



6 keys to a successful eco-driving project in a transport company

Executive Summary

Based on experiences from hundreds of eco-driving projects, where proper eco-driving programs have been implemented, AddSecure see companies make fuel savings of 3-15%.

In addition to fuel savings, many of AddSecure's customers have achieved considerable savings through reduced costs of damage, decreased need of maintenance, lower employee turnover and less sick leave. These are typically areas that are affected in a positive way when drivers are less stressed thanks to eco-driving.

Over the years, AddSecure has been part of many Eco-driving initiatives. Not all of them have been successful. The reasons vary, but in most cases the success of an eco-driving program is dependent on how it is executed. According to our experience, the keys to good management of an eco-driving program in a transport company include the areas below.

- ▶ **1** Make sure the whole company stands behind and is involved the project
- ▶ **2** Define objectives and make a diagnosis before starting
- ▶ **3** Use a system for monitoring, analysis and feedback of the driving behavior to the drivers
- ▶ **4** Implement regular and effective training to ensure results in the long run
- ▶ **5** Establish a precise communication plan with actions dedicated to drivers, managers, partners and the press
- ▶ **6** Make a good routine how to handle good and bad results. Don't be afraid to let teams compete!

Behind most successful eco-driving projects, there is normally a core of a few very committed employees, who get deeply engaged in the project. Such project champions often play an integral role to making a success of the project, i.e. to get the drivers to go the "extra mile" to achieve the project goals.

Introduction

As an introduction, let's review the basics. What is eco-driving?

It is a type of driving behavior that is based on a few basic principles and has a positive effect on fuel consumption, damages, maintenance, employee turnover and sick leave. It is common that drivers are compared based on fuel consumption. But fuel consumption is affected by several different things, such as:

- Vehicle characteristics (engine, axles, weight, height, etc.)
- External factors (road conditions, weather, topography, etc.)
- Driver behavior

**The driver can only impact his/her behavior.
Measuring behavior is fairer than to measure
the consumption!**

So, Eco-driving means smoother driving where drivers plan routes in order to anticipate situations and actions of other drivers on the road in order to avoid unnecessary braking and acceleration. One example is to have greater distance between vehicles in order to regulate the speed without braking. Two other important areas within Eco-driving are idling and over speeding.

The principles of eco-driving seem simple enough at first glance. But when it comes to managing the project in a company with a large fleet of vehicles, there are several obstacles and challenges ahead that need to be mitigated and controlled.

Challenge 1: Engagement of the employees

One of the first difficulties you may face will be getting the engagement of the employees! Resistance to change is common. Drivers often think this type of training is unnecessary and you will probably hear statements such as "You will not teach me how to drive" or "Eco-driving is for old people".

- ▶ A typical comment is that "they have no choice".
- ▶ The problem is that we want to act on their behaviour, and without their motivation and engagement it will be difficult to achieve substantial improvements.

This brings us to a second important challenge; we will try to change the reflexes of the individual. The repetitive actions of a driver while driving is more or less autonomous. There is no thoughtful decision-making.

So sometimes, even if the driver is of good will, their habits will take over. We have to find a way to break these habits. Common ways to do this is to offer the drivers coaching through systems or/and through training. In this document we will give you some ideas how this can be implemented.

