

#### Contents

Introduction	3
Why driver safety is critical	4
Safety-related developments Why has road safety progress stagnated? Legislation Technology	<b>5</b> 5 6 8
What can companies do	11
Conclusion	17
Contact	18
References	18



Introduction

## Road traffic injuries and deaths reach epidemic proportions Urgent measures are needed to make real progress

The number of road traffic injuries and deaths has reached epidemic proportions globally and is still rising in most regions. Between 20 million and 50 million road users suffer non-fatal injuries on the world's roads each year, and there are over 1.35 million fatalities. In fact, road traffic accidents are expected to be the fifth-biggest cause of death by 2030.

On a positive note, road safety in the European Union (EU) and United Stated of America (USA) has improved greatly in recent decades, and European roads are the safest in the world. Nevertheless, with the Americas currently at 15.6 deaths per 100,000 of the population and Europe at 9.3, the number of deaths and injuries is still far too high.

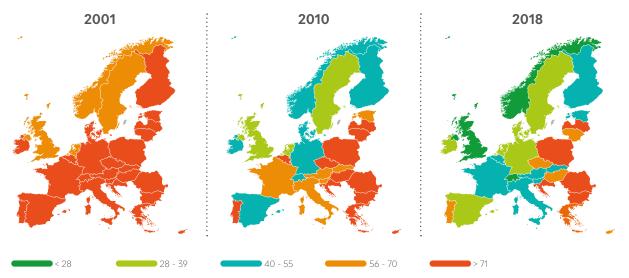
Safety is fundamental to any mobility system. In the EU, the statistics showed a significant decrease in road deaths up to around a decade ago, but progress has been stagnant since 2013.

This stagnation – which has occurred despite the fact that cars are getting safer and governments are introducing ever-more safety initiatives – means that in 2020 the actual number of fatalities will exceed the EU target set at the beginning of the decade by some 10,000.

Strong political will and urgent measures are needed to narrow the gap between the desired and the actual progress. In this context, the European Parliament has set a new objective: to halve the number of road deaths and serious injuries between 2020 and 2030."

This paper is aimed at creating awareness of the road safety problem as well as providing insight into the continuous development and implementation of various public-sector and private-sector measures. It also contains tips about how companies themselves can contribute to a much-needed improvement in road safety.

Figure 1: Road deaths per million inhabitants in 2001 / 2010 / 2018



Source: ETSC, 13th Annual Road Safety Performance Index (PIN) Report, 2019



## **Driver safety is critical**

Work-related road accidents account for up to a third of all work-related deaths

Approximately 50% of vehicles on the road today are registered to corporate organisations. Corporates can therefore play an incredibly important role in halting and reversing the current global increase in road traffic deaths – firstly by recognising road traffic injuries as an important health and development problem, and secondly by intensifying their support for accident prevention.

In the EU, USA and Australia, work-related road accidents account for between a quarter and a third of all work-related deaths. The collision rate of company-car drivers is 50% higher than that of private motorists (after adjusting for exposure).<sup>iii</sup>

In addition to the incalculable price of personal loss of a fatal collision, the quantifiable financial cost is very high too. The European Commission estimates that the socio-economic cost per fatality varies between €0.7 million and €3 million.

## Cost impact of a non-fatal accident

- Time off work and productivity losses
- Emergency medical costs
- Vehicle repair and maintenance costs
- Legal and insurance costs
- Damage to employer's reputation (especially when liveried vehicles are involved)
- Environmental costs
   (e.g. due to spillages of
   dangerous substances)

Safetu-related developments

# Why has road safety progress stagnated? Distracted driving is largely to blame

Road safety is a shared societal responsibility. This is underlined by the fact that over 90% of all accidents are caused by driver error, such as poor anticipation, inappropriate reaction to a hazard and violation of road traffic laws. The behaviour of road users, including pedestrians and cyclists

as well as drivers, offers by far the

biggest potential for improving

road safety.

