

It is vital for a carrier to know precisely its GSE inventory level



# Here, there - and everywhere

Just how important is it to keep track of your assets? The Editor investigates.

**W**hen a handling operation reaches a critical mass then it is important to know a) what exactly is in the fleet in terms of GSE and b) whether or not each item is being put to effective use. The only way of achieving this is through monitoring the vehicles in question – which is where the fabled black box technology comes into play.

In fact, telematics is more than just knowing where equipment is sited: fitting GSE with the right telematics hardware will enable the operator to log running times, distances travelled, fuel consumption and a host of other criteria. Sensibly used, this data can bring cost savings to any operation.

And that operation doesn't necessarily have to be large: telematics can be rolled out to quite modest undertakings. The point here is one of making the best use of what's available, whatever the fleet size.

## When seeing is believing

For readers who attended the recent IAEMA event in Las Vegas, Inseego was showcasing its award-winning Ctrack aviation asset management and tracking solution. Aimed at airlines as well as airports and GSE users, the solution has found notable success

already within the European mainland.

Ctrack's telematics platform starts with the installation of the proverbial little black box. The specialist offers several different models of this device, each box differing slightly in terms of how many inputs it can accommodate for peripheral devices, as well as Bluetooth and wi-fi capabilities. The NX device typically is discreetly installed underneath the dashboard of a vehicle and is wired into the ignition source and battery of the vehicle being monitored. Additionally, depending on customer requirement, the inputs to the device may be wired to other sources to be monitored, such as a belt on a conveyor system. The NX device is fitted with so-called G sensors that are used to measure harsh braking, harsh cornering, rapid acceleration and impact. There is also an internal GPS antenna, with an option for an external antenna.

## The users

Hannover Aviation Ground Services has already deployed this technology, which has entailed a combination of intelligent fleet management and straightforward tracking: a better insight into what has been happening on the ramp has been the net result. The

handler was, in fact, the first German customer for the solutions provider. This operation fields 166 motorised and non-motorised units and employs nearly 460 staff, and the services provider needed a solution to co-ordinate all of its equipment and its people.

René Jeske is the Head of Equipment Services: "For us, this combination of pure tracking with an intelligent fleet management system is the perfect solution: from enabling complete visibility, control, security, billing and maintenance to asset efficiency. The system provides us great visibility into our operations."

Another user is that of KLM Equipment Services, where Paul Feldbrugge is General Manager.

"We chose Ctrack to manage the GSE fleet because of its state-of-the-art telematics technology, user-friendliness, cost-effectiveness and excellent customer service – as well as attention to detail and true understanding of our very specific operational needs. These aren't generic telematics systems: the solutions are built together with us (and our customers), purpose-built for aviation, and that makes all the difference."

De-icing at Denver International: the operation is fully monitored



Other airports which have taken advantage of this technology include Amsterdam's Schiphol airport and Hong Kong International; Lufthansa has also subscribed to the solution.

### Perfection in partnership

Thanks to its 20 years' experience as a trendsetter in the realm of GSE rental solutions (which has resulted in a rented GSE fleet of some 26,000 motorised and non-motorised units, maintained by over 1,000 specialised technicians), TCR has built a robust network and benefits from its intrinsic synergies in over 120 airports through Europe, Asia and the US.

Rental and leasing expertise apart, TCR understands that continuous innovation is essential to keep ahead of the game. In consequence, as a reaction to numerous customer requests, TCR has been offering GSE consultancy services. Telematics is one of the topics that has arisen and the result of TCR's approach has been the deployment of a solution, which is already being used by two customers in Europe. More and more airport authorities worldwide are requesting tracking systems for GSE to enhance safety on the ramp, to decrease ramp congestion, reduce CO<sub>2</sub> emissions and optimise the use of equipment.

Through partnerships with Targa Telematics (for motorised GSE) and Sensolus (for non-motorised units), TCR is seeking to boost its offering to customers, with a highly competitive and differentiated range of innovation-based services. Targa, in collaboration with TCR, intends to consolidate its role as a leader in the digitalisation of airport management and the challenges inherent in ground handling, a sector that is currently in ferment.

The Targa Telematics digital platform is well proven (thanks to its solid experience in managing large fleets of connected vehicles), and is a pioneer in airport tracking, with specific patents to its credit. By enabling the remote, real-time monitoring of GSE vehicles and motorised assets, it can improve processes and activities, ensure optimal maintenance (with significant safety repercussions) and it allows sharing between different operators, authorising both access and use. The Targa Telematics digital platform is also able to certify to the authorities the adequacy of activities carried out and their compliance with current regulations. These features are integrated with TCR's competences, so that in addition to operating leasing services, it will open logistics and operational sites in all major airports for the support and the maintenance of vehicles used by its customers.

