



The show of the year

Fleet Vision International – THE SHOW highlighted world-class examples of best practice and innovations in fleet at the awards, conference and exhibition on 12-13 April 2022 at the Guildhall in the City of London.

April 12 saw a glittering Gala Dinner and Awards ceremony hosted by Keith Kerman, Deputy Commissioner and Chief Fleet Officer for the City of New York.

Barry Sheerman MP handed out the best Air Quality Strategy award to Eastleigh Borough Council and Iknaia on behalf of the Westminster Commission for Road Air Quality (pictured). Vince Dignam, Business Performance Manager for the City of London, handed out the award for Most Sustainable Fleet Management Strategy to Westminster City Council and the Veolia Decarbonisation Project on behalf of the City of London. Nathan Wilson from Allison Transmission won the Industry Personality of the Year Award, handed out by Robert Martinez, Head of Operations at the NYPD, on behalf of FVI and the City of London.

The awards dinner was exceptionally well-

received. Attendees raised nearly £1,700 for the [Lord Mayors' Appeal](#), and Barry Sheerman raised £3,000 from Fiveways for the [Ukraine Appeal of Richard Dass](#), a Huddersfield resident supplying medical aid to Ukraine.

Conference host Keith Bottomley said: 'It was fantastic to celebrate a genuinely trans-Atlantic partnership between two leading cities – London and New York. FVI – THE SHOW has become a showcase for all that London has achieved to improve air quality. Together with NYC, we are setting an example for others about what can be achieved with international cooperation and sheer determination.'

The event was organised by Visie Communications and *Fleet Vision International*. 'Together with our host, the City of London Corporation, and our partners NYC, CLOCS, SMMT and WCRAQ, we provided a much-needed international showcase for best practice, with speakers demonstrating that even the most

complex fleets can become sustainable, diverse, and inclusive,' said organiser Ann-Marie Kneegt.

The event's main sponsors NRG Riverside, Electra Commercial Vehicles, Dennis Eagle and Terberg Matec UK, have all pledged support for next year's event.

'Congratulations on a great event last week in London. Informative speakers capped an excellent mix of suppliers – well done!'

Ian Bourton, Head of Fleet Operations, Ubico

'Excellent show, all your efforts paid off.'

Eddie Cross, Owner, Prosolution

'Very well done for the event, very useful indeed.'

David Wilson, FMCL

'Thanks for putting together a great couple of days. We look forward to next year's show.'

Ben Hoadley, General Manager – Sales, Dennis Eagle.



New York goes green

Despite operating one of the world's largest municipal fleets, New York City plans to move entirely away from diesel by 2025 using a three-part strategy that has fleet-wide electrification as its ultimate goal, Chief Fleet Officer Keith Kerman told delegates at Fleet Vision International 2022.

New York city has a fleet of 29,500 vehicles across 158 vehicle types. 'If a fleet of our size and complexity can become sustainable, anyone can do it,' said Keith Kerman, Chief Fleet Officer and Deputy Commissioner for the Department of Citywide Services in his opening presentation of the international keynote session.

NYC aims to reduce greenhouse gas emissions by 50% by 2025 and has committed to all-electric light and medium-duty units by 2035, with an entirely electric fleet by 2040. The City already operates 3,100 electric vehicles, including RCVs, sweepers, and police vehicles, with 1,300 more EVs on order this year. 'Our strategy is, firstly, to electrify where we can. We are also looking at fleet sharing – changing the way the fleet operates. We have just upgraded our sharing technology to link with our telematics, so we can now share any vehicle we are tracking.'

EVs need charging infrastructure, and the City has the largest electric charging network in New York state. 'Most chargers are for City vehicles, but we have 11 fast chargers for public use, and we hope to increase this number. We have already committed to a total of 1,776 fast chargers for fleet vehicles by 2030. We are also the largest adopter in the US of free-standing solar carports. These aren't tied to the grid and are part of our emergency generation programme for electric fleet. We can now produce power, not just consume it.'

Keith explained that the second strand of the City's strategy involves hybrids and more efficient vehicles. 'We are still investing in these vehicles. For example, most of our ambulances are hybrid with plug in capacity.'

