Case Study

Hospital General de Granollers is a health and social care provider, 30km outside Barcelona. The organisation specialises in several areas, including teaching, dementia and geriatric care, and forms parts of the broader Catalan Health Service.

Like others in the modern healthcare sector, and in an age of electronic health records, the Hospital must connect with outside agencies. It must also operate seamlessly across its multiple buildings, and throughout the patient’s healthcare journey.

“We have to deal with more digital content,” says Anna Benavent, IT director, Hospital General de Granollers. “Healthcare is becoming more collaborative. We need to be more mobile, in our management and at the bedside, and be prepared to use modern productivity tools.”

Supporting Mobility and Digitisation

In order to be able to achieve their strategic objectives, the Hospital decided to revamp its entire network, building an infrastructure to support mobility and digitisation – and longer-term goals around IoT, BYOD and location-based services. In the short term, the Hospital was keen to launch an app aimed at improving the patient experience, with geolocation and up-to-the-minute waiting times. An improved network would be central to the effective working of this app.

Requirements

- Establish the hospital among leading regional care environments
- Enable the execution of the hospital’s digital agenda
- Ensure security and integrity of digital patient and health records
- Foster digital collaboration with other healthcare services and bodies
- Improve patient and visitor experiences
- Increase staff agility and their ability to use mobile productivity tools
- Deliver higher quality on-site services via the new hospital app

Solution

- 802.11ac Indoor Aruba APs
- Aruba Campus Core and Access Switches
- Aruba ClearPass Policy Manager
- Aruba AirWave Network Management
- Aruba Mobility Controllers

Benefits

- Seamless and consistent Wi-Fi roaming across multi-site hospital environment
- Secure and fast connectivity to external healthcare agencies
- The means to faster and more secure guest access
- Solid platform for extending future services via the Hospital app
- Create platform on which to connect future medical and other devices
- Establish single view, and simpler management, of network

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Anna Benavent, IT Director
Hospital General de Granollers

“Our priority was a stable network – this is healthcare, we cannot afford the network to fail,” explains Benavent. “But we also wanted flexibility. We understand that mobility and digitisation will grow, and that we can create new services and new ways of working. We wanted a solution that would allow us to adapt on the go.”

Secure, flexible and reliable

The Hospital turned to Aruba due to their track record of robust technology and their experience in deploying innovative solutions around it. “Aruba demonstrated the most secure, flexible and reliable solution,” says Benavent. “It also
offered the most exciting roadmap, in terms of what we could do with the technology."

The implemented Aruba Mobile First architecture is, in part, based on the deployment of over 180 Aruba 200-Series access points, and a fully redundant campus network architecture based on Aruba 5400R, 3800 and 2900 series switches. To centrally deploy and secure the WLAN, two Aruba 7200 controllers were deployed in addition to Aruba AirWave Network Management for monitoring and troubleshooting. Aruba ClearPass Policy Manager was chosen in order to develop a highly context and role-based network access control system, based on flexible and granular policies. The next phase is to roll-out Aruba Bluetooth Low Energy (BLE) Beacons and the Meridian mobile engagement platform in order to enable location-based services via the new Hospital app such as on-site wayfinding, or asset tracking via dedicated mobile tools.

“The 200-Series access points can have USB Beacons added to them, but they’re not enough for what’s needed, but they already offer the baseline architecture required for the next phase,” says David Ferrera, Network Solution architect at SEMIC, the Aruba partner involved in the implementation. “We're carrying out a full site survey to determine how many beacons will be needed.”

Improved healthcare efficiency

The first phase of the Aruba solution is now in place across three of the Hospital’s main buildings. At present, it supports around 200 corporate mobile devices along with bedside ‘computers on wheels’. Anna Benavent says the plan is to extend wireless coverage to the entire site by the end of 2017. Today, authorised and authenticated mobile users are able to access digital records, including scans sent from external agencies. Patients and visitors have access to the wireless network. The Hospital is now integrated with the wider Catalan Health Service, via the CatSalut network, and the Supercomputing Centre of Catalonia (CESCA). Both connections are high-performance with high-redundancy. It is imperative that the wireless network does not diminish the performance expected from these sources. The Aruba Wi-Fi and LAN ensure the optimum mobile experience when accessing these networks.

“Ultimately, this connectivity means we’re faster and better able to deal with patients. Diagnostics is better, treatment pathways are more connected,” says Benavent. “It’s improved our overall responsiveness and efficiency, and led to an improvement in quality of care.”

CREATING A MODERN, PATIENT-FOCUSED ENVIRONMENT

There is also an external benefit. The successful launch of the app has, not least, allowed the Hospital to present an image of a modern, patient-focused environment.

“With the app, we wanted patients to be able to access up-to-the-minute information,” explains Benavent. “Once they’re registered and logged on, they can view appointments or waiting times.”

The new app is working as expected. New users need to visit the Hospital to be given a login code; once they have this code, the app can be used from anywhere. “We have offices at the main building, and other locations in the nearby town,” says Benavant. “The app is proving a great way for patients to check waiting times before heading in.”

The start of the digital journey

Benavent says phase one is simply the start of the Hospital’s digital journey. The immediate plan is to enable users for secure BYOD while more corporate devices will be added. The Aruba BLE Beacons will enable wayfinding, helping visitors move around the site. Longer term, an IoT project could allow the Hospital to track valuable assets or even monitor the location of Alzheimer patients.

“A hospital is a complex environment,” says Benavent. “We have up to 2,000 staff and 10 critical care rooms, and we want to expand, to move up the healthcare value chain. To make expansion possible, we’ll have to be more connected and more digital. The Aruba solutions provide a platform on which we can create our own digital future.”