

OpenBlue

Location Manager

How Johnson Controls Uses Location Manager to Keep Collaborative Spaces Safe



Challenge

Companies will be returning to the office in droves over the next few months, and they'll need to ensure that those workspaces can fulfill their main purpose: collaboration. To have colleagues working together in physical proximity may be desirable in terms of productivity, well-being and cohesion, but it also appears to be incompatible with social distancing to reduce the risk of COVID-19 transmission. There is no doubt that the risk of infection is receding as the [biggest vaccination campaign](#) in history keeps rolling out, but several companies will continue to mandate or recommend

some form of [social distancing](#) in the months ahead. A popular idea holds that social distancing is impossible in practice, but Johnson Controls, whose employees occupy over 1,300 spaces around the world, has developed technology that challenges this conventional thinking. It has installed software at some of those sites that harnesses Bluetooth technology, real-time data and artificial intelligence to generate insights about how individuals and teams move around in buildings and interact. Companies can use those insights to help create healthier, safer environments for employees returning to the office.

Solution

Johnson Controls started ensuring its buildings were safe, ready for occupants and flexible for the future very early in the pandemic. It drew up a [checklist](#) that included priorities such as installing signage, ensuring frictionless facility access and updating HVAC systems. The mountains of data Johnson Controls was collecting were helpful, as were the insights it had been churning out about its own buildings, workspaces and operations since long before the era of COVID-19. This included extensive data about the utilization of spaces

where people are in close proximity to one another for long periods of time. For example, we already had systems in place at our Glendale campus just north of Milwaukee and in our Life Sciences research environments that analyzed space utilization and collaboration, and determined the risk of cross-contamination. Before the pandemic, companies were not hugely interested in these systems and insights, and tended to evaluate their use of space in terms of head count and cost per square foot.

We quickly realized that the advanced techniques we were using to analyze space utilization, collaboration and contamination risk could also help solve social distancing, contact tracing and real-time communication problems, because the techniques were grounded in understanding proximity and movement. For example, the addition of analytics to datasets about space, time and maximum room occupancy allowed users to detect whether or not people were regularly 6 feet apart during certain times. This explains why we were ready to leverage that data and those insights from the moment the pandemic hit. Johnson Controls developed software called Location Manager, which can alert companies to potential infection hot spots, help to maintain

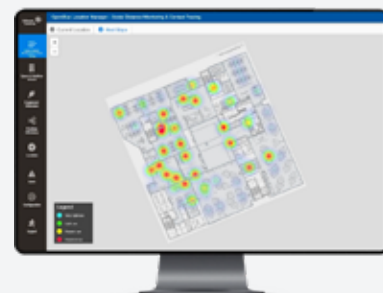
social distancing in their buildings and, ultimately, allow them to maximize their vital collaborative spaces. "Location Manager is a proof point," says Ward Komorowski, vice president for Johnson Controls' Enterprise Property Group. "It allows employees to be confident that companies are providing a safe environment for when they come back to the office."

Location Manager can be rapidly deployed, using plug-in transceivers that require no more space and less power than a typical phone charger. All the features of the app are available using pseudo-anonymized data, which means that the locations and movements cannot be attributed to a specific person without the use of additional information.

Results

The devices are constantly receiving and relaying Bluetooth signals from employees' location badges into the cloud, while the badges can also ping one another. The system then triangulates the data points in real time, which helps to improve social distancing performance. For example, Location Manager can identify social distancing hot spots that might otherwise be difficult to observe, and instantly be aware of specific rooms and spaces that might be congested or overoccupied. A contact-tracing feature in Location Manager can then alert facility managers to employees at highest risk of COVID-19 infection, as well as report the time and duration of close contact between people. The feature can also retrace the movements of any infected employees, detecting the people with whom they came into close contact. This keeps mission-

critical workplaces running smoothly by minimizing the business impact of any employee who tests positive. The system will also help companies understand and predict how their collaborative space will be used after COVID-19. For example, one customer using the data and insights from Location Manager has just finished a reconfiguration within \$1 billion building to achieve a 2.5-times increase in the number of people who can use the space. "One advantage of using Location Manager is that insights are based on data, which takes the emotion out of a situation when companies are seeking to make changes to their operations," says Komorowski.



About OpenBlue

OpenBlue is a complete suite of connected solutions that serves industries from workplaces to schools, hospitals to campuses, and beyond. This platform includes tailored, AI-infused service solutions such as remote diagnostics, predictive maintenance, compliance monitoring, and advanced risk assessments. A dynamic new space from Johnson Controls, OpenBlue is how buildings come alive. To read more about OpenBlue, [visit: www.johnsoncontrols.com/OpenBlue](http://www.johnsoncontrols.com/OpenBlue)

About Johnson Controls

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