BY LARRY BARICH, CPA

President, EKTOS

Modern TIMES

The 20-year evolution of EMS (Energy Management Systems) to BMS (Building Management Systems).

Technology makes it possible to remotely manage buildings and equipment.

Most restaurants will use 50% of energy costs on HVAC and lighting.

You only need information that is truly decipherable and actionable.

Let me take you back to a McDonald's more than 20 years ago when, even at that time, the restaurant chain was cutting edge, especially as it concerned the back of the house and kitchen equipment. But when it came to running and operating the buildings, crew members were switching breakers for interior lights or using photocells for outside lights and simple thermostats for controlling HVAC systems.

Along came basic EMS that automated some of the manual building operational controls. This improved human inefficiencies surrounding HVAC usage and produced consistent temperatures. It also resulted in saving energy and ensuring the lights were on when management wanted them to be.

Over the years the technology progressed to land-line modems over phone lines for better visibility of interior temperature control and other HVAC performance indicators. It was the beginning age of progress toward remote management of buildings and equipment.

THE ROLE OF THE INTERNET

Right around 2010 when companies like Facebook and Twitter started to become prominent and smartphones were becoming the norm, EMS technology was becoming more affordable — evolving into BMS technology and progressing into data-accessible devices.

Now it became possible to scale operations over a greater number of restaurant locations, obtaining data on various things including mechanical performance data with exception reports and alerts on equipment operation ability.

This enabled restaurant facility managers to save money on maintenance costs as well as avert equipment failure. As a result, restaurants operated more consistently with comfortable temperatures.

IMPORTANCE OF DATA AND IOT

Today, technology has progressed to the point where one can get data on anything from any device.

The challenge is to determine what data to get and how much. That is where the restaurant operational experience comes into play.

Generally speaking, each restaurant operation has its own unique cost structure and customer service methodology. It is important to choose a BMS that offers editing ability and can be customized to report on the particular needs of your facilities.

With the Internet of Things or IoT technology, there are plenty of ways to measure equipment and system functionality within your restaurants. As a precaution, however, understand that what would be nice to know may not be what you really need to know to save money or operate efficiently. Stated plainly, too much data can be overwhelming and distracting from your goals.

RETURN ON INVESTMENT OF RESTAURANT BMS

The good news about BMS is, like almost everything else in technology, capabilities are increasing while its costs are decreasing. Most financial advisors recommend trying to achieve a 2-year or less payback on your investment.

Therefore, the more your restaurant uses in facility costs such as energy, equipment maintenance and replacement, the greater opportunity for a higher rate of return.

Approach the forecasted energy savings and equipment maintenance cost savings with a healthy conservatism. Most restaurants, depending on QSR, fast-casual or casual dining format, will use 50% of their energy costs on HVAC and lighting. Also depending on format, most restaurants could approach annual equipment maintenance and replacement costs in the thousands.

Larger restaurant facilities with high demand on HVAC, for example, will benefit from a BMS.

A good rule of thumb is to forecast in the range of 10% energy savings and equipment cost savings. Actual savings could be 15% to 20% as a BMS will help extend the life of equipment as well as reduce annual repair and maintenance costs.

IS BMS APPLICABLE FOR YOUR RESTAURANTS?

In general, the more complex and extensive your restaurant facility, the more it will benefit from a BMS. If your restaurant facilities are smaller with less equipment and less demand on HVAC or lighting, you may find out that your operations are better served with a simple smart thermostat system coupled with LED, motion lights, and other key sensors to your vital kitchen equipment.

Think of your BMS as a quarterback for your facility operations. Its capabilities are more valuable if you are running a greater number of facilities with meaningful complexities of cost impact.

CHOOSING THE RIGHT BMS

Over the years the "Big Guys" have figured out it is worthwhile to serve the small and mid-size commercial market. These billion-dollar companies have invested significant research and development into the BMS offering, providing greater stability of product and supplier longevity.

While this has resulted in many sophisticated products, it is important to look for one that has easy and understandable on-site override capability. This will be handy if the BMS system is not providing desired comfort, lighting or has encountered a failure.

A good override protocol operates within certain pre-designated parameters. It should not vary too widely from standard exceptions; otherwise, it could produce the same vagaries you are trying to avoid in order to save energy and costs.

In addition, any data feed should have the feature of exception reporting — especially if you are operating numerous facilities remotely across a wide geographical area. Having the ability to edit the data feed to determine type and extent of equipment alarm and performance parameters dramatically reduces data overload (a.k.a. "drinking from a firehose"). This is important because you only need information that is truly decipherable and actionable, not data that requires an extensive amount of time to review.

Ultimately, the food and beverage restaurant industry is unique and its facilities do not act the same way as an office building, or even a retail building. When evaluating BMS software and providers, look for one that caters to the restaurant industry and has the flexibility and editing capabilities to meet your specific building and energy management goals. ■

Larry Barich is president of EKTOS, a Schneider Electric Business Partner located in the Seattle area. EKTOS designs, develops and provides building management facility solutions for the food and beverage restaurant industry across the U.S. and Canada. Its professional background and senior leadership stems from restaurant operations management. For more information, visit www.ektos.com.