – especially if they live in towns or cities. Whether for work or social reasons, an employee could take the train then use a car club vehicle to drive from the station, rather than doing the whole journey by car. On longer journeys, this could be more cost and time effective.

The next generation of company car drivers will also be used to being fully connected all of the time. In the absence of safety-related legislation, such as those governing the use of handheld mobile phones, they will expect vehicles being offered to them to reflect this need.

COMPANY CAR LEGISLATION AND TAXATION

Benefit in Kind (BiK) tax rates are likely to continue reflecting the CO₂ emissions of a company car, with different bands for lower and higher emitting vehicles. Obviously, there is the possibility that taxation policies could change in future budgets. In the meantime, employees with low emission vehicles will still benefit from reduced tax payments, but the CO₂ level to qualify for the cheaper tax bands is likely to continually reduce over coming years.

Importantly, in 2020 new BiK taxation comes into force affecting vehicles with a CO₂ emission level of 50g/km or below with the ability for zero emissions. They will have the opportunity to reduce the levels of tax based on their zero emission range capability – the distance they can travel on a single charge.

The choice of vehicles being offered in a company car scheme must therefore reflect the needs of employees who want to benefit from a company car but want to avoid a high tax burden.

CALL TO ACTION

- Culturally, vehicles within a business fleet or company car scheme will need to reflect the gender equality of drivers and the environmental concerns held by society.
- Changing attitudes towards ownership, and enhanced travel management systems, could mean that employees want access to a pool of vehicles rather than just one company car.
- Being fully connected while in the car may be vital for the next generation of drivers, and the vehicles and technologies offered to them must reflect this.
- BiK tax will continue to impact employees using company car schemes, increasing the need for ultra low or zero emission vehicles as part of the scheme.

THE FUTURE OF DRIVING

– GETTING TO WHERE YOU WANT TO BE

New technologies are changing the landscape of company cars and business-use vehicles. Telematics systems can track cars and vans while monitoring the drivers, smart safety features can prevent accidents before they happen, and the technology to support self-driving cars is approaching reality. Fleet managers should assess whether the current fleet matches the existing needs of the organisation and what concrete benefits any new systems will bring. It is essential to work out where the organisation is now and its future strategy before considering where the fleet should be in the future.

STAGE 1: ASSESS THE APPROPRIATENESS OF THE CURRENT FLEET

In the years since the organisation leased or bought its vehicle fleet, its needs may have changed. The demands placed on vehicles may have changed so much that they no longer fully meet the operational requirements of the organisation.

For example, extra pieces of equipment, such as power tools, may be being run regularly from a commercial vehicle today. A different vehicle with a more powerful engine and battery could be more appropriate.

Previous reviews of vehicle demands become outdated quickly, due to the quick evolution of technologies following their release. It means electric vehicles that were previously overlooked may now be much more viable, as the distance they cover on a single charge continues to improve and the range of models increases.

It is vital that whoever sources the vehicles is aware of the organisation's current and future requirements, as these may have changed substantially since the last round of vehicle procurement.

STAGE 3: ASSESS THE COST EFFECTIVENESS OF THESE TECHNOLOGIES

With so many state-of-the-art technologies available, there is a temptation to incorporate as many of them as possible. There is a need to balance excitement with caution: each piece of equipment must be judged on the benefits and savings it provides versus the installation, maintenance and replacement costs.

For example, telematics could save money by highlighting out-of-hours usage and inefficient routes, but some packages may provide expensive, unnecessary features that are of little use to the organisation.

STAGE 2: PINPOINT TECHNOLOGIES THAT MATCH THE ORGANISATION'S NEEDS

The range of available vehicle technologies may have changed substantially in the years since the organisation last renewed its fleet. These technologies have the potential to dramatically reduce fuel, maintenance and insurance costs, as well as improve driver safety and prevent accidents.

