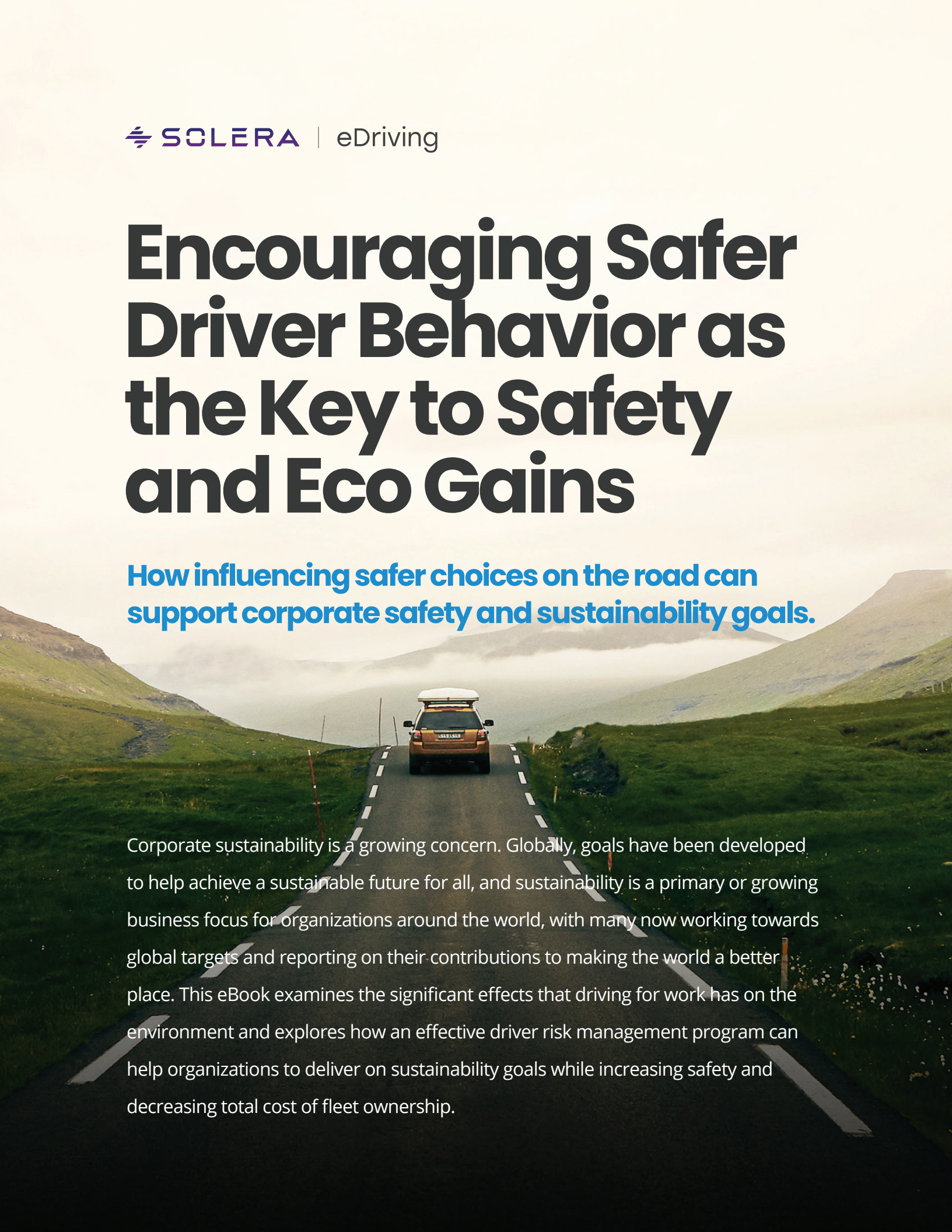