Excessive speed is the main factor in 30% of fatal accidents, while distraction causes 10-30% of road deaths. Equally worrying is the fact that 25% of all road fatalities in Europe are alcohol-related.

There are several simple steps we can all take to help keep our roads safe. If everybody would fasten their seat belts, respect speed limits and refrain from driving under the influence of alcohol or drugs, we could reduce the number of fatalities on European roads by half.

But the rapidly emerging and evergrowing risk of distracted driving due to the proliferation of mobile devices is most likely the biggest reason why progress on reducing road fatalities has stagnated in recent years, despite all the governmental measures and technological advancements that have improved vehicle safety. So what else can – and should – be done? Let's dig a bit deeper.



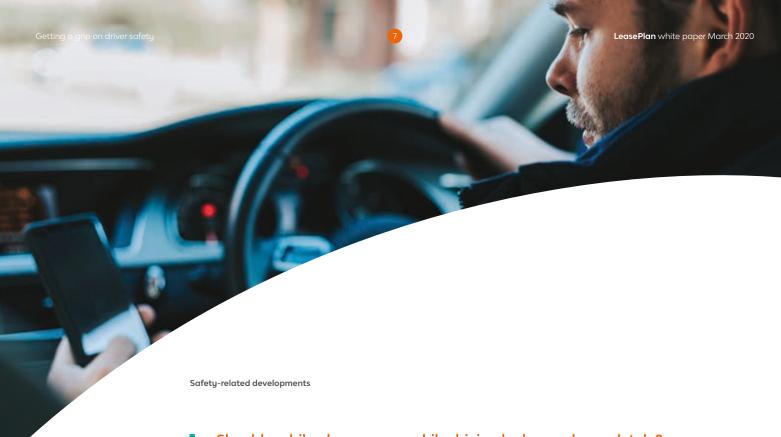


Governmental bodies such as the European Commission (EC) and the USA's National Highway Traffic Safety Administration (NHTSA) play a pivotal role in terms of legislation and policymaking. They provide a framework and define the roles and responsibilities of the various stakeholders such as local governments, citizens and car manufacturers. As well as adopting laws, such bodies set targets, support public education campaigns, help individual countries, regions and other road safety organisations to share relevant experience, and provide funding. This is all aimed at addressing every factor that plays a role in traffic accidents: infrastructure, vehicle safety, driver behaviour and emergency response.

For example, the EC's 'Vision Zero' sets the long-term goal of zero road deaths by 2050 and a 50% reduction in serious injuries between 2020 and 2030. The NHTSA has a similar aim to reduce deaths, injuries and economic losses from road accidents. In May 2018, in support of 'Vision Zero', the EC launched 'Europe on the Move' which includes a new approach to the EU Road Safety Policy, along with a strategic action plan. It translates 'Vision Zero' into policies which are then rolled out on a large scale. It also looks at the implementation of a 'Safe System' at EU level, i.e. safe vehicles, safe infrastructure and safe road use (speed, sober driving, seat belts and helmets).

#### **Technological developments supporting legislation**

New technological advancements such as in-car access to email, internet and mobile visual display while driving have introduced the potential for new safety risks. However, they may also hold the key to future solutions by enabling in-car enforcement of legislation. Governments are also supporting the implementation of other new technology to detect and punish unsafe driving behaviour such as speeding and smartphone usage, e.g. the use of infra-red camera technology to scan drivers and check their heat signatures to see if they are holding a phone.



#### Should mobile phone usage while driving be banned completely?

The use of hand-held phones while driving is illegal in over 40 countries, and the use of hands-free telephones while driving is widely debated. Numerous safety organisations (including the National Safety Council in the US, the European Transport Safety Council at EU level, and the Royal Society for Prevention of Accidents in the UK) have called for a complete ban on mobile phone usage while driving. In the EU, Portugal is currently the only country to restrict the use of hands-free telephones in addition to hand-held ones. In the USA, some jurisdictions support a legislative ban on all telephone use while driving for novice drivers and school-bus drivers, but not for all drivers. In some other countries, telephone usage while driving is covered more broadly under legislation governing driver distraction and careless or dangerous driving.

