



# Microsoft enables the Powershelf retail digital transformation



**“We see ourselves as the ambassadors of data and analytics that can drive solutions. Using it to drive solutions is the beauty of it.”**

—John White,  
CEO, Powershelf

## Revolution on aisle nine—and everywhere else

The digital transformation of retail is happening all around us, and Powershelf is leading it with the help of Microsoft. The company is creating a complete ecosystem that connects shelves to stockrooms, checkout, distribution, and every point in the enterprise.

It's all in real time. Second-by-second sales, stock, and logistics can all be seen, analyzed, and controlled from anywhere in the organization. Working closely with multiple Microsoft teams and technologies, Powershelf devices and technology are revolutionizing electronic pricing, electronic inventory management, promotion, merchandizing, and communications.

It's all part of the Powershelf vision, supported by Microsoft to make the shopping experience faster, more efficient, and more cost-effective.

**“This really is the Internet of Things on full display right before your eyes.”—White**

## Take the roof off the store and peer inside

**Real-time visibility from the cloud**  
Microsoft Azure and Power BI are at the heart of this transformational shopping environment in the cloud. Each in-store Powershelf product continually communicates critical data through the Microsoft Azure cloud. Microsoft Power BI then lets Powershelf compile the data, analyze it, and communicate it back to consumer products companies—in real time.

“Microsoft has some extraordinary tools around Azure and Power BI that allow us not only to manage everything in the cloud but also, for the first time ever, to give manufacturers real-time data about their products in stores, customized down to the individual store and the individual product,” says John White, CEO of Powershelf.

For the first time, the CEO can open up his laptop anywhere in the world, look at a dashboard from Microsoft, and get a picture of an individual store—or shelf unit—and see how long he's been out of a product.

“That's new,” says White. “It's a big day.”

## The backbone of transformation: Azure IoT and Power BI

Within Power BI, Microsoft has helped Powershelf customize the dashboard specifically to the end user's data. For bread roll maker King's Hawaiian, for example, Powershelf customized racks for real-time inventory tracking.

Data from each shelf is sent back through Azure, then Power BI enables a dashboard that is created specifically for bread rolls and each individual store.

The challenge this addresses is simple: King's Hawaiian products are so popular that they're always out of stock—a missed business opportunity and a bad customer experience. Powershelf uses Azure IoT and Power BI to allow for real-time visibility of exactly when and where supplies are low.

When restocking can happen that efficiently, there are fewer lost sales and happier customers. King's Hawaiian sales went up as a result.

Powershelf and Microsoft go deeper than helping avoid lost sales; they quantify them. As