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If you're like most building owners and facility managers, you're more than ready to experience smarter maintenance, fewer frustrations and greater savings when it comes to the mechanical systems operating your building.

Superior building performance is centered around the functionality and sustainability of the systems that heat and cool our facilities, as well as keep the air clean and filtered. The method you use to maintain your equipment matters. According to McKinsey & Company, predictive maintenance can reduce machine downtime by 30-50% and increase machine life by 20-40%. It impacts efficiency, too. Research shows that when equipment is not maintained, energy efficiency is degraded by 20% in rooftop units, 23% in chillers, 30% in air-cooled condensers, 35% in cooling towers and 50% in air handling units.

While you may have a traditional maintenance program with a reputable company, do any of these scenarios sound familiar? Two weeks after your service provider is onsite for maintenance your HVAC goes down. Or, your energy costs continue to rise and no one offers a reason or a solution. Perhaps you called your service provider about a cooling issue and someone new showed up—they didn't know your building or your equipment and couldn't resolve the issue without one or more additional visits.

Thanks to new technology in HVAC and building automation, it's now possible to see the performance of your building and it's changing the way buildings are monitored and maintained. With the right tools and support, you can work smarter, not harder, to achieve your goals and avoid scenarios like these.

If you haven't heard about the role data is now playing in building automation and maintenance, you are not alone.

Your equipment's data can optimize maintenance and when used correctly, will improve equipment performance, reduce energy costs and increase occupancy comfort.

A typical building generates millions of data points each and every day. This data offers incredibly useful information that can help you understand your building better. Utilizing facility analytics, that data can be collected from sensors on existing building equipment to better diagnose malfunctions and faults and find potential opportunities for improvements, including energy savings.

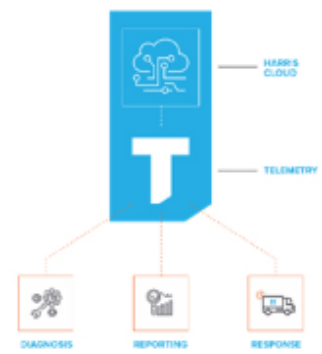


The technology puts a total view of building performance in the hands of both building managers, and their service partners, enabling a more proactive and efficient practice. How does it work?

A small computer is installed in your building which communicates with the existing building automation system (BAS). It continuously collects data about each piece of equipment and sends that information to off-site cloud servers. Many BAS manufacturers now build their products on open protocols and standards to allow owners this kind of flexibility. By applying facility analytics, with no additional manpower, it's possible to see what's happening in every corner of a building, 24-hours-a-day, seven days a week.

The data is monitored and trended to identify issues, assess immediate concerns, predict fixes that will likely be needed down the road and pinpoint opportunities to improve comfort and efficiency. The data is also run against a set of algorithms to find mechanical failures, programming problems or energy-saving opportunities. If certain patterns are known to lead to a component failure, that trend can be identified early and action can be taken to prevent a more costly fix down the road.

With data analytics and this technology, dispatchers and service technicians know your building equipment issues before you do. The maintenance you do can also be based on the actual performance of your systems—it's the right maintenance done at the right time.



With specific fault information in hand, a technician can arrive and go directly to the problem, leaving time to address or seek out less obvious issues

or opportunities. Buildings don't break down at once. Performance erodes as small problems are missed and accumulate. A facility partner with a total building view, who can fix a few additional problems each visit, will deliver a better performing and comfortable building. The cumulative effect of the minor adjustments that can be made over time creates an environment that optimizes comfort while lowering energy costs.

With the right team and data, you will gain valuable information that can be used to develop a better understanding and operational plan for your building. It's about doing the things that a building requires to get to peak performance – not more, not less.

\*Side panel

The benefits of gaining a deeper understanding of your building, include:

**Reduced repair expenses:** Problems can be identified and corrected before they turn into bigger issues requiring more expensive repairs.

**Improved visibility:** Building health scores allow customers to stay abreast of facility conditions and operations.

**Lower energy costs:** Continuous monitoring means that mechanical equipment can be kept in optimal condition and provide the most energy efficient operation.

**Greater building comfort:** Comfortable occupants are happy occupants.

**More informed dispatch:** With accurately diagnosed problems, the right technicians with the right equipment arrive at the right time.

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