Thirdly, after electrification and hybrids come biofuels and a low-carbon fuel standard. 'We have to get out of diesel. In the long-term, that's electric; in the short-term, it's biofuels.' Keith said NYC wants to move completely

out of fossil fuels, as soon as fiscal year 2023 if possible, with all existing ICE vehicles switching to renewable diesel until electric alternatives can be found.

However, an all-electric fleet has different challenges, particularly a fleet that is made up largely of emergency services vehicles, and Keith discussed NYC's work on resiliency strategies. 'An emergency response fleet would normally be the last type of fleet to go electric, and we are looking at lots of emergency power generation options, including light towers and back-up batteries. These issues are almost as important as finding the electric models.'

He closed the presentation with a plea for international cooperation on the issues facing fleet operators around the world. 'Fleet is an global industry. We can't make changes alone. We are here at this event because unless the entire fleet industry is pushing manufacturers to make products cleaner and safer, nothing will happen.'



Responding to change

The New York City Police Department has faced many challenges over the last two years, from Covid-19 to the Defund the Police movement, however, these operational and financial challenges have led to new strategies, new ways of working, and cost-saving initiatives, Deputy Commissioner Bob Martinez told Fleet Vision International – THE SHOW.

Covid-19 has caused almost one million deaths in the US over the last two years, with more than 40,000 in New York City alone.

When the pandemic hit, the NYPD, like fleets around the world, had to rapidly adapt its operations to protect staff and the public.

Among the initiatives employed by the NYPD was the development of a system to super heat vehicles to 135° F to destroy viruses, including Covid-19. The department also introduced remote working where possible, staggered shifts for mechanics to reduce human interactions, gave PPE to all employees, and carried out training online.

In the midst of Covid came the Black Lives Matter and the Defund the Police movements, which saw mass protests across the city. 'The protests damaged 362 vehicles, 16 of which were total losses,' said Bob. 'The cost of the

damage is almost US\$1 million and counting.'

The impact of all the various challenges is stark – around US\$50 million annually. In total, the NYPD lost around US\$1 billion. 'What did we do in response? We extended the lifecycle of our vehicles rather than buying new ones. We also have a salvage programme, which has saved millions every year, and reduced our fleet size.'

Bob explained that all department vehicles are fitted with a GPS tracker. 'From Monday to Friday, 85% of our fleet is utilised. Every time someone asks for a new vehicle, we can assess their current utilisation and make adjustments. We have bought no new vehicles in 26 months. However, 46% of our vehicles are now over their lifecycle and our out-of-service time is going up.'

Other fleet reduction strategies have included vehicle pooling and a bicycle share

programme. 'We accumulate bicycles every year. We used to auction them; now we make them available to staff via a bicycle sharing initiative.'

In addition, Bob shared some examples of cost savings achieved through the NYPD salvage programme, which sees the department remove all equipment from damaged vehicles. 'For example, replacing a damaged door with a new one would cost around \$2,400. However, the cost of using a replacement door is just \$87.72, and reduces vehicle downtime.'

The department has also invested in windshield removal tools and trained staff to salvage windshields from damaged vehicles. 'A new windshield costs \$434. Removal and installation of a salvaged windshield costs just \$95. Now we have the right tools, we have a 90% success rate.'

London's transport strategy targets freight



London's freight makes up almost a third of all morning peak traffic in the capital, John Oosthuizen, Transport for London's Freight Strategy Planner told delegates in the third of the international keynote presentations. So, how the city deals with freight is crucial to its long-term sustainability plans.

Van traffic accounts for 80% of road freight and is the only motorised mode of transport currently forecast to grow in London.

Freight, therefore, is an opportunity and a challenge for London as the city aims to meet the objectives of the mayor's 2018 Transport Strategy, which targets a 10% reduction in morning peak freight traffic in central London by 2026. The strategy also calls for an 80% sustainable mode share and Vision Zero for the transport network by 2041, and zero emissions by 2050. 'We are now looking at a plan to be net zero by 2030,' said John.

There are numerous challenges affecting freight transport in London, said John, including the safety of vulnerable road users and the need to meet ambitious clean air targets. Then there's efficiency – congested roads lead to longer, more unpredictable journeys. A shortage of loading spaces can lead to inefficient deliveries, not to mention the changes to freight patterns resulting from Covid. Global supply chains are changing, and there are real skills shortages.

