



5G

## In-house GSM - trend or new must-have?

When new buildings or modernizations are planned today, a specialist planner often asks whether Inhouse GSM is planned as well. Where does this question come from?

More and more applications no longer depend on a comprehensive WLAN, but communicate via a 4G or even 5G network. In our opinion, a specialist planner asking this question is future-oriented and you can be sure that he will not be satisfied with today's standards.

Buildings in the Minergie standard, buildings with coated windows or earthquake-proof buildings all have the same problem. They resemble a Faraday cage, meaning that no signal from outside penetrates or leaves the building. This creates new problems for a nursing home.

The management, the staff, the residents and the visitors are all using their smartphone or tablet, wanting to be online and easy to reach at all times.

## What are today's standards?

In order to meet today's requirements, a comprehensive WLAN is often installed. In addition to the high costs, this usually implies a high level of effort. The nursing home has to manage the passwords for its own WLAN, provide a public WLAN as well as a separate WLAN for the residents. Experience has shown that most nursing homes lack the resources to operate a secure WLAN.

In addition, WLAN telephony on smartphones mostly only works reliably when a person stays in one room and does not move around in a building – which is usually the case in a work environment.

## Why is in-house GSM the future?

A properly configured Inhouse GSM in connection with cloud and/or server applications solves many problems at once. The baby boomer generation, who are likely to move into a nursing home with their own smartphones, tablets etc., can keep their existing subscriptions and the nursing home does not have to worry about setting up Wi-Fi. As a result, residents do not have to change their habits.



The same applies to the management, staff and visitors. Regardless of which part of the building they are in, the connection to the outside world is established and access is guaranteed. Even stays in the basement or in the garage no longer result in an interruption of the connection.

If a resident nevertheless wants to have access to Wi-Fi, or if the meeting room and the office wing need to be equipped with Wi-Fi, it is sufficient to install the access points selectively and as required. For new buildings, it is therefore advised to provide enough IP connections.

You will quickly notice in the construction project that the cabling of an IP socket is of little consequence, as often other cables already have to be run from the technical room to the residents' rooms or other premises.

## What does an Inhouse GSM have to do with security?

A modern Inhouse GSM system is multi-provider capable. This means that all providers known on the Swiss market can be supplied via the inhouse network. An area-wide failure of a large provider (which is very rare) no longer results in a total breakdown. As a nursing home, you also benefit from being able to design your subscriptions individually and provider-independently.

The data is encrypted in the cloud and, depending on the provider, supplied with the latest encryption technology.

At the same time, Inhouse GSM coverage allows you to stay in touch with people in and around the building at all times, even in the event of a disaster (e.g. a fire).

Swisscom and Sunrise themselves offer Inhouse GSM coverage, in some cases already with a RAS-CNA (see: [FactSheet](#) (swisscom.com)). It allows secure access to one's own data from anywhere in the mobile Swisscom network.

## What about radiation in the building?

It would go beyond the scope of this article to focus on the effective effects of electromagnetic radiation on the human body. However, the Inhouse GSM systems used comply with all current standards and are often well below the authorized limit.

An Inhouse GSM system has the additional positive effect that smartphones do not have to transmit as strongly to receive a data signal, since the antenna is in close proximity. This also reduces battery consumption.

## The question remains, is In-house GSM a trend or the new must-have?

From today's perspective, the answer to this question is that Inhouse GSM should be a fixed component of a future-oriented design.

Wi-Fi will still be needed in most cases, but more selectively and no longer comprehensively. For nursing homes, there is even the possibility of charging for these services (WLAN access) on a situational basis and as required, just like it's already the case for many other applications and services today.



«It's clear that Inhouse GSM coverage still seems a bit futuristic these days. But all nursing homes should already prepare for the future of tomorrow. For example, if I were faced with the choice of placing my parents in a nursing home with or without an Inhouse GSM, I would clearly choose the first one.»



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