ela INNOVATION

Success story

» Indoor tracking

Management of industrial tools »

Business

Safran Airfcraft Engines optimizes

its tool inventory management thanks to an IoT solution

As a major player in the aeronautics industry, the **management of industrial tooling** is a real challenge for Safran Aircraft Engines whether for **performance**, **cost** or **safety** reasons. The equipment manufacturer trusted Orange Business Services and ELA Innovation to deploy a high-precision **indoor geolocation solution** to digitalize and automate its inventory. This solution was deployed in stages on 2 production sites (55,000m² and 20,000m²), to integrate perfectly with the business processes already in place and to take into account the technical constraints. Indeed, the metallic environment, the surface area and the ceiling height (about 8m), as well as the number of tools to be geolocated (+/- 25,000) required a pilot phase to validate the technical choices.

The key players

ela INNOVATION
Tracking beacon manufacturer

Business
Solution integrator

Quuppa
Technology provider

« The objective is to be at the cutting edge of technology and to adapt our means of production in order to improve all processes and the quality of work. »

Médéric Bourbon, Production resources project manager, Safran Aircraft Engines

>> Discover Safran Aircraft Engines' video testimonial <<

The client requirements

- **Automate the inventory** and **improve** the traceability of all its tooling
- **Improve the operational performance** of teams (reduce lost time)
- **Reduce costs** related to the purchase of lost tools
- **Analyze the fequency** of use of equipment

The equipment

(1)

- 25 000 AERO Beacon (1)
- 250 360° Quuppa antennas (2)
- Ubisense business application integrated by Orange Business Service

(2)

Modus Operandi

From a technical point of view, the geolocation solution for industrial tools is based on an infrastructure consisting of **a set of tracking beacons and 360° antennas**, also called «locators». Based on **Quuppa AOA (Angle Of Arrival)** technology, the beacons **attached to the tools** will emit a location signal every second when the equipment is in motion and every 10 seconds in static mode. The antennas

fixed on the top will cover a maximum of the ground surface, in order to detect all the surrounding beacons and thus calculate the angle of arrival of the signal formed between them and the beacons. The beacons will then transmit the positioning information to the business application through the **Quuppa Positioning Engine tool** which will transform the raw data into GPS data. On the business application, the operators will be able to **visualize in real time on a map the position of all the tools** with a very fine precision (up to 1m). They will also have access to numerous dashboards to **optimize the management of the equipment fleet** and ensure predictive maintenance.

The results

- **Time saving**
- Optimization of the management and **predictie maintenance** of its tooling fleet
- Increase in **productivity**
- Improvement of **working conditions**

The advantages

- Ultra compact **industrial beacons** (IP68)
- Beacons comply with **anti-FOD** (Foreign Object Damage **standards**
- **Real-time** indoor geolocation
- **Geolocation accuracy 1 - 3m**