'In 2019, we developed a shared ambition for clean, safe and efficient freight with stakeholders. This has three key areas – road safety, emissions, and efficient movement – and includes actions to protect land for logistics

and make space available for logistics and consolidation.'

John outlined some of the actions taken, including 20mph zones, improving the safety of junctions, the Direct Vision Standard, CLOCS, and FORS, and traffic management guidance for sites, along with other measures to help achieve Vision Zero by 2041.

'This is a new approach that looks to eliminate road danger at source by targeting safe speeds, vehicles, streets and behaviours. Of the 69 pedestrians and cyclists killed in London in 2016, 27 were involved in a collision with an HGV or a bus. We have launched the world's first Direct Vision Standard to improve the safety of vulnerable road users. The standard restricts zero-star rated vehicles from entering London and will only allow a minimum of three-star vehicles by 2024.'

The introduction of the London ULEZ is central to TfL's emissions reduction strategy. 'The consultation will go out looking at how we expand this to greater London. We have an ambitious plan to reach net zero by 2030.'

Actions to help meet this accelerated target include working to switch last-mile deliveries and servicing in the GLA's supply chain to zero emissions modes, gaining commitment from industry to increase the uptake of

consolidation and last-mile solutions at a local level, reviewing emerging technology and market availability for zero-emission HGVs, and increasing uptake of cargo bikes for delivery to help reduce congestion.

'The GLA is leading by example in switching to zero-emissions ahead of the 2030 government ban of ICE sales by showcasing the availability of zero-emission vehicles and the practicality of doing so,' said John. 'All these issues are integrated. To reduce carbon, we need efficient operations, the right vehicles, and the right behaviours – and we need these to work together.'

To ensure more efficient journeys, TfL is engaging in network management, consolidation, procurement, and last-mile solutions, and designating and protecting industrial land, including safeguarding railheads and wharves.

The organisation also creates priority routes for strategic freight movement to protect capacity and encourage mode shift for light freight to rail and water.

'Freight is a major priority,' said John. 'We identified the challenges, and we engaged with industry. We put our action plan in place in 2018 to address the issues people face regarding freight and have revised the plan to address issues resulting from Covid.'



Don't ignore tyre wear

Tyre wear and tear doesn't just cause air pollution, it also contaminates water and soil, and the environmental and health impact of these non-tailpipe emissions is still not fully understood, Nick Molden from Emissions Analytics told delegates at the event.

There is no such thing as a zero-emissions vehicle and there probably never will be – because of things like tyres, Nick claimed as he opened his presentation on tyre wear.

'Tyre wear is a big problem. Transport is too often just linked to emissions, but we need to connect it to questions around marine life, soil, and the food chain.' This is because tyres are made from at least 1,000 chemicals, some of which are toxic even in low concentrations, and according to Nick, rapidly declining exhaust emissions mean that non-tailpipe sources such as tyres make up a growing share of total automotive emissions.

Emissions Analytics has developed test methods to measure tyre wear rates and emissions. The company tested eight tyre brands, using the same car, the same driver, and the same routes over at least 1,000 miles. 'We found that, on average, 64mg per km is shed from a tyre, with significant differences between premium and budget tyres.'

He noted that heavier vehicles experience

increased tyre wear. 'If you increase vehicle mass by 500kg (the weight of a large car battery), you increase tyre wear rate by 21%, so electric vehicles are likely to lead to higher tyre emissions.' However, HGVs, although heavier than cars, cause less tyre pollution because HGV tyres contain more natural rubber.

Wear rates also are affected by driving style. 'The most damaging from a health perspective are ultra-fine particles, which are shed during acceleration, deceleration, and cornering.'

How toxic is that 64mg? 'There are a huge number of compounds in tyres, from fragrances to hormones and fatty acids. Some are irritants, others are toxic if swallowed or inhaled.' He highlighted 6PPD (N-(1,3-dimethylbutyl)-N'-phenyl-p-phenylenediamine). 6PPD-quinone has been implicated in the deaths of Coho salmon in California – the first time an environmental impact has been linked directly to pollution from tyres.

