

Case Study

SOLUTIONS IN PRACTICE

Vending appeal

Just as The Coca-Cola Co. tried to add flare to the marketplace with New Coke, many manufacturing facilities are beginning to get a taste for the next generation of vending machines. It's likely the latter experiment will have greater sustainability.

What once held only soda pop and candy bars now serves a more industrial purpose. Instead of Coke and Pepsi, these latest vending machines hold rows and boxes of machine parts, work clothes and safety equipment. These new contraptions are successful results 15 years in the making, according to Kent Savage, CEO of Apex Industrial Technologies, a manufacturer of industrial vending technology. He said the technology has evolved and now is entering its next generation, but the road there has been "too complicated, too expensive and too difficult to implement." The difference-maker, uniquely, has been the information superhighway.

"When industrial vending machines first came into play, they weren't Internet-based; they were site-based," Savage said. "So [manufacturers] didn't have the benefit of pushing information endlessly to the suppliers."

A constant understanding in the manufacturer-supplier relationship is that supplies cost money, and several factors along a supply chain determine how much the deal between the two parties will be worth. Add a struggling economy into the mix, and any manufacturer that shares a contract with a supplier is going to start looking to reduce wasteful spending.



Photo courtesy Apex Industrial Technologies

Point-of-work dispensing has eliminated about 1.5 hours of downtime per transaction at Wyeth's plant in Pearl River, N.Y.

In 2009, according to a report compiled by Apex, managers of the Pearl River, N.Y., plant for Wyeth Pharmaceuticals — a Pfizer Inc.-owned manufacturer of the drugs Advil, Dimetapp and Robitussin, among others — wanted to reduce monthly costs in labor, production, downtime and inventory. The focus of their efforts soon concentrated on maintenance, repair and overhaul, as well as access to the facility's Fastenal-operated supply store, separate from the 100,000-square-foot manufacturing area. The store is only open during the day shift of the 24-hour operation.

Savage said this is a typical cause of wasteful spending among manufacturers.

"For across the board of industrial companies, getting materials to the workers that need them is a huge challenge. And that's why this point-of-

work automation technology, what we call industrial vending, has caught on in recent years."

Killing time or is time killing?

Mechanics from the manufacturing area who needed a lug from the Fastenal supply store during nonoperating hours had to follow several time-consuming steps to get what they needed to help maintain production flow. They had to call building security to request someone to meet them at the supply room to open the door. They had to de-gown, removing all protective coveralls, gloves, boots and hairnets. They had to walk from the second floor to the fourth floor. And they had to wait for the security worker to meet them. According to Apex's report, the entire process could take at least 90 minutes, barring whether the mechanics

could even find the lug they wanted in the first place.

“Wyeth, like many manufacturers, [is] trying to become more lean,” Savage said. “Lean is all about eliminating waste — waste of time, motion, material, actions that don’t have value. If you think about a storeroom or a traditional tool crib, that’s about as wasteful and inefficient as you can possibly imagine. It would have a production or maintenance worker who needs material leave their post and go stand in line for a pair of gloves or a simple maintenance part. So that’s the kind of problem that all companies are trying to solve.”

In partnership with Fastenal, Apex incorporated its “Connect n’ Go” software into Fastenal’s Fast SmartStore program, which provides technology and stocking services at the point of work. Through Fastenal’s Fast 5000 vending machines and lockers, floor workers can avoid the long processes and treks to the supply store by walking to one of the five vending setups within the manufacturing area, swiping the employee badge they use to enter the facility every day, and retrieving the stocked part — all without having to remove any safety equipment or clothing.

Savage said the design behind the industrial vendor and the corresponding software resolves two challenges right away. First, the interface is so simple that Wyeth’s floor workers practically use it as though the machines were the typical soda machines.

“We took the same architecture that’s used in designing Internet banking networks — very robust, high-use, high-availability system but that still has to be easy for the layperson to use. ...

We know that the users of the machines themselves are going to be factory floor workers. They don’t want to have to learn any kind of complicated interface, so we make the interface very simple in order to pick out what they want.”

He added that the machines can transmit real-time data to order replenishment of supplies automatically, as well as determining whether a worker needs to use the part or has used too many of the same part in a certain time period.

“Let’s say that a reasonable limit is that I can only get six pairs of safety glasses per month, but if I need a seventh pair within the month, then I’ll have to go talk to a supervisor because the machine will recognize that I’ve reached my limit,” Savage said.

Getting coins back

Inside of a year, Wyeth has seen cost savings of almost \$300,000, according to the Apex report. Thanks to point-of-work dispensing, the company saved \$13,000 per month in labor costs alone. Downtime is only a few minutes, thus reducing any chance of production stoppage.

Facilities like Wyeth that incorporate a point-of-work supply system not only reduce costs and production waste, but they can cut down on time spent managing its supply chain through manual control. Through its lean goals and vending system application, the Wyeth plant now has enhanced traceability. With a supply room, time and manpower would be required to take regular inventory. And if the supply room is being accessed during a time when no specific employee is tracking what parts are being used, how can the

company know for sure if it’s properly stocked with a particular part?

“One of the areas we also see driving distance is the number of touch points. In a traditional environment, when demand is identified, someone flags that and puts in an order that has to go through a whole chain of approval,” Savage said. “And when the material is shipped in it gets received by the traditional warehouse, gets put away on a shelf, management says now it’s available, and it’s dispensed through a traditional storeroom or tool crib. There are a lot of costs and time involved, and a lot of that has to be maintained just to keep that supply chain flowing.”

He added that Wyeth managers only need to negotiate with Fastenal once for every contract.

“The company tells the supplier which categories of materials they want supplied, and these are the prices we’re willing to pay, and the supplier agrees to that. So instead of having to review every time they need more parts, it is automatically reordered and automatically billed. Wyeth has information in real time, as does Fastenal as the supplier. They have the same data, so there are no disputes.”

— David Brandt

SPREAD THE NEWS

If you have been involved in implementing a project and can share details, we’d like to interview you for a case study. Contact David Brandt at (770) 449-0461, ext. 120 or dbrandt@iienet.org.