



10 ways that telematics can improve fuel management

Trakm8
Data driven insights

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For any fleet manager, fuel represents a substantial overhead – and for companies whose primary objective is moving people or goods, fuel is typically their biggest expense. The Road Haulage Association (RHA) estimates that fuel accounts for almost a third of the total running costs for a heavy goods vehicle (HGV) operator.

This white paper from Trakm8 highlights 10 ways in which telematics and associated fleet management solutions can help to improve fuel economy, reduce fuel expenditure, and cut emissions.

1. Driver scoring

Most of the leading telematics systems now rightly come with driver behaviour as a standard feature, rather than an optional extra. This is partially because driver scoring can have such a positive impact on fuel economy – a report by Frost & Sullivan estimates that it can improve your average miles per gallon (MPG) rating by up to 25%.

Driver scoring works by monitoring risky and fuel-thirsty behaviour including: Speeding, over-revving or heavy acceleration, harsh braking, and sharp cornering. A driver starts with a score of 100% and loses percentage points every time they engage in one of these behaviours. This creates a score per journey or per day, which the driver can access via a mobile app. Fleet and transport managers can view map of historic journeys to see where each driver behaviour breach occurred, enabling them to identify trends and act accordingly.

Speeding in particular can have a substantial impact on fuel economy. For example, according to the Freight Transport Association (FTA), a van travelling at 80mph can use 25% more fuel than one travelling at 70mph.

2. In-vehicle coaching

Along with driver scoring, you can also install driver coaching hardware in cars, light commercial vehicles (LCVs) and HGVs. These systems are designed to provide real-time nudges to drivers to help them avoid the type of high-risk and fuel-burning behaviours outlined above.

Driver scoring can identify issues and you can rectify them to a certain extent by investing in additional driver training. However, eventually most drivers will relapse into bad habits. Conversely, one of the key advantages of these in-vehicle systems is that they constantly reinforce good driving.

3. Engine idling

Engine idling is the act of leaving the engine running while the vehicle is stationary. This is often a hidden drag on a vehicle's achievable MPG, but can be addressed through telematics.

Research by Natural Resources Canada found that, for every 10 minutes of idling, a vehicle with a 3-litre engine burns 300ml of fuel, while one with a 5-litre engine will burn 500ml of fuel over the same period. When factored over an entire fleet, you could be looking at a huge amount of wasted fuel.

Furthermore, in the UK, engine idling can land you with a fine of up to £80 under the Road Traffic (Vehicle Emissions) (Fixed Penalty) (England) Regulations Act 2002, so it is not just the wasted fuel which could impact your overheads.

The fines are intended to help tackle urban air pollution. In London, Westminster City Council's "Don't Be Idle" campaign claims that an idling car produces enough exhaust emissions to fill 150 balloons per minute with harmful substances such as cyanide, nitric oxide (NOx) and particulate matter (PM2.5). These microscopic pollutants can lead to health problems including heart and lung disease, strokes and cancer – and are especially damaging to children. Therefore, by tackling engine idling, you will be reducing harmful emissions as well as cutting your fuel bill.



25%

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4. Fuel theft

Telematics has evolved far beyond traditional track and trace applications. Today, sophisticated devices can communicate with the CAN bus system on a car or LCV, providing rich data on a wide range of vehicle metrics.

Status on fuel tank levels might not sound particularly beneficial. However, the ability to receive notifications when there is a sudden drop in amount of fuel in the tank can help to prevent fuel theft – either by third parties or your own employees.

5. Tyre pressure

CAN bus connectivity can now also provide data from a vehicle's tyre pressure monitoring system (TPMS). For the first time, fleet and transport managers have remote access to tyre pressure information.

This is important as underinflated tyres result in higher fuel consumption, because they increase road resistance. In fact, a reduction in air pressure by one bar causes a 30% increase in rolling resistance, and a rise in fuel consumption of 3%.

Tyres also wear more quickly when under-inflated. A tyre that is 20 per cent under-inflated will wear out 25% faster than a tyre kept at the correct pressure. Correct tyre inflation across your fleet can help cut down on your expenditure on tyres as well as on fuel.