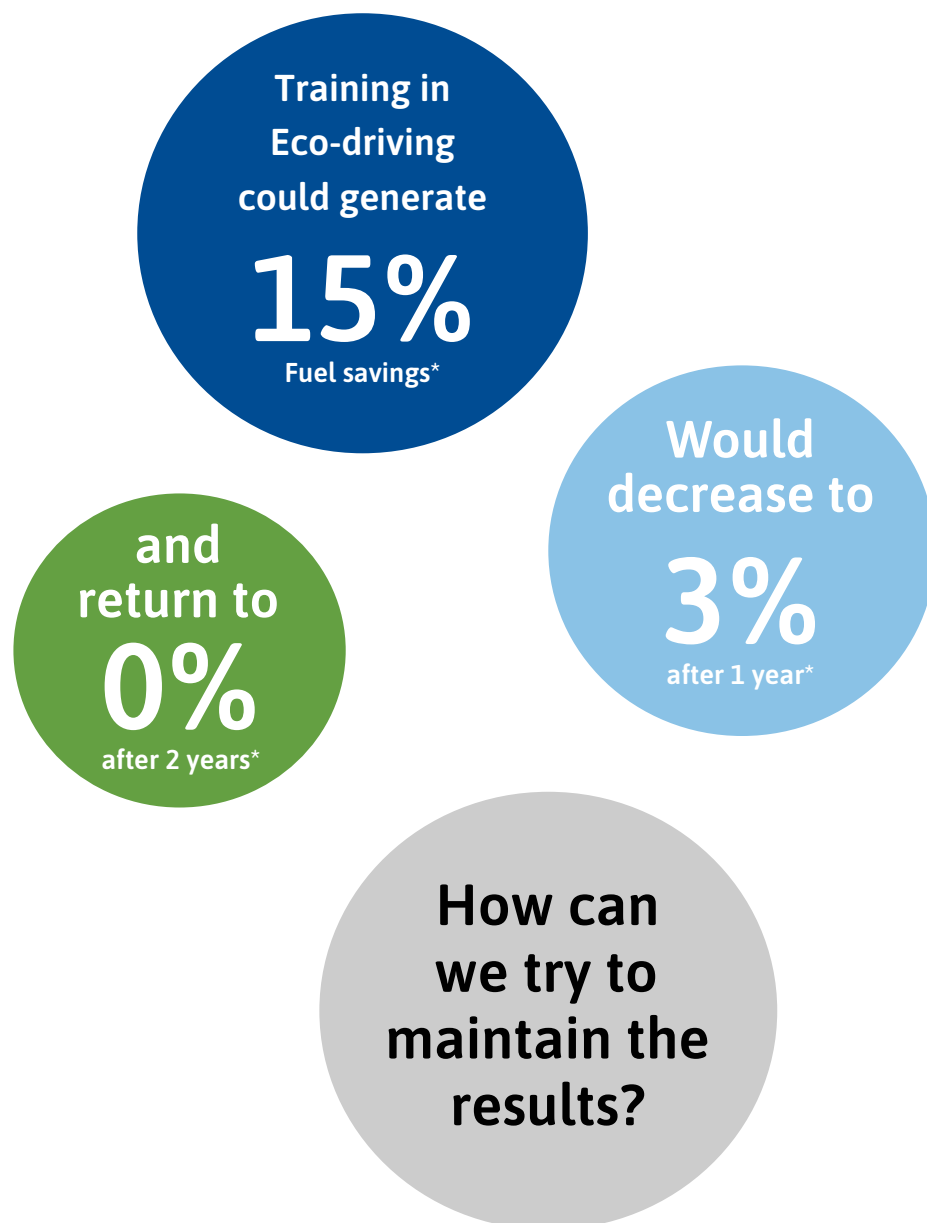
Challenge 2: Keep a balance between productivity and Eco-driving

Another difficulty concerns the pressure of productivity. Too tight delivery schedules will give more priority to speed and could cause frustration for stressed drivers. The attitude of the driver will depend on the instruction they receive from the transport manager. It is therefore important to include the team of transport managers in the process.

Daniel Newman, Account Manager for Waterlogic

"It is great to see the AddSecure system make such a positive change within Waterlogic. We are excited to see how things continue to improve over time, especially now the system is well integrated into their daily business operations. Welcoming the technology in this way can produce fantastic results and deliver a strong ROI. There really is no cap on what can be achieved, so much so that Waterlogic are looking to hire an additional member of staff to work solely with the solution and data, focusing primarily on improving driver behaviour."

Challenge 3: Achieving long term results



Let's move to the different keys that will enable you to face these challenges and make your eco-driving program a success!

Key 1: Make it a project for the whole company

If you are considering this kind of project for your business, it is important to step back and tackle it in a comprehensive manner. This project does not only concern drivers. It is a project that will impact all departments and services within your company.

Naturally the finance department will be involved (after all, this is a project to save fuel) as well as the fleet management department as the project may lead to investments in vehicles with less of an impact on the environment. The transport management department plays a key role to ensure any unnecessary mileage is avoided and that journeys are well planned .

Also, the maintenance department should be involved in order to make sure that tyres are always correctly inflated to limit fuel consumption and that vehicles are regularly serviced. Finally, the management team must be engaged, preferably on a personal level. If the CEO and the CFO don't pay attention, the impact of the project will

be limited.

From the start, it is therefore very important that you approach eco-driving as a global company project. Let everyone be aware of the project and incorporate its requirements into their working methods to enable drivers to have the best results possible.

It also has benefits in terms of motivation. For example, with good internal communication, somebody in accounts could congratulate a driver. These are small things that can have a huge impact on the working environment within a company . Management should encourage this process in order to improve staff well being.



Emyr Owen, Group Operations Manager, Owens Road Services

"With AddSecure's user-friendly and extensive CANbus reporting suite we have been able to effectively identify areas for improvement within the fleet. The FMS league table and fuel analysis reports show us which drivers are consistently performing below the fleet average and have proven invaluable for driver training."

