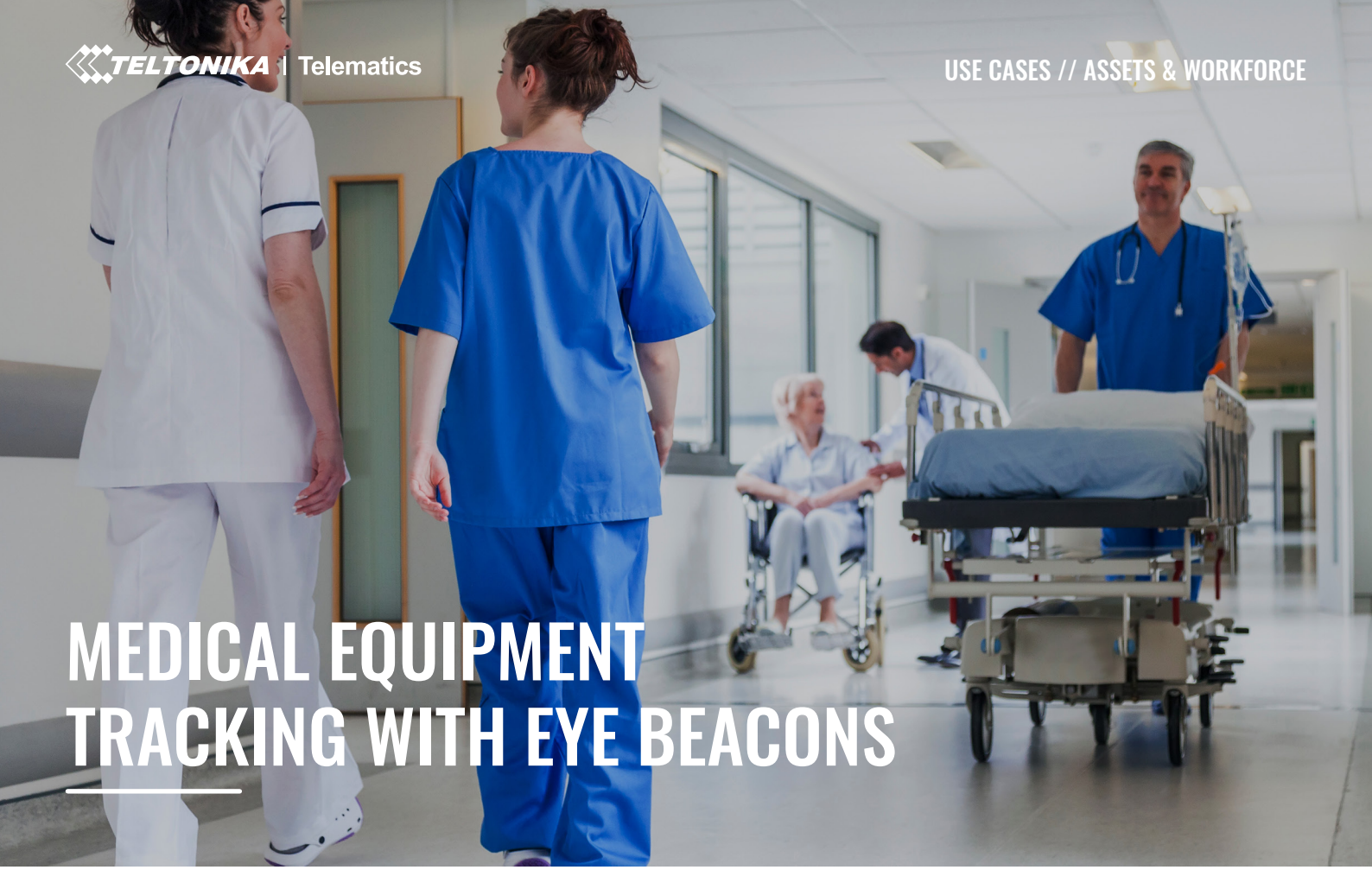


MEDICAL EQUIPMENT TRACKING WITH EYE BEACONS

INTRO

The medical device market was worth a staggering $512 billion in 2022 and is expected to grow to $800 billion by 2030. However, managing such high-value medical equipment comes with its own set of challenges. Teltonika EYE Beacons combined with a gateway can help to address these concerns.

