How Giant Eagle's Technology Experiments Reduce Losses From Out-Of-Stocks

I n 2017, the Harvard Business Review released a Microsoft-sponsored study on the current state of data collection and analysis technology, and its expected short-term effects on business. The study, based on a survey of global business leaders, found that 80 percent of them think their industry will be disrupted by digital transformation within the next three years.

Fewer than half, however, said they actually had a digital strategy in place.

In one respect, that's not too surprising. Although there's a great deal of talk about the age of big data — we are, according to the World Economic Forum, now living through the Fourth Industrial Revolution — there's less talk about what this actually means in terms of running a business.

On the other hand, the absence of a corporate grand strategy tends to obscure the fact that there's a lot of very interesting work going on out there. Retailers — and the technology and systems companies they're partnering with — may not have a map of the Fourth Industrial Revolution, but they have a firm grasp on a key central point about data: What you don't know can hurt you.

Reducing out-of-stocks

Take unrecognized out-of-stock merchandise. For the average retailer, out-of-stocks are responsible for lost revenue amounting to 4.1 percent of total sales, according to a 2015 study from IHL Group — a total of $129.5 billion in North America.

The study places the blame on five areas: bad processes, people problems, data issues, supplier issues and theft.

All these problem areas (except theft) could theoretically be improved by access to timelier and more accurate information — better data. That is the assumption driving western Pennsylvania-based grocery chain Giant Eagle to experiment with a relatively new technology called Powershelf.

Powershelf co-CEO John White heads Compass Marketing, a communications and strategy consulting firm that also does some investing.

Powershelf was "looking for a little help in the area of marketing," White says, "and we were so fascinated with the technology that we ended up buying a majority of the company. Basically, it's helping retailers digitize their store shelves. They can manage their inventory electronically on the shelf, they can see it live and they can manage their pricing electronically, so that associates don't have to go to the shelf and do a price change."

Connecting knowledge to action

Giant Eagle, with 400 stores in four states, has tested the technology in some of its Columbus, Ohio, stores across a handful of commodity items. "We got into the pilot because the technology showed the possibility to help us identify when we were in an out-of-stock condition," says Brian Brand, Giant Eagle's senior manager of retail supply chain.

"And not only identify it, but connect it to actions within the store that would allow our team members to address the problem."

This is the crux of the issue — and perhaps the justification for referring to today's advances in data technology as a new industrial revolution. There's never been a shortage of data in retail; from merchandise orders, bills of lading and warehouse inventory to store inventory, sales records and returns, the industry generates a vast trove of information about its day-to-day activities.

What's missing is useful information before it's too late. Knowing a popular item ran out yesterday, or last week, is not particularly helpful. Even knowing it might run out today — if that knowledge exists only as a blip on a dashboard somewhere at headquarters — is not all that helpful.

Knowing an out-of-stock is imminent and getting somebody to the shelf in time to prevent it, however, is gold.

"Since we started the pilot," Brand says, "they've been doing a lot of work on the dashboarding aspects of it. And we're in partnership with them to look for the best ways to leverage this technology to provide guidance to store personnel. Because at the end of the day, if the shelf's empty, somebody's got to go to the back

Giant Eagle has tackled out-of-stocks with the help of the Tagnetics WF Scanner and a technology called Powershelf.

Out-of-Stocks

room and get the product and put it on the shelf. I can't do that from 300 miles away in Pittsburgh."

Power to the people

Getting to the end of this series of handoffs — from sensing device to database to business intelligence application to management to somebody who can actually do something — is of keen interest to Microsoft, another player in the team of partners enabling the use of Powershelf.

Powershelf makes the hardware: shelf sensors, digital signage for price changes, etc., and provides analytics for predicting everything from out-of-stocks to price gap analysis to promotional return on investment software. Microsoft provides a platform for all this stuff to run on, and also links it to other business applications.

"Our customers have not traditionally spent money on empowering employees," says Karen Garrette, Microsoft's global retail industry director. "The amount of money they've spent on systems for employees, and giving employees what they need in the store, has been very, very small. But they're now realizing that investing in their operational models, investing in their employees, can reap dividends."

Bread and barbecue sauce brand King's Hawaiian, another Powershelf client, is using the technology to facilitate better deployment of its field staff. "We know consumer goods companies send merchandisers into the store on a schedule," Garrette says. "If you're in Minnesota and it's Tuesday, you get a visit, whether you need product or not. But knowing electronically what the stocking situation is has enabled them to optimize where they send their field staff. They're not wasting time going to places they don't need to go to."

Looking ahead

Giant Eagle is still in the test and pilot phase with Powershelf. Brand says it's too early to be able to quantify the technology's benefits.

"We're not there at a business case," he says, "but from a business value point of view, you can measure the [number] of minutes that something's been out of stock, and from there you could look at your demand and see what that costs your business."

As to how broadly Giant Eagle may one day deploy the Powershelf technology, Brand says the company needs to learn more about the cost/benefit tradeoffs before it can consider a possible expansion.

"We're still thinking about how to integrate it with our existing systems in ways that would make the information more valuable and more actionable, but action such as the Microsoft partnership are encouraging."