Encouraging road users to improve their behaviour in line with the legislation is a crucial element in making roads safer. This applies especially to respecting applicable speed/alcohol limits and wearing seat belts, since these are some of the major factors in road fatalities. In order to ensure compliance with the law, systematic control is necessary: road traffic offences must be followed up and effective sanctions enforced consistently for all offenders. All these measures will help us to move closer to the long-term goal of zero road fatalities.

Safetu-related developments

## **Technology**

## The value of active safety in emergency situations

Road safety is a major priority for the automotive industry itself. In Europe, the sector invests a large part of its annual €54 billion R&D budget in making passenger cars and commercial vehicles safer i.

In terms of vehicle design, road safety measures can be divided into two main categories: passive safety and active safety. Passive safety systems mitigate the consequences of an accident during/after the impact, whereas active safety systems constantly monitor the performance and surroundings of a vehicle to prevent or mitigate an accident pre-impact, i.e. before a collision actually occurs.

Although passive safety systems have made a major contribution to road safety over the years by reducing the severity of injuries sustained in accidents, the level of maturity of this technology limits the scope for further improvement. Instead, active safety measures now offer huge potential to further improve road safety by actively helping drivers to manage and mitigate the impact of emergency situations or even to avoid emergency situations altogether.

#### **Passive safety**

Passive safety technology comprises a range of built-in mechanisms that protect the occupants of a vehicle and other road users when a collision occurs by reducing the impact of an accident or the level of injury.vii

Common examples of passive safety systems include airbags (cushions that inflate immediately upon impact, providing a soft restraint between the occupants and the vehicle interior during a crash) and seat belts (or 'safety belts') which keep passengers correctly positioned if the vehicle comes to a sudden stop, thereby reducing the impact of the vehicle interior on the body and preventing people from being ejected.

Most vehicles are also designed with deformation zones (also known as 'crumple' or 'crush' zones) which absorb the kinetic energy of a collision to minimise the harm to the vehicle's occupants. Passive safety systems are only really effective if people wear their seat belts, which makes seat belt reminder systems – and enforcement – equally important.



#### Safety-related developments

As part of 'Vision Zero', the EC proposes to make certain safety and driverassistance features mandatory, and many of these are already being widely adopted by car manufacturers. The newest vehicles are equipped with intelligent transport systems that alert, assist and even correct the driver, for example, and some of these systems cannot be deactivated manually.

As of 2022, new safety features will become mandatory throughout the EU due to a new type-approval requirement with regards to general safety and the protection of vehicle occupants and vulnerable road users (e.g. pedestrians, motorcyclists and cyclists). The new mandatory safety features include:

 For cars, vans and buses: warning of driver drowsiness and distraction (e.g. smartphone use while driving), intelligent speed assistance, reversing safety with camera or sensors, and data recorder ('black box') in case of an accident

#### **Active safety**

Many of today's passenger cars and commercial vehicles are fitted with the first wave of active safety technology; approximately 80-90% of the cars on Europe's roads come equipped with technologies such as anti-lock braking systems (ABS) and electronic stability control (ESC) to prevent the driver losing control of the vehicle while braking or steering. A second wave of active safetu measures is now being introduced - based on cutting-edge technology such as onboard sensors, radar, cameras, GPS and lasers - to prevent a collision entirely or, if a collision really is unavoidable, to slow the vehicle before impact. Both of these measures can save lives





#### Safety-related developments

In addition to governments and automotive manufacturers, the third driving force behind road safety solutions is the technology industry, first and foremost by reducing human error through connectivity and automation. One example of recent technological advancement is a driver distraction solution that not only prevents the driver using a smartphone while driving but also features reporting functionality (e.g. to the fleet manager). Other examples are telematics devices that gather data and rate the driver's risktaking (speeding, braking, acceleration, cornering) as well as dashcams which issue warnings when the driver encounters potentially dangerous situations.

