Waste not, want not

Founded as a full-service ground support equipment rental supplier, **TCR International** has grown to become an integrated solutions provider and consultancy for the rapidly developing needs of airports. Director Christophe Guir and senior business development manager Maxime Baccaert discuss some of the ways their company is innovating to help ground handlers go green and optimise their operations.

he unloved old cliche is that knowledge is power, but we can make it relevant for the 2020s without changing its meaning: knowledge is power-saving. Sometimes you just need to expand to keep delivering value. That's what TCR International has found. The home of full-service rental and fleet management, the 20-year-old Belgian ground support equipment (GSE) agency now has 33,000 assets across four continents, with telematics as an option to identify when equipment is on and idling, and the consulting expertise to advise on the merits of hydrogen fuel cells versus lithium batteries, and the knowledge to advise on the best way to deliver green electricity on ramp to help ground handlers improving their on time performance (OTP) in an environmental friendly way.

Such capabilities are becoming ever more important. With the number of flights per day expected to double from 20,000 to 40,000 over the next 15 years, expansion and savings need to go hand in hand. As TCR director for strategic projects Christophe Guir explains, "Because of this tremendous growth, we have to address specific issues for airports in terms of environmental issues with gas emissions, pollution, and congestion while creating new processes with connected equipment to improve the on-site performance and reduce the average delay per flight."

No idling

Telematics, using state-of-the-art network technology alongside Wi-Fi mesh networks as appropriate, are absolutely crucial to achieving this. As well as recording when equipment is left idling, TCR's data analytics are able to rapidly identify and address issues around when a customer has excess units causing congestion without helping them meet their needs.

"We can analyse and make sure that at each moment our customer has the right number of assets to perform its operations," explains senior business development manager Maxime Baccaert. "In terms of delivering value to the customer, the more the GSE is used, the better it is. From the moment customers are not optimising their fleets, they're paying for something they don't use efficiently. Maybe you would think that in the short term that's not a bad thing for us, but that's not our policy. Over the long term what we want is to make sure that customers have the proper number of units to meet demand."

Share the load

As well as enabling more flexible contracts and making it simple to expand ground operations when necessary, this real-time optimisation capability can also be leveraged to help an airport share equipment with its airlines and third-party ground handlers. Each airport's total peak GSE needs are less than the total of the peak needs of its individual groundsupport providers added together, and by merging the GSE fleets, they can drastically reduce congestion. Sharing of equipment among different handlers in one airport is not always possible. Specific conditions are needed to end up in a cost-saving solution for all stakeholders involved.

"To have the best ground operations, you need to have the best integration between people, GSE and flight operations," says Guir. "So these kind of telematics offer our customers the opportunity to manage that in real time, reconfiguring and redefining your teams and needs on the ground, and specifying which equipment will be used for which aircraft in which area." It can even be set up so staff have to use their IDs to activate equipment. "To track at each moment which units are running and the related operator offers the opportunity for ground handlers to better manage their resources and improve their OTP"

TCR's entire telematic system was designed in consultation with ground handlers, to guarantee a user-friendly interface and its implementation is closely tied in with staff training. "If we had a telematic solution that nobody used, it wouldn't make any sense," Baccaert shrugs. "It's when you know how to use it that it starts to add value."

Green infrastructure

That same insight informs how TCR works with airports to develop the optimal green infrastructure for their needs and contexts. "We have developed specific tools to analyse customers' business, activities and GSE needs," explains Guir. The best solution for a baggage tractor could still be lead-acid batteries, while for buses it could be lithium batteries with their simple infrastructure needs, or quickly recharging and longlasting hydrogen fuel cell, to give just two examples.

Guir continues, "One of the key points today is to work with airports to develop the best infrastructure to deliver energy. It can come from hydrogen stations, electric farms or solar panels, but if you buy electricity from the wrong plant it's not green or efficient. We can't propose solutions without consulting with airports and including the electricity supply, and the best way to deliver it to the airport, in our discussions. In each case, you have to study exactly the business and the equipment to find the best solution." •

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