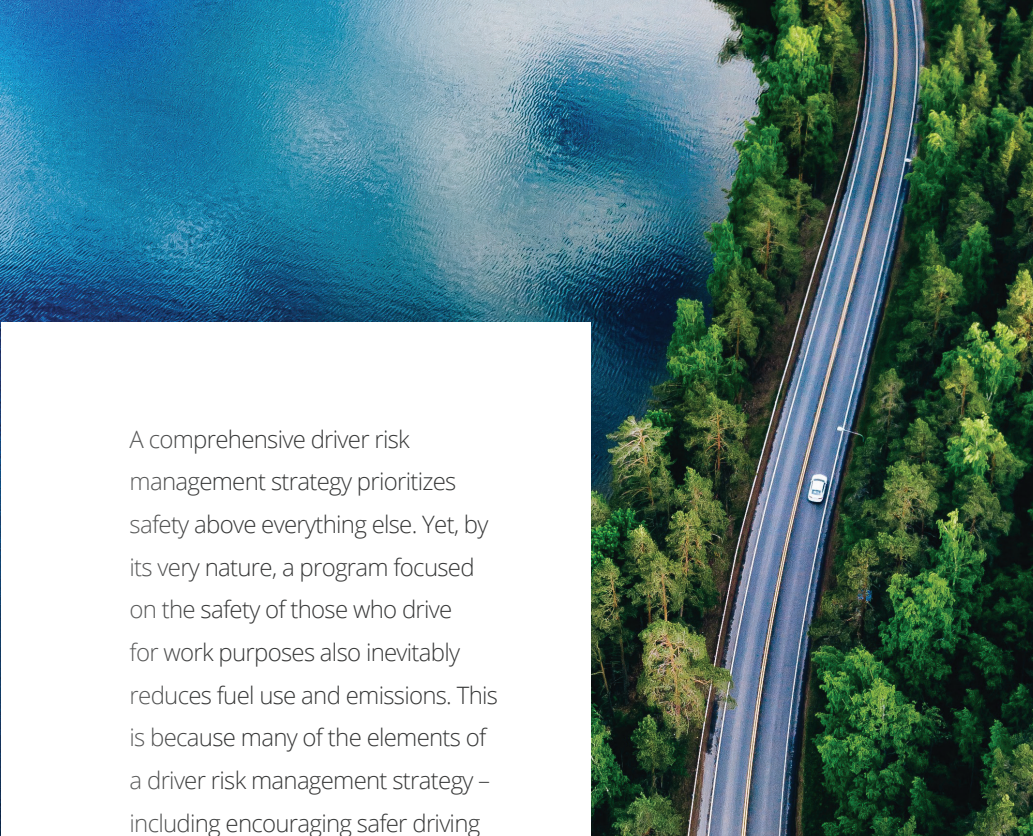