Emissions Analytics has organised the chemicals into groups, such as Alkanes (affecting the lungs, liver, kidney, brain);

Cycloalkanes (which can cause headaches and dizziness); Terpenes (aromas); Aromatics (carcinogens); and N-containing (carcinogens).

'Some of these compounds are deliberate additions, whereas others come in component mixtures such as carbon black. Alkanes are often irritants but can be toxic in high concentration. Aromatics are more likely to be carcinogenic and toxic at lower concentrations. We mapped these groups to each of the tyre types we tested, looking at their relative composition, and we found significant variation between brands.'

'We must continue to work rapidly to find out the environmental impacts of these compounds. Around 90% of these go into water and oil; only 10% go into the air. These chemicals are getting into the food chain.'

In conclusion, Nick said: 'We know how much tyres shed, and we can quantify how bad it is. Now we need to test as many tyres as possible to get specific figures for each brand and communicate this information in a format that people can use to inform their decisions.'



One size does not fit all for HGVs

Decarbonisation should be prioritised over zero emissions for heavy-duty transport, Amanda Lyne from Ulemco told Fleet Vision International – THE SHOW, but it is important to match the solution to the application.

“We believe dual-fuel technology can reduce the CO₂ emissions of vehicles on the road, which means we can do something now rather than wait. Let’s not hang around for zero when we can reduce emissions today.”

Hydrogen is about decarbonisation rather than zero emissions or air quality, Amanda Lyne, MD of hydrogen vehicle pioneer Ulemco told delegates. ‘This is where we have not yet made sufficient progress, and the planet cannot wait.’

She argued that the need for change is urgent. ‘99.4% of HGVs and machines on our roads are still powered by diesel. There are 500,000 HGVs in operation in the UK, most of which are owned or used for 15 years, so to meet the 2050 target for zero-emissions HGVs on the road, we have just two lifecycles and three R&D cycles. We need to do something now.’

Hydrogen can offer a solution for HGVs, but where does it come from? ‘This is a critical question. We need to decarbonise hydrogen, and this can happen in two main ways – we can make it from renewables or capture carbon when we make it from fossil fuels. The important point is that hydrogen is not putting carbon into the atmosphere from the tailpipe.’

However, she said one size cannot fit all when it comes to decarbonisation. If we move to low-carbon technologies, an entire range of suitable alternatives will be required. ‘HGVs are here to do jobs, and we have to make decisions based on the productivity of the machines and the jobs they need to do. We need to compromise as we move away

from diesel, but we can’t compromise on everything.’

She explained that in the context of decarbonisation, it is energy use that matters. Amanda shared the results of research into the energy use of a rural fire truck and an ambulance to show that a battery-electric solution can’t cover all the energy needs of these vehicles. Based on real-world data of power consumed by the ambulance over 34 shifts, for example, an EV with no fuel cell would only have enough power to cover four of these shifts. ‘But if you add a fuel cell with 8 kg of H₂, this increases to 25 out of 34 shifts, and with refuelling this would cover 100% of the energy needs.’

‘Ulemco has developed a hydrogen dual-fuel technology available now that can help cut CO₂ emissions,’ said Amanda. This is already in use in Aberdeen, and the city has saved three tonnes of CO₂ just in Q1 2022. She added that hydrogen dual fuel also saves on NOx in comparison to Euro VI diesel vehicles, with a fleet-wide deployment of 100 urban trucks converted to hydrogen dual fuel (sourced from solar or wind) delivering savings per year of 40% NOx, 2,600 tonnes of CO₂ and 100,000 litres of diesel.

‘We believe dual-fuel technology can reduce the CO₂ emissions of vehicles on the road, which means we can do something now rather than wait. Let’s not hang out for zero when we can reduce emissions today.’

Poor in-cab air quality shortens drivers' lives



When Biffa started monitoring in-cab air quality in 2019, the results were 'frightening,' Transport Manager Kevin Barcroft told delegates during the air quality, emissions, and clean propulsion session. But there are steps operators can take to protect drivers, from simple measures to alternative fuels.

"In the UK we had not previously considered air quality's impact on drivers' life expectancy, looking instead at things like diet and sedentary lifestyles. Is air quality killing us?"