Installing telematics could lead to significant savings, as driving behaviours and vehicle use can be monitored and journeys adjusted to save fuel. The data may reveal that drivers leave their engines running while making delivery stops, or are regularly stuck in traffic jams, flagging the need for vehicles with stop/start technology to drive down fuel costs. The data could also reveal potentially dangerous driving practices, with the need to intervene and provide driver training before an accident occurs.

Safety technology such as lane departure warning systems, fatigue-monitoring cameras and automatic braking all have the potential to prevent accidents and save drivers' lives. Simply ensuring that vehicles chosen by drivers include these technologies could also reduce insurance premiums.

In extreme circumstances, the potential benefits of installing a piece of technology are so high that it could be cheaper to replace a current vehicle early; the fuel and efficiency savings are greater than the amount it would cost for the organisation to buy itself out of an agreement. For example, would switching to electric cars or vehicles with stop/start technology save more money on fuel than it would cost to cancel the lease?

STAGE 4: CHECK UPCOMING LEGISLATION

Organisations need to be aware of any changes to the law that might make seemingly sensible vehicle decisions uneconomical in the near future. For example, buying diesel vehicles might make sense from a fuel economy point of view at the moment, but such vehicles will be taxed more heavily in future owing to their higher emission levels. Also in 2020 Clean Air Zones are being introduced and if vehicles cannot meet the required emission standards they may need to pay on a daily basis to enter the appointed city or in some cases may not be allowed access. Decisions like this by Local Authorities or Central Government could mean a review of fuel types and technologies used by your fleet.

Current optional safety features could also become standardised or even required on future vehicles. For instance, ABS brakes were once an optional extra, but are now required on all new cars – the same thing could happen with automatic braking. Organisations should consider the impact on insurance premiums if their fleet lags behind in terms of safety standard changes.

STAGE 5: PREPARE FOR THE FUTURE

After assessing their current vehicles and technologies and planning ahead for upcoming legislation, an organisation must look forward to see how their needs may or will change – and what differences the vehicle fleets of the future might bring.

Smart pool cars are likely to be more of a feature in these future fleets. These require the driver to log in when the vehicle is started, and comes with GPS software to track the location and log the mileage of the individual driver.

With an efficient pooling system, these pool cars could remain in use all day, rather than being sat idle in between the morning and evening commute. Employees would have to adjust to no longer having their 'own' car, and this would need to be prepared for well in advance of a change.

As self-driving technology improves, the coming decade should witness semi and even fully-autonomous vehicles becoming more commonplace. This will require changes to driver policies to incorporate the use of self-driving cars. Organisations need to consider what can be done now to prepare the ground for this technology, and should keep an eye on the progress of self-driving systems.

Additionally, the experience of mobile phones shows that technologies are regularly being updated or replaced completely. When procuring vehicles for the future, technologies may become obsolete before the end of the vehicle's replacement cycle, so it is worth analysing how easy the technology is to replace or update.

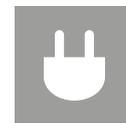
Any attempts to take advantage of new technologies will be subject to pre-existing constraints, such as the years left to run on current vehicle contracts and the ability to sell older vehicles, especially if they have been modified. When signing a new contract, it is essential to consider how the driving landscape may change before the contract expires.

IMPORTANT CONSIDERATIONS FOR DECISION-MAKERS ABOUT THEIR FLEET VEHICLES



41%

SUPPLIED BY AN
AUTOMOTIVE BRAND



26%

SUPPLIED BY A
CONSUMER BRAND



23%

SUPPLIED BY
A NEW BRAND

15%

OF BUSINESSES SEE NEW ENTRANTS AS A SERIOUS
CONSIDERATION FOR BUSINESSES IN THE FUTURE

37%

THINK IT IS POSSIBLE THE NEW ENTRANTS
MAY BE SUITABLE FOR BUSINESS VEHICLES

22%

THINK NEW ENTRANTS WILL HAVE LITTLE IMPACT ON BUSINESS VEHICLES

8%

THINK NEW ENTRANTS WILL NEVER COMPETE
AGAINST THE ESTABLISHED VEHICLE MANUFACTURERS

18%

DON'T HAVE AN OPINION

DRIVING TECHNOLOGY SUMMARY: VOLVO'S VIEW OF THE FUTURE

Autonomous driving has the potential to revolutionise how we use our cars. Not simply in terms of handing over control of the driving to the vehicle itself – and what this will allow us to do with the time freed up – but in terms of productivity, cost savings, safety, time management and environmental concerns.