CHALLENGE

The time spent searching for medical equipment is distressing, with nurses wasting up to an hour per shift searching for equipment ranging from infusion pumps and medical trolleys to wheelchairs and hospital beds. Other studies suggest that hospital staff waste up to 34% of their time searching for equipment. And it's clear that time is of the essence in hospitals, where every wasted minute can cost lives.

Another significant worry is the theft and loss of medical equipment. Typical targets for theft and loss include medical computers, wheelchairs, defibrillators, portable diagnostic equipment, ventilators, and infusion pumps. It is very concerning that 10% to 20% of mobile equipment in hospitals is stolen or otherwise lost, costing an average of $3,000 each.

For example, despite the significant cost of medical devices, approximately 30% of healthcare spending in the United States is wasted. A number of factors contribute to this wasteful spending, including inefficiencies such as over-purchasing equipment, ineffective use of medical devices and lack of workflow data.

Today's modern hospitals need an effective and automated approach that can help solve these challenges, and Teltonika Telematics has a practical solution to offer.

SOLUTION

To solve these challenges, boost hospital efficiency, and prevent medical equipment theft, we use Teltonika EYE Beacons and a gateway, such as a GH5200 autonomous GPS tracker, a smartphone with a third-party app or a compatible Teltonika Networks router. EYE Beacons should be attached to all portable medical equipment, and gateways should be placed throughout the hospital or, in the case of the GH5200, carried by staff.

How it works – each EYE Beacon is assigned to a specific medical device to which it is attached – a computer, ventilator, diagnostic device, etc. When it is near the gateway, for example when the nurse visits the room with the GH5200 tracker, it scans the nearby beacons and the staff in charge can see the RSSI-based location of the medical device via a third-party platform or mobile application. Moreover, each room has one stationary EYE Beacon installed, so that the GH5200 can recognise indoor location. Teltonika EYE Beacon is equipped with an omni-directional antenna, so the signal travels around the beacon, unlike competing one-directional solutions. In this way, our beacons provide reliable coverage in hospital rooms.

Such solution helps to significantly reduce the time it takes to locate medical equipment. Hospital staff can easily see which room the equipment is in and when it leaves the room. For example, the nurse can quickly find out if the bed is in the patient's room before a person arrives. It can be adapted throughout the hospital to track thousands of different medical devices.