A US study estimated that being a truck driver reduces life expectancy by 16 years, said Kevin Barcroft, Transport Manager at Biffa Waste Services in his presentation in the Air Quality, Emissions, and Clean Propulsion session hosted by the Westminster Commission for Road Air Quality. A smaller-scale study by Kings College London found it shortened the life of drivers by 14 years.

'In the UK, we had not previously considered air quality's impact on drivers' life expectancy, looking instead at things like diet and sedentary lifestyles. Is air quality killing us? According to an IOSH and HSE campaign, half a million UK workers are exposed to high levels of diesel emissions. 'Nearly 40,000 people in the UK die prematurely as a result of air quality. A quarter of them are in London. Poor air quality is a fact. It is measurable and we measure it all the time.'

Since 2019, Biffa and CMS SupaTrak have been monitoring in-cab air quality in a Biffa RCV. The monitor measures ozone, greenhouse gases, and particulate matter. 'The results,' said Kevin, 'were frightening.' He shared slides showing PM pollution regularly spiking to alarming levels. 'So, we fitted new filters, and we measured the impact of these, and the results were amazing.' PM levels still spiked on occasion, but to much lower levels. The filters also reduced levels of NOx, and Biffa is now looking at alternative filters to reduce NOx further.

'If you don't have filters, there are still

things you can do to protect drivers,' he told delegates. 'Simple interventions such as keeping windows closed in cities or high traffic areas can be effective. Put aircon or heating on recirculation when in traffic and route drivers away from congestion – if you can.' Air quality has also prompted Biffa to look at alternative fuels. He pointed out that procurement cycles mean that the phase-out of diesel will not realistically happen for HGVs until 2050. '2050 may well be too late.'

Since 2002, Biffa has reduced carbon emissions by 65% and is targeting a further 50% reduction by 2030. Initiatives include purchasing EVs, installing FuelSense 2.0 from Allison Transmission, installing solar panels on the roof of RCVs – and trialling HVO (hydro-treated vegetable oil).

'HVO is a sustainably sourced drop-in diesel replacement. We are using HVO+, which is entirely sourced from waste. It reduces GHG and CO₂ by up to 90% compared with diesel, PM by up to 80%, and NOx by up to 30%.

'At my depot we're conducting a 100% blend HVO trial, which we hope will deliver a data-driven case study. We will fully measure both our AdBlue use and DPF regens, as savings here may help offset the premium price of HVO. It is hoped that the trial will help seed HVO within the wider Biffa fleet. We will also continue to work with the Westminster Commission for Road Air Quality to lobby government to at least deliver fuel-duty parity against diesel.'



St Helens opts for hydrogen

St Helens Borough Council has invested in a hydrogen RCV as part of its climate response plan Pathway to Net Zero by 2040, Trevor Nicoll, the council's Assistant Director of Operations and the Environment told delegates at Fleet Vision International – THE SHOW.

St Helens Borough Council operates a fleet of 250 vehicles, from ride-on mowers to 32-tonne RCVs, and has committed to moving away from fossil fuel technology in favour of hybrid, electric, and hydrogen alternatives.

'This is not just about replacing vehicles,' said Trevor Nicoll. 'We need to develop the skills base, conduct training and information transfer, develop the required infrastructure and demonstrate leadership in this area.'

Several factors came together to make hydrogen the right choice for the new vehicle, said Trevor. 'Merseyside is an area of high enthusiasm for hydrogen, and we wanted to take advantage of that and include it in our fleet. Our politicians also saw it as a leadership issue – it is our responsibility to help this technology move forwards. Then there was the question of fuelling infrastructure.'

Trevor explained that the council's depot was not suitable for electric vehicles.

'We would have needed major network reinforcement to have more than two electric RCVs. However, next door is the bus depot with 20 hydrogen buses. One hydrogen vehicle alone would have been impossible to fuel, but we were able to piggyback on top of the fuelling infrastructure for the buses.'

The vehicle itself is a purpose-built hydrogen refuse collection vehicle from Faun Zoeller UK, due to arrive at St Helens in September 2022. These vehicles are already operating in Germany and are designed on a Mercedes-Benz chassis to be as efficient as possible, said Trevor.

