



Success story

» **Indoor location**
of medical equipment »



»» Perpignan's hospital center optimizes its medical equipment inventory

with RFID Discovery's IoT solution

Managing a stock of medical equipment used by many different departments and by many different people is a challenge faced by all hospitals. In the event of a medical emergency, time can be of the essence, so **it's vital that medical staff can find the equipment they need as quickly as possible.**

Perpignan hospital is no exception to the rule. To meet this need for traceability, it has entrusted RFID Discovery and ELA Innovation with the task of **tracking 900 medical beds and infusion equipment** using BLE MESH indoor geolocation technology. The challenge was considerable: to **accurately locate hundreds** of pieces of equipment spread over 75,000m² and 5 floors.

»» The key players



IoT Manufacturer
of IoT sensors



IoT
Solution provider



End
User

« The customer is clearly satisfied with the solution, and regularly orders ELA Innovation Tags to extend the system. A project is currently underway to cover a new building with this solution and geolocate new types of equipment. »

Nicolas Bellemon, Healthcare Sales Manager at RFID Discovery France

»» Client requirements

- ✓ Monitor over 900 medical devices in real time
- ✓ Improve equipment maintenance management
- ✓ Be alerted when equipment leaves the authorized zone

»» The equipment

- ✓ 900 Blue LITE ID+ MESH (1)
- ✓ 5 gateway compatible with BLE MESH
- ✓ RFID Discovery's web platform (2)



(1)



(2)

» Technical operating

From a technical point of view, the indoor geolocation solution is based on a **mesh network of fixed beacons and 100% autonomous mobile tags**. The former, also known as anchors, are installed at regular intervals in the building, while the latter are installed on the equipment to be tracked (beds, infusion equipment, etc.). The mobile tags emit regular signals to the various anchors, which in turn pick up all dialogues and transmit the information to the gateway. This is known as a Mesh network. The data transmitted through this mesh network is **centralized by one or more gateways**. This gateway transmits the data collected by the network to the hospital's **server/cloud**.

Once on the server, the data is processed and analyzed by tools such as the WNT (Wirepas Network Tool) and the WPE (Wirepas Positioning Engine). These tools enable the **visualization of diagnostic elements** supplied by the network, and the **localization of devices** within Wirepas networks.



All this is transparent to the end user, who can **visualize all the data on RFID Discovery's IoT platform** in the form of a map (like an internal Google Map), a history or a graph.

On a day-to-day basis, thanks to this IoT solution, nursing staff at the Perpignan hospital can quickly find a piece of equipment, and asset managers can **automatically take inventory**, plan **maintenance** or **set up alerts** to secure their equipment against theft.

» Results

- ✓ Increased responsiveness of nursing staff in emergencies
- ✓ Improved working conditions for teams
- ✓ Better knowledge of equipment utilization and maintenance requirements

» Benefits

- ✓ An **easy to set-up** solution. No wiring required.
- ✓ Optimum responsiveness and **location accuracy < 3m**.
- ✓ An easy-to-use IoT platform