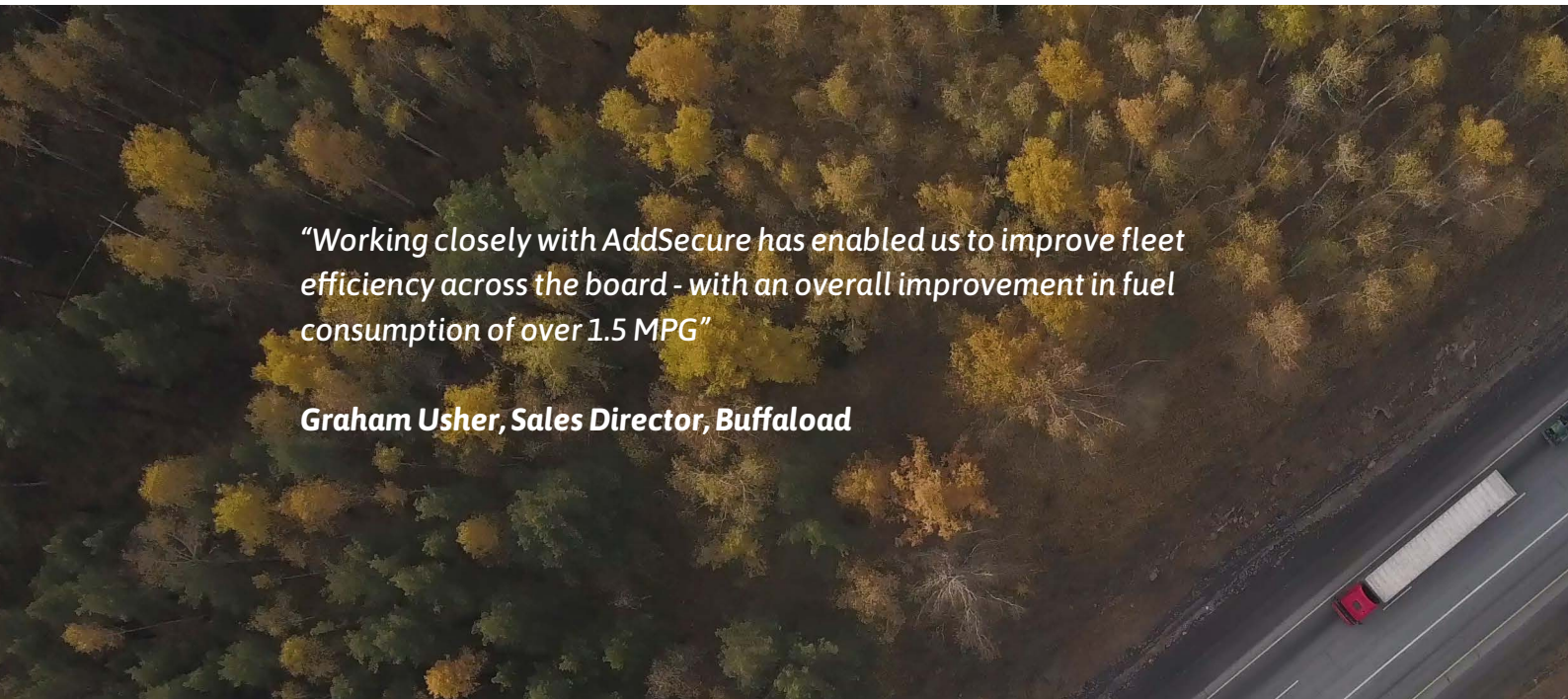
Key 2: Careful preparation of your project

Before starting, we recommend you go through a phase of analysis and critical thinking and to consider all the stakeholders of the project. Define objectives that explain why the approach is specific to your business. What are the objectives? Cost control, environmental policy? Setting objectives is important because they will allow you to define priorities throughout the project and explain the reason for implementing the project to your employees.

An audit before the launch of the project is essential. It does not necessarily have to contain lots of data, but you need to do an inventory to know where you are going and to be able to measure and analyse your progress. At a minimum, this audit must include fuel consumption and cost, fleet CO2 emissions, number of incidents and their cost, the number of vehicles of each model and type and an inventory of monitoring indicators that you will use to measure the

performance of your drivers throughout the project. All of these variables will allow you to get a better understanding of how the project is progressing.

During the audit process, you should analyse the current performance of your drivers. In order to get the most out of the project, it would be a good idea to start with the drivers with the most potential for improvement.



"Working closely with AddSecure has enabled us to improve fleet efficiency across the board - with an overall improvement in fuel consumption of over 1.5 MPG"

Graham Usher, Sales Director, Buffaload

Key 3: Implement tools that monitor and coach the drivers

How should you analyse the performance of your drivers and vehicles if you do not have the tools? How should drivers improve their behavior if they are not coached and don't get continuous feedback?

“After trialling different market offerings it became clear that AddSecure best fit our business’ needs. We were looking for a solution that could improve visibility of our fleets’ operations and we found the Verilocation platform was a good one-stop-shop for us in bringing together a number of areas within our business into a single, user-friendly platform.”

Steve Bremner, Head of Transport Services & Compliance, LLynch Plant Hire & Haulage

Let's start with monitoring and measuring..

Driver performance can be improved improved immediately through the act of measuring and observing.

Pearson's law tells us, that the mere act of measuring performance improves it and because we are dealing with human beings, mistakes will be made but having the right tools enable you to take measure to iron these out.

good result. This helps to maintain the results in the long run.

Monitoring tools are essential in order to prove the impacts of eco-driving, to establish an inventory of behaviors and consumption and to set realistic objectives. They also enable monitoring to be carried out on objective criteria.

