

# Technology transfer

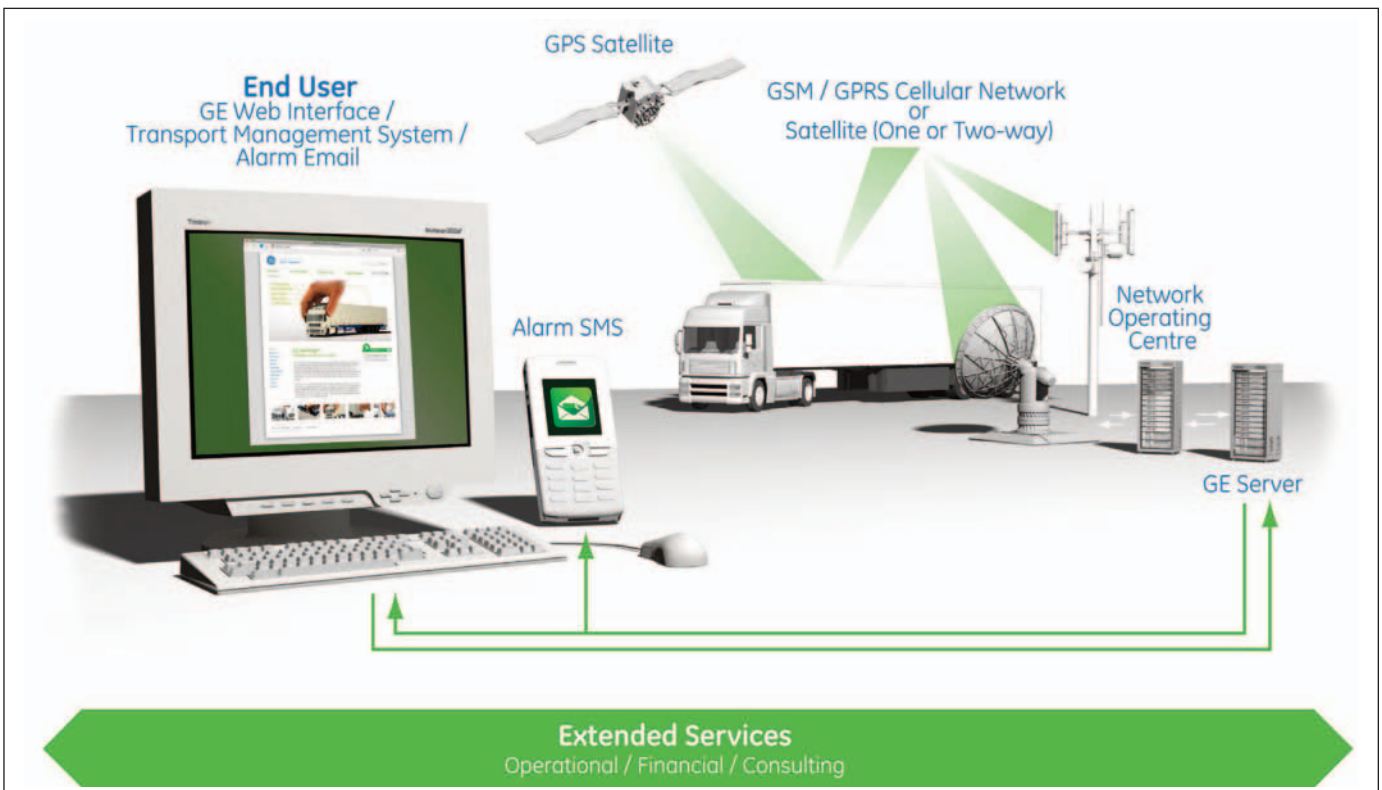
A popular approach to saving operators money and fuel is to harness telematics and tracking equipment on vehicle fleets.

Keith Read investigates latest developments



**W**hile  $E=mc^2$  might have been one of Einstein's finest equations, there is another that truck owners, transport managers and van drivers ought to adopt:  $E+TT = CP$ . In this case, E stands for enterprise, TT is telematics and tracking, and CP is a chance of profits – what every operator wants, especially when fuel costs are at record highs and still rising.

If you need evidence of why technology is required to offset fuel costs, just look at the tables on pages 11, 13 and 14 of Transport Engineer January 2011, showing the percentage of annual running costs accounted for by fuel. Petrol for a car-derived van accounts for £2,198 of its £3,134 running costs (70%). Diesel for a 44-tonne, three-axle tractor towing a three-axle curtain-sider takes up £46,536 of the £59,623 running costs – 78%.



So why be enterprising and introduce telematics? Jon Gilbert, director of customer services at ING Car Lease, says there are several benefits, although saving fuel is top of the list. "Let's say you have 100 Ford Transits on the road, averaging 30,000 miles per annum at 25mpg and diesel costing £1.25 per litre. More effective route planning to avoid unnecessary mileage and monitoring to prevent personal usage will give a saving of about 5%, which works out at £30 a vehicle each month," he calculates.

"Improving driver behaviour offers an additional minimum saving of 10% – £60 a month – while reducing idling by 20 minutes a day [a litre of fuel is burned for every hour of idling] saves £10 a month. That's £100 saved for each vehicle each month – around £120,000 a year for a fleet of 100 Transits."

Impressive statistics, but the benefits don't stop there. "Wear and tear will be reduced, and installation of telematics could take around 10% off insurance premiums and reduce accident costs by up to a half, because drivers become more conservative, and there are fewer accidents and fewer fraudulent claims," he explains. "Finally, operators can make productivity savings by better allocating resources, based on proximity of vehicle to the job, and engaging with customers to reduce waiting time to unload."