Encouraging Safer Driver Behavior as the Key to Safety and Eco Gains

How influencing safer choices on the road can support corporate safety and sustainability goals.



Corporate sustainability is a growing concern. Globally, goals have been developed to help achieve a sustainable future for all, and sustainability is a primary or growing business focus for organizations around the world, with many now working towards global targets and reporting on their contributions to making the world a better place. This eBook examines the significant effects that driving for work has on the environment and explores how an effective driver risk management program can help organizations to deliver on sustainability goals while increasing safety and decreasing total cost of fleet ownership.



A comprehensive driver risk management strategy prioritizes safety above everything else. Yet, by its very nature, a program focused on the safety of those who drive for work purposes also inevitably reduces fuel use and emissions. This is because many of the elements of a driver risk management strategy – including encouraging safer driving behaviors and reducing miles traveled, where possible – not only reduce risk exposure, but also fuel use and harmful emissions.

The benefits of driver risk management don't end there. Safer drivers are involved in fewer collisions, incidents, and license violations, which helps reduce total cost of fleet ownership. A reduction in lost workdays, liability suits and insurance premiums can also be linked to driver risk management, as can an increase in vehicle residual value, driver well-being and engagement, and corporate social responsibility achievements.

This eBook examines the relationship between driver safety and sustainability, and more specifically, how influencing safer driving behaviors not only reduces risk, but your organization's impact on the environment.

In February 2021, the US government estimated the social cost of carbon to be **\$51 per ton.**

During 2021, carbon dioxide emissions are forecast to jump by the **second biggest annual rise in history¹**, as global economies inject stimulus cash into fossil fuels in the recovery from the COVID-19 recession.

Sustainable Development Goals

The 2030 Agenda for Sustainable Development was adopted by all United Nations Member States in 2015. The Agenda provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are 17 Sustainable Development Goals (SDGs), which comprise an **urgent call for action by all countries**, and a shared responsibility of governments and businesses. For many organizations, the SDGs provide an opportunity to make a real difference, not only for their own employees, but for the wider communities in which they live and operate.

Considering that transportation is responsible for close to a quarter of energy-related global greenhouse gas emissions, exploring cleaner transportation options to fulfill workplace obligations is an obvious starting point for companies globally.

Defensive driving

IS eco-driving

Speed

Traveling at a safe speed is one of the best ways to avoid collisions, and also helps to reduce fuel use and emissions. Drivers should always feel like they're in control of their vehicle, and never like the car is "getting away from them", especially on bends.

- For car occupants in a crash with an impact speed of 50mph / 80 km/h, the likelihood of death is 20 times what it would have been at an impact speed of 18mph / 30 km/h².
- A collision at 65 mph / 100km/h has a force about the same as driving your car off the roof of a 12-story building.

Speed also affects fuel consumption. At 75 mph / 120 km/h, a vehicle uses around 20% more fuel than it would at around 60 mph / 95 km/h³.

Using cruise control during highway driving – where it is safe to do so – can help drivers maintain a steady speed appropriate for the driving conditions.

Idling uses fuel, costs money and is bad for the environment. Idling for more than 10 seconds uses more fuel and produces more emissions that contribute to smog and climate change than stopping and restarting your engine does⁴.



Following Distance

Leaving a "safety space" around their vehicle helps drivers to avoid trouble on the road. The "three-second rule" (follow at least three seconds behind the vehicle in front of you) is the rule of thumb in good conditions to give drivers plenty of time to slow down and avoid a collision. Drivers should double following distance when roads are wet and multiply it by 10x when icy.

To check following distance a driver should glance at a fixed point, such as an upcoming road sign or lamppost, and check how long it takes between the car in front passing that point, and their own vehicle doing the same.

Scanning

Scanning — or focusing on different areas of the driving environment, rather than looking at one point for an extended period — helps drivers negotiate hazards. Also, by looking well ahead, roughly as far as their vehicle would travel in 12 seconds, they can plan their approach to a hazard, as well as their route through it.

The ABCs

Acceleration, Braking and Cornering are all behaviors that, when performed harshly, can negatively impact safety, fuel use and the environment. For fleets with electric vehicles (EVs), smooth driving can also help to extend range. Identifying these behaviors and providing education and training that directly addresses these behaviors can help encourage smoother movements.

Alternative travel options for safer, more sustainable trips

For some companies, it is worth considering other forms of transportation for certain trips – and whether some trips can be eliminated completely.

For many organizations, the COVID-19 pandemic has already had a dramatic effect on mileage driven, due to employees working from home and a switch to virtual meetings. While it may take some time for “normal” business activity to recover, it’s still worth evaluating options for safer, more eco-friendly travel.

Over-generous mileage expense rates can act as an incentive to drive extra miles.

Working from home

Already the “norm” for many people globally, many organizations are likely to retain a “work from home” environment for the time being. For those that do intend to resume “pre-COVID” activities, considering allowing a set number of home-based days per week could significantly reduce miles driven, reducing driver risk exposure and contributing to sustainability goals.