When performance is measured and reported, the rate of improvement accelerates. Indeed, this seems logical, when drivers know they are observed, they become more vigilant. But the simple measurement is not enough, a regular and objective feedback on these performances is essential, for a

“From our perspective the results speak for themselves. Fleet related incidents have fallen by 30%, our environmental credentials have improved, and the integrated system has made an impact on driver performance.”

Steve Bremner, Head of Transport Services & Compliance, LLynch

Example of driving parameters for Eco-driving

AddSecure's eco-driving solutions make it possible to evaluate the performance of the drivers independently of the vehicles and the terrain. We use six criteria that allow this objective analysis. These are Wasted energy, Harsh braking, Over-speeding, Idling, Roll out and Coasting. Our platform goes one step further by offering pedagogic and graphical reports that can be used to display or communicate directly to drivers. Below we briefly go through the parameters.

Wasted Energy (braking)

The energy that is consumed during acceleration to a certain speed is compared with the energy that is lost as heat within the brakes when the speed is reduced.

Harsh Braking

Harsh braking is calculated when the speed is strongly reduced with a brake. The measurement shows how many harsh braking incidents have occurred out of the total number of times the brake has been applied. Harsh braking is especially interesting for when transporting people or sensitive goods in dense traffic situations.

To minimize harsh braking: Focus on route planning and braking ahead. Good braking is done in a smooth way. Good performance: 0%

Over-speeding

Going more than 70mph. Note! If the vehicle is driving downward a slope faster than 70mph no overspeed is calculated since no fuel is consumed. To minimize overspeed: Focus on keeping the right top speed and not driving too fast and keeping a constant speed. Good performance: 0-3%

Idling

Standing still more than 60 sec with the engine on. (If the stop is less than 60 sec, or if we receive a PTO-Signal, we do not calculate any Idling). To minimize idling: Focus on turning off the engine when the vehicle is at a stand still. Good performance: 5-8%.

Roll out

Roll-out measures how well the driver adapts to the traffic around, how exits are approached, etc. This is only measured when the speed is decreasing. Rollout is calculated when the vehicle speed decreases slowly (less than 1 m/s^2), the brake pedal is not applied, and the accelerator pedal is not applied (no fuel consumption). To maximize rollout: Focus on planning stops ahead and lower the speed in a preferred way when possible without braking. Good performance: 75-100%.

