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Does your fleet need telematics?

Permanent telematics installations do not always provide the information required and can carry a high cost. Are there alternatives, asks ***John Kendall****.*

GPS navigation-based telematics systems have become part of the suite of fleet management tools; most notably for the heavy truck sector and to a lesser extent with light CV and car fleets. The technology can be particularly useful for fleets on service operations, when information about the location of individuals with specific skills can help to speed up response times.

Telematics systems come at a price though and it might be that the information they provide is more complex than some fleets need it to be. Is there a more cost-effective alternative? The answer is "yes" according to Derrick Bishop, managing director of consulting firm Bishop Fleet Optimization. Derrick has a background in developing GPS-based systems.

He argues that GPS/telematics gives a clear picture of surplus vehicles on a fleet, but the expense of a three-year contract that might come with it is not necessarily what all fleets need.

Derrick has developed an alternative, still GPS based, for those who wish to identify inefficiencies in their vehicle usage, i.e. more vehicles on the fleet than are actually needed, as well as develop customised benchmarks, optimise the location of their depots, or base costings on fleet activity. Bishop argues that most vehicle utilisation patterns are repeated on a daily, weekly or monthly basis, so GPS/telematics systems offer very little knowledge gain after the first month.

The Bishop Fleet Optimization system is based on the data gathered by a GPS device that is locked in place into the vehicle's lighter socket. The device is kept in place for five weeks. After this it is removed and the captured data downloaded for analysis. Two weeks later, the company will deliver a written report on the findings.

The data loggers gather data every five seconds for five weeks.

Using the device does not involve purchasing the equipment and there are no associated on-going costs, according to the company. Bishop Fleet Optimization reckons that the costs are around 10 to 15 times lower than the cost of a permanent GPS/telematics installation.

"It's all down to collecting good data," says Derrick. "95% of our clients have managed an actual reduction in fleet size of between 14% and 37%. We did one recently in Sydney Australia, with a fleet of around 600 cars and we achieved a 27% reduction in fleet size, with no loss of service delivery capability. It's just getting rid of waste, not cutting.

"The data loggers lock into the cigarette lighter socket of the vehicle. They drive around for five weeks gathering data every five seconds, when the vehicle is moving and we're not getting data gaps, because the system can 'see' through buildings. The data is accurate when you start lining it up against logbooks. Normally, the organisation is using logbooks anyway, so we carry out a bit of a random sample. Consistently they are out by about 40%. You can imagine that people forget to write something in and the destinations are called for example, 'London', 'the city', and 'the west end.' So they are not necessarily precise.

"We're just looking at a large US government fleet with around 16,000 vehicles," continues Derrick. "We're just getting an audit started at the moment. In our estimate a logbook audit will have around 0.5 million trips in five weeks and if you want to try and code that, it would take an army of people. A five-week utilisation snapshot is the best option.

"What we've been finding in the hospital sector is that some of the hospitals are in the wrong places," says Derrick. "I could give you four examples in the last three months where between 60% and 80% of the departments aren't the nearest option for vehicles to be deployed to go to see those clients out in the community.

"We're looking at the distance between where the home base is and where the client is, multiplied by 100,000 data points. We're saying, "Your base should not be there. You're driving an extra 10-15km, or whatever it is, to get between A and B. This is how long it's taking you in terms of trip duration to get from there to there and here's the reason; your base is in the wrong place."

"So we're starting to get into not just how many vehicles you need, but from an operational standpoint, where should the departments be? Obviously there are other things that need to go on – if they need a specific machine nearby, or certain expertise and that's joined to a department that needs to be at a major hospital or whatever, that also comes into the decision. But just from a purely logistics perspective, we can give them a perfect data set."

How does the company process the data? The data is downloaded from the GPS data logger to a PC and the files are downloaded onto a server based in New Zealand. The data is then uploaded into a Bishop Fleet Optimization software package for analysis. Clients are given

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secure access to their data. The web-based system allows users to search by site, department, or vehicle type, then generate the report they want, or download it. The company has deliberately limited the number of reports that can be generated based on experience with other projects, where companies only use a relatively small number of reports from the many possibilities offered. "One of the faults that GPS companies have globally is that they keep providing large wads of tables," says Derrick.

"Every fleet and site is different," he says, "Some will have a lot of idling, some will just be driving around without any trip planning, because we can see the spatial gap on the Google Earth maps and can calculate it. Some are taking vehicles home when they shouldn't.

"We provide that evidence in the first report and then about every three years we do another audit." Giving the example of an Australian health authority, Derrick continues, "I think we cut the fleet by about 23% and I've just done another audit now, after they implemented our recommendations on change. I found another 18% last month and we've found all these departments that are in the wrong place. So if you take it from 2011 when we first started, we're probably going to cut the fleet by around 50%, with no loss of service delivery capability."

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