Virtual meetings

In 2020, almost every business interaction went virtual – and for many, business meetings will remain this way for the foreseeable future. For others, a hybrid environment will exist. Maintaining a proportion of virtual meetings in place of in-person appointments where possible will help to keep business mileage down.

Other transportation modes

Public transportation is another area that has been significantly affected by the pandemic, with many of those who did need to travel for work purposes, preferring to use their own vehicles instead of buses, trains and taxis. While this trend may remain for a short time, it’s likely that the use of public transportation will experience a resurgence over time. Where appropriate, public transportation may be a viable option for business travel – and for shorter trips, cycling or walking may be a practical, safe, environmentally-friendly option.

Carpooling & car sharing

Prior to the pandemic, both models had grown significantly in recent years, particularly in Europe. However, it may take some time for them to resume at the same levels. Where and when practical, a carpooling system can be an ideal option for those who don’t need a vehicle every day, while a car sharing arrangement could be appropriate for employees who need to make the same trips; for example between offices and warehouses.

Route optimization

Telematics and GPS technologies can help to improve routing and efficiency of vehicles, reducing both travel time and distance. Delivery companies, in particular, optimize routes to keep their drivers moving safely and efficiently. Dynamic route optimization allows adjustments based on factors such as congestion, roadworks and weather, to enable drivers to adapt scheduling according to conditions.

Smarter scheduling

Incorporating everything from assigning jobs for the week to dispatching the most appropriate mobile workers in real time, smart scheduling can reduce mileage and idle time. There are many factors to consider, ranging from the urgency and priority of jobs to the existing location of employees and optimal routes. Keep in mind that trips of fewer than 3 miles generally do not allow a vehicle’s engine to reach its peak operating temperature, particularly in cold weather, meaning fuel consumption and tailpipe emissions are higher than if the engine had reached optimum temperature.



Vehicle choices for a safer, more sustainable fleet

Vehicle selection plays a significant role in the sustainability of a fleet. Electric vehicles (EVs) represent the biggest shift towards a greener fleet for many organizations, but there are many other vehicle selections that can contribute towards a more sustainable fleet.

Vehicle age, size and model

In addition to being better for the environment, EVs are cheaper to run and maintain. For business owners, the biggest concern is likely to be range. Yet, most EVs can now travel at least 200 mi / 320 km on one charge, and the charging infrastructure continues to expand globally. However, for some fleets, EVs may not be the best option, and those not ready to make the full switch might also consider hybrid vehicles that run on both traditional fuel and electric power. In terms of safety, crash tests confirm that EVs are as safe as, or safer than, gasoline- and diesel-powered cars.

Appropriate vehicles for the job

Employing the smallest, most fuel-efficient vehicles appropriate for each activity is an important consideration when aiming for a more sustainable fleet. Achieving this may require a “pool” of vehicles that are used by different employees on different days according to their assignments.



Fuel selection

A recent industry report revealed that 98% of fleets expect a continued interest, or increased investment, of sustainable vehicle technologies and fuels⁵. Switching to renewable fuels can be a cost-effective measure that helps to cut CO₂ emissions. Alternative fuels include biodiesel, ethanol, hydrogen, natural gas and propane.

Vehicle maintenance

Routine vehicle maintenance and regular vehicle checks help to optimize performance. For example, under-inflated or over-worn tires can significantly increase fuel consumption. Other factors, such as oil leaks and poorly tuned engines, can also affect fuel efficiency. Adhering to a regular maintenance schedule and performing routine checks will help identify issues promptly.

The total effect on the environment, based on a 9,000 state-owned or leased vehicle fleet: **87,066 tons** or **174,132,000 pounds of carbon dioxide (CO₂)** emitted annually⁶.

A safer culture for safer behaviors

Positively influencing driving behavior and making simple adjustments to your fleet operations can lead to swift and effective results in terms of both safety and sustainability. Before implementing any changes, it's recommended that you start with a solid company-wide safety culture, within which you can issue policies, provide training and coaching, and successfully communicate to employees. See [eDriving's eBook](#) for tips on getting a safety culture off the ground.

