BUILDING MANAGEMENT SYSTEMS

Intelligent Building Management Systems

Building Management Systems can be adapted to suit a wide variety of requirements. They can play a pivotal role in the performance and maintenance of Smart Building Solutions, helping you to make smarter decisions.

LoRaWAN devices can be easily installed into new and existing buildings without the need for any additional cabling. By connecting to a local LoRaWAN network, you can create a Smart Building solution with minimal costs and disruption to any existing network. Sensors can be configured to report data and raise alerts at your chosen intervals, helping you to maximise on your ROI. Through automated monitoring, you can minimise the physical interaction required to maintain records and complete tasks such as desk cleaning.

We've taken a look at how LoRaWAN devices can be used within Building Management System applications to provide valuable information and improve overall efficiencies within smart commercial buildings.

KEY BENEFITS

- No need for additional cabling

- Customise data feeds to receive information at your pre-defined intervals

- Simple to implement to existing buildings and set ups

- Remotely control Building Management Systems to maintain operational efficiencies and overall workplace wellbeing

The Challenges

Smart Buildings often accommodate many visitors and workers everyday, therefore maintaining workplace safety is a key factor to consider. Research has also shown that small changes to the working environment can help to create optimal conditions for workers, helping to improve overall staff wellbeing.

Implementing LoRaWAN IoT sensors to your building management system can also help to optimise efficiencies and identify potential areas where savings may be able to be made.

The main challenges in question include:

- Workplace safety

- Optimal conditions for workers

- Optimising efficiencies

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Case Study: SMART BUILDINGS

The Solution

Once you are happy you have sufficient network coverage the next stage is to select your gateway and sensors. If you are unsure of your network coverage and requirements contact Alliot for expert technical advice. The diagram below illustrates how you can use different devices to optimise your Smart Buildings.
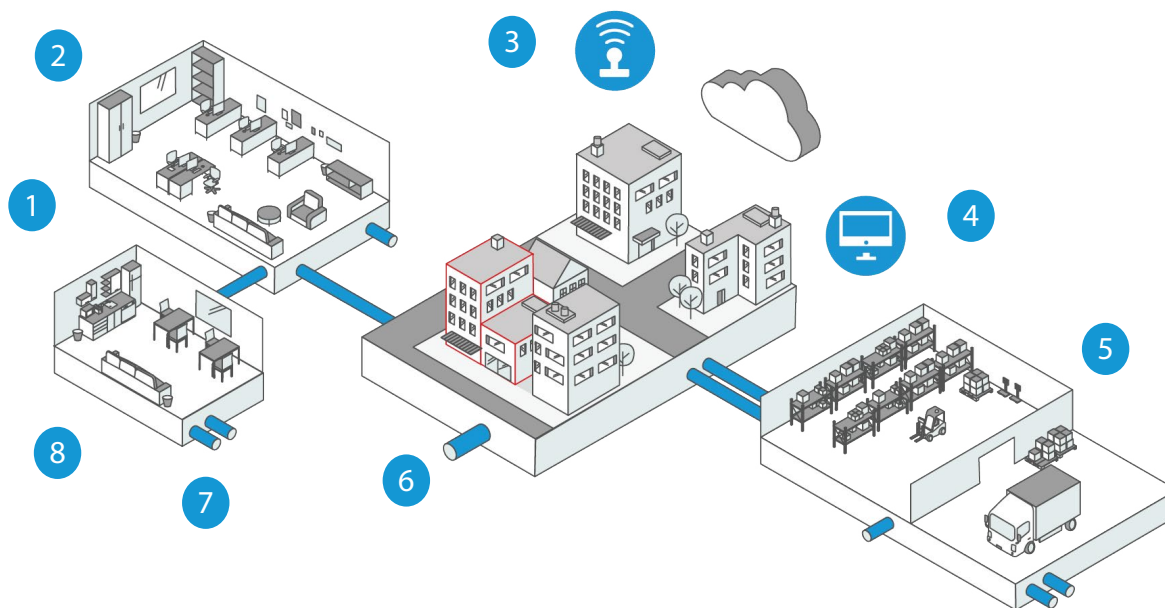
1 Elsys' desk sensor monitors desk occupancy along with temperature and humidity. Monitoring desk occupancy can help to maintain social distancing measures, and hot desking. While the temp and humidity element can be used to maintain optimal working conditions for staff.

2 The Netvox R72615A can be used to monitor carbon dioxide levels within office areas. High CO2 levels can make workers lethargic and effect productivity. Montoring such factors can help to ensure safe levels are maintained at all times.

3 The Kerlink Ifemtocell Evolution bridges the gap between your devices and network server. Data is transferred from deployed sensors to the gateway ready to be analysed via your selected platform.

4 Kerlink's Wanesy Platform provides an easy to use solution for managing your LoRaWAN IoT connections. Data recorded from your deployed sensors will be transmitted from the gateway ready to be visualised helping you to make sense of your BMS.

5 Optimise waste collection with the Tekelek Waste bin sensor. This neat sensor fits to waste bins to monitor waste levels, enabling you to optimise collections exactly when you need them.

6 The Kentix SmartXcan body temperature sensor can help to create a COVID-secure workplace by screening the body temperature of staff and visitors. For advanced functionality you can integrate this device with existing access control systems.

7 Remotely monitor your legionella risk with the Netvox R718CK2 thermocouple sensor. With this sensor you can ensure water temperature records maintain up to date and at a safe level to comply with regulations and achieve maximum ROI by minimising site visits.

8 Remotely monitor water consumption with the Robeau Smart Water Meter. Detect water leaks and make savings based on usage. For areas at risk of legionella, we can also supply sensors to maintain regular, automated records for workplace compliance.

How it all works..

The devices within your solution will connect to your gateway which then transmits the collected data via the cloud to your chosen application server. Alliot can pre-provision your sensors to send data at specified times and frequencies enabling you to start monitoring your Smart Building environment right away.