

Vaisala's viewLinc monitors medical assets in the Finnish Red Cross Logistics Centre



“Time is of the essence when disaster relief aid is sent to the emergency site. That’s why we need to hold a stock of products ready for urgent deliveries. Medicines and vaccines play an important role in many of our operations. However, they are also the most regulated items to store. The medical supplies require audited storage conditions and we are regularly audited by the Finnish Medicines Agency, FIMEA,” Koiranen explains.

To help ensure FRC operations are responsive, efficient, and GxP-compliant, Vaisala donated a wireless viewLinc Continuous Monitoring System to safeguard storage conditions of the medicines around the clock.

Inside the bedrock

The location of the FRC Logistics Centre has a long, but not-so-peaceful history. “This place used to be an ammunition factory, built before the second world war. Manufacturing ammunition was a high-risk business, and we are actually in a huge cave, excavated several meters inside the Finnish bedrock,” says Koiranen. “Each floor is 1,500 square feet in size and the height equals a three or four-storey apartment building.”

Even in the unusual location inside the rock, the ambient conditions must be suitable for storing equipment, devices and supplies. Thick concrete walls and solid rock surrounds have obvious requirements for the monitoring system.

Two hundred kilometers north of Helsinki, in a storage facility carved into the Finnish bedrock, you can find a trove of goodwill and generosity. The Finnish Red Cross Logistics Centre in Tampere is full of tents, blankets, water purifiers, hygiene packages, and other necessities for emergency response. The centre also stores life-saving medical supplies that can be delivered to the scenes of catastrophes. Vaisala's viewLinc system monitors those invaluable assets continuously.

The logistics centre is central to the Finnish Red Cross's (FRC) preparedness to provide disaster relief and respond to developmental cooperation activities. Supply preservation within the centre is an increasingly essential element of Finnish national emergency preparedness.

“This logistics centre coordinates, stores, packs and manages the logistics of all the aid supplies

the Finnish Red Cross delivers to various locations, both domestic and global. As the destinations vary from the Bahamas to Bangladesh, so do the aid needs too,” says Jari Koiranen, Emergency Response Unit (ERU) Planner, Medical, from the Finnish Red Cross.

In almost any disaster, emergency medical aid is a critical element of response effectiveness.



“The new viewLinc monitoring system is a fantastic tool for us, compared to the old method of manually collecting the data. Alarms and reports are making our work efficient and we can concentrate on the other tasks we have, which are plenty...”

*Jari Koiranen
ERU Planner, Medical,
Finnish Red Cross*

While most of the aid supplies and medicines are stored at room temperature, some of the vaccines and drugs are refrigerated. Vaisala’s viewLinc system was installed to monitor the temperature in four medical fridges, and humidity and temperature in three storage halls.

“We need to monitor the environmental storage conditions with a validated monitoring system. Some of the drugs need to be stored in cool conditions of 2–8 °C. But even if the medicines are stored in room temperature, we must be able to provide evidence of those conditions to FIMEA. Ambient room conditions must also be within a certain range in order to keep the drugs in perfect condition,” says Koiranen.

Continuous monitoring with remote alarming and automated reports

As a GxP-regulated and validated site, FRC’s logistics centre already had a monitoring system in place before the installation of the viewLinc system. The new system

replaced old data loggers they had been using manually before.

The newly installed system consists of Vaisala RFL100 VaiNet Wireless Data Loggers and AP10 VaiNet Wireless Access Points, Vaisala viewLinc 5.1 software and the validation IQ/OQ protocols for installation and operational qualifications. The new monitoring system brought many advantages, including long-range wireless data logger communication inside the challenging building structure, accurate and reliable humidity and temperature measurement, remote SMS alarming, and automated reports.

“With the old system, we had to download the data from the loggers manually and create the reports from that data once or twice a month. It all was very labor-intensive. Someone always had to go to each individual logger, download the data and create the report. In addition to the extra work, we were missing the remote alarming and confidence that everything was running normally,” says Koiranen.

As soon as the Vaisala data loggers were installed and the viewLinc software validated on the FRC server, there were immediate observations.

Jari Koiranen comments: “There was a temperature measurement display on some of the fridges. Once the loggers were installed inside the fridge, we could see the variation in the measurement values of the fridge’s factory-installed thermometer compared to the logger value. Both shown temperatures were still within the storage temperature range, which is important to keep the medicines in a good condition, but this was a good reminder to value the accurate and fast response measurements Vaisala provides.

“The new viewLinc monitoring system is a fantastic tool for us, compared to the old method of manually collecting the data. Alarms and reports are making our work efficient and we can concentrate on the other tasks we have, which are plenty. There is a lot of distress in the world,” he concludes.



Vaisala's viewLinc Continuous Monitoring System & VaiNet Wireless Technology

Vaisala's wireless monitoring system provides accurate and reliable data on the storage conditions of critical assets in regulated environments like pharmaceutical warehouses,

laboratories, fridges, freezers, and cleanrooms. The system ensures gap-free data, dependable remote alarming, and reports that aid in compliance with GxP-regulations and guidance.

The viewLinc system consists of the viewLinc software, data loggers that can connect over Ethernet, Wi-Fi or Vaisala's proprietary wireless protocol VaiNet, and optional IQOQ and other GxP/GAMP documentation. The innovative Vaisala proprietary VaiNet wireless technology offers a typical indoor signal range of over 100 meters between data loggers and access points, even with concrete walls, metal shelves, and other typical obstructions. In unobstructed environments, the wireless signal range can be several times longer.

The wireless data loggers and access points are easy to connect, extremely energy efficient, and

provide accurate measurements for temperature and humidity. The viewLinc software collects and saves the measurement data from the data loggers, sends automatic alarms if the monitored parameters deviate from permitted values, and automatically generates and sends reports to designated personnel.



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