Needless to say, vehicle technology is just one piece of the complex road safety puzzle. The behaviour of drivers and other road users, the design and maintenance of road infrastructure, the clarity and enforcement of traffic rules, and vehicle fleet age and composition are all equally important factors. It is not enough to focus on just one of these factors at the expense of the others. Real road safety progress will require an integrated approach – one in which companies and drivers play a role too.

## Examples of the latest vehicle safety features

- Advanced emergency braking
- Alcohol locks
- Drowsiness and distraction detection
- Lane-keeping assistance
- Collision warning systems
- Assisted driving
- Intelligent speed assistance
- Reversing camera and detection systems
- Tyre pressure monitoring system
- Vulnerable road users detection and warning on front and side of vehicle
- Safety glass
- Event data recorder



# What can companies do to improve driver safety? Effective fleet safety programmes contribute

## Effective fleet safety programmes contribute to a healthier business

With road safety high on national and international agendas as a way to reduce traffic-related fatalities and serious injuries, companies are increasingly looking to implement fleet safety programmes, typically as part of their Corporate Social Responsibility (CSR) policies. This is a good fit, since CSR embraces issues such as occupational health and safety: the legal obligation to ensure workplace safety and to prevent risks. In this instance, the workplace extends to company vehicles that are driven for business purposes, which means that companies have a responsibility for the safety of their employees while out on the road

An effective fleet safety programme comprises active accident prevention measures including educating drivers about responsible and safety-conscious behaviour and making sure that the vehicles they drive are safe. Such a programme demonstrates that a company is doing everything it can to ensure that its workforce and the general public are safeguarded, drivers are equipped to deal with potential hazards and company vehicles are legal, safe and compliant.

#### Why is a fleet safety programme important for my business?

As an employer, you are responsible for the health and safety of your employees – and of others – in every work-related aspect. This means you must evaluate all the risks your employees may be exposed to and put in place preventive and protective measures, such as ensuring that each worker has received the necessary health and safety information and training. In many countries, vehicles are now also classified as a 'workplace', so any company operating vehicles must view fleet safety as an essential consideration'iii.



To ensure the continued success of your business, it is vital to keep up to date with legal obligations and operational good practices. Now that reducing road deaths and injuries is so high up on the political agenda internationally, it is more important than ever for companies to be aware of the legal, moral and financial implications of ignoring work-related road safety risks. Implementing an effective fleet safety programme and actively preventing accidents will enable your company to save costs as well as reduce risk across the business. Immediate benefits include:

- Reduced frequency and severity of accidents
- Reduced vehicle operating costs
- Improved employee well-being, motivation and retention
- Reduced insurance premiums and repair costs
- Reduced downtime of staff and vehicles

Additionally, effective accident prevention demonstrates that road safety is being taken seriously, thus providing operational reassurance. This can help to enhance your corporate image and reputation, boost your company's CSR credentials and create competitive advantage leading to more profitability.



No matter how big your company is, you have a responsibility and duty of care to ensure that effective systems and controls are in place, and that they are communicated to all relevant parties. Implementing a fleet safety programme is the optimal way to achieve this.



**Actively preventing accidents** 

One of the most effective ways companies can improve safety is by implementing an active prevention programme to change driver behaviour and demonstrably reduce the accident frequency rate. As part of the active prevention programme, a dedicated Safety Board is set up at corporate level to establish targets and monitor progress. Quantitative and qualitative data is gathered and analysed to understand the root causes of accidents, and claims data is used to benchmark accident frequency levels and identify highrisk areas. This process allows companies to define a set of bespoke preventive measures that can help to reduce the accident frequency rate.

