

WhitePaper

The 5 Biggest Headaches Fleet Managers Face And How to Deal with Them





Effective fleet management means dealing with a wide variety of challenges, both big and small. With decades of experience out in the field, we at Mobileye have put together a list of what we've been told these challenges are and how our technology can alleviate them.

Distracted Driving

In the modern world, there are more and more reasons for drivers to become increasingly distracted, when behind the wheel of their vehicle. There is little doubt that the primary device responsible for this is the mobile phone, with nearly [half of drivers](#) admitting it distracts them at the wheel, especially younger drivers.

However, while the spotlight is often placed on mobile phone usage, increasing research shows the dangers of other forms of driver multi-tasking, such as fiddling with your radio, eating/smoking and looking at Sat Nav devices. Road safety charity Brake conducted a [survey](#) of 11,000 drivers observed on roads in St Albans, England and found that 1 in 6 were engaged in a distracting activity while driving.

Even hands-free mobile devices, legally used in the UK, have a seriously detrimental impact to driver behaviours. The Royal Society of the Prevention of Accidents (ROSPA) states that drivers using a mobile phone can fail to see up to 50% of the information in their driving environment, known as 'inattention blindness.' Hands-free phones may reduce visual 'eyes off the road' and mechanical 'hands off the wheel' distraction, but they do not reduce cognitive distraction. As ROSPA [argue](#) "research clearly shows that using a hands-free phone while driving is just as dangerous as using a hand-held phone – there is little point in having both hands connected to the steering wheel, if the brain is not connected to the hands."

In 2016, out of 1445 fatal crashes in Britain, the police recorded 397 incidences due to "failure to look" with a further 140 due to driver in-vehicle distractions, distractions outside the vehicle, and phone use. This accounts for [37%](#) of total fatal accidents, though the real number is likely to be higher due to the difficulties when appropriating the cause of any accident.



Distracted to Death



Drivers of heavy vehicles are **23X** more likely to crash or near crash when **texting**



Drivers of heavy vehicles are **5.9X** more likely to crash or near crash when **dialing** a cell phone

[Source VTTI](#)



Drivers remain distracted for up to **27 seconds** after using a device

[Source AAA](#)



With the dangers of distracted driving clear, Mobileye continually hears from Fleet and Safety Managers that fighting these dangerous behaviors has become their number one priority.

So, what can be done?

- 1. Lock it:** The first step to ensure drivers remain focused on the road, is to remove distraction from their environment. So, in the spirit of “out of sight, out of mind,” encourage drivers to remove hands-free devices and lock away their mobile phones in the glove compartment. You can even find [apps](#) and devices that will not allow the vehicle to start until the phone is locked away.
- 2. Take a break:** The clearest solution to ensure your drivers do not drive distracted is to encourage them to pull over and take a break, to stop for food, or make a phone call when required. In particular, encourage the use of schedules to ensure that drivers have plenty of time to stop for short breaks and ensure they remain focused behind the wheel.
- 3. Education:** Let’s face it, no solution will work without the drivers’ cooperation. Therefore, the best way to work with drivers is to show them that distracted driving is bad for everyone. Nobody wants to get in a collision, so more must be done to ensure that all drivers realise the dangers of driving distracted.
- 4. Warning:** According to the US National Highway Traffic Safety Administration (NHTSA) almost [80%](#) of all collisions occur due to some form of distracted driving during the 3 seconds before a collision. While nothing can substitute for an attentive driver, collision avoidance systems such as [Mobileye's](#) can play an important role in reducing these statistics. When Mobileye's sensors detect a dangerous situation ahead, they generate both audio and visual cues, pulling the driver's attention back to the road and warning the driver in time to prevent or mitigate a collision. Best of all, the Mobileye system does not rely on cooperation from unwilling or stressed drivers, nor does it rely on the driver to activate the system. It's just there, undistracted, helping to protect the driver and those around them and complementing whatever other steps are taken to reduce both the phenomenon and the results of distracted driving. [Learn more](#) about how the Mobileye system works.

Driver Retention

The chronic shortage and fast turnover of skilled truck drivers is one of the biggest challenges that fleet managers face.

As [reported](#) by the Freight Transport Association “the shortage of HGV drivers in the UK has climbed to 59,000 and 64% of transport and storage businesses now face severe skills shortages.” This trend appears set to continue unless fleets can come up with better ways to attract and retain drivers. Further [evidence](#) submitted to the UK’s All-Party Parliamentary Group for Road Freight stated the shortfall could rise as high as 150,000 by 2020.