### The benefits of telematics technology

The following are flagged up by Ctrack but most, if not all, are common to providers of this technology.

**Security is enhanced, since operators know who is using their equipment - and when.**

**Safety is also improved, as assets used in no-go areas and vehicles driving at too high a speed can be recorded and followed up.**

**Savings should be**

**evident: there will be less manual financial work in terms of checking and correcting usage-related billing to third party users. Invoicing will also be more accurate.**

**Visibility into near flat batteries on assets like**

**conveyer belts or low fuel levels on vehicles mean that the right equipment can be delegated to the right gate. The overview also allows for a preventative maintenance schedule.**



Adoption of Sensolus' telematics technology eases monitoring, planning and reporting, and helps reduce operational costs. As with Targa, its users should notice increased efficiency, safety, availability and compliance within ground handling operations. Through a Web-based platform, customers have easy access to historical data, to real-time localisation on a map as well as to selected statistics and reporting. On top of this, this technology does not require a large amount of battery power, an essential consideration for large, non-motorised GSE fleets. In fact, high-cost systems and large batteries that need frequent replacement become a financial drain.

According to TCR's Benoit de Borman, TCR's Operations Director, TCR was a pioneer and considered telematics for GSE fleets some 15 years ago. "But technology was not mature and customers didn't realise the possible advantages," he relates.

Today, though, GSE equipped with telematics is rapidly becoming an industry standard. The connected airport is something of a global trend and this embraces the equipment on the ramp.

Some airports, notably in the UK and Italy, already have a mandatory requirement for GSE on their ramps to be equipped with telematics; others are following this trend. Handlers are requesting this technology more and more to meet airport operators' requirements and because they appreciate underlying the logistical, cost and safety advantages.

"We strongly believe that both Targa Telematics and Sensolus will be long-term partners and that their telematics systems will be regarded as industry-leading solutions," de Borman adds. And in the US, he says, the handling industry is now recognising the advantages of the full-service rental agreement, with the telematics function included: there, various telematics tenders are ongoing.

### An airport's perspective

At Denver International airport, telematics is nothing new. There, Jeff Booton is Director of Fleet Maintenance.

"We have had GPS/telematics on a portion of our landside snow removal fleet for several years but wanted to expand that capability to more areas of our fleet. We primarily wanted more information on vehicle utilisation to augment our Vehicle Replacement Programme. Additionally, there was grant money available to help offset the cost of implementing a GPS/telematics system. We received 80% of the start-up cost.

"There were several providers on the market in 2015 but we evaluated five companies to make our decision. It all came down to weighing the cost of the programme against the capabilities of the products offered. The company we chose, Verizon, provided the second lowest cost of all the companies evaluated while providing in-depth diagnostic capabilities of our fleet

and a high level of vendor support in the local area."

Booton relates that a diverse fleet entailed time spent analysing units to decide the extent of implementation. He also had to consider that many of the vehicles were operated in a campus-type environment, so some equipment types would not benefit from monitoring. In all, about 700 assets were fitted with telematics technology, equating to about 40% of the fleet. The roll-out was phased in through two waves, with the lighter vehicles being the first to benefit: this took a couple of weeks. A further six weeks saw the heavier duty assets equipped.

"Co-ordination was key to getting the customers to bring their vehicles in and returning them to the customers in a timely manner," he states. "Our co-ordination consisted of bringing in approximately 40 vehicles at a time and setting them up for the vendor to install their equipment in an assembly line manner. This allowed us

to return the vehicles to our customers as they were completed, which eliminated the congestion of having all of our customers show up at once for their vehicles.

"If you're not installing the equipment in-house, ensure you co-ordinate specific start/stop working hours for the vendor: the GPS/telematics vendor had sub-contracted the installation of the equipment and the sub-contractor employees were not arriving for work on a set schedule, which caused delays in getting some vehicles back to our customers. There was some initial concern by a small number of employees that this initiative felt like we were trying to monitor everything they did, but we communicated that our focus was on vehicle utilisation, and not solely driver behaviour."

Assessing vehicle utilisation has been the chief gain. This has allowed the airport to make better decisions, such as ensuring that it replaces the correct vehicles at the right time during their lifecycle. When a customer requests an additional vehicle, Denver now has better analysis capabilities that help provide its customers with more efficient fleet utilisation.

In conclusion, Booton relates that future plans include making the system more available to airport customers so that they can become partners in managing their fleet. Incorporating geofencing tools will also help the authority better manage landside snow removal vehicles during inclement weather. *RZN*

Denver has also benefited from telematics on its snow removal fleet



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