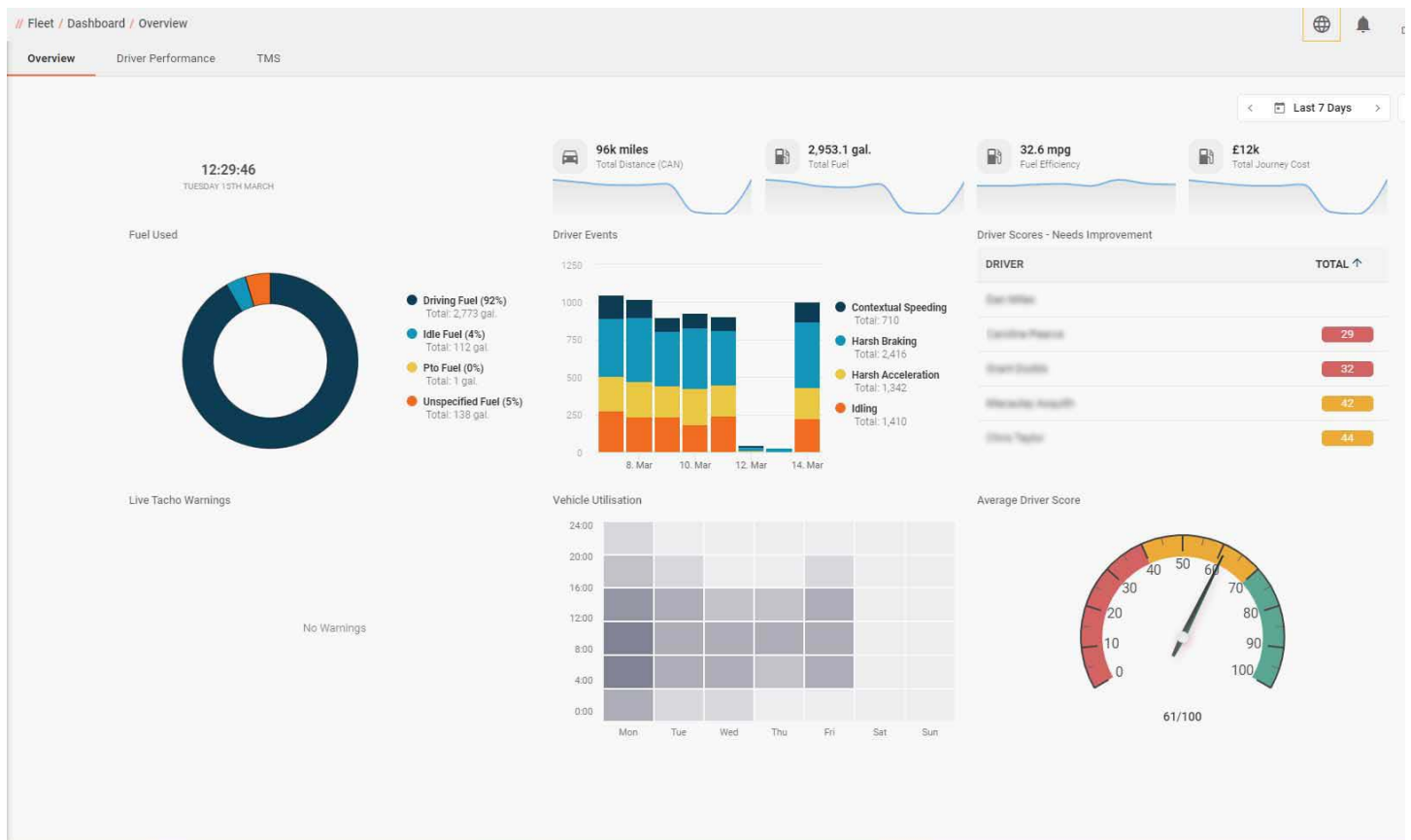
Coasting

Here we are measuring how much the truck is coasting without interference from the driver (accelerator/brakes). Coasting is calculated when: the vehicle is moving without fuel consumption, the brake pedal is not applied, the accelerator pedal is not applied (no fuel consumption) and the cruise control is not used. To maximize coasting: Try to keep this value as high as possible. Focus on using the topography or other possibilities that to bring the vehicle forward – without using the accelerator pedal or cruise control. Good performance: 75-100%.

Dashboard and reports

In order to conduct proper analysis of your drivers performance dashboards and reports should be used. A proper dashboard presenting a holistic view of the drivers, the ranking and the trends are useful to get a bird's eye view of the status of your fleet.

Since it is common to use several driving parameters to measure driving behavior, a common and smart way is to combine the parameters in an eco-driving index.



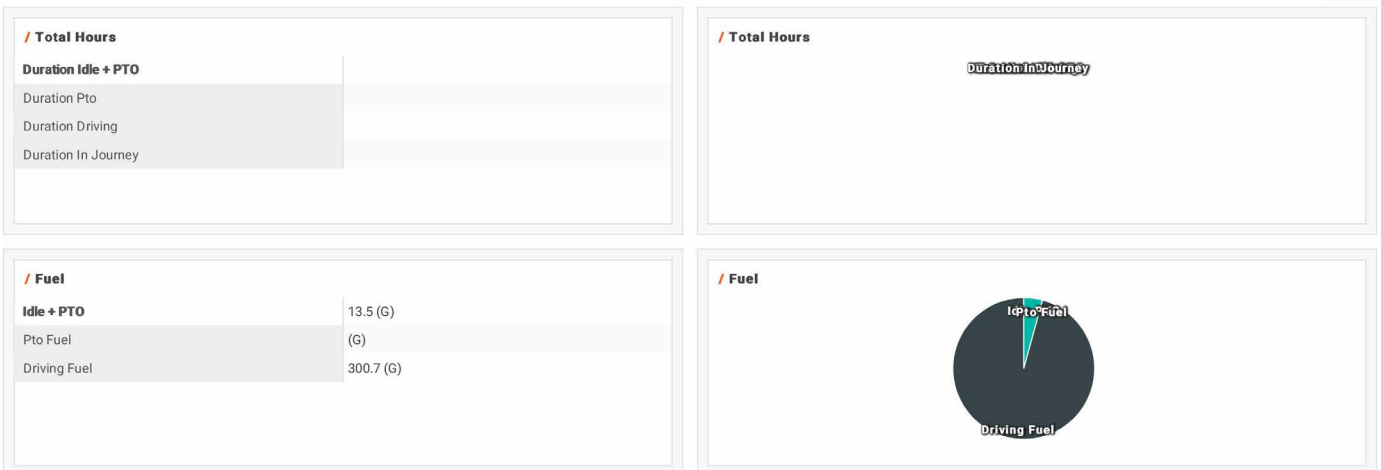
On a company level, each parameter can be analyzed to identify the most important improvement areas. Using this kind of index, it is possible to compare companies, groups and drivers with each other.