Sally Gilson, Head of Skills Campaigns at FTA [states](#) that “the combination of an ageing workforce, low unemployment, declining EU net migration and difficulties attracting new candidates to the sector has created the perfect storm of driver shortages.”

To stem the tide, proactive fleets in the USA are [adopting driver reward](#) programs that motivate employees to improve their performance. Drivers who attain certain metrics, from the number of miles driven to safer driving behavior receive higher salaries, bonuses or benefits, like additional vacation days.

With the new Mobileye 8 Connect™ collision avoidance system, Mobileye can help companies monitor driver performance. The system records alerts triggered by dangerous driving behavior such as:

1. Following a vehicle ahead too closely
2. Is in danger of colliding with a vehicle ahead
3. Is in danger of colliding with a pedestrian or cyclist ahead
4. Making an un-signalized deviation from its lane



Driver Shortages

By **2020** The FTA estimates there will be a shortage of **150,000 lorry drivers**

[Source: https://fta.co.uk/media/press-releases/2019/october-2019/hgv-driver-shortage-climbs-to-59-000](https://fta.co.uk/media/press-releases/2019/october-2019/hgv-driver-shortage-climbs-to-59-000)

In **2018** Large fleets had a driver turnover rate of **89%**
Small fleets had a driver turnover rate of **73%**

[Source: www.trucking.org/article/Fourth-Quarter-Truck-Driver-Turnover-Rate-Shows-Muddled-Picture](http://www.trucking.org/article/Fourth-Quarter-Truck-Driver-Turnover-Rate-Shows-Muddled-Picture)



By recording the number and type of alerts triggered by their fleet of vehicles, fleet managers can then analyse this data to determine who is driving safely – or at least more safely than their colleagues – and provide incentives and rewards as an employee retention tool. On the other hand, the system is not video recording the drivers, giving them a degree of privacy and diminishing their privacy concerns.

In addition to these rewards programs, Mobileye's collision avoidance system helps retain drivers in a more mundane way: by preventing injuries from collisions. Studies show that after installing Mobileye, drivers exhibit improved [driving habits](#) and [lower collision rates](#).

In the article "[5 Things to Expect in Trucking in 2019](#)", transportation executive Joseph Evangelist predicts that the driver shortage will continue, and that fleets will focus more on retention incentives. "We will see more things like mileage bonuses, longevity bonuses, safety bonuses and other performance-based incentives rewarding different aspects of the driver's activity. These bonuses will boost driver pay in a different way than a simple cost-per-mile increase and will reward drivers for their efforts toward meeting goals," Evangelist says.

Mobileye's cutting-edge technology can help fleet managers retain their drivers and improve the safety of their fleet at the same time. To learn how much safer your fleet and drivers can be, contact a [Mobileye rep for more information](#).

Busted Budgets

When DISH Network Corporation, based in Colorado, USA, adopted the Mobileye collision avoidance system for its fleet in 2016, they looked forward to improving driver safety, decreasing vehicle maintenance times and lowering their exposure to liability claims. What they didn't expect was an increase in fuel savings – reporting at least a 2% increase.

In 2017 Direct Line DrivePlus conducted a survey in the UK, [showing](#) that bad driving habits not only are costly in terms of road safety, they have also have a direct impact on a fleet's marginal costs. Studying over 319,000 journeys made by more than 2,000 drivers during a two-month period they calculated that the 'best drivers' spent an average of £837 per year on fuel, compared to £1,399 for the worst, a difference of £562 (67%).

With fuel making up 21% of [the average fleet's marginal cost](#), these savings could therefore be very significant to fleet owners across the UK. So how exactly does retrofitting your fleet with a collision avoidance system save fuel?

A major component of Mobileye's collision avoidance system is [headway monitoring & warning](#) (HMW). The collision avoidance system constantly scans the road ahead, monitoring the distance, in seconds, between vehicles. When this distance become unsafe, the HMW warns the driver.

Crucially, this alert activates before the driver is in danger, allowing them to take preventative action before the situation becomes critical, forcing the driver into emergency action. For example, if a distracted driver gets too close to the vehicle ahead, they receive a warning that allows them to slow down as opposed to slamming on the brakes – one of the main culprits in added fuel consumption.