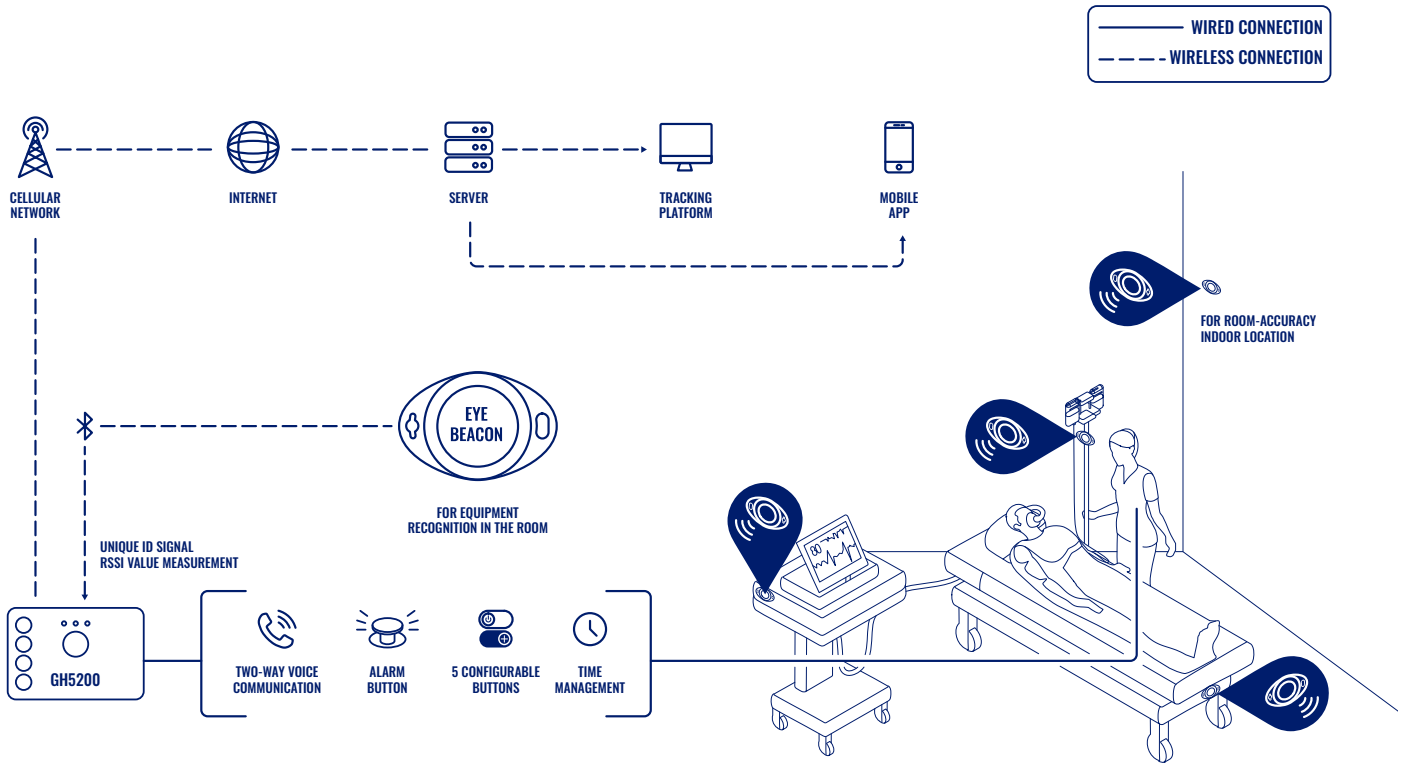
Hospital personnel can then ensure that equipment is returned to where it's supposed to be after use, ready for the next emergency. Hospitals cannot afford to be unprepared for emergencies, and this solution helps to ensure that they are, by locating equipment throughout the hospital without delay or hassle.

With EYE Beacons attached to devices of interest and connected to gateways throughout the hospital, managers are always aware of the location of their medical equipment, acting as a perfect theft prevention measure and helping to locate items lost in different rooms throughout the hospital. Operational management can also swiftly and accurately find out how many beds are available in each unit and how many patients can be admitted. Moreover, digitised medical equipment usage data can help optimise workflows and equipment purchases, saving valuable time and resources.

