



VGR Establishes Its Own 5G Network

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The increasing digitalization and the current geopolitical security situation are placing higher demands on fast, accessible, and secure communication. Region Västra Götaland (VGR) will therefore develop its own wireless infrastructure: VGR-5G.

A well-functioning connection is essential for IT systems, telephony, and other equipment to operate effectively for all employees within VGR—whether the workplace is an operating room, an open-plan office, or outdoors in the Gothenburg Botanical Garden.

“The VGR-5G program has been tasked with establishing a new wireless infrastructure within VGR based on 5G technology, which meets VGR’s need for a communication system with guaranteed high coverage, speed, and security,” says Tony Hertz, program manager for VGR-5G.

The infrastructure will be built autonomously, meaning that alarms and other communication within a hospital area can continue to function even if external connections are lost.

“VGR must be able to carry out vital societal functions even in the event of a crisis, disaster, or war. The establishment and ongoing operation of VGR-5G will be managed by in-house expertise within VGR. This enables high continuity in both everyday operations and during increased preparedness,” says Tony Hertz.

Modernization of Current Telephony and Alarm Management

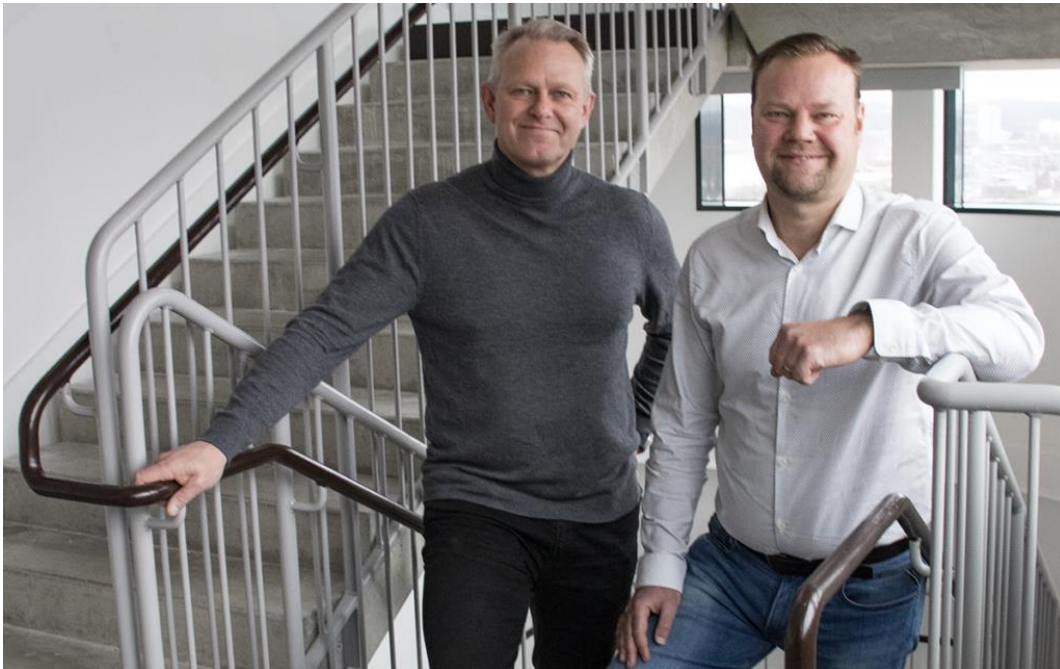
The foundation for the VGR-5G program is a 2020 decision to phase out the DECT phone system in VGR. Around 25,000 phones—mainly used in healthcare—need to be replaced with devices using mobile technology. A subsequent feasibility study recommended a new mobile solution based on 5G architecture.

VGR-5G will modernize today's telephony and alarm management systems—benefiting healthcare staff.

“Today, a nurse might have to carry several mobile devices: a work mobile, a pager, a DECT phone, and sometimes a Raket unit for emergency communications. These can now be replaced with a single smartphone,” says Christian Bohlin, IT infrastructure strategist for the VGR-5G program.

This means fewer devices to carry and removes the hassle of keeping track of who needs which device and when.

“The personal phone will be linked to the role, employee, and schedule. Phone numbers, extensions, on-call numbers, as well as alarms and messaging functions, can be tied directly to a specific staff member,” Bohlin explains.



Tony Hertz, Program manager and Christian Bohlin, IT-Strategist from program VGR-5G

VGR will act as its own operator and manage the data traffic internally. This enables prioritization of calls and alarms. High-priority communications will be given precedence through the infrastructure for faster delivery to the recipient.

The new technology also gives VGR improved capabilities for mass and group communication.

“If a lone worker is injured or encounters a threatening person, an alert can be sent to a specific group. There's also the option to send information to a larger group—for example, in the case of a suspected fire or other serious incident,” says Christian Bohlin.

Positioning, Navigation, and Smart Buildings

5G enables new positioning and navigation services, such as quickly locating equipment or helping individuals navigate within buildings or campuses.

VGR-5G will also support IoT (Internet of Things)—physical devices connected to the internet to collect and share data.

It will become easier to gather information from buildings and better control lighting, temperature, and ventilation—aimed at saving energy and optimizing indoor environments for both patients and staff. In medical technology, providers are beginning to develop smarter products and services that require advanced wireless technologies.

“There are many advantages to 5G, and not just in healthcare. The technology will support the adoption of self-driving vehicles, robots, and drones, and accelerate digitalization in areas such as public transport and agriculture,” says Tony Hertz.

Collaboration with Other Authorities and Public Organizations

The VGR-5G program is initially focused on indoor coverage across VGR:s buildings. In parallel, possibilities are being explored to connect VGR:s 5G network with other networks at the national level. Tests are currently underway with the Swedish Civil Contingencies Agency (MSB) and the Swedish Transport Administration. If successful, end users will experience seamless connectivity when moving between the coverage areas of VGR, MSB, and the Transport Administration.

“A seamless and secure connection will make it easier for VGR to offer more and more advanced healthcare services directly in the patient’s home,” says Christian Bohlin.

Full-Scale Pilot Early Next Year

VGR already holds the required license from the Swedish Post and Telecom Authority to establish its own private 5G network. Early next year, one of VGR:s hospitals will act as a pilot site for a full-scale VGR-5G installation.

“This will help us gain experience and build internal technical expertise in 5G, and during this first stage, it will not impact operational healthcare services,” says Tony Hertz.

On September 17, the VGR Regional Board approved an investment of 335 million SEK over five years to implement VGR-5G. The plan is for the network to be fully operational by 2028.

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