

Fighting Hunger With Proper Cold Chain Management



Customer

Like most hunger relief organizations, the mission of the Mississauga Food Bank is a noble one: to provide and promote access to healthy food for people in need in order to relieve hunger among the citizens of Mississauga, Ontario, Canada. As a member of the Feed Ontario Association of food banks, the nonprofit organization provides food for more than 217,000 meals served each month through a network of 50 agencies, all in support of their goal to make sure no one goes hungry in Mississauga.

The Mississauga Food Bank is comprised of a main distribution facility and network of eight partner food banks. Of the 2.5 million pounds of food they distribute annually, perishables represent nearly half of their total inventory. According to Jon Davey, warehouse manager of the organization's main hub, keeping those perishables fresh, cool and frozen is absolutely imperative.

Challenge

"Almost 50 percent of our total food distributions are perishable, so we rely on our refrigerated coolers and freezers to maintain proper temperatures," Davey said.

One of the organization's stated objectives is to provide food from the four categories of Canada's Food Guide — fruit and vegetables, protein, grains and dairy products — to ensure balanced diets for the thousands of individuals and families who rely on the Mississauga Food Bank every day.

Davey said that historically, cold chain management activities were performed manually by employees, who

logged temperatures by hand twice a day at the main distribution hub. This process was time-consuming, unreliable, and didn't provide the desired visibility into member food bank inventories. As a result, when food was distributed from the main facility to member agencies, Davey's team had no way of knowing if the refrigeration systems where the food was kept were in good working order on a given day.

"Cold chain management is difficult when you don't have access to data," said Davey. "Not only were we uncertain of what was going on in our coolers and freezers, we also couldn't see the status of our neighboring facilities," he added.

Davey recalled an incident that occurred over a weekend when a walk-in freezer went down. When his team arrived on Monday morning, they found a total loss of the freezer's perishable inventory. Losing a freezer full of food is a worst-case scenario for a food bank — forfeiting both its food donations and a week's worth of inventory to feed those in need.

“Thanks to Emerson, we can move forward with the tools in place to protect our perishable foods and fulfill our mission.”



Solution

Refrigerated temperature and facility monitoring

To mitigate this risk and enable proper cold chain management, executive management within the Mississauga Food Bank organization recognized the need for a robust refrigeration and facility monitoring system. The leadership team reached out to Emerson in Canada to discuss potential solutions, and quickly discovered that the company was more than capable and willing to help.

Emerson not only consulted with the Mississauga Food Bank to recommend a best-fit solution, it also donated a new Emerson GO Facility wireless temperature monitoring system for the main distribution facility and five of the member food banks. The robust solution provided visibility to the network of supporting food banks via:

- Facility control software portal (for the main facility)
- Cellular gateway (for each location)
- Sensors (for each cooler and freezer system)

The system is designed to notify Davey when any of the refrigeration systems fall outside of the predetermined setpoint ranges and allow the warehouse manager to check the status of all refrigeration systems in the network. This visibility gives him the abilities to review and validate operating conditions of all their walk-in freezers and coolers before sending product to them.

“The first thing I do when I come in every morning is check for any temperature variances in our refrigeration systems. And if I have a delivery to one of those locations, I know that they’re ready to receive a shipment,” Davey said.

Result

Refrigerated peace of mind

Since the GO Facility wireless monitoring system has been installed, the Mississauga Food Bank has not experienced any major refrigeration system outages. Davey said that simply having a system in place to help alert them of any problems is invaluable.

“There is a tremendous peace of mind that comes with knowing that if something does happen, we’re prepared for it and can spring into action to save our inventory,” Davey said. “Even if I forget to log in ..., I get alerts when any of the systems have temperature variances,” he added.

Their new temperature monitoring capabilities also lay the foundation for future growth. The Mississauga Food Bank has near-term plans of launching a food rescue program with 58 partnering grocery stores. As their operations expand, Davey feels that proper cold chain management will be even more important than ever.

“Thanks to Emerson, we can move forward with the tools in place to protect our perishable foods and fulfill our mission,” he said.



Emerson GO Facility wireless temperature monitoring system gateway and sensor