How to Save Fuel



Avoid aggressive driving (harsh braking, accelerating)



Fuel Economy Benefit
10-40%



Stop speeding



Fuel Economy Benefit
7-14%



Avoid carrying unnecessary weight



Fuel Economy Benefit
1% per 100 pounds

[Source: US Department of Energy](#)



In fact, according to the RAC Foundation, [outlined](#) in a report studying the effectiveness of eco-driving, aggressive driving – a category which includes, speeding, harsh braking and rapid acceleration – can increase fuel consumption by 37%. US company, Gamma Technologies, also ran a [study](#) comparing two simulations – in one, a vehicle closely followed a lead vehicle while in the second a vehicle followed the lead vehicle at a safe distance. Engineers were surprised to find a 3% drop in fuel consumption simply by following at a safe distance.

A further benefit of HMW is that as drivers gain experience using the technology, they improve their driving habits, anticipating the alerts and acting to prevent them. This means even fewer incidents of harsh braking occur, increasing fuel efficiency even more.

Of course, these savings come on top of the other, myriad, benefits of collision avoidance systems—increased uptime for your fleet, decreased liability and, most importantly, keeping your drivers safe.

[Learn more](#) about how you can implement Mobileye's collision avoidance system in your fleet.



"Aggressive driving can decrease gas mileage by **up to 40%** in stop-and-go traffic."

Speeding Drivers

For many drivers, speeding is an automatic behavior, rather than a conscience decision. Drivers usually don't realize how fast they are going until they have to suddenly slow down. They just want to get from point A to point B as quickly as possible, but fleet drivers who regularly speed can have a negative impact on your business.

The Dangers of Speeding

Drivers seldom consider the safety risks when they're going over the speed limit until it's too late. In the UK, inappropriate speed contributes to around 11% of all injury collisions [reported](#) to the police, 15% of crashes resulting in a serious injury and 24% of collisions resulting in a fatality.

Aside from being illegal, traveling even 5 miles above the speed limit can seriously increase the severity of a collision. If a pedestrian is hit by a car at [40mph they are 90% likely to be killed. This drops to 50% at 30mph and just 10% at 20mph.](#)

Traveling at higher speeds leads to more serious injuries primarily due to:

- Speeding reducing the amount of reaction time that a driver has, making it harder to avoid a collision.
- It takes more time and distance for a speeding vehicle to come to a complete stop, so even if a driver applies the brake, the vehicle's momentum will carry it further.
- The force of a collision [increases exponentially](#) as speed increases, so there is a higher risk of injuries and death. As a vehicle gains speed, its kinetic energy also increases, meaning that the impact will be more severe. A



Speed Kills

Speeding
was a factor in 24%
of traffic fatalities

[Source: ROSPA](#)

collision that happens when a vehicle is going 50 mph is four times, not twice, as severe as a collision when the vehicle is moving at just 25 mph.

If you can ensure that your drivers observe the speed limit, you'll help them stay safe, avoid accidents, and save lives.

The Financial Burden of Speeding in Fleets

There is a common misconception that speeding can save your fleet money by reducing travel time. But in reality, speeding is actually less cost effective because it can lead to an increase in operating costs. Department for Transport [statistics](#) show that over 2.02 million speed limit offences were registered in England and Wales in 2017, an increase of 2.4% compared to 2016.

Of these, [2 million](#) resulted in a Fixed Penalty Notice ranging from £50-£300 depending on the severity of the offence, which means speeding can be a serious drain on a fleet's budget. This also does not account of losses due to drivers having to take time off work to attend speed awareness courses or the National Driver Offender Retraining Scheme.

A vehicle run at high speeds is also more prone to wear and tear. Whether it's new brake pads, tires and engine transmissions, maintenance costs add up when a vehicle must be taken off the road for repairs – in addition to the costs to the fleet for being short one vehicle.

Finally, as discussed above, fuel is one of the highest operating costs of running a fleet, so preventing speeding can benefit your bottom line. It's important to note that gas mileage drops steeply when vehicles exceed 55 mph.

For your fleet, any collision can be expensive. From lost driver hours to vehicle repair and maintenance, to an increase in insurance rates and fuel usage, the costs quickly accumulate. By managing your drivers' speed, you could lessen the severity and frequency of accidents, saving money and lives in the long run.

How to Stop Speeding in Your Fleet

Driver education can certainly teach your fleet drivers about the dangers of speeding. But these programs may not go far enough and their lessons may soon be lost once your fleet drivers leave the classroom. If these educational classes fail to change their driving habits, it is time to take further action.