We are some years away from a fully autonomous car that will drive you for your entire journey, but a car that will do that for part of the way is not too far off. In fact, Volvo is pioneering autonomous driving (AD) research and will start an AD trial called Drive Me in Sweden later in 2017, and run similar projects in the UK and China before making this technology **publically** available.

The potential time and cost savings are significant. Imagine you are a business car driver with a meeting in Manchester followed by one in Birmingham. After driving through the outskirts of Manchester, you decide to hand control over to the car for the long motorway journey south. The car would keep you a safe distance from any surrounding vehicles and at a set speed, liberating you to catch up with your emails, have a conference call or review your presentation for the next meeting. You arrive in Birmingham refreshed and ready to do business.

Next-generation connectivity will also allow AD cars to intelligently reroute themselves to avoid any accidents or traffic hotspots, saving time and fuel.

There will be other financial benefits for fleets, too. Computers do not get distracted or tired, so an autonomously driven car is likely to have fewer accidents than one driven by a person. Fewer accidents means fewer repair bills, smaller insurance premiums and – the biggest cost saving of all – fewer days with a driver off work recovering from an accident.

Autonomous drive vehicles will allow business car travel to be smarter and more efficient than ever. Factor in the potential cost savings and safety benefits, and it is clear that everyone should be excited about how we will be using our cars in the not-too-distant future.



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LEX AUTOLEASE

Lex Autolease is the UK's leading fleet funding and management specialist, with the scale and strength to keep British business moving.

All over the country, businesses and public bodies, large and small, trust us to keep them on the road with vehicle leasing and management solutions that are tailor-made and expertly supported.

OUR SERVICES

Our leasing solutions provide customers with different funding options to meet their needs and ambitions, whether for a fleet of just a few vehicles or many thousands.

We also help manage over 350,000 cars and vans nationwide, as of December 2016, with support ranging from end-to-end fleet management to customised additional support packages including vehicle servicing, maintenance and repair and tyre, glass and breakdown.

As the UK's leading specialist commercial vehicle provider, we are perfectly placed to help meet an organisation's unique needs, no matter how specialist.

OUR EXPERTISE

We bring up-to-date insights and technical expertise to our customers to ensure their fleet runs as efficiently, safely and reliably as possible.

From transport data systems and mobility trends to the latest intelligence on taxation and regulations, our experts are on the cutting edge to help inform vehicle decision making and improve an organisation's fleet performance.

OUR APPROACH

Our approach is based on building a close relationship with our customers, whether they are small firms, large corporations or public sector organisations. We work side by side with our customers to provide a flexible, tailored solution that meets their goals.

At the heart of our approach is Customer First, a set of five principles guiding our relationship with customers and ensuring we put them at the centre of everything we do.

By bringing together expertise, innovative service and a comprehensive range of vehicles, Lex Autolease can keep your organisation moving.

WHAT YOU CAN EXPECT FROM LEX AUTOLEASE

A flexible, tailored solution to suit any fleet size and ambition
A smooth, customer-centred process from quotation to delivery
Support options to keep vehicles running efficiently and safely
Technical expertise and intelligent insight to inform fleet decisions

We hope the information in this report proves useful and helps support your understanding and decision-making with regard to future fleet technologies. If you would like to talk about any of the issues in this report in more detail, or wish to discuss your current or future vehicle finance needs, please contact our consultancy team: fleetconsultancy@lexautolease.co.uk