

SWEGON'S NEW WISE

Swegon, a market leading manufacturer and supplier of energy efficient ventilation and indoor climate systems has, together with LumenRadio, produced a unique and revolutionary wireless HVAC system which is easy to install, maintain and upgrade.

New WISE, the first system of its kind on the market, is built upon commercially available products and gives Swegon and real estate owners great savings on installations, unprecedented flexibility and at the same time allows them to reach the next level of energy efficiency.

THE PROBLEM

Swegon's primary goal when creating a wireless IoT-enabled HVAC control system was to cut the costs of an installation. The wired legacy systems are very inflexible, and recommissioning and rearrangements have always been a major cost driver.

But also due to new environmental requirements and legislations (BREEAM and LEED etc) the need for reducing energy consumption and operating costs became vital. The HVAC industry is forced to create energy efficient and flexible products for sustainability.

THE SOLUTION

To reduce installation costs and meet the new environmental requirements, Swegon collaborated with LumenRadio to develop a revolutionary wireless HVAC system called New WISE - a wireless climate control system that has put Swegon miles ahead of the competition.

The innovation allows thousands of sensors, actuators and dampers to communicate and create an unprecedented indoor climate solution. LumenRadio's Mira, the technology embedded into Swegon's product, connects all thousands of products in a reliable, meshed IP-based network. It also includes the sophisticated frequency hopping system "Cognitive Coexistence", which causes no interference with WiFi or any other wireless networks.

Furthermore, the new intuitive commissioning tool enables changes in the climate control system with just the push of a button, for example two rooms can become one without moving cables, changing dampers or using a ladder.

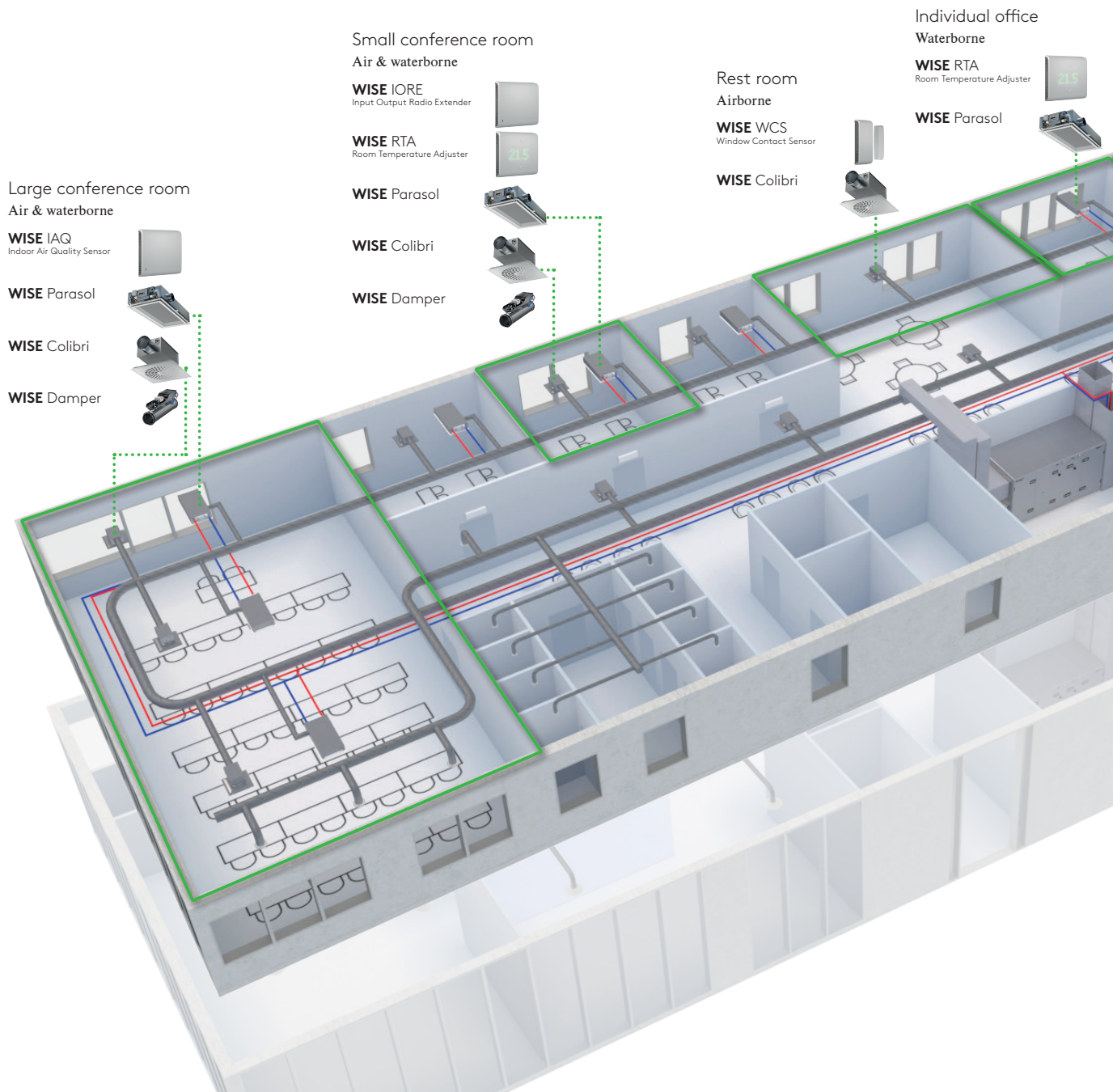
This system offers real estate owners reduced installation costs, never seen before flexibility, great energy savings and new groundbreaking services. All made possible with a unique ultra-reliable wireless technology from LumenRadio.



