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City Lünen Saves Up to 30 Percent of Heating Energy with Smart Radiator Thermostats

Together with Zenner, the City of Lünen has implemented a smart radiator thermostat control solution in its town hall. Significant savings potential was identified after only a short period of operation.

An analysis by the German Energy Agency shows that approximately 35% of Germany's total final energy consumption is attributable to buildings. Rising energy prices and the need to significantly reduce CO_2 emissions in the building sector are placing increasing emphasis on the energy efficiency of buildings. Smart radiator thermostats that automatically regulate room temperatures via the Internet of Things (IoT) support these efforts and can help reduce energy losses. A practical example is provided by the City of Lünen, which, together with Zenner, opted for smart radiator thermostat control using B.One BuildingLink.

Intelligent Radiator Control with LoRaWAN

B.One BuildingLink is an IoT solution for the intelligent control of radiator thermostats via LoRaWAN. It enables centralized, demand-based temperature control at room, floor, or building level, thereby helping to reduce energy consumption and CO_2 emissions.

"B.One BuildingLink helps reduce CO_2 emissions and provides complete transparency and control over heating behaviour across all properties. This enables targeted and efficient heating," explains René Claussen, Head of the Metering Systems, IoT and Digital Solutions Division at Zenner. The IoT solution is ideally suited for efficiently managing heating systems in public buildings, schools, and office buildings via LoRaWAN networks.

Smart Radiator Control in Lünen Town Hall

Since 2024, the City of Lünen has been focusing intensively on the topic of Smart City development. Through its own Smart City strategy, the city aims to improve quality of life, with a particular emphasis on sustainability and climate protection. The introduction of a smart thermostat control system in the town hall marks an important step in the expansion of urban infrastructure.

A total of 250 smart radiator thermostats and eight gateways have been installed in the building. The thermostat data is collected and visualized in B.One BuildingLink. Dashboards allow room temperature and humidity levels to be monitored at any time, while thermostats can be centrally controlled. Actual-versus-target monitoring provides the city with real-time visibility into deviations and highlights optimization opportunities.

With just one click, room temperatures throughout the entire building can be adjusted. Those responsible also receive an overview of all properties, can monitor key performance indicators, view all deployed devices, and benefit from predictive maintenance functions.

"The implementation of smart thermostats via LoRaWAN with Zenner has demonstrated how existing buildings can be operated significantly more efficiently through retrofit IoT solutions. During the heating season, we were able to reduce consumption in some facilities by up to 30 %. For us, the system is an important component of our Smart City concept for urban infrastructure and actively contributes to making our city more sustainable and future-oriented," reports Gregor Spanke, Smart City Coordinator of the City of Lünen.

The City of Lünen demonstrates that significant savings potential can be unlocked through smart radiator thermostats and B.One BuildingLink. Centralized control via LoRaWAN can reduce heating costs and

optimize building operations. In addition, the solution lowers energy consumption and CO_2 emissions, thereby making an important contribution to climate protection.

Image material

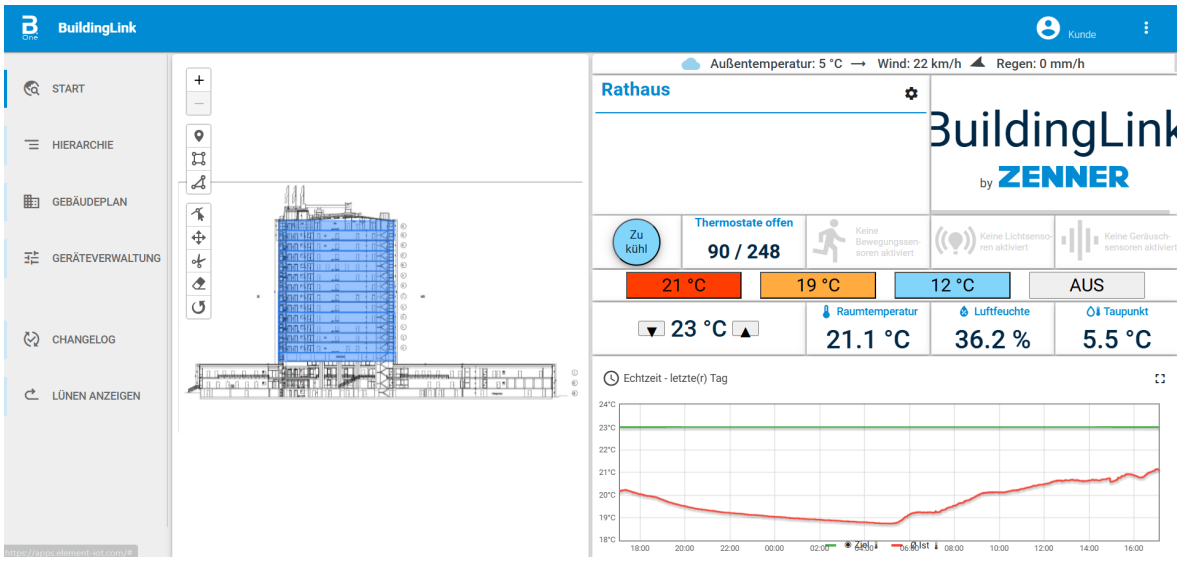

Image caption: B.One BuildingLink: Overview of room temperatures, humidity and thermostat control (Source: ZENNER).

About ZENNER

ZENNER International GmbH & Co. KG is a leading global provider of innovative solutions for municipal utilities, energy suppliers and local authorities. The company develops and produces measuring technology for recording water, heat and gas consumption as well as digital solutions for the Internet of Things (IoT) for the digitalisation of the smart city. From measuring technology and sensors to LoRaWAN infrastructures and data services to the finished application, ZENNER offers everything from a single source. With well over 10 million measuring instruments and sensors produced each year and experience from over 450 successful IoT projects, ZENNER is a pioneer in the smart city sector. ZENNER, headquartered in Saarbrücken, operates production facilities in Europe, Asia and the USA and has 60 locations worldwide. Founded in 1903, ZENNER is now part of the international Minol-ZENNER Group, which employs more than 4,400 people worldwide.
More information at www.zenner.de

Press contact

Zenner International GmbH & Co. KG
Patrik Sartor/ Stefanie Schröder
Heinrich-Barth-Str. 29
66115 Saarbrücken
T. +49 681 / 9 96 76 - 3157, - 3155
patrik.sartor@zenner.com, stefanie.schroeder@zenner.com
www.zenner.de