Undagrid's Putting GSE on the Grid

One Dutch company is working to change the way GSE managers keep track of their equipment, and they now have significant backing from a major aviation player.

by Alex Wendland

Our industry can be – how do I put this? – resistant to change. Equipment tracking and maintenance status is often left to Excel or, even worse, paper.

Undagrid, a Dutch tech startup, has developed a tracking system for non-motorized GSE called GSETrack. The company, and GSETrack, recently received investment from the Mainport Innovation Fund (MIF), an investment partnership between KLM Royal Dutch Airlines, Amsterdam Airport Schiphol, Rabobank and the Delft University of Technology. The funds will allow Undagrid to take GSETrack into new markets including international opportunities.

GSETrack is a system that Undagrid developed, in conjunction with S-P-S Group, in which a small tracking device is outfitted on non-motorized and non-powered GSE. Three of the four Undagrid founders were working at an IT firm, Technocon (now known as Moving Intelligence), that developed technology similar to GSETrack for the automotive industry, when the company was approached by S-P-S Group to develop tech-

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◀ ***The four award-winning Undagrid founders, pictured from left-to-right: Christiaan Willemsen, Marcus Breekweg, Lennart Schroer and Rolf van de Velde. Michel van Hal, general manager of S-P-S Group, is pictured seated. S-P-S Group worked with Undagrid in developing GSETrack.*** ***Undagrid***

nology to track their non-motorized GSE at Schiphol Airport.

The problem was that Technocon's tracking system focused on equipment that had its own power supply. Rolf van de Velde, Lennart Schroer and Christiaan Willemsen left Technocon to form Undagrid along with Marcus Breekweg, who joined the trio from Vodafone Global and brought expertise in developing what is now called the "Internet of Things."

The Internet of Things is the marketing buzzword for a lot of devices that were once working independently, but are now all interconnected and exchanging data through the internet. On the consumer side "smart" thermostats, washers, dryers and home devices are all part of the Internet of Things.

"Undagrid connects moving objects without their own power-supply to the internet without complex configuration, infrastructure or communication costs," Schroer says. "GSETrack is a combination of hardware on the carts, dollies and stairs on one hand and a cloud based application on the other."

By attaching a small device about the size of an iPhone to baggage carts, stairs or any number of non-motorized GSE, maintenance and equipment managers can monitor the location and upkeep of equipment for up to five years on AA batteries.

"It's a network solution wherein devices transmit information to nearby devices, which in turn relay this information to others in their vicinity," Schroer says. "This way, the devices on objects form the network and it's very low on power."

Because GSETrack can create it's own network, the cost stays lower than other common Internet of Things applications that use cellular data, Wi-Fi or Bluetooth connectivity.

Navigating the Internet of Things

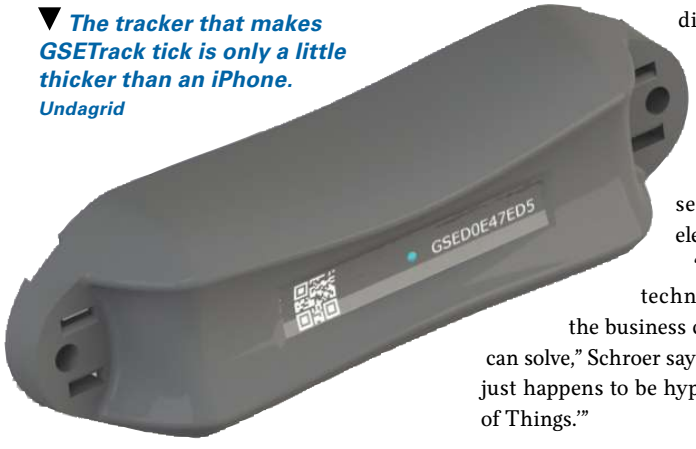
If all of this seems particularly complicated, it is – but only for those building the networks. Schroer says that the best way to deliver a solution for an industry is to build it from the ground up for that industry's needs. While that seems obvious, many companies try to reach economies of scale by applying their existing products to new industries. When S-P-S Group came to Technocon, the team that eventually became Undagrid saw an opportunity to build something specifically for GSE instead of applying automotive technology.

"It's utterly simple," Schroer says. "Although the network and hardware technology of GSETrack is pretty high-tech, the customer only has to mount it to a cart and it works, that's it."

GSETracker currently shares the location, movement and status of ground support equipment. The data provided can make searching for available carts easier and optimize the usage of all equipment in fleets at airports across the world. "To optimize your maintenance process, you need to know the location of equipment that needs periodic maintenance," Schroer says. "By keeping maintenance logs, you have the ability to commit to Service Level Agreements."

While high-tech solutions aren't the *fad de jour* in GSE, Schroer and Undagrid are focused on providing a direct value to customers with GSETrack while taking on the complexity of the systems and networks themselves to create an elegant solution.

"It is not about technology, it is about the business challenges that you can solve," Schroer says. "This technology just happens to be hyped as the 'Internet of Things.'"



▼ ***The tracker that makes GSETrack tick is only a little thicker than an iPhone.***
Undagrid

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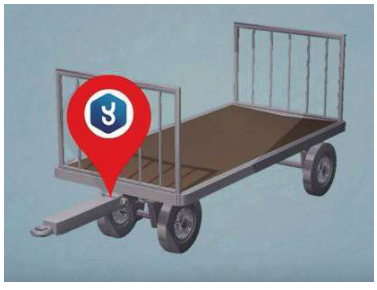
Undagrid, founded in 2014, has already won "Start-Up of the Year, 2014" from European entrepreneurship magazine, Sprout, as well as the "Best Internet of Things Starter" award from the European Institute of Innovation and Technology.

"We started with simple GSE tracking," Schroer says. "However our focus is on delivering a communication infrastructure that forms the basis for smart airports. With the roll-out of GSETrack at an airport you not only can track your equipment, but you also have laid the foundation for more sophisticated smart airport services."

You can learn more about Undagrid and GSETrack by watching their informational video in this story, visiting their website at GSETrack.com or at inter airport Europe; they'll be in hall 6, stand 280. **GSW**



▶ FOR MORE ABOUT UNDAGRID AND GSETrack:
Find this story online at AviationPros.com/12110538 to watch Undagrid's introductory video.