For more detailed analysis, eco-driving data such as fuel analysis should be available in more detailed reports, preferably with features for scheduling and distributing to other users in the organization. The

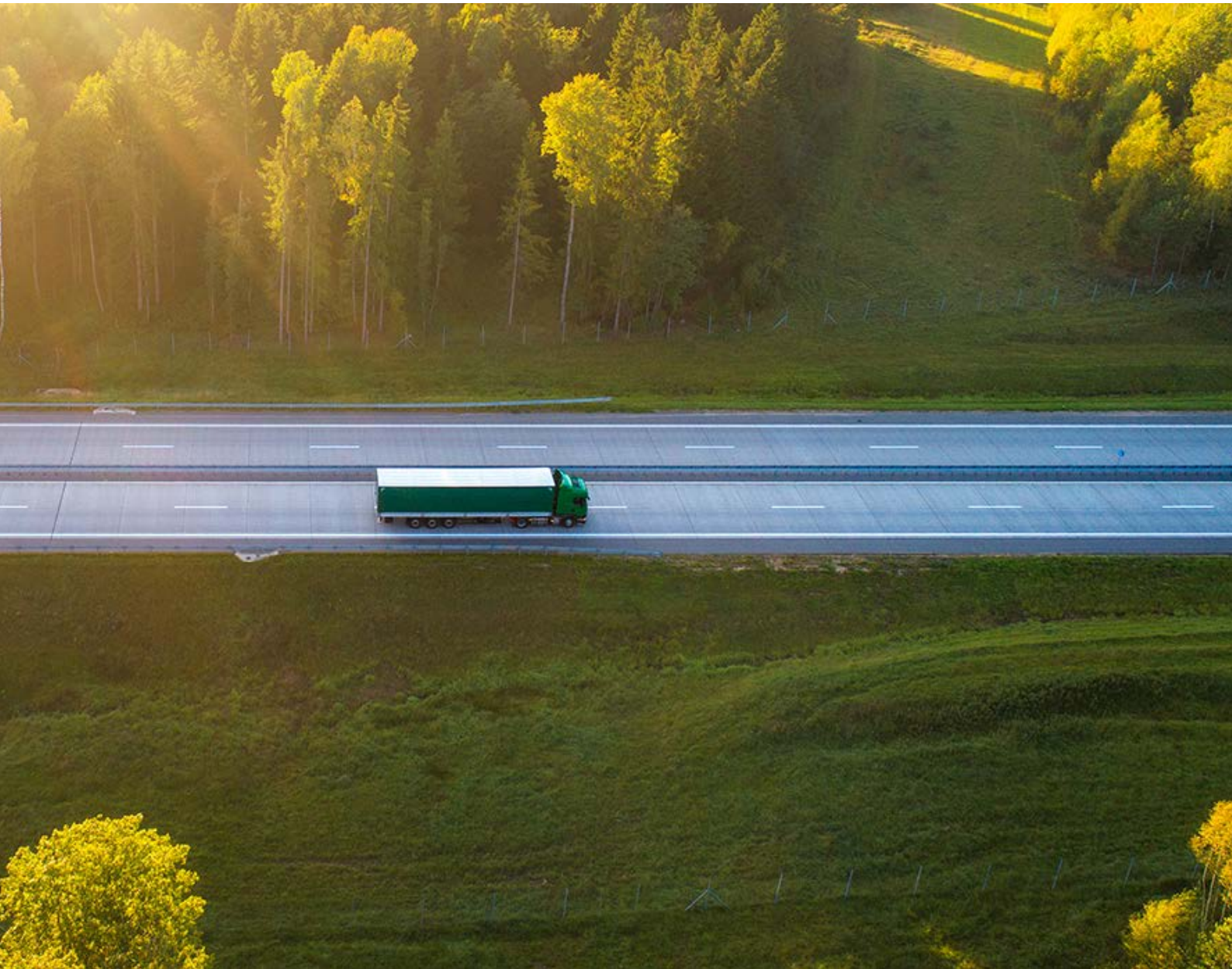
data should also be possible to export in different formats, for further analysis in reporting tools, such as MS XLS. See below an example of a report from the AddSecure system.

Fleet Fuel Analysis Including Idling (Copy)

All Vehicles and Drivers | 15th Mar 2022 | GMT Standard Time



Vehicle ▲	Distance (mi)	Fuel (G)				Fuel Efficiency (MPG)		Driver	Duration	
		Used	Driving	Idle	Driving + Idle	Fuel Efficiency	Driving		Over Idle	Idle
BD68GLK	49.7*					N/A	N/A	DRIVER NAME		
BD68GLV	22.9	1.9	1.5	0.4	1.8	12.3	15.3	DRIVER NAME	01h, 05m	01h, 28m
BD68OBC	63.9	3.9	3.8	0.1	3.9	16.4	17.0	DRIVER NAME	00h, 02m	00h, 30m
BD68OBE	26.7*					N/A	N/A	DRIVER NAME		
BD68PGZ	42.1	3.0	2.6	0.4	3.0	14.0	16.2	DRIVER NAME	00h, 56m	01h, 38m
BD68PHA	183.5	8.9	8.8	0.1	9.0	20.5	20.7	DRIVER NAME	00h, 00m	00h, 17m
BD68PHF	108.3	6.6	6.4	0.2	6.6	16.3	16.8	DRIVER NAME	00h, 10m	00h, 43m
BD68PHK	56.5	4.6	4.3	0.4	4.6	12.2	13.2	DRIVER NAME	00h, 13m	01h, 03m
BF18SNY	91.2					N/A	N/A	DRIVER NAME	00h, 00m	00h, 00m
BF67EYM	< 0.1	< 0.1	0.0	0.0	0.0	4.3	N/A	DRIVER NAME	00h, 00m	00h, 00m



Key 4: Implement regular and effective training

Communication of the basic principles of eco-driving must be supplemented by individual theoretical training and real time driving. Why? Quite simply, nothing replaces coaching by an experienced trainer. To ensure long-term results, training and reminders are essential. As we saw earlier in the results of the drivers, the trainer can adapt to the specific needs of a driver and give them the advice they need.