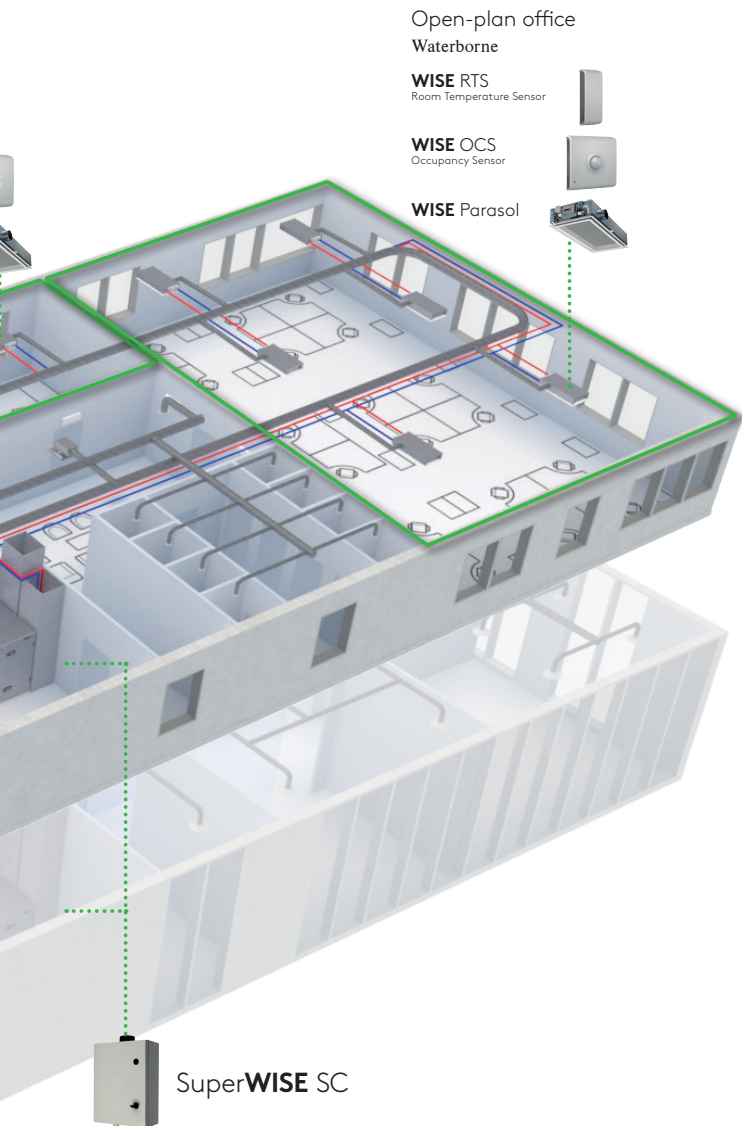
CHALLENGES AND BENEFITS

In offering and providing best-in-class indoor climate, Swegon relies on sensors and actuators, which sometimes can be as many as 5000 nodes in the same property. This high amount of nodes was a technical demand that LumenRadio's patented meshed technology could easily meet, an achievement no other standard or competition can match today.

