

Telematics and GPS – the Why's and Where-fore's

We're bombarded in the press with terms like GPS tracking, telematics, fleet management, transport management the list goes on. The big question is – what should you buy and why ?

As with all IT projects, and indeed most business investment projects, the key is to think about your business needs, your growth plans, your pains and your needs. This then puts you in a good position to evaluate all the transport related technology that exists in the market.

Let's look at the technology that is available:

Telematics – the black box - most of you will have heard of the black box, the 'satellite tracking' device that mysteriously tracks a vehicles whereabouts. Let's defuse a few ideas – the satellite aspect is a little more mundane than some people think , the black box is simply getting it's location (in terms of latitude and longitude) from the satellite orbiting the earth - in exactly the same why a smart phone can do. The black box is therefore just like a stripped down smartphone. Like your smartphone it can also record speed and direction. This information is sent back to 'base' using a simple mobile data link - enabled by a SIM card in the black box – again like your smart phone would. This information can be viewed live, for instance on a Google map, or stored for months and years and viewed historically. This information is often described as 'bread crumb trails' from the Hansel and Gretel story. It's entertaining information but needs to be managed to be of real use..

So why not use a smart phone ? - a good question and it can be a good solution as we'll discuss below. Often however the black box needs to do just a little bit more than the smart phone could – and often it needs to be hidden from view to avoid tampering. A typical black box can accept alarm inputs – for instance a door being open or a driver panic button being pressed. A black box may also talk to the vehicle itself - it sounds complex but its only doing the job your garage-man would do when h plugs in his diagnostic computer. All this happens through the vehicles CANbus – the equivalent of the network connection in your home or office. The CANbus connector is known as the OBD connector – the very same connector, normally under your dashboard, that your garage-man plugs in his box of tricks. Information available through this connector varies from vehicle to vehicle but includes such things as fuel consumptions, engine revs, speeds, engine faults and so on. Vehicle idling – ie vehicle revs at zero speed can be easily deduced using this information and is often one of the quick wins of telematics - however beware - your driver may have very good reason for idling to keep his air con going during a 50c spell in August !

Safer, more economical driving is the aim of many responsible businesses and telematics plays a big role. Often a 'black box' will be equipped with a g-force sensor – the sort of sensor you'll have on your Nintendo at home. This can detect hard braking, harsh acceleration, harsh cornering - thus giving you the tools to improve your drivers. Go in with your eyes open however - it's only by using this data and acting on it that you'll achieve results – information is power, but only if it's used to make decisions and to take actions ! Such systems often need a lot of calibration so make sure you check their real effectiveness with long term users before you invest.

A picture says a thousand words and especially so with telematics. Advanced telematics can now include full CCTV, with as many as 8 cameras per vehicle. The mobile video can be stored in the black box for days or even months. The video can be streamed on demand, or indeed automatically if there's an incident. Video is often useful for monitoring vehicle loading and unloading to reduce damage and theft. Cameras can monitor the front, rear and sides of the vehicle to record accidents and to attribute blame. The use of cameras almost eliminates fraudulent insurance claims and can lead to better driving standards.

Delivery management systems - we talked about smart phones and indeed increasingly smart phone based systems are reducing the demand for telematics. A delivery management system for instance is an Android phone based system that will manage a delivery route. The driver's instructions are displayed to him on the phone, along with navigation information. The phone knows when the delivery is about to happen, based on a 'geo fence' or proximity to the destination. Appropriate messages can be sent to the person awaiting the delivery. The system is recording the vehicle route and the conformance to despatch times. Drivers are normally given a debrief when they return to the depot, looking for instance at excessive miles over and above the planned miles.

In summary - in summary define your business needs and do your homework ! Don't get distracted by lots of 'bells and whistles' , and check out both your supplier and his equipment with at least three other long term users in a similar field to yourself.

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