



MORE SAVINGS. LESS WASTE

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Fast-Food Chain Challenges All Meet in the Kitchen

Running stocking, operations, and energy management in one of the nation's tens of thousands of fast food restaurant franchises around the country is clearly no small task. Fast food chains seek to manage labor and energy costs along multiple nodes of their supply chain. And the one place where all the challenges of running these restaurants converge is the kitchen.

The kitchen in fast food restaurants is where food waste happens, or, in an ideal world, where energy can be saved, monitored, and improved, turning those well-known logos glimpsed from the highway just a shade greener.

Corporations that supply and help manage these fast food franchises increasingly are appointing a director of technology or innovation,

tasked with finding ways to make new tech work for classic American restaurants.

The toughest part about making these restaurants more efficient, they say, is that the structures for most of the buildings are old and tough to mess with. Because of that, these companies need efficiency solutions that update the buildings without imposing enormous costs for labor, new construction, and support. It's the same challenge faced by owners of many types of buildings seeking to take steps forward in terms of energy or efficiency.

McDonald's Riverside a Sign of the Times

An important way to boost efficiency in building automation is to use interoperable devices that communicate with one another on an existing Wi-Fi network. Often, such networks incorporate open standards-based LonWorks technology. Interoperable building automation approaches save individual fast-food franchise owners an enormous amount in energy costs.

For instance, a McDonald's franchise in Riverside, California, used green kitchen technology, including Lon-

Works, as part of its LEED Gold certification, a designation marking the building as one of the world's greenest and most energy efficient. The Riverside restaurant was the fourth McDonald's location to receive LEED Gold certification.

A green fast-food kitchen system incorporating LonWorks technology can help control HVAC across the building, manage exterior lighting, and track metering/monitoring for electrical systems or a solar-hot-water system. As in most energy-monitoring systems, each restaurant manager can have access to a web portal in her or his office, allowing individual franchise owners to browse, control, and monitor data on each component of the energy system.

In an operation where ovens are particularly important, like at a restaurant that bakes bread or cookies, communication-enabled temperature monitoring devices can be attached to ovens, notifying a franchise

owner both of ideal temperatures and moments when waste might be an issue.

And of course, any successful business owner wants access to data to know how to improve practices. In full green-kitchen systems, one could manually program set points for times at which less energy is needed, such as when the kitchen is closed. The system could also self-correct intelligently to avoid energy losses common to most industrial building operations.

The goal of networked building automation solutions in the fast-food industry is simple: less food waste, fewer maintenance issues, and better food safety. As a bonus, these systems should make it more convenient for franchise owners to connect with the company driving them.