### Monitor and save

So convinced of the opportunities is Gilbert that ING has formed a partnership with Cambridge-based telematics firm Cybit, which recently launched Sustainability+, billed as the next generation designed to improve driving styles and safety by monitoring behaviour in real time. He says that installation of the small box required, behind the dashboard, takes 45 minutes. Also, in most cases, there is no upfront cost, with payments being incorporated in monthly rentals. For non-rented fleets, there will be an initial outlay. But savings, says Gilbert, will quickly cover the investment.

"The business-wide intelligence provided by telematics can save the company thousands of pounds," he insists. "But, as the introduction of telematics can be an emotive issue, it is important to work with unions and HR to identify potential issues and allay any unfounded fears."

His point: "Acceptance of telematics and tracking depends very much on the organisation. Some of the bigger truck and van fleets are still heavily unionised, and the unions can put big obstacles in the way. But there are a lot more these days that come to the party understanding that there are benefits for everybody.

For example, if drivers break down, or have an accident, there is a lot more support available, and there is security, especially for drivers out late at night. And if a driver was being forced to do too

## Non-vehicle specific

While telematics and tracking are mainly associated with vans and trucks, the technology is playing a vital part in raising efficiency, increasing security and saving money for trailer owners, too.

Novacom Europe BV, a joint venture between GE Equipment Services BV Asset Intelligence and Novacom SA, was established in May last year to develop its VeriWise tracking service. Described as the control centre for trailers, VeriWise provides remote monitoring and diagnostics via a web interface. Its claimed benefits include: improved fleet efficiency and reduced idle assets, reduced downtime, on-time delivery, minimised freight and asset theft, and freight condition monitoring for the cold chain.

Walter Verhelst, director of Asset Intelligence Europe, says: "Our telematics solutions draw on insights and hands-on experience gained from decades in transportation. GE Asset Intelligence has 150,000 modems activated globally and our sister company – GE's TIP Trailer Services – has been operating for over 40 years, with more than 75,000 trailers on the road."

In its system, wireless sensors are retrofitted, or incorporated during trailer construction, to monitor parameters, including reefer engine, braking systems, doors, locks, curtains and truck identification.

Brake controller integration for diagnostics has been developed with Knorr-Bremse to monitor brake condition, load, driver braking behaviour and speed, while reefer controller integration offers diagnostics for operating mode, defrost, engine running hours, shutdown alarm codes, battery voltage, oil pressure, coolant temperature and fuel level. These have been developed through collaboration with both Carrier Transicold and Thermo King.

much mileage – or they were expected to do too many hours – it would show up very quickly with telematics in place."

For many fleets – and for smaller operators with limited resources – a fixed-price system without long contracts is attractive. And that's the route being taken by Road Tech Computer Systems, one of the first to design computerised haulage and logistics systems, more than a quarter of a century ago, with its Falcon.

"We have two fixed prices – pure vehicle tracking, at £29 for each vehicle a month, and vehicle tracking with analytics, at £49," explains marketing manager Gerald Woodgate. "There's no minimum-term contract, no extras and the cost of the unit on the vehicles is included."

Woodgate reveals there is a small charge, if his company installs the equipment, "which we prefer to do, if the analytics option is taken, because it involves connecting with the CAN-bus".

Savings that are made then depend on what users do with the information, maintains Woodgate. "Gains of 8–10% are possible and, with the cost of fuel today, I can't see anyone not being able to save £49 a month."

Meanwhile, Masternaut Three X claims it is

saving operators collectively £4 million a month via its web-based vehicle tracking service, which now monitors more than 100 million fleet miles each month. That figure results from 750,000 gallons of fuel – or 10% – thanks to more efficient, safer and eco-friendly driving. “This is clear proof that vehicle tracking is an essential aid to reducing fuel use and costs,” states managing director Martin Port. “Few other technologies could claim to have such a positive impact.”

More than 60,000 vehicles have been fitted with Masternaut tracking units in the UK. Two years ago, the company broke new ground, with its GreenerFleet environmental management tool for recording CO2 emissions and driving behaviour. This is popular with fleet operators, as it provides both live and historical information, showing vehicle and driver activity. Indeed, its wide adoption prompted the company to launch the world’s largest safe driving competition, won in 2010 by United Biscuits truck driver David Blake.

There are plenty of other routes to E+TT = CP, such as that taken by Kings Lynn-based 3 Distribution. The operator initially tested sat-nav systems on refrigerated trucks, but, according to director Patrick Finch, wasn’t impressed, especially

with their inability to monitor its refrigeration units. However, the Foretrack system, offered by Carrier Transicold and purchased almost a year ago, has more than paid for itself – and it provides the required temperature monitoring, as well as tracking the fleet.

“We calculated that a 1% reduction in fuel consumption across the fleet would pay for the £400 Foretrack monthly subscription,” comments Finch. In fact, 3 Distribution has seen a 3% reduction in its monthly £80,000 fuel bill. That is £2,400 per month saved over the past nine months, which more than covers the monthly subscription and the £450 worth of hardware per vehicle.

“If there’s one thing we’ve learned, it’s [the need for] management by measurement,” advises Finch. “Yes, we were making profits before we had telematics, but things are getting tougher all the time. However, in the six months up to Christmas [when we had telematics], we made better profits than previously.” **TE**

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