Figure 2: A five-step approach to active prevention Ongoing annual cycle

## Annual renewal / Bonus-Malus Propose preventative actions • Set-up Safety board • Claims statistics • Benchmarking

Active prevention 5 step approach

- Agree safety KPIs
- Reporting structure

- Potential risk factors
- Awareness
- Feedback • Incentives & penalties
- Technology
- Training
- Fewer accidents

• Lower insurance premium at renewal & prevention of indirect cost



#### How to implement an active prevention plan

For an active accident prevention programme to be truly successful, it must be embedded in the culture of a company. There are various ways to do that, of course, but this five-step approach is a proven methodology:

#### 1. Ensure management buy-in

'Leading by example' is widely regarded as the best way to ensure buy-in. Therefore, it is essential that any fleet safety programme is championed from the top down, ideally at CEO/senior management level, so that good practices can cascade down through the organisation. Roles and responsibilities need to be clearly defined and a safety board should be implemented. An effective and comprehensive plan of ongoing communications will play a vital part to ensure all employees and managers understand their roles and responsibilities.

#### 2. Collect relevant data

Once buy-in has been achieved and the policy defined and implemented, the company needs to start gathering data to obtain a clear picture of all the risks as the basis for addressing them. Elements that need to be measured include:

- Accident frequency rate
- Types of accidents
- Cost of accidents, including repair costs
- At-fault indicator
- Bodily-injury indicator
- Insurance claims
- High-risk drivers, including vehicle type, mileage, routes and job type

#### 3. Perform root cause analysis

When the organisation has a true understanding of the actual figures associated with each risk, it can begin to perform root cause analysis to identify high-risk areas. Benchmarking the frequency and severity of accidents will support risk management and indicate which preventive measures should be given priority.



What companies can do

#### 4. Propose preventive actions

People's attitudes will not change until they start to see the benefits of behavioural change. Just some of the ways a company can raise awareness and stimulate cultural and hence behavioural change include by communicating accident ratios, providing instant driver feedback, and introducing incentives/penalties, safety-related gadgets and driver training.

Figure 3: Some examples of preventive actions



#### **Awareness**

#### Workshops

Action plans on an organisation or departmental level

#### Communication Presentations, Newsletters, Videos, ...



#### **Feedback**

## **Driver coaching**

based on risk profile and behaviour

#### Performance review with line Manager

#### **Driver report** accidents, fines,

fuel consumption

#### Instant driver feedback

App, telematics

## External feedback

1-800 How's my driving

Vehicle inspection



#### **Incentives &** penalties

#### Incentive programme

Rewards for improved behaviour

#### **Penalties**

For example pass-on deductible to driver, or collective if KPIs are not met

## Gamification

Rewards for best drivers



#### **Technology**

#### Vehicle safety options

Park distance control, Lane assist, Alarm, ABS

### **Smart technologies**

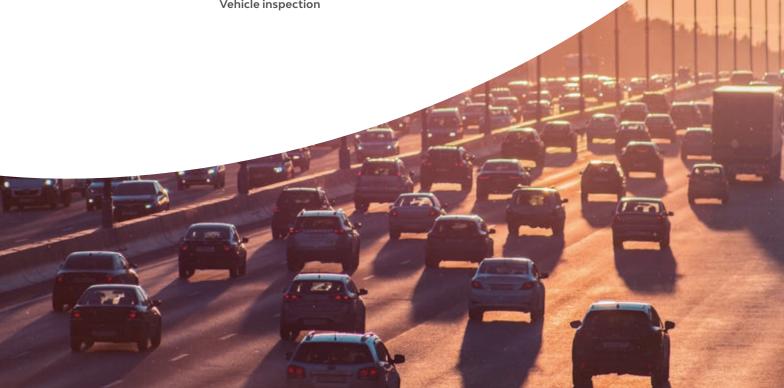
Driver Distraction Solution, telematics, Nauto



#### **Training**

Online training

On-road training



What companies can do

#### 5. Annual renewal / Bonus-Malus

A business has only achieved a truly embedded driver safety culture when change has spread throughout the entire organisation. This is when corporates will start to derive the first benefits from their fleet safety initiatives. Reduced frequency and severity of accidents will lead not only to lower accident-related costs and improved employee well-being, motivation and retention, but also to lower insurance premiums.