Secondly, many drivers have learned to drive on older vehicles with less driving assist features. However, vehicle technologies have evolved considerably over a short space of time.

A training course allows drivers of older vehicles to be upgraded and use the full potential of new vehicles. A trainer can also easily spot bad habits and make improvements along the way..

And finally, training is essential in order to get drivers on board! Even if the driver arrives at the training session not feeling very motivated, they can quickly see the benefits of eco driving when they compare performance before and after training! And in general, the driver realises at the end of the day that smoother driving also has its benefits on a personal level, not only for the company.

If the trainer performs well, the driver will realise that it is much better to drive with more consideration and care. Maybe most importantly, the driver will realise that they have more control and will in turn feel less stressed.

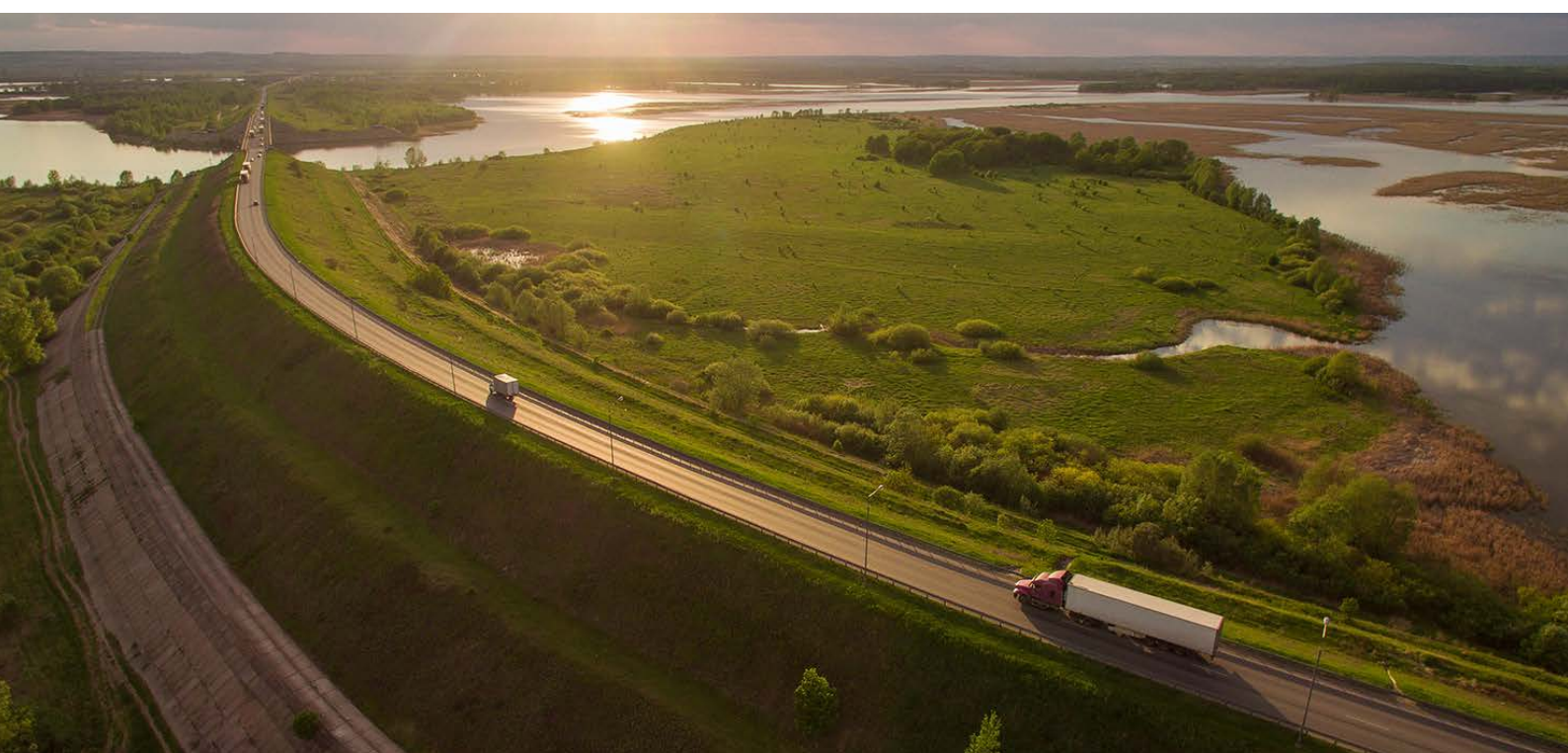
For this to work, you will need to have a good trainer who gets along with the drivers and who knows their job well. Normally drivers listen far better to trainers who have been or who are drivers. This is essential in order to get your drivers fully on board with your eco driving project.

You can get in touch with a recognised training organisation or even recruit your own trainer.

This is a good idea in order to ensure the quality of the training program and its consistency. It is important to consider your long term company relationship with the trainer from the start.

Pay close attention to how this training program is communicated to staff. Perhaps you could introduce it as a professional approach to driving and as a means for the company to invest in its human resources in the long term, which should be seen as a huge benefit for all employees.

In order to ensure best practice within your fleet driver performance should be continuously monitored and guidance and training offered regularly.




Key 5: A good communication strategy

The success of your eco-driving will depend on your communication strategy. A positive and well-constructed communication will engage your employees. The first steps of the preparation are always important.

Before launching your eco-driving project, consider communicating about the project. Talk to your different departments and use this opportunity to detect possible issues. Asking employees for advice on

defining goals, for example, allows you to more actively involve them and ensure their engagement.

Adopt a clear and consistent communication. Consistent with the company's climate and throughout the project. For example, if the main objective is to respect the environment, make sure that the company respects the basics such as recycling.



“From the multi-camera solution to the detailed driver behaviour and fuel efficiency reports, the AddSecure team were able to work with us to optimise our business operations. By centralising our fleet information, we could access and analyse all of our fleet data in one place.”

Steve Bremner, Head of Transport Services & Compliance, LLynch

Communication about the eco driving project should be kept as simple as engaging as possible and use a variety of different mediums. You could choose to simply display the scores of your teams in the break room. Send monthly newsletters or place updates on a Facebook page.

Use the quick messaging function in the Fleet Management system to communicate with the drivers. You can also choose to put the best drivers in the spotlight. The important thing is to

communicate regularly and positively.

Celebrate the start of the project and important milestones! Organise a launch of the project to reach all employees as best as possible and make it a real company project. At the launch, the presentation of the project is of paramount importance.

Help your employees understand the project, convince them of its merits and create a sense of belonging. Give meaning to the overall goals you have set, communicate positively and clearly and present the role that is expected for everyone.

As already mentioned, your communication of your eco-driving project must be based on objective indicators. Use numbers to remain objective, set goals and demonstrate performance.

For clearer communication, share diagnostics, fuel consumption data and other criteria at an individual and collective level. This is easy because you have gathered all of this data to do your initial audit. In any case, explain clearly the indicators and your expectations for each driver.

If possible, divide your drivers into several groups and let the groups compete each other. Competition is often a very efficient way to get drivers to improve their performance.



Key 6: Management of results and incentives

One important area that many of our customers often discuss is how to handle good and bad results, and if any incentives should be offered to the best performing drivers.

Based on our experiences, it is often a good idea to offer rewards to the drivers who perform best or who have shown the most improvement. It can be an effective and cheap way to promote eco-driving. Gift vouchers, being part of a lottery, an outing for the most successful team, or even a financial reward. No matter what the reward is, the important thing is the recognition of the results!

Management studies generally agree that the effects of rewards are often more effective than punishments. Some studies would also say that non-financial rewards sometimes have a more positive effect than financial ones, as employees would respond more emotionally. In

most situations, drivers would most likely be prouder of a group outing won on the back of their good performances compared to a financial reward.

It is then important to provide advice and extra help for those who are lagging behind. You should keep them informed that their performances could be easily improved with limited changes and there should be continued dialogue in order to improve performance

Through continued dialogue performance issues may turn out to be due to mechanical problems or factors they cannot impact. If this is not the case, additional training aids or training sessions may be required. In general, there are always 10-20% of the staff who may not be interested in participating in the project and for whom a personalised approach is necessary.

Conclusion

As we have pointed out within this document, the keys to good management of your eco-driving project include:

- ▶ **1** Make sure the whole company stands behind and is involved in the project.
- ▶ **2** Define objectives and make a clear plan before starting
- ▶ **3** Use a system for monitoring and analysis of driving behavior; feedback is essential!
- ▶ **4** Implement regular and effective training to ensure results for the the long term
- ▶ **5** Establish a precise communication plan with actions dedicated to drivers, managers, partners and the press
- ▶ **6** Make a good routine how to handle good and bad results. Don't be afraid to let teams compete!

Behind most successful eco-driving projects, there is normally a core of a few very committed employees, who get deeply engaged in the project. Such project champions often play an important role to make a success of the project, i.e. to get the drivers to go the “extra mile” in order to achieve your project goals.

If your eco-driving program takes these areas into account, you have a great chance to make your eco-driving program a huge success and could provide the following benefits:

18%

Less maintenance thanks to smoother driving and less wear and tear.

15%

Up to 15% fuel savings and CO2 emissions.

5%

Reduction in insurance costs.