A speed limit indicator (SLI) is an innovative preventative measure to help keep drivers aware of speed limits while on the road. The system identifies speed limit signs along the route and issues an indication whenever the vehicle exceeds the posted speed limit. In Mobileye's collision avoidance system, the current speed limit is displayed on the Eyewatch™ to remind drivers in case they lose track of this limit.

Whether the driver is intentionally or unintentionally speeding or didn't realize that the speed limit had suddenly changed, having a speed limit indicator in your fleet's vehicles can remind your driver to take corrective action and stay within legal limits.

"Every day about **112,000 drivers** receive speeding tickets at an average cost of **\$150 per ticket**"

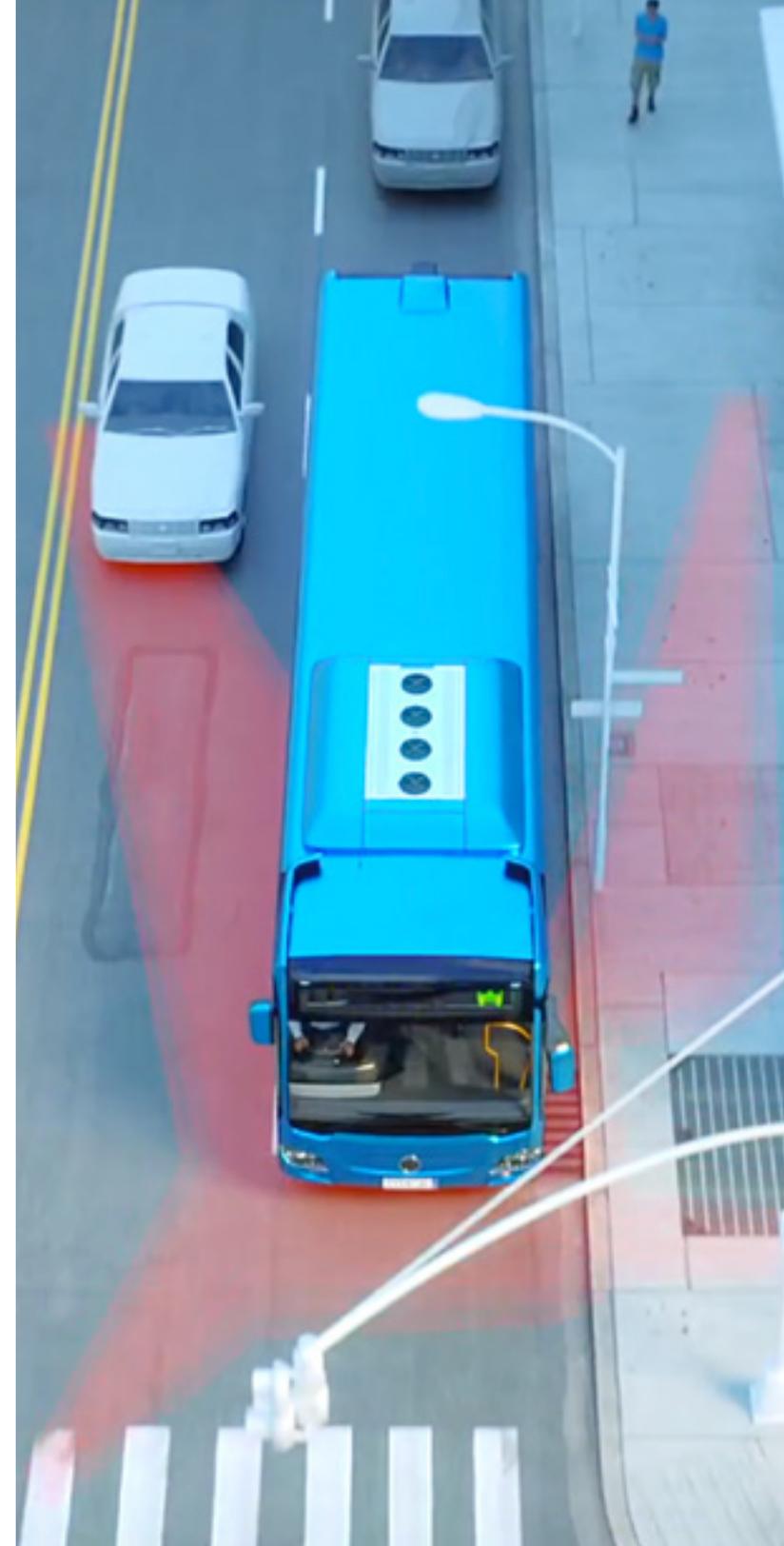


Urban Driving

Managing a fleet in an urban environment involves navigating your drivers around bumper to bumper traffic and other inconveniences, making it, in some ways, more dangerous than a motorway environment. According to a [2016 report](#) by the US-based NHTSA, the high concentration of vulnerable road users in cities meant that 72% of pedestrian fatalities and 68% of cyclist fatalities occurred in urban areas.

So how can you help your drivers safely navigate these urban hazards?

- 1. Provide a good GPS** – Imagine all the dangerous situations drivers can find themselves in simply by not knowing where they are going. Everything from harsh braking when you're not prepared for a turn to accidentally turning down a one-way street. All these can be reduced by a good GPS system, not to mention the benefit of allowing drivers to concentrate on the road and not the navigation.
- 2. Weather preparation** – Of course, weather affects driving everywhere, but in urban areas there are many more obstacles - pedestrians, cyclists, delivery trucks etc. This makes preparing for bad weather even more important. Windshield wipers and tires become vitally important at these times, so put effort into checking that they are up to standard. In addition, make sure windshield wiper reservoirs are full in case drivers need to clean off their windshields. Bad weather can also increase your stopping distance. Here, a good collision avoidance and blind spot detection system (see 4 and 5 below) can also help drivers keep safe.
- 3. Avoid tiring your drivers** – We typically associate collisions due to fatigue with long highway drives, but urban driving is also severely affected by fatigue. A London [study](#) of city bus drivers, published in 2019, showed 21% of city bus drivers had to fight to stay awake while driving two or





three times a week and 5% had been involved in at least one accident due to fatigue. This makes dealing with blind spot detection (see below) even more difficult.