A study to evaluate the effectiveness of driver education on fuel efficiency concluded that drivers who received education in eco-driving techniques⁷ saw a **reduction in fuel use of 4.6%**, or 0.51 litres per 100 kilometers / 0.28 ounces per mile.

Telematics technologies can also help your safety and sustainability goals by providing insights into on-road driver performance, as well as miles driven and fuel efficiency.

Telematics technologies can help to:

- Decrease collisions and injuries
- Improve driver behavior
- Reduce fuel use
- Reduce emissions
- Optimize routes
- Keep track of miles driven
- Reduce maintenance costs



Introducing Mentor by eDriving



Our comprehensive digital driver risk management offering helps organizations worldwide reduce incidents, collisions, injuries, license violations, carbon emissions, and total cost of fleet ownership.

eDriving's award-winning Mentor app combines our patented Crash-Free Culture® risk reduction methodology, delivered from a privacy-first, data-secure platform, with a unique smartphone app that not only identifies risky driving behavior, but also remediates it with in-app micro-training and coaching and supports drivers and managers with unsurpassed professional services.

Through eDriving's partnership with industry analytics leader FICO®, drivers receive an individual FICO® Safe Driving Score, validated for its ability to predict the likelihood of a driver being involved in a collision.

And, linked to a driver's FICO® Safe Driving Score, the **EcoDrive icon on the Mentor dashboard shows drivers just how eco-friendly their driving is** and reminds them that smooth, defensive driving IS eco-driving.

About eDriving

eDriving, a Solera company, helps organizations around the world to reduce incidents, collisions, injuries, license violations, carbon emissions, and total cost of fleet ownership through its patented digital driver risk management programs.

At its heart is the Mentor by eDrivingSM smartphone app that identifies risky driving behaviors for intervention and safe driving habits for recognition. In-app features include micro-training and coaching, gamification, collision reporting, vehicle inspections, and an individual FICO[®] Safe Driving Score validated to predict the likelihood of being involved in a collision. Mentor's integrated automatic crash detection and Personal SOS features powered by Sfera and Bosch trigger a voice call and emergency support, as needed, from one of Bosch's Global Call Centers supporting >50 countries. Through its five-stage, patented Crash-Free Culture[®] risk reduction methodology, eDriving helps organizations embrace safety and reduce risk for Sales, Service, Delivery and Warehouse drivers, all within a privacy-first, data-secure environment.

eDriving is the digital driver risk management partner of choice for many of the world's largest organizations, supporting over 1.2 million drivers in 125 countries. Over the past 25 years, eDriving's research-validated programs have been recognized with over 100 awards around the world.

References

1. Harvey, Fiona. "Carbon Emissions to Soar in 2021 by Second Highest Rate in History." *The Guardian*, Guardian News and Media, 20 Apr. 2021.
2. "Road Safety - Speed." *World Health Organization*, Who.int.
3. "Fuel Efficient Driving." *Earthesy Guides & Articles*.
4. "Idling Reduction for Personal Vehicles." *U.S. Department of Energy Alternative Fuels Data Center*, <https://afdc.energy.gov>.
5. Solutions, Penske Transportation. "State of Sustainable Fleets Report Released, Finds Sustainable Vehicle Technologies and Fuels Are Growing across All Sectors." *State of Sustainable Fleets Report Released, Finds Sustainable Vehicle Technologies and Fuels Are Growing Across All Sectors*, 11 Aug. 2020.
6. "Creating a Sustainable Fleet Strategy." *West Virginia Fleet Management Division*, Wv.gov.
7. Genevieve Graves, Dr Ian Jeffreys, PhD Michael Roth, "RACQ EcoDrive Research Study" Final Report, 10 October 2012.