THE RIGHT **CONNECTION**

Floor care in the Internet of Things

by Maggie Koester

It's 10 p.m. and the average building service contractor that oversees a fleet of floor care equipment and facility manager with multiple sites or areas under their purview either has no idea where their cleaning machines are or aren't sure. Reality is, any company that has invested in quality floor care equipment should know where their machines are as well as whether they're actually being used, when they're being used and if they're being used properly. But sometimes the people responsible for answering these questions are hundreds of miles away from the actual site itself, making it nearly impossible to draw conclusions and make decisions regarding floor care. This is why 'connected' floor care machines are becoming increasingly popular and, with the evolution of the Internet of Things (IoT), it is becoming easier than ever to address these queries — and many more.

Connected floor care equipment is often capable of sending alerts on critical issues such as a machine moved outside a specific geographic region or not used in a set number of days.

MIGHTY MACHINES

There are many successful companies currently using connected cleaning technology to not only get a return on investment from their floor care equipment but to also properly train staff and run their operations more efficiently.

To 'connect' a piece of cleaning equipment, a small module is placed inside a machine to transmit data over a network to a cloud-based portal, which in turn converts raw data into powerful insights about how a machine is being used. There is no human interaction required with the module; the machines simply run as they normally would, with data collection for human use occurring in the background.

Connected floor care equipment is often capable of sending alerts on critical issues such as a machine moved outside a specific geographic region or not used in a set number of days or, in some cases, the detection of improper battery charging behaviour. This data can be received in a variety of ways, including e-mail alerts, text messages, push notifications accessible through a mobile device or by way of more traditional means such as from computer or printed data extracts.

Since IoT sometimes inundates people with data, it's important to have a system that provides simple reporting to help turn data into insight. In some cases, a cloud-based web portal is available for easy access to a multitude of data points like machine usage by hours per day, week or month; usage by time of day; usage of eco-friendly cleaning solutions or other technologies; and how and when batteries were charged.

THE POWER OF COMMUNICATION

Telemetry can be a powerful tool. Those who have had the most success have used the data to drive meaningful insights, which has allowed them to change business processes to impact their bottom line.

When it comes to asset management, telemetry can be used to track where floor care equipment is located, how old it is, number of hours on the machine and whether or not equipment is where it should be. There have been cases where companies that use telemetry have tracked down lost cleaning equipment — imagine the cost savings of finding a machine that was about to be replaced in a storage closet.

Looking ahead, IoT in the cleaning industry will continue to evolve. When it comes to floor care machines, remote diagnostics and the ability to diagnose and service a machine before an operator even detects an issue are not out of the question, nor is the ability to integrate into other connected systems used in facility management. Telemetry-enabled machines and other IoT capabilities are changing the game by arming individuals with the tools to make data-driven decisions and drive return on investment through effective use of their machine fleet. **/**

Maggie Koester is the market development manager, telemetry, at Tennant Co. Tennant is committed to creating and commercializing breakthrough, sustainable cleaning innovations to enhance its broad suite of products and services, including floor maintenance and outdoor cleaning equipment, detergent-free and other sustainable cleaning technologies, aftermarket parts and consumables, equipment maintenance and repair service, specialty surface coatings and asset management solutions. Maggie can be reached at maggie.koester@tennantco.com or 763-540-1422.

IT'S TELEMETRY, DEAR WATSON

Here are three real-life scenarios where adoption of a telemetry system has proven successful.

1. A building service contractor used proof of performance — real data about when and how often floors were being cleaned at customer sites — to win contracts and retain existing business. These metrics also helped set the contractor apart from its competition.

2. The ability to view floor care machine usage across all of its locations afforded one retailer the opportunity to see which stores were being cleaned the most and which were not using the equipment. Utilizing this data, the retailer was able to correlate store complaints with stores that had unclean floors (and low machine usage) and create a best practices program that set specific machine usage goals. The results: Usage went up and customer complaints went down.

3. A university employed the 'usage by time of day' metric on its connected cleaning machines to assign machines to specific operators in each cleaning shift. The data showed there was a gap in the university's staffing and there simply weren't enough trained equipment operators on staff during times when floors needed to be cleaned. The university has gone on to reinforce training with those operators in order to create greater ownership and accountability when it comes to floor care.