The vehicle, however, is the easy bit. 'The hard part is the education and training of mechanics. We have dedicated on-site support and certified training to upskill council-employed mechanics, so we are developing our workforce, investing in our people, and giving them skills and experience for the future. We are also stimulating green growth.'

St Helens is engaging with local

organisations to share knowledge about hydrogen and provide training to mechanics as well as working with schools and colleges to develop educational modules covering alternatively fuelled vehicles.

'We are also looking at apprenticeships. We want to show our commitment as a local authority.'

The council's hydrogen journey involves working with local partners and organisations within Merseyside, including Liverpool City Region Combined Authority, which is funding the order for the 20 hydrogen buses in St Helens.

'We are also working with the council to develop hydrogen supply chains so the technology can be deployed and rolled out on a larger scale, including the development of shared public sector infrastructure and a technology transfer programme,' said Trevor.

'The move to hydrogen is about leading by example and aligning with our partners to deliver change and benefits for all.'

The gulf between on and off-site safety



‘The chasm between on-site safety and off-site safety is putting lives at risk,’ said Kate Cairns, Founder of Cairns Consultancy, who told delegates the story of her sister’s death under the wheels of an HGV in London to illustrate the tragic outcomes of industry complacency as she called on operators to do more.

Kate Cairns’ sister, Eilidh, was hit from behind and killed by a tipper HGV while she cycled through London in 2009. The driver was fined £250 and given three points on his licence. 15 months later, the same driver killed a 97-year-old Holocaust survivor, Nora Gutman, on a pedestrian crossing in Marylebone. He was sent to prison for four years and was released early, still permitted to drive HGVs.

The tragedy and its response prompted Kate to take on the industry over its management of road risk. ‘These collisions are happening time after time. Why? There is a massive chasm between on-site and off-site safety culture. We deal very differently with risk on-site, where legally, we must report incidents, but there is a blind spot around off-site safety. We have safety policies, global safety shut down days, and Vision Zero, but industry claims of caring about its people and the public ring hollow when it comes to road risk. Action often doesn’t match words.’

These crashes, said Kate, are prolific, and they could be prevented. ‘When tragedy after tragedy occurs, that is a scandal. When tragedy happens as a function of complacency, that is a scandal. When a tragedy happens because of a lack of preventative action, that is a scandal.’

The facts are stark. 28,325 people were killed or injured by construction vehicles in the UK in the last five years. HGVs account for 4% of road traffic and 78% of cyclist fatalities. Five hundred pedestrians are killed or seriously injured by HGVs every year. In collisions with construction vehicles, 43% of those injured are pedestrians, 33% are motorcyclists, and 24% are cyclists.

Kate set up the See Me Save Me campaign to drive change. ‘Time after time, drivers said they didn’t see. So, we started a campaign for mandatory mirrors, but it can take six seconds to check all mirrors. Then we campaigned for mandatory cameras and sensors, but that can cause cognitive overload, so we realised it was the cab’s design that needed to change. This is why we are now seeing new low-entry, direct-vision cabs in London.’

However, while the Direct Vision Standard applies to London, this is a UK-wide issue. ‘I have met with manufacturers, and I have lobbied EU Parliament in Brussels. I have been campaigning for ten years. I’ve written articles, and technical papers and had lots of media coverage to try to influence public opinion, policymakers and politicians.’

What needs to happen? The industry needs to manage work-related road risk, said Kate, and implement a corporate strategy from

the top. CLOCS is the national standard for ensuring safe, clean and lean construction vehicle journeys, using construction logistic plans (CLPs) as the golden thread to connect regulators, clients, contractors and operators.

‘Organisations must identify and mitigate risk and procure safe companies down the supply chain. The CLOCS standard is the framework to do that, and CLPs facilitate collaboration between stakeholders, leading to tangible mitigation. We now have the standards, the vehicles, and the training – all the tools are at our disposal.’

‘Where are you on the path to safety?’ Kate asked the audience. ‘Are you just complying with legislation or are you being proactive, progressive and resilient? Because as I’ve demonstrated, legal compliance is not sufficient.’

She added that solving WRRR also improves efficiency and productivity, reduces congestion, driver stress, and embodied carbon, improves sustainability, enhances reputation, and saves money.

