ela INNOVATION

Success story

» **Asset tracking**

identification of non-motorized mobile equipment »

PARIS AÉROPORT

AIRFRANCE

≫ Roissy CDG airport track

5000 non-motorized mobile equipment (NME) thanks to an IoT solution

Roissy CDG Airport has placed its trust in **ELA Innovation** and **Resonate MP4** to optimize its non-motorized mobile equipment (NMEs). This challenge involved to deploy a monitoring system on **5,000 NMEs in Roissy CDG airport**.

To answer this need, Resonate MP4 and ELA Innovation deployed a beacon network and GPS units for **indoor** and **outdoor** NMEs location. The GPS data is uploaded to the business platform developed by Resonate MP4 (www.xops-aero.com) allowing this fleet management optimization.

≫ The key players

ela INNOVATION

IoT tag
manufacturer

resonate MP4

Integrator of
IoT solutions

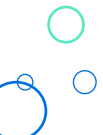**PARIS AÉROPORT**

End-user

AIRFRANCE

« Air France has extended the technology to all its ramp equipment, including the ones used for the technical maintenance of airplanes. »

A.Barré, Air France

≫ The client needs

✔ Track and identify 5,000 non motorized equipment
✔ Allow indoor and outdoor traceability
✔ Share and charge equipment for multiple users

» The equipment

- ✓ Blue PUCK ID (1)
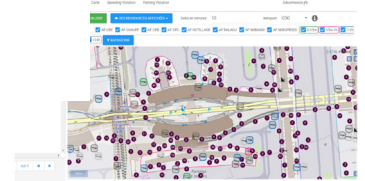- ✓ GPS Trackers - TAG3 (2)
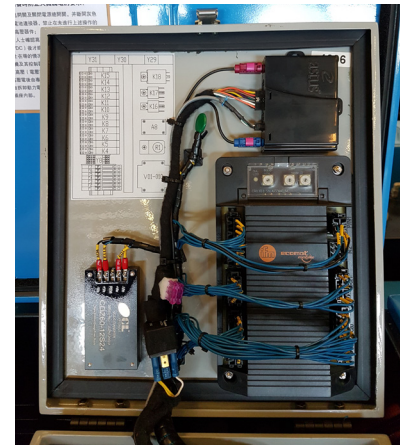- ✓ XOPS Resonate platform(3)

(1)

(2)

(3)

» The operating mode

From a technical point of view, the location solution can be deployed following two technologies: **Bluetooth Low Energy (BLE) and Active RFID. In order to be identified, each non-motorised equipment** carries a Blue PUCK ID[1] with BLE technology or, in some cases, a PUCK ID based on Active RFID technology. The motorized mobile devices are equipped with GPS2 trackers, called Tag3, communicating via GSM 4G network. In case already installed trackers do not have BLE connectivity, the same type of solution can still be deployed by adding an Active RFID reader. RSSI network management allows to define the distance between motorized and non-motorized equipment. If this distance is reduced to a few meters, **the tracker communicates the presence of the non-motorized equipment** by associating the Blue PUCK ID to its GPS position. In this way, this fleet composed of thousands of TAG3s (GPS boxes) running on the airport becomes a detection and communication network for non-motorized equipment.

The GPS data is transmitted in real time by the 4G unit to the XOPS business platform developed by Resonate MP4. This platform allows to **track**, **optimize**, and **share** fleet between different airlines

» The results

- ✓ **25% reduction of NMEs** on the slopes
- ✓ Enhanced security

» The advantages

- ✓ **100% autonomous beacons**
- ✓ Beacons compatible with **GPS units on the market**
- ✓ Compact beacons, watertight, and robust
- ✓ **Regular emission (every 4 seconds)**
- ✓ Vital battery life : **at least 6 years**