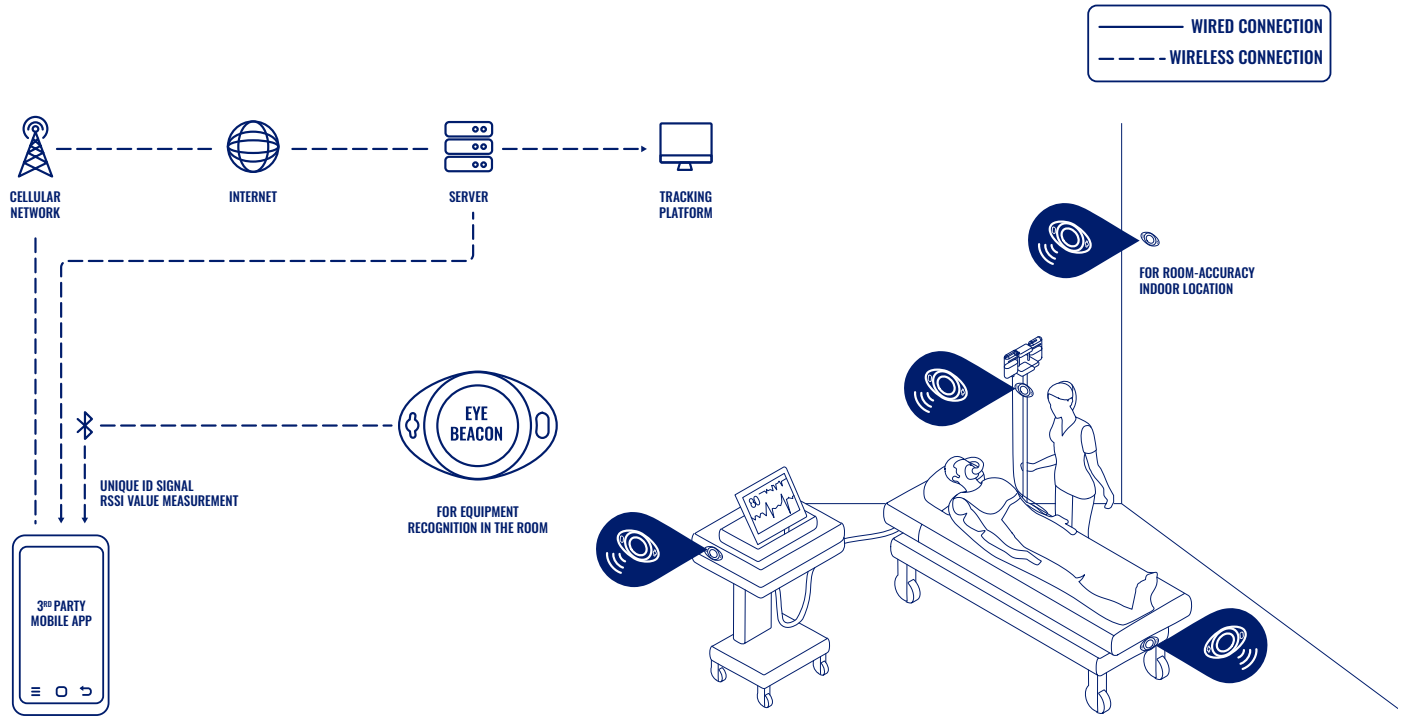
Finally, by equipping hospital staff with Teltonika GH5200 personal trackers, an organisation ensures their safety by confirming their approximate location and providing them with an alarm button to call for a doctor or report an emergency. It also supports two-way voice calls for easier communication among medical colleagues. Time management opportunities enable checking the timing of when the personnel visits specific patients and how long

they stay there. Another great part of this solution is that this GPS tracking device regularly scans the surrounding EYE Beacons, eliminating the need for other gateways and making a project more affordable.

TOPOLOGY WITH TRACKER



TOPOLOGY WITH APP



BENEFITS

- **Reduced time wasted in locating equipment** - Teltonika EYE Beacons help spot the location of required hospital equipment with room accuracy.
- **Prevent theft and loss** - the location of medical equipment is always available throughout the hospital, ensuring that equipment is not lost or stolen.
- **Improved emergency readiness** - hospital managers can ensure the right equipment is available for patients at all times.
- **Increased hospital efficiency** - with data on equipment usage and availability, hospitals could buy only what they need and avoid overspending.
- **Safer and more efficient hospital staff** - with the GH5200 tracker, it's possible to know the location of staff in the hospital, provide them with a panic button for emergencies and communicate easily with two-way voice calls.

WHY TELTONIKA?

Thanks to its extensive experience in the telematics sector and IoT industry, Teltonika Telematics has developed a reliable BLE beacon that, combined with the personal tracker, is the perfect choice for tracking medical equipment. Robust design with easy mounting options, up to 10 years of battery life, an IP67 waterproof rating and an omni-directional antenna are just a few examples of what makes the EYE Beacon stand out for medical equipment tracking.

Furthermore, we use sustainable manufacturing processes, environmentally friendly product packaging and other measures to set ourselves apart from the competition. These efforts have also been recognised by the Ecovadis sustainability ratings, which awarded Teltonika Telematics a silver medal. This adds up to the trust of business partners and customers in over 160 countries around the globe.

FEATURED PRODUCT

GH5200

RELATED PRODUCTS

TMT250

RELATED ACCESSORIES

Eye Beacon