



A Guide to Telematics



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FleetNews

Department for
Transport

Get on track for greater efficiency

Running a fleet can be a constant challenge, particularly when it comes to managing and monitoring how vehicles are used on the road.

Vehicles incur the greatest costs when they are being driven, either through general wear and tear, fuel use or even accidents, but this is when the fleet manager has the least control. In response to these challenges, an increasing number of fleet operators are considering the role that telematics can play in their businesses.

A thoroughly-researched and well-implemented telematics system can deliver the insight and information a manager needs to take informed decisions that make the fleet more cost-effective and efficient.

Fleets that have benefited include a 40-vehicle fleet that is saving £400 a month in fuel costs, a company that saw a 30% increase in staff productivity and another that recorded a 20% cut in accidents and a 60% reduction in speeding.

A tracking system can provide an immediate and accurate view on vehicle mileage to help plan replacement cycles and even verify mileage claims.

Other areas where it can make an impact include risk and time management, employee schedules, challenges to fines, minimising mileage and CO2 emissions and reviewing the way a business serves its customers.

This doesn't make telematics a panacea for all ills, nor does it mean that any implementation is automatically straightforward, particularly when it comes to persuading employees of the benefits.

Nevertheless, telematics needs to be a key consideration for both car and van fleets when they examine how they might reduce their costs, their vehicles' impact on the environment and their overall use of resources.

This Guide to Telematics is an overview for car and van fleet operators on the key issues related to using telematics. It will focus on the potential benefits from an environmental and financial perspective and will identify the core issues to consider when reviewing the fleet's requirements.

**Nigel Underdown, Head of Transport Advice,
Energy Saving Trust**

Green fleet management is driven by three simple strategies:

- Drive cleaner vehicles
- Drive them more economically
- Drive them less

Do this and you will save money and reduce your environmental impact.

As ever in fleet, the devil is in the detail, particularly when there are so many stakeholders wanting to see how they will benefit from any fleet changes.

The Energy Saving Trust has worked with hundreds of organisations to look at opportunities to run a

greener fleet and meet the differing requirements of individual departments.

Understanding your fleet's operating costs and carbon emissions is not easy. Identifying a solution to reduce them can be even harder.

However, depending on the size and location of your fleet, the Energy Saving Trust can provide you with a range of transport advice services that could save your organisation up to £1,000 per vehicle, reduce your environmental impact and help increase your commitment to corporate social responsibility.



Pay less for your fleet Pay nothing to discover how

Looking for savings? Look to your fleet. The right vehicles, used for the right trips and driven in the right manner, can save your business thousands of pounds – and cut your carbon footprint.

The Energy Saving Trust can help you make the right choices, including providing advice about telematics. Funded by the Department for Transport, our impartial advice* comes from expert consultants who have worked with fleets of all sizes. And it's free.

Energy Saving Trust
0845 602 1425
www.energysavingtrust.org.uk/fleet

* For vehicles up to 3.5 tonnes.

One key question to answer in the quest for telematics success



Fleets need to ensure they can explain why they need a telematics system

The biggest challenge facing any fleet considering telematics technology is answering a very simple question – why? The answer will vary depending on whether the question comes from the finance department, HR, the fleet manager, drivers or even a union representative.

However, in most cases, the issues covered fall into four broad themes, all of which are interlinked: mileage and time management, fuel and emissions, safety and security and financial benefits. Mileage and time management reflects the ability of telematics systems to provide pinpoint accuracy about vehicle mileage and use. This in turn allows companies

to ensure vehicles are being used effectively and efficiently, ranging from the speed they are travelling to the type of journeys they make and the routes they use. By maximising the value of every mile driven, a company can ensure that vehicles are being used as efficiently as possible, which reduces fuel use and emissions. From a safety and security perspective, by monitoring and managing drivers more effectively, a company can proactively tackle the source of potential accidents by offering training to drivers where needed and by ensuring they are not being put under pressure to take risks on the road in order to meet targets. In addition, it is possible to actively protect vehicles against thieves and track them if stolen. The final theme, which is one of the most important for winning the support of the business, is financial benefits. A strong cost-benefit argument is essential to the success of any telematics project, as senior management will be looking for clear proof that money invested in telematics will be recouped in the short term.

Mileage and time management



Telematics can ensure managers know where vehicles are being driven and how they are being used. This may benefit the business in a number of ways.

