

CASE STUDY



GERMANY



HEALTHCARE

**SECURE, FLUID AND MOBILE HEALTHCARE
EXPERIENCE SUPPORTS HEALING ARCHITECTURE
AT GROUND-BREAKING NEW HOSPITAL**



**WALDKLINIKEN
EISENBERG**

Create an uncluttered,
mobile healthcare experience
throughout ground-breaking
new hospital



Waldkliniken Eisenberg is a stunning new hospital in the German state of Thuringia. Opened in October 2020, the 128-room facility has already been judged one of the country's best hospitals.

Waldkliniken (literally 'forest hospital', in English) aims to be a new kind of hospital. It wants to create a hotel-like experience for patients: the orthopaedic specialist hospital features three restaurants, fireplaces in plush lounge areas, 52 verandas connected to patient rooms and lots of natural materials. In all patient rooms, windows in the circular building look out at a tree canopy. Waldkliniken calls this 'healing architecture'.

"Technology should not be visible, but it must play its part," says Andreas Rossa, Head of IT, Waldkliniken Eisenberg. "We want a mobile, uncluttered experience. And everything must work 24/7."

TECHNOLOGY TO SERVE A HEALING ARCHITECTURE

The network at the ground-breaking Waldkliniken Eisenberg is built on Aruba. The wired network provides a robust backbone with 10 Gbit uplinks for high-performance server connectivity, convergence of Ethernet and storage traffic, and virtual environments. The highly resilient Wi-Fi access is based on 7200 Series Mobility Controllers and both Outdoor and Wi-Fi 6 & 6E Indoor Access Points. Network Access Control policies are defined, enforced and automated by Aruba ClearPass Policy Manager.



REQUIREMENTS

- Establish failsafe wireless connectivity throughout six-floor campus
- Ensure robust security policies to govern network access for multiple healthcare teams
- Enable the building to evolve new digital use cases

SOLUTION

- Aruba Indoor & Outdoor Wi-Fi 6 & 6E Access Points
- Aruba 7200 Series Mobility Controllers
- Aruba Switches (Core to Access)
- ClearPass Policy Manager
- AirWave Network Management

OUTCOMES

- Enables seamless mobility for care teams throughout the 128-room building
- Supports hotel-like experience for patients
- Strengthens transparency and accountability of clinical treatment through digital trace
- Gathers data to inform service improvement and building usage
- Provides roadmap towards intelligent building management

The hospital was ten years in the planning. Andreas Rossa says technology moves fast and the network team recognised that decisions from five years ago could be quickly superseded; his focus was on broader themes.

"The priority was for the network to be failsafe. That was an absolute must," says Rossa. "We were assured by Aruba's track record in the healthcare sector. Aruba was then able to provide the experiences we needed: enhanced mobility, ease of management, robust security."



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ANDREAS ROSSA

Head of IT, Waldkliniken Eisenberg

ENABLING FREEDOM OF MOVEMENT THROUGHOUT THE BUILDING

The network’s primary role is to support the clinical experience. Today, medical teams can move freely throughout the building with no loss of connectivity.

Consultations can take place at the bedside or in the communal courtyard garden. Doctors use iPad Minis (ideally sized to fit in coat pockets), and care teams use full-size iPads. Larger computers, powered by batteries, can be wheeled into rooms when needed, maintaining the wireless environment. Connected workflows ensure there is a digital trace between care teams and a single patient record from which to work.

“We have no need to plot heat maps or spot user trends because our requirement was for the network to work everywhere, for everyone,” explains Rossa. “No matter if there is one person in the room or ten, we wanted abundant coverage and the freedom of mobility.”



With each carer responsible for eight to ten patients, mobility and seamless access to up-to-date patient records mean clinical teams are more productive.

“Medical teams have access to the right data at the right time,” says Rossa. “There is no need to log in and out, and we have no areas where connectivity drops. What’s more, everything is documented.”

Creating a hotel-like experience for patients

For patients, the discreet use of technology serves to create a relaxed, informed experience. All the information a patient may need, from the day’s menu options to the weather and upcoming medical appointments, is listed on the Waldkliniken app. Visitors have easy access to the wireless network and can seamlessly use the app.

Each patient has their own TV screen, with access to online streaming services. The network capacity enables all 200 screens to stream content simultaneously.

Bastian Guntermann, PR & Marketing, Waldkliniken Eisenberg, says the digital experience has been developed alongside patients and staff. Waldkliniken was careful to involve all stakeholders as it made plans for the new hospital. The idea is that new services or adjustments to workstyles can be made continuously.

“Our initial vision was for an entirely open working environment, where medical and admin teams could mix and colleagues could share and learn from one another. But we’re not there yet. It is important we move at an appropriate speed.”

The plug-and-play flexibility of the Aruba network architecture allows Waldkliniken to make these changes, or explore new set-ups, when necessary and at its own pace.

The result, says Rossa, is a team committed to constant improvement: “It is important to have staff who feel happy and empowered in their work environment. Staff are invested in the digital process. There is far less delegating.”

Intelligence to allow the building to evolve

The building is likely to evolve. The plan is to add sensors to optimise the performance of the building. A host of



environmental, energy and security controls, all connected to the network, will govern access, reduce carbon emissions and optimise the use of daylight through the building. All of this is geared towards making Waldkliniken a more effective place to recover health.

“We’re only at the start of our smart building journey,” admits Guntermann. “We want greater interaction between the building and those who use the building. We now have the necessary network in place.”

Tracking and location services are on the roadmap, whether that is for people or assets, adds Rossa: “The idea is that more connections create an integrated experience. We could add traffic alerts for patients travelling in, guide visitors to the right room and provide weather updates.”

INSPIRING A RETHINK OF THE RECUPERATION ENVIRONMENT

The success of Waldkliniken Eisenberg will be determined by the happiness of its patients. Like a business in the hospitality sector, Waldkliniken actively seeks patient feedback and ratings. It has already sought (and achieved) an official five-star ranking.

The hospital conducts elective surgery, the focus is on recovery and recuperation. Guntermann says the network is only one part, but an important part, of a wider architecture enabling a ‘healing experience’. Digital touchpoints on the Aruba network will help generate the data to prove the effectiveness of Waldkliniken Eisenberg.



“Sometimes the clinic and hotel ideas collide, but our focus is always the clinic. That said, it is important we achieve a five-star rating for our facilities, and we can be pleased with the response from our patients. Many are so comfortable here they choose to extend their stay.”

The progress of the hospital is being monitored closely by others in the healthcare space. Guntermann says he has hosted several clinics, keen to understand the impact of a hotel-like experience; there are other projects underway in Germany to mimic the characteristics of Waldkliniken Eisenberg.

“No one wants to be sick, but if you are to choose an environment in which to get better you could do worse than Waldkliniken Eisenberg.”