‘If you think you can’t afford to do this, I say you can’t afford not to. So, I ask you all to go away from today and do one thing to make change. We all have a part to play. The power is in your hands, and it could be the difference between a life and a death.’



Next-gen safety systems

The next evolution of vehicle safety systems will allow commercial vehicles to intervene on behalf of the driver, said Mike Britt from MG Britt Consulting. These next-gen systems are known as fused technology and include object recognition through camera and sensor technology that works together.

Fused technology provides significantly improved sensor and camera integration in safety systems. Via fused radar and camera technology, the system provides optimum on-road safety, and seamless integration. With bumper-mounted radar and optional windshield-mounted camera, the systems communicate information to the truck's brakes, engine, and transmission in real time to help mitigate collisions and enhance driver safety.

These high-tech vehicles will not look like old trucks, said Mike. 'With the integration of sensor systems, there will be no mirrors, no glass. The driver will look at a set of iPads, all integrated. And if the driver doesn't pick something up, the system will intervene.'

To the extent of autonomous vehicles? 'With safety improvements, we are moving closer to autonomous vehicles. In the US, we are running five autonomous tests where the driver starts the vehicle, and that is it. The trials are running on remote roads with GPS and sensor technology – this is happening now.'

He added that the evolution of safety is about reducing collisions in all settings. 'In the US, we have been killing 25,000 to 30,000 people a year on our roads since the 1950s. Many of these collisions are caused by driver inattention, and we believe we can engineer that out. Some of these safety systems we have been putting on for years. For fused technology, they need to talk to each other, the grid, and other parts of the motoring community.'

'AI predicts the movements of vehicles and makes decisions. A lot of AI will improve intent. A lot of AI is making sure the vehicle is maintained properly.'

From mid-2022, all new vehicles in the EU, including trucks, buses, vans and SUVs, must be equipped with advanced safety systems. 'In addition to existing systems such as lane departure warning and advanced emergency braking, trucks and buses will have to be designed and manufactured in such a way that blind spots around the vehicle are significantly reduced. They will also have to be equipped with advanced systems capable of detecting

pedestrians and cyclists located in close proximity to the vehicle.'

If all this sounds expensive, Mike points out that installing ADAS systems in trucks can save money. More and more insurance companies are using data to assign premiums based on how fleets and drivers operate.

'Video intelligence is almost always viewed favourably by insurers, with some insurance companies in the US even subsidising or supplementing the cost of deploying the technology,' said Mike. 'There are usually expectations for shared-cost programmes, with performance indicators that must be met.'

But the advantage is camera footage that can be used in court, especially important given the rise in 'nuclear verdicts' in the US, which is when a jury award surpasses US\$10 million. The average verdict size for a lawsuit above \$1 million involving a truck crash has increased nearly 1,000% from 2010 to 2018, rising from \$2.3 million to \$22.3 million. These are driving up insurance rates for trucking companies and carriers are leaving the market as a result.



Inclusivity means everyone

Covid and the Black Lives Matter movement provided the catalyst for the Society of Motor Manufacturers and Traders to initiate a diversity, equity, and inclusion programme. Now, the organisation is helping its members roll out similar initiatives, Sukky Choongh, SMMT Chair of the Diversity, Equity and Inclusion Taskforce 2021-2022, told delegates.

The isolation of the first Covid lockdown in 2020 prompted Sukky Choongh to tackle the issue of diversity and inclusion at SMMT, resulting in the creation of a taskforce looking at ways to improve inclusivity within the organisation with support from CEO Mike Hawes – top-down support that Sukky says is so essential to the programme’s success.

‘We talk about diversity and inclusion in the automotive industry a lot, particularly with reference to women. It’s not new,’ said Sukky. ‘We have been talking about equality in this country for 50 years. But it can’t just be about women, it must be about everyone.’

SMMT is already a diverse organisation according to a survey carried out in 2020, with room to further develop. The association has a 50/50 split between men and women, with 2% identifying as agender. Eleven languages are spoken by employees, while 76% of team members are white, 10% of employees are Asian and 4% are black.

SMMT’s initiative is employee-led. ‘We talked to staff about what we can do to

improve inclusivity within the organisation and the industry, and we developed a five-year strategy with a range of different milestones,’ said Sukky.