Automatic mileage updates can be received by managers or suppliers, such as leasing companies, to enable proactive servicing and timely replacement of vehicles.

In addition, tracking systems are able to identify a vehicle's location, so the right vehicle and employee can be sent to the closest job.

Furthermore, typical journey patterns can be monitored and reviewed to establish the most efficient route.

Telematics could help automate manual and time-consuming processes, such as timesheets, to make them more accurate and reduce paperwork. The system will automatically log vehicle use and location along with the start and end of the working day. This information can then be imported into payroll systems.

A system can also log whether mileage is business or private to improve expenses claims.

Fuel and emissions



Achieving lower fuel use as a result of lower mileage is just one of the benefits of telematics. In addition, systems can report on the fuel economy of specific vehicles.

For example, in one study of company car drivers, a telematics system identified a 50% difference in fuel economy being achieved in identical cars over similar journeys. Much of the excess fuel use was down to driving style, including excessive speed and harsh acceleration.

This level of insight isn't possible with other fuel management systems, such as fuel cards, mainly as the process involves the driver accurately recording mileage when filling up.

By having more accurate, vehicle-specific data, a company can quickly identify where action needs to be taken, such as with driver training.

Furthermore, by improving fuel economy and reducing time spent idling, a business can ensure it reduces its total carbon emissions, which is a key consideration as businesses are increasingly required to provide carbon reporting as part of their annual results.

Safety and security



Telematics can provide the information needed to improve safety, reduce accidents and combat vehicle crime.

Some systems can clearly identify speeding, harsh braking and acceleration, sudden steering changes, over-revving and hours of vehicle use.

This information can be used to pinpoint safety issues so drivers and managers can be trained and educated.

In addition, modern telematics can act as a security system, with unplanned vehicle movements raising an alarm and pinpointing the vehicle so police can be directed to its location.

Personal safety can be enhanced for lone workers too, as telematics can track their location and vehicles can be fitted with panic alarms in case of emergency.

This level of insight may be viewed with suspicion by employees, but many companies have tackled this issue successfully by focusing on the personal benefits, such as identifying driving style changes that bring lower personal fuel bills and improved safety.

Financial benefits



If senior management are going to take up the challenge of persuading employees to accept tracking then the financial argument must be persuasive and clear.

Typical figures suggest that through better scheduling, higher productivity and increased vehicle utilisation, operating costs can fall 10%.

By covering fewer miles, reducing speeding and improving driving style, fuel use and CO2 emissions can be cut by 15%.

Finally, reduced incidences of speeding and greater levels of driver awareness could cut crash costs by up to 50% (source: Greenroad).

By using telematics to record drivers' hours, unnecessary overtime claims can be reduced, often by tens of thousands of pounds, while there are other fringe benefits too.

Because telematics systems provide accurate location and time information, a number of companies claim they are successfully challenging fines for parking infringements.

In addition, insurance companies may be willing to consider a reduction in premiums.

Telematics in action deliver savings for fleet operators



By using telematics, fleets have achieved savings worth millions of pounds

Stolen vehicle tracking rescues engineer's van

A £10,000 van stolen in Edinburgh was recovered by police within hours thanks to its vehicle tracking system.

The van, taken from outside the home of a TV installation engineer, was back with its owner, the Eden Group, the same day.

Stuart Baillie, the group's senior partner, said: "I contacted the police, and logged into our tracking system to tell them the location of the van.

"The system had tracked it to a deserted car park 25 minutes from where it was stolen. Its contents had been stolen but the main thing was we got the vehicle back."

Productivity raised at glass firm

Glass Express increased productivity after fitting tracking technology to its vehicles.

The main motivation to move to telematics was to increase communication between office and drivers, so a two-way messaging system was included as part of the implementation.

Jobs are now allocated using the messaging service, which is less time-consuming and received instantly, with read-receipts.

Due to this flexibility and speed at which it is processed, Glass Express increased jobs performed each week from 30 to approaching 40.

Fuel economy and safety have also improved.

On-road savings for NHS

NHS fleets are turning to telematics in an effort to drive down costs and reduce carbon emissions in line with government targets.

In 2009, Leeds Teaching Hospitals NHS Trust reported that a tracking device helped reduce its annual mileage by 220,000 miles.

NHS Trusts in Lothian, Maidstone, Tunbridge Wells, Fife Health Board and Greater Glasgow and Clyde hope to cut their combined mileage by around 600,000 miles per year – a 12% reduction.

