The smart lab of the future

Make more time for science

Life-altering, mission critical laboratory environments require the best, most efficient facilities available. When scientists are able to work comfortably and productively, they produce life-changing health solutions. And as with any mission critical environment, labs are expensive to build, equip, maintain and secure. In fact, they are the second most expensive commercial space to manage, not including the cost of equipment, which typically exceeds millions of dollars per lab.

As more organizations move toward the development of 'smart labs' with a shared-space model, there's even greater potential for over-utilization of equipment or inefficient allocation of space. Every hour that a scientist waits for equipment is time that can be devoted to science. Every dollar saved on infrastructure is a dollar that can be redirected to life-saving research. With the Johnson Controls Intelligent Laboratories solution, you can make more time for science.

Johnson Controls Intelligent Laboratories provides space, equipment and environmental analytics and insights for scientists and lab managers to quickly make informed decisions that improve lab efficiency and effectiveness.

The application runs on a software platform that collects real-time data from various sources around a lab, such as badges, asset trackers, environmental monitors, intelligent power monitors and occupancy sensors, as well as log files taken directly from equipment. The solution's analytics capability delivers an unprecedented level of insight about the movement of user groups, utilization and run-time of equipment and the micro-environmental conditions in the laboratory.

The application blends together data from many different sensor types, surfacing insights and unique views to tell a complete story on a single platform. It looks beneath the surface of data that might be generated by an independent system and sees how the data combines to tell a complete story. With this new level of insight, you can achieve several benefits.

The Intelligent Laboratories solution is agnostic to any infrastructure or service provider, which means it can make use of sensors that may already be in place, and provide insights that weren't previously possible.

Unprecedented insights about your labs

Make Lab Configuration Decisions in Real-Time:
Intelligent Laboratories provides real-time feedback on space reconfiguration so you don't waste time waiting for results. Is there enough space? Too much? The application's data-driven analytics will pinpoint inefficiencies.

Optimize Equipment Inventory:
Lack of equipment slows scientific progress and too much equipment is an unnecessary expense. With Johnson Controls Intelligent Laboratories you will have the data to understand which equipment you need more of and which you have too much of.

Detect Micro-Climates:
Johnson Controls Intelligent Laboratories provides labs the ability to detect out-of-range temperatures that impact experiments and create ideal workplaces to keep employees comfortable and more productive. These data sources also allow the application to provide insights that minimize energy consumption and integrate additional data sources such as refrigerator and freezer thermostats and OEM utilization APIs to monitor temperatures within the lab.

Quickly Find Critical Items:
Eliminate time spent walking around to find carts, pipettes and other commonly used items with a real-time view of these mobile assets.

Improve outcomes

Maximize Research Time:
Is there a lack of available space or equipment at certain times of the day that forces scientists to suspend or delay their work? The data delivered by Johnson Controls Intelligent Laboratories helps you manage the lab's calendar more efficiently, so no scientist has to wait for bench time. With this data in hand, you can make informed decisions to add capacity for over-utilized equipment, reposition or even remove under-utilized equipment. The application's API integration capability facilitates equipment utilization data and real time availability used by your equipment booking system.

Improve Work-flow:
Do you know if your equipment is positioned in an ideal order for optimized work-flow or if scientists are traveling long distances to complete scientific processes? Ensuring the right equipment is in the right location with appropriate space allocated can dramatically improve work-flow and outcomes of your lab.

Increase Collaboration:
Do you need to know if collaboration is happening between groups? Do you know if your collaboration improvement programs are effective? Our solution can measure collaboration through statistics on 'proximity events' and include metadata to understand what kind of collaboration is taking place – whether it's scientist-to-scientist or scientist-to-engineer, etc.

Increase Security:
The software goes beyond 'who badges in and who badges out' of the lab. It detects unauthorized persons who might have entered, prevents unauthorized dwelling in highly sensitive areas and can track whether a high-value asset is moved outside a defined area by an unauthorized person. Its security features also improves health and safety within your facility by detecting lone workers operating outside of normal working hours and

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