

A system from UBI Solutions enables Interhospitalia to receive, launder and ship up to one million tagged linen items to 22 area hospitals, and to track each one.

By Claire Swedberg

Tags: [Health Care](#)

Mar 15, 2020—Spanish hospital services company [Interhospitalia](#) provides linens and laundry services for 22 Barcelona hospitals by leasing its one million flat linens, uniforms and gowns for use by health-care providers and patients. By tracking the goods via RFID technology, the company is able to manage the status of each linen as it arrives at and leaves a hospital, as well as the laundering services at its own facility.

Traditionally, each hospital owned its own linens, which were laundered by Interhospitalia and then returned to that facility. Interhospitalia, however, was interested in increasing its volume and providing a different model. The laundry company owns the linens it washes and provides to hospitals at a fee, and with the use of RFID it can automatically identify each item and thus manage where linens go and when they return. The system is provided by technology company [UBI Solutions](#).



By employing the RFID system, Interhospitalia can bill customers according to the number of linens the use, and for the cost of any item that goes missing while in a particular hospital's custody. The UBI RFID solution was launched a year ago with UHF RFID tags sewn onto flat linens, and hospitals are now beginning to use handheld readers to gain further data about when linens arrive at and leave their own facilities, says Renaud Munier, UBI Solutions' international business development director. In the future, patient gowns and worker uniforms are also expected to be tagged and tracked via RFID. New products come into the system with tags already applied by the supplier.

Thus far, approximately 40 percent of all linens are being tracked. Since the system was taken live, says Raul Asla, Interhospitalia's managing director, the company has been able to use the collected data not only to view the location and status of each item in real time, but also to gain historical data that can help it make its processes more efficient. "We have control over linens in a way that we would never have imaged before," he states. "Now, we can know where the linen gets stuck, where it is lost," and how long it takes to complete a washing cycle.



Traditionally, Interhospitalia simply washed products arriving from numerous hospitals at its facility, then returned those items to the hospital that owned them once laundered. The company envisioned a more efficient model, however. It visited a firm in Paris, France, that was using UBI Solutions' technology to provide full linen management, and it decided to launch the same system in Barcelona.

Tracking linens as they arrived at and left from 22 hospitals was not possible manually due to the labor costs involved, Asla says, in addition to the inability to distinguish one piece of linen from another. With RFID, however, that identification is now automated. The solution consists of [Zebra Technologies](#) readers, including a fixed reader portal at the laundry entrance, as well as two readers installed at washing tunnels and another built into a cabinet where orders of clean linens are fulfilled.

As dirty linens arrive at the laundry from hospitals, they first pass through the entrance reader portal, where each item's RFID tag responds to interrogation by transmitting its unique ID number. Those IDs are then forwarded to the UBI software. Each ID is

linked to data about a specific item, including the number of wash cycles, the type of linen and where it was last used.



As the goods pass on a conveyor to the washing tunnels, the tags are read again for redundancy purposes, thereby updating each item's status as being washed. The linens are laundered, dried and folded, and are then picked to fulfill orders from hospitals. Those items are stacked in a roll cage that is used to deliver the linens to each hospital. At that point, the cage is rolled into the shielded reading cabinet, and the tag IDs are linked to the hospital and department order. If there are any packing orders, the software can display an alert on the company's computer.

As new linens are brought into the system, they are laundered and placed in this same cabinet to commission the tags. That data is then stored and the system begins tracking these items and they are provided to hospitals and later return for laundering. Additionally, staff members use Zebra RFD2000 readers and TC20 mobile readers to capture tag reads in order to manage exceptions. The readers forward that read data via a Bluetooth connection to an Android device, or they can send the information

directly to the server via a cellular or Wi-Fi connection.

Some hospitals are also acquiring those handheld units, Munier says, to take advantage of the inventory-management functionality the devices provide. For instance, as goods are received or shipped back to Interhospitalia, hospital workers can read the tags with the handheld and update the cloud-based UBI software to ensure they have accounted for everything received and returned. Interhospitalia can also access that data so that it can, for instance, receive an advanced notification when goods are on their way to the laundry service.

The first customer to acquire the mobile device, Asla says, was the Corporación Sanitaria del Maresme i la Selva, which operates the Hospital de Calella, which serves patients in that area of the Costa Brava.



When Interhospitalia came to UBI, Munier recalls, the company's management had an ambitious plan to manage all the linens in

house, and to understand where its goods were and when they might go missing, "They wanted to unify all linens for all the hospitals," he recalls. "They didn't know how much linen they were losing" without an automated solution.

Since the system was taken live in January 2019, it has provided data indicating that when linens end up missing, this typically happens at hospitals. For that reason, some hospitals now plan to track linens internally via handheld readers. One hospital also intends to install fixed readers at its emergency doors so that it can track how many linens pass through its exits.

With this data, Munier says, the system knows when items were shipped to the hospital and whether or not they were returned. Interhospitalia can then invoice the hospital for any linens that were lost. The technology is helping the company to service goods more quickly. In fact, some linens are received twice in one day, and can thus be laundered and returned to a customer.

Without RFID, Asla says, the rental service solution simply wouldn't be possible. Prior to the UBI system's deployment, he notes, Interhospitalia had little visibility into where its linens were located and how quickly they were being processed. "All was based on assumptions," he states, "some of which, after one year of usage, have already been proven to be wrong."



In addition, Interhospitalia can use the system to employ a payment structure with product suppliers, by which a company would

not buy a product outright, but instead pay for linens according to the number of washing cycles each item undergoes. This ensures that products have the durability promised by manufacturers. If garments are lost, the laundry company pays the balance owed for the value of each item. The RFID system automatically counts the number of washing cycles each linen receives.

Improved efficiency has been the company's greatest gain, however. After the first year's success, Asla reports, the firm is now considering moving all of its linens through the same RFID system. Presently, the service owns about one million linens, about 30 percent of which are chipped. The system is being expanded as new linens are provided, with tags being applied to uniforms and patient gowns.