Detailed reporting allows the organisations to verify and confirm deliveries as well as reduce corporate risk for mobile and lone workers.

Firm targets 5% saving

3663 set itself a target of a 5% cost saving across its logistics transport operations.

As a first phase, 3663 implemented tracking and telematics across the company's logistics fleet of around 340 vehicles.

It then launched a driving for excellence initiative which included publishing detailed driver league tables.

This programme delivered substantial savings as it quickly highlighted driving issues which could then be addressed, resulting in 3663 achieving its 5% target fuel saving in the early stages of the project.

Pay-as-you-go insurance service uses telematics

Online insurer Coverbox is using vehicle tracking as part of its pay-as-you-drive insurance scheme.

The firm is expecting to require 15,000 units in its first year, as policyholders receive the trackers and qualify for discounts if the system detects their mileage is less than anticipated or their journeys have been made in off-peak periods when fewer accidents occur.

An additional service includes 24-hour online monitoring and enables stolen vehicles to be tracked and recovered.

Coverbox is aimed primarily at the young-driver and high-risk markets.

South Wales traffic officers efficiency gains

A new vehicle tracking and navigation system has helped effective deployment of traffic officers in South Wales.

It feeds back live data so vehicle locations can be shown on a large screen in the control room, giving a bird's eye view of operations.

When there is an incident, the control room team can quickly locate the nearest traffic officer on screen to dispatch to the scene.

The system also tracks vehicle location, movements and whether the engine is idling or switched off.

As a result, response times are minimised.

Technology beats bogus insurance claim

A bogus insurance claim against home service business Fords was dropped thanks to vehicle tracking technology.

One of the Sidmouth firm's heating engineers was accused of driving at excessive speed and colliding with a driver on a country road near Exeter, smashing his door mirror. The employee disputed the allegation.

The data on the tracking system was reviewed and it showed the employee had pulled over, giving way to the other driver, and was therefore not travelling at speed. The firm was then able to successfully dispute the false claim.

Tesco delivers with telematics

Home delivery firm Tesco.com revealed 12% fuel use savings and a 6% drop in accident damage after fitting telematics.

The 2,200 vans on the fleet cover 60 million miles a year, so such significant reductions in costs will have a major impact on the business.

Any examples of bad driving are flagged up and bosses can immediately deal with problems such as harsh braking and errant behaviour.

To encourage drivers a league table has been produced at each depot.

Drivers are rewarded with a set number of points, which they retain if they are shown to have driven carefully and sensibly on the road on an ongoing basis.



Technology delivers savings for Royal Mail

Royal Mail reduced its fuel usage by more than 10% – a saving of £4.4 million – whilst improving the efficiency and accident record of its collections and delivery fleet by using tracking.

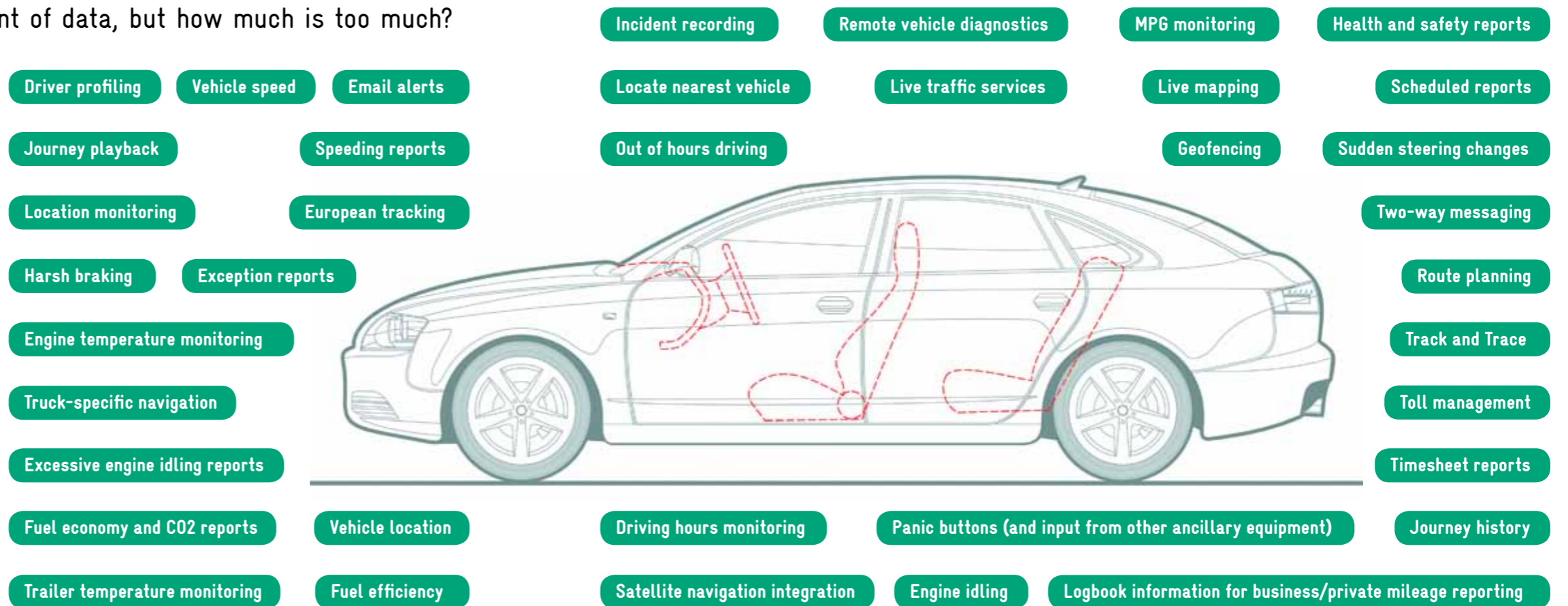
More than 8,000 Royal Mail vehicles were fitted with a tracking system as part of a drive to improve road safety, reduce fleet size and drive down fuel consumption.

