Vending machines are getting a lot smarter - and tougher to shake down.

Machines equipped with wireless, Web-based monitoring systems are not only helping the $20 billion American vending industry sell more products, they're also helping to stop thieves.

"It's an old industry with more of a new start, so to say," said Mark Brenner, a Kansas City-area franchisee for Fresh Healthy Vending.

The technology couldn't come at a better time.

The recession and the huge unemployment numbers in 2009 resulted in the biggest one-year drop in vending sales to just under $20 billion from $22 billion in 2008, according to Automatic Merchandiser's 2010 State of the Vending Industry Report.

Some operators have responded by increasing prices. But many have resorted to technology to keep a tighter control on inventory, saving unnecessary trips to stock machines and stopping theft from inside or outside sources.

One company that's turned to technology is Treat America Food Services, a Merriam, Kan.-based vending and dining service management company with $52 million in annual vending sales. It is using a system designed by Cantaloupe Systems Inc. in many of its snack and beverage vending machines in businesses, colleges and hospitals.

Cantaloupe Systems was founded in California in 2002 by two engineers, one a second-generation vending professional. Its "Seed" technology lets off-site vending machine owners know exactly how much product and how much money - to the number of dimes, nickels, quarters and dollar bills - are in one of their machines, minute by minute.

As a result, owners know when to make a trip back to a machine to restock the Sprite or snack mix, when they should devote another row to Snickers, and when a ham sandwich is past its shelf life. The system also can text or email owners to alert them when a machine door is opened up after hours.

The tiny Seed device can be installed on top of a vending machine, sending signals back to the vending company via a cellular network. The average cost per machine is $150 annually.

"We got it for operational efficiencies," said Jim Mitchell, president-vending division for Treat America. "But it's as if we have security in front of the machine 24 hours a day."

The systems seem to be working. For example, a customer in Phoenix was alerted when one of its school vending machine doors was opened after hours. It notified police, who caught the two culprits in the act. The owner even told police how much money was in the machine right before the break-in. Another New Orleans client saw several employees quit once the security system was installed.

Brenner uses a performance monitoring program developed by USA Technologies in Malvern, Pa. He considers the technology a good investment now that area gas prices are edging closer to $4 a gallon.

"So you're using less gas, going out there only when you need to as opposed to just making a trip hoping the vending machine has been used," Brenner said.

Except for accepting dollar bills and credit cards, and a few new styles, vending machines haven't changed much in the past few decades. But recently, along with new technology, vending machines also began selling everything from digital cameras to diapers, and offering healthier choices -
veggies, bagel chips, even Lean Cuisine.

Brenner now has Fresh Healthy Vending machines in several locations, including schools, businesses and fitness centers. The machines carry such items as mango juice, yogurt, vitamin water, cheese crackers and baked barbecue potato chips, all natural or organic with low sugar content.

In late January, Treat America launched its own new licensed vending concept, the Company Kitchen, combining both new technology and healthier choices.

The areas, which are not staffed, feature open coolers with sandwiches, salads, sodas, fruit juices and more. Another snack bar has bins of granola, fresh baked goods and fresh fruit. Customers serve themselves, scan the bar codes on an item, and then swipe their credit card or a prepaid rewards card to check out.

But companies using the Company Kitchen concept won't exactly be expecting their employees to keep to the honor system. Cameras, which are mounted on the ceilings or walls, are digitally recording the area, so if inventory doesn't match money taken in, Company Kitchen operators will be alerted. Signs warn employees they are under surveillance.

Company Kitchen operations are in 16 sites now with a dozen more in the works in several states.

Some companies want a Company Kitchen because they need to cut back on staff in their employee lunchrooms. Others want to offer healthier choices, especially for round-the-clock worksites.

With prepaid loyalty cards, companies also can offer their employees special prices for vending combo meals - say sandwich, drink and chips. They also can add funds to the card as a birthday present, to reward an employee for meeting a sales or safety goal, or even for making healthy food choices.

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