One of the major benefits of New WISE is that the cost of installation has been reduced by as much as 60% compared to the legacy wired system. This is of course related to a reduction of cabling, however the biggest contributor to these cost reductions is that the time for commissioning is much more predictive due to greatly reduced troubleshooting. The cost for troubleshooting has always been subject to frustration between the supplier, installer and customer.



The new innovative system also offers unparalleled flexibility. With a wired system one need to decide upon the building's functionality very early in the building process, often before you know who the tenants will be. A wireless system gives the flexibility to decide this much later, and since there will always be ongoing refurbishment in big office buildings, rearrangements become very inexpensive and easy. The wireless climate control system enables changes with just the push of a button.



MAJOR BENEFITS WITH NEW WISE

- Reduced installation costs
- Fast and easy commissioning
- Fast and flexible refurbishment
- Reduced cost for troubleshooting and support
- Reduced energy consumption
- Enabling of value added services

MAJOR BENEFITS WITH LUMENRADIO'S FPCC* TECHNOLOGY

- Cognitive Coexistence lets the products co-exist along other wireless technologies, not being interfered or causing interference.
- Upgrades for new functionality through best-in-class firmware upgrades over the air
- The patented meshed technology can handle 5000+ nodes in the same property.
- Support for any future wireless standard.

*FPCC- Future-Proof Coexistence Connectivity

"Although thousands of nodes can be found in a single system, commissioning has never been this easy. LumenRadio's and Swegon's patented technology for commissioning, combined with Swegon's long experience, the installer is offered a new intuitive tool for fast and easy commissioning."

Jan Risén
System Development Director at Swegon



FUTURE BENEFITS

Swegon's new system and LumenRadio's IoT platform also opens the door to value-added services and makes it easy to test new service-related offers without any major investments. Valuable data from the building can be provided to the real estate owner, which opens up new services such as optimization of cleaning, space utilization, asset management etc. The connected sensors can be used for so much more than just controlling the indoor climate.

This is a major feature: very few companies are prepared to go from product to service in a single step. LumenRadio provides a platform that adds real value to customers' existing products and furthermore is flexible and powerful enough to launch new services along the way.

"The real estate owner will enjoy a never seen before flexibility and new groundbreaking services for energy savings and maintenance.

With great savings on installation and new services being possible to add after the system has been fully commissioned, we decided to make all of our products wirelessly enabled by LumenRadio's technology"

Christoffer Lindström

Business Development Manager at Swegon

FUTURE-PROOF CONNECTIVITY

With billions of sensors and actuators being wirelessly connected, the frequency spectrum gets more and more congested and is becoming one of our most precious natural resources. This congestion could result in a communication breakdown, a degraded quality of service for your wirelessly enabled product or make them even stop working.

With LumenRadio's technology Swegon's system is future-proof, as their products will coexist along with other wireless technologies, not being interfered and not causing interference.

Also firmware updates are critical for building a future-proof system. Swegon can easily do firmware updates over the air; which otherwise would be an extremely time-consuming and expensive task. Also battery-powered products can be updated and, at the same time, continue to work for more than 10 years.

At LumenRadio our connectivity experts are focusing on providing the most future-proof and frequency-friendly wireless technology. This is what we call FPCC – Future-Proof Coexistence Connectivity.



LumenRadio is your wireless partner in connecting your products and enabling your future IoT-offer. Based on our patented ultra-reliable Cognitive Coexistence technologies, we offer radio modules and an operating system that can be integrated straight into your products.

Wireless interference is profoundly increasing but using our technology your products will be future-proof as they co-exist along other wireless technologies, not being interfered or causing interference – we call this FPCC (Future-Proof Coexistence Connectivity)

LumenRadio - Creating Connectivity for a Better Tomorrow

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