To date, driver productivity has increased by 3%, accident rates have been reduced by 20% and instances of speeding are down by more than 60%. Meanwhile, harsh braking has been reduced by 70% contributing to greater fleet efficiency.

Cherry-picking services for the right telematics mix

Telematics systems provide a vast amount of data, but how much is too much?

Even the most ardent supporters of telematics technology will agree that you can have too much of a good thing. A vehicle tracking system isn't just a one-box solution, as it can provide a myriad of reports and charts that can go into minute detail or just provide a graphical overview of key issues related to fleet use. If fleet managers choose wisely, they will have absolute clarity on their fleet. Choose poorly and information will be irrelevant, too detailed to use or in such great volumes that any benefit is lost in a sea of figures. The data that a telematics system can provide comes from three key sources. The first is from GPS data, which calculates location and speed, the second is from a direct link to the vehicle that delivers information on any aspect of performance it is collecting, which can include oil temperature and even whether doors are open. Third, some systems have sensitive instruments that measure g-force to identify harsh braking, steering and acceleration. As a result, fleets can choose from any number of pieces of data or reports, a selection of which are listed to the right.



The use of telematics in commercial vehicles can provide insight in three key areas:

- **Vehicle productivity and management – involving the tracking and monitoring of vehicles**
- **In-field vehicle management – using automated scheduling and dispatch**
- **Asset management – including vehicle diagnostics and close monitoring of different aspects of vehicle performance.**

For van fleets with a customer-facing role, such as couriers, breakdown services and engineers, tracking and monitoring can assess how vehicles are being used. Office-based managers can automatically assign jobs to vehicles during the day, based on who is closest to a customer.

Drivers can also register their current status, such as being available for their next job.

If the workload is more likely to be established at the start of the day and not change, then the driver's schedule can be automatically uploaded to a routing system, which can then monitor progress according to the schedule. This information can identify whether a driver will arrive at a destination at the scheduled time, which in turn can be relayed to the customer.

For vans that aren't used for a customer-facing role, telematics can still ensure they are being used efficiently by delivering accurate data on elements such as speed, fuel economy and even driving style. If employees claim for working additional hours, telematics can verify the time spent at specific locations.

With commercial vehicles often carrying expensive equipment, telematics software can monitor key elements of security, such as rear doors being opened.

Alternatively, vehicles themselves can be 'geofenced' with an automated alert generated if they are moved outside a specified location or into one, such as a congestion charging zone.

Telematics can also monitor vehicle performance, including engine malfunctions, faults or warnings, thus avoiding vehicle downtime.

One of the most recent uses of telematics within commercial vehicles has related to private mileage. Drivers are allowed an incidental amount of private use of company-owned vans, such as for commuting and occasional private trips, without incurring benefit-in-kind tax charges. However, HM Revenue & Customs is now asking companies to provide evidence to prove this level of private mileage isn't extensive and telematics can be used for this task.