#### The importance of a clearly defined policy

An active prevention programme must be supported by a clearly defined safety policy, underpinned by the right level of resources and investment. This ensures that safety is embedded in the lease policy, e.g. that safety is a factor in vehicle selection, that drivers understand how they are expected to behave, and that there are guidelines in case of an accident.

A safety policy is a broad statement which declares the company's commitment to fleet safety. It should define and guide standards for business conduct and ensure compliance with legal requirements. It should outline the responsibilities at all staff levels, from senior management and line managers to employees out on the road. It is vital that the policy is fully communicated, understood and acted upon at all levels throughout the organisation and that everyone knows they have a role to play in its implementation.

After implementation, it is essential to ensure that employees retain and continue to develop relevant knowledge and skills in support of ongoing behavioural change aimed at reducing road safety risks.





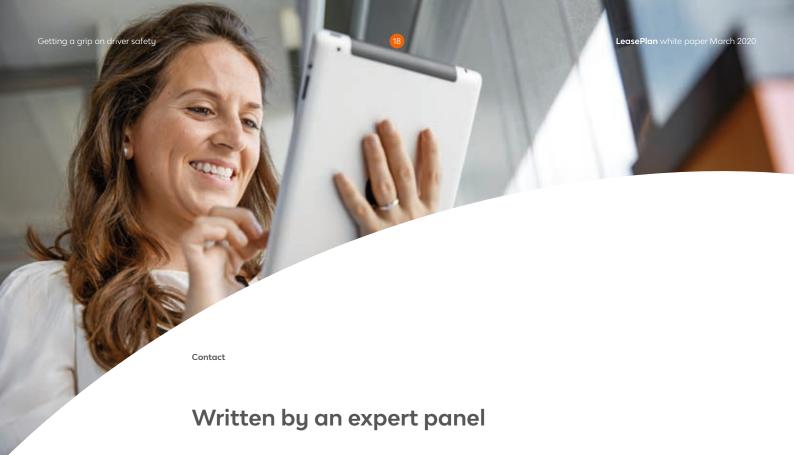
# At LeasePlan we aim to make our fleets amongst the safest in the industry

More than 1.35 million people die in road traffic accidents each year worldwide, according to the Global Status Report on Road Safety 2018 by the World Health Organization (WHO). Traffic injuries are now the leading killer of people aged between 5 and 29, including a disproportionate number of pedestrians, cyclists and motorcyclists – especially in developing countries.

The 2030 Agenda for Sustainable Development set the goal (SDG 3.6) of halving the global number of deaths and injuries from road traffic accidents. A further target (SDG 11.2) includes a focus on safe, sustainable transport systems to improve road safety, with special attention for children and vulnerable groups.

At LeasePlan, we aim to contribute to achieving these goals by making our customer and employee fleets among the safest in the industry. Our dedicated programme to help corporates measurably reduce their fleet's accident frequency rate is called 'Active Prevention'. This programme forms part of our 3D Coverage insurance proposition, which is available across all countries, and is based on a phased approach tailored to each customer's specific circumstances.

Safer driving results in fewer accidents and reduces fatalities and bodily injuries. It lowers damage costs and improves business productivity. Zero avoidable accidents will benefit our customers, their drivers and society as a whole.



LeasePlan is working in partnership with customers, drivers and road safety specialists to raise awareness of the issue of fleet safety. Through our account managers and fleet consultants, we offer practical solutions and expertise to help prevent avoidable accidents.

#### Our experts



**Saskia Harreman** Head of Knowledge Centre

+31 6 435 362 20 saskia.harreman@leaseplan.com



**Eelco Laan**Director Strategy & Transformation

+31 6 225 504 66 eelco.laan@leaseplan.com

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