



OpenBlue: How Johnson Controls Is Delivering Healthier, Safer Buildings With HID Technology

Johnson Controls builds technologies and solutions designed to, among other things, transform the environments where people work, live, play, learn and heal. That mission carries through to their own employees of nearly 100,000 individuals spread around 150+ countries.

When COVID-19 struck in 2020 and began to wreak havoc on the global workforce, Johnson Controls realized they needed to make their industry-leading smart buildings' solutions even smarter for the welfare of its customers, visitors and employees.

THE CHALLENGE

Johnson Controls wanted to extend their ready-to-launch solutions suite, OpenBlue, to provide cleaner air, promote contactless interactions and monitor and enforce social distancing polices.

“We wanted to generate insights about how individuals and teams move around in buildings and interact with one another,” Michael Hayes, Building Engineering Lead at Johnson Controls said. “With these insights, companies can help create healthier, safer environments for employees returning to the office. The result was the Location Manager building management system.”

OpenBlue was already full of powerful features, including remote diagnostics, predictive maintenance, compliance monitoring, advanced risk assessment and more. But the advent of COVID-19 created new problems that prompted the expansion of OpenBlue's capabilities, while still keeping it simple, intuitive and reliable.

“We needed to ensure OpenBlue could not only connect every aspect of intelligent buildings, but also enable facility managers, human resources and safety departments to effectively manage contact tracing and monitor social distancing within workplaces of all sizes,” Hayes explained.



THE SOLUTION

Johnson Controls partnered with HID Global to deliver a real-time location service solution that would enable OpenBlue to deliver on its lofty ambitions. HID's engineering team developed an app leveraging BEEKs Aware Bluetooth Low-Energy (BLE) beacons and BluFi gateways.

The beacons broadcast encrypted data with peer-to-peer information via BLE to the gateways, which are triangulated in real time. The gateways then relay the data via WIFI signals to the cloud. The system protects privacy by using pseudonymized data. Locations and movements cannot be attributed to a specific person without additional information. The collaboration with HID Global enabled actionable, real-time intelligence and analytics that support a number of critical functions, including:

- **Social distancing monitoring:** Observing the distance between beacons, identifying social distancing hot spots and triggering alerts when distancing guidelines are breached
- **Close contacts identification:** Notifying those at high risk of infection through contract tracing reports, including time and duration of close contact to initiate safety protocols, in cooperation with HR
- **Equipment tracking:** Providing strategic indoor location insights into space and equipment utilization
- **Underuse monitoring:** Identifying optimum use and over-occupancy within a space
- **Touchless systems:** Reserving meeting rooms and controlling office features such as lighting, blinds and temperature
- **Efficient routing:** Providing views of congested areas, as well as those closed for use and/or recently cleaned, aiding in the planning of safe, efficient routes around large buildings
- **Compliance:** Demonstrating compliance with local and state mandates

Each employee or visitor is issued a BEEKs Aware Bluetooth Low Energy (BLE) beacon, which can replace standard credentials and is also available in other form factors such as badges, fobs and bracelets.

THE RESULT

For Johnson Controls, the collaboration with HID Global resulted in a range of benefits, including better defined social distancing policies, alert parameters and human traffic flow throughout buildings. Moreover, employees are embracing the safety measures.

“Because insights are based on real-time data, it takes the emotions out of a potentially challenging situation,” concluded Hayes.



“With the power of HID Global behind us, we have peace of mind that the environment is safe and secure, and individuals' privacy is protected.”

Michael Hayes, Building
Engineering Lead
Johnson Controls

Solutions

- BEEKs™ Aware Bluetooth Low-Energy (BLE) Beacons
- BluFi™ Gateways



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