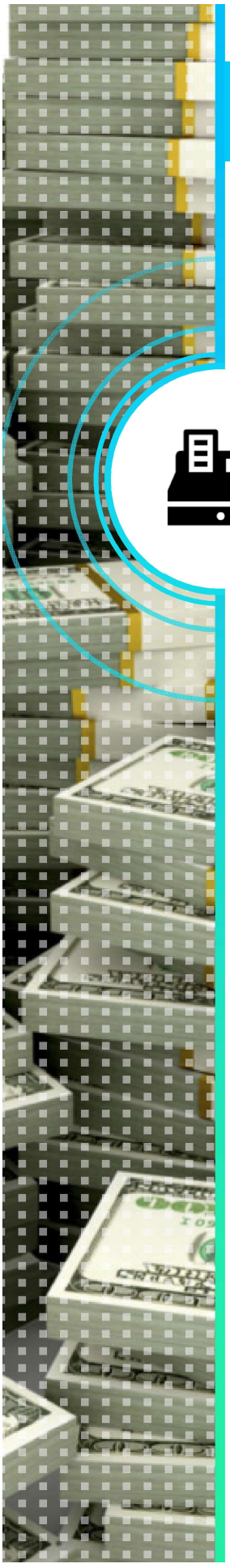

IoT Increases The Bottom Line

THE CHALLENGE

Running a restaurant is no small challenge. Before the kitchen delivers that mouthful of heaven on your plate, a precisely used parade of appliances have been involved. From electric mixers, across stoves to the freezer. Each of these appliances consume electricity. The freezer and walk-in cooler consumes an estimated 37% of the average restaurant electricity consumption according to the U.S. Energy Information Administration. So when the freezer is running sub-optimally, the restaurant's bottom line is negatively affected.

THE SOLUTION

When freezers are installed and tuned to run optimally, it is only a matter of time before they start to worsen. To catch such departure from normal and desirable behavior, the OptumSoft SMART Refrigeration IoT solution was installed. After running for several months, a noticeable increase in compressor run-time was detected. Also an increase in temperature was evident. The freezer was spending more energy – but not keeping the freezer cold enough. Thanks to SMART refrigeration monitoring it was time for a deeper inspection of the system.

THE RESULTS

Upon closer inspection, a weld of ice build-up was found on the freezer door. As a result, the door was not closing properly and cold air was escaping, causing the freezer to work harder. Once the ice was removed, the freezer's operation returned to normal.

	Before	After
Ah	156.8	103.9
kWh (220V, PF=0.9)	31.1	20.6
$ (at $0.266 per kWh)	$8.27	$5.48

Ice build-up on door resulted in a *51% increase* in electricity consumption.

Had this ice situation not been detected and fixed, the restaurant would have lost **$1049** of annual profit. With the OptumSoft SMART Refrigeration IoT solution however, such losses are now avoided.