Significant savings to be realised

Fewer than 20% of van fleets are thought to use telematics systems to control their operations, but among those that do, savings can be significant.

Companies have reported savings of tens of thousands of pounds a year, with some recouping the value of their investment in little more than a year. This can either be through reduced mileage or fuel use, lower accident rates or lower vehicle numbers, as they are being used more effectively.

Vans are business tools, so they have to be run as efficiently and reliably as possible, with a particular focus on deriving the most value from an asset for the minimum investment.

Achieving this demanding service requirement needs close management of both the vehicle and drivers, often with very limited budgets.



As company cars are almost certain to have a significant element of private use, the challenges of persuading drivers to accept the technology and the changes it might bring are much more significant.

That doesn't suggest it can't be achieved, as thousands of cars are tracked already, but there has to be a much clearer benefit for the driver.

One solution can be to focus on a de-personalised service that offers the benefits of telematics at the most basic level, with automatic reporting of vehicle mileage.

This allows a company to generate automated service booking and reminders and track overall mileage to plan vehicle replacement more effectively.

If a business is leasing a vehicle, and depending on the supplier chosen, this basic level of telematics may be supplied as part of the package. In some cases, it can be extended to business and private mileage capture to help automate expense reports. Stolen vehicle tracking can also be added.

The insurance industry is also supporting the increased use of telematics in cars as part of a new 'pay-as-you-drive' car insurance service. Drivers can be billed according to the mileage they cover and the time of day they are driving.

While this model is most suited to new drivers in the consumer market, there are expectations that this use of telematics will increasingly be offered to fleet operators in a bid to reward those with a low-risk driver profile. More extensive use of telematics technology can depend on the employer, its drivers and the type of work they do.

Police forces support extensive use of telematics to monitor vehicles on the road and to provide vital evidence of how vehicles are being used in case there is an accident. 'Black box' journey recorders can provide a detailed recording of the moments leading up to an accident, including speed, steering, braking and even whether vehicle lights or sirens were being used.

For the traditional company car, this is less likely to be a concern but telematics can create a detailed map of vehicle use to effectively manage teams such as sales staff or car-based service engineers.

In these circumstances, the clearest arguments for using telematics often relate to staff safety on the road. Studies have shown that for each 1mph reduction in average speed, accident frequency reduces by 6%.

Additionally, a clear benefit of reducing accidents is lower costs for the company. Typical own damage costs rarely fall below £1,100 per claim, while average insurance claims including third-party damage and injury claims can be more than £4,000.

The Government estimates the costs to employers arising from 'at-work' road traffic accidents to be in the region of £2.7 billion per annum.

In addition, by encouraging drivers to reduce speed and drive more carefully, fuel bills can be reduced, in some cases by up to 30%. Maintenance bills can also be dramatically cut – for example, because of lower brake wear.

■ To find out more about how to pay less for your fleet while paying nothing to do so, contact the Energy Saving Trust on 0845 602 1425 or visit our website at www.energysavingtrust.org.uk/fleet



You could save £250 per driver

Drive smarter and save on fleet costs

It's not just *what* your employees drive that matters, it's *how* they drive as well.

Smarter Driving training from the Energy Saving Trust can help reduce your fleet costs and carbon emissions by reducing drivers' fuel consumption by around 15 percent.

This can lead to typical annual savings of between £200 and £250 per driver (based on 12,000 miles per year). Smarter drivers tend to be safer drivers too, so your organisation may also save on the physical and human costs of accidents.

Training takes place in cars or vans with highly experienced fleet driving instructors. We come to you – so you don't have to send your drivers off-site – and training takes less than an hour per person, so disruption to the working day is kept to a minimum.

Smarter Driving training is subsidised, making it very cost-effective. Call us today to find out more about training your drivers.

So far we have trained over 20,000 drivers from more than 500 public and private sector organisations, including BAE Systems, E.ON UK, Microsoft and Liverpool City Council.

"Smarter driver training has been easy to implement and the first round has seen an impressive 20% reduction in fuel consumption."

Scott Jones, Head of Facilities and Environment, Hampshire NHS Trust



EST can offer you advice on telematics systems that will help monitor ongoing driver performance after training. For this, and more information on Smarter Driving, get in touch today. Call 0845 602 1425 or email smarter.driving@est.org.uk



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