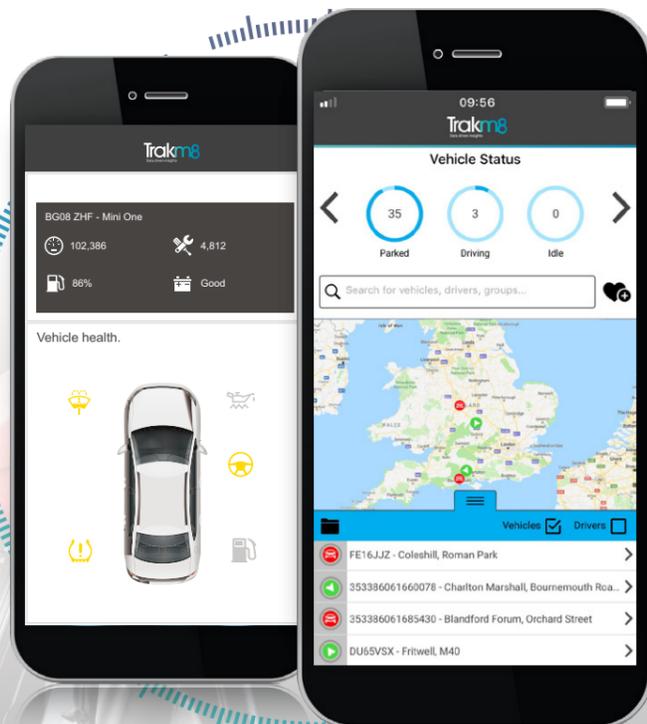
6. Unauthorised use

Vehicle tracking can help to identify, monitor and prevent unauthorised use of company vehicles. This could be employees making detours during work hours for personal reasons; or out-of-hours use of company vehicles.

Snail trails showing the routes drivers took - and the times trips occurred - can help fleet or transport managers to quickly identify those miles employees drove for personal reasons, but using your fuel.

Another way to prevent unauthorised vehicle use is with geo-fencing. Geo-fences are virtual boundaries around geographical locations, and can be assigned to groups or individual vehicles.

Telematics enables fleet managers to configure geo-fencing on a map. The manager will then receive a notification every time that vehicle crosses the boundary.



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7. Nearest vehicle

Many vehicle operators often encounter last-minute requests from customers or client emergencies which require an immediate response. Vehicle tracking enables managers to quickly identify the nearest vehicle to the location, cutting down on wasted mileage and improving the response time to your customer.

Leading telematics solutions now incorporate "Find My Nearest Vehicle" features, so you can type in a postcode and immediately see which of your vehicles is closest to that location.

8. Vehicle cameras

Vehicle cameras are primarily used to prevent "crash for cash" fraud and to reduce road risk. However, research has shown that drivers who know their vehicles are fitted with cameras tend to adopt a more sensible and risk-averse driving style. This is known as the Hawthorne Effect, or the Observer Effect. A safer driving style is often a smoother and more fuel-efficient driving style, helping again to boost MPG.

The latest generation of telematics cameras combine vehicle tracking and driver behaviour with single and dual lens cameras. While the first lens monitors the road ahead, the second lens monitors the driver. The best telematics cameras have remote live-streaming capabilities, meaning the transport or fleet manager can conduct spot checks any driver, at any time. Again, this helps to discourage drivers from risky or fuel-burning behaviours.

9. Route planning

For organisations whose vehicles visit multiple locations each day, route optimisation is proven to cut total fleet mileage by up to 20%. Route optimisation achieves these savings by analysing all of your resources such as depots, drivers and vehicles; then assigning jobs or tasks to each driver or vehicle in a way that makes the entire process as efficient as possible, delivering the lowest cumulative mileage.

The best route optimisation platforms are able to factor your electric vehicles (EVs) into these calculations, alongside conventional diesel and petrol vehicles. The software is designed to maximise the number of battery-powered miles you can achieve within the range limitations of an EV. Every additional electric mile driven reduces your expenditure on fossil fuels.