- 4. Blind spot detection training** – Large vehicles, such as city buses, means larger blind spots and it is critical for drivers to be properly trained to deal with them. This is especially important for buses traveling city streets. Quite frequently cyclists will pass buses on the left, directly through the bus's blind spot. Right turns also create a hazardous situation when the A-pillar on city buses creates a blind spot that can easily hide pedestrians until it's too late.
- 5. Install a collision avoidance system** – A proper collision avoidance system such as Mobileye Shield+™ can help with many of these issues. The system offers five safety features, among them urban forward collision warning, specially designed to prevent or mitigate collisions in slower, crowded, urban traffic. Both visual and audio warnings are designed to grab drivers' attention in those vital few seconds before a collision can occur. Perhaps most critically, the pedestrian and cyclist detection system built into Mobileye Shield+™ constantly monitors a vehicle's blind spots and the road ahead, not only signaling to drivers when pedestrians or cyclists enter these dangerous areas but also intelligent enough to ignore inanimate objects, avoiding false alarms.

Collision avoidance systems, such as Mobileye's, have a solid record of reducing the likelihood of a collision, as shown by a [trial](#) of our collision avoidance system by Abellio, a major transport operator with more than 600 buses in London. Working with Mobileye, Abellio installed the system on 66 buses travelling three different London routes and the project produced outstanding results, with avoidable collisions dropping by [nearly 30%](#). In addition, there was an unexpected result – a [60% drop](#) in the number of avoidable on-board casualties.

For more information on blind spot detection and protecting pedestrians check out the Mobileye Shield+™ [system](#) for yourself.

About Mobileye

Mobileye, an Intel Company, is a global leader in the development of computer vision and machine learning, data analysis, localization, and mapping technologies for Advanced Driver Assistance Systems and autonomous driving solutions.

Our safety technology is integrated into hundreds of new car models from the world's major automakers: BMW, Audi, Volkswagen, Nissan, Ford, Honda, General Motors and more.

The Mobileye Collision Avoidance System is available with a single, forward-facing vision sensor suitable for almost any vehicle, or in a multi-sensor solution designed specifically for large commercial vehicles with hazardous blind spots.



100+ distributors
around the world



40+ million vehicles use
Mobileye technology



International Fleet Industry
Award 2011 & 2013

Learn More

For more information on blind spot detection and protecting pedestrians, visit www.mobileye.com/uk/fleets or contact www.mobileye.com/uk/fleets/contact