These include short-term goals, such as setting up a mentoring and sponsorship programme – ‘the next step is reverse mentoring to show senior managers what it is like to be an employee’ – while the SMMT has also introduced diversity and inclusion champions and set company-wide DEI objectives. ‘Everyone has diversity and inclusion objectives in their PDR,’ she explained. ‘We are trying to incorporate it into everything we do.’

Staff are encouraged to include pronouns on email signatures should they wish, while SMMT’s social media channels celebrate an inclusive range of cultural events, and everyone in the organisation has taken unconscious bias training.

‘We have also set up employee network groups across a range of subjects, as formal or as informal as required. Some great ideas have already come out of these groups, such as a

women’s health programme.’

Medium and long-term goals are more ambitious and stretch beyond SMMT to encompass its membership and the wider industry.

‘We have done all these things internally, and now we want to help our members do the same,’ said Sukky. ‘We are working with Kenroi Consulting to create a Diversity, Equity and Inclusion toolkit for members, and we are also speaking to other organisations similar to ourselves. We all have the same challenges, so why not work together to create an industry that better represents our customers?’

‘Inclusivity shouldn’t be an afterthought. We need to include everyone in the conversation,’ she said in closing. ‘Everyone is purchasing our vehicles so our workforce should look like and reflect our customers. My advice is to think about inclusivity in everything you do within your organisation. Don’t just talk to people who look like you, because you will only ever get the same answer.’



Diversity is our strength

How to shape a bright future for the industry through greater diversity and inclusion, and how this goal dovetails with new and emerging technologies were the topics addressed by Grahame Neagus, Renault Trucks' Head of LCV and Municipal for the UK and Ireland, in the closing presentation of Fleet Vision International – THE SHOW.

The industry is on the cusp of a new technology era. 'Alternative fuels and engines are here, and they are here to stay, so how do we move forward?' asked Grahame. 'It's not all about the technical stuff. Our sector has, across the globe, been at the centre of keeping countries running during the last two years. Despite the challenges, there is a huge opportunity.'

Grahame said the pandemic and consumer behavioural shifts pushed the transport and logistics sector to the forefront and provided a profile boost in the public's and the Government's perspective, but the industry still faces huge problems. 'Customers want new technology. Clients want new technology, but as an industry, the ability to sell and serve are not running in tandem.'

Employment in the motoring sector increased almost 12% in the last year, and the IMI expects the industry to add 320,000 jobs by 2030, but just 3% of technicians in the commercial vehicle sector are trained to work safely on EVs. 'We need to address this urgently.'

Grahame cited IMI statistics indicating that almost half of young people are opting to avoid student debt by choosing options such as apprenticeships – but how to entice them into the transport sector?

The transition to new technologies presents an opportunity, said Grahame, and growing EV ownership is influencing the changing face of the sector. 'Many job applicants today may be EV owners or users, and new technical and engineering requirements are drawing from a new source of applicants. We need employers to look beyond the historical pool of candidates as fleets change. We work with schools, colleges and universities and offer an apprenticeship scheme. Last year the scheme had 38 apprentices – a record year.'

However, he said that ensuring the longevity of the industry means harness the ever-growing spectrum of people in society. 'Our sector is always in demand – it's challenging, it's varied, and it's cutting-edge. Our job is to make road transport and logistics a career of choice for the next generation and ensure we are leading everyone into a better future.'

Support for diversity and inclusion must start at the top. 'If your CEO isn't fully engaged, it is hard for it to filter down. But if your CEO believes in diversity and inclusion, it makes an amazing difference. At Volvo/Renault, it is part of our DNA, and enhances our performance. It enriches the talent coming through the doors, energising the business.'

He added that performance is not just about productivity and profitability, but staff turnover, and whether a company is seen as a good place to work. 'We need more technicians, more drivers, more salespeople – more of so many roles – to drive this industry forward. We need the vibrancy that diversity and inclusion offer, and the opportunity for change starts now.'

The event closed with an engaged debate with the audience of this final session. Speakers and delegates from the UK and US exchanged views and experiences relating to diversity and inclusion, attracting new talent, and making the industry an attractive career prospect, including removing barriers to recruitment and educating the next generation about everything involved in a career in transport and logistics.