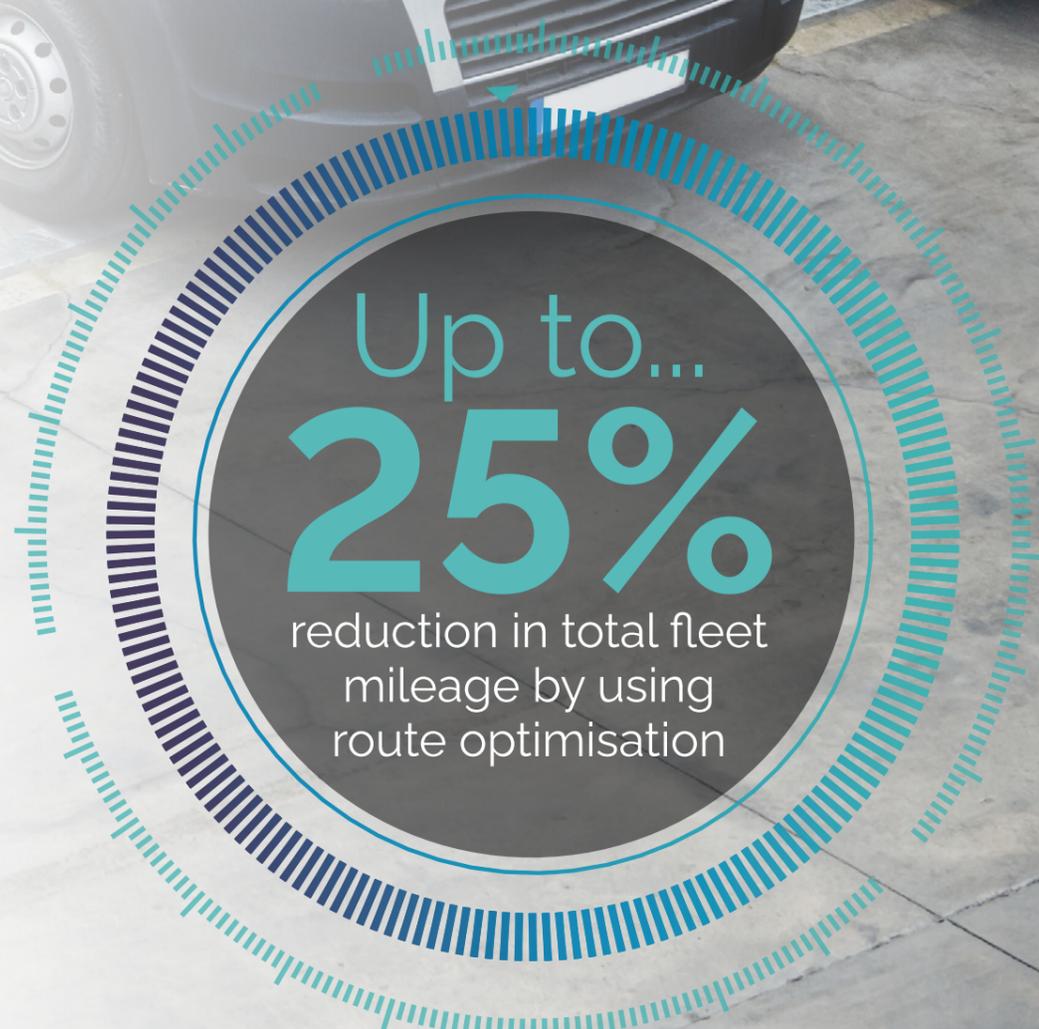
10. Vehicle utilisation

One of the benefits of true route optimisation over basic route planners is that it can substantially increase vehicle utilisation rates. By consolidating your goods deliveries and collections onto fewer vehicles you can do more with less, helping to further reduce wasted miles and empty running.

How can Trakm8 help me to reduce my organisation's fuel use?

Trakm8 is uniquely positioned to provide all 10 solutions outlined above. If you are interested in reducing your fuel overheads, it starts with a conversation. We listen to you, understand your business and its objectives, then recommend the most cost-effective solutions for you.

To start your discussion on saving fuel, please email info@trakm8.com or call us on 0330 311 5157. You can also find further information on our telematics, driver behaviour, vehicle health, route optimisation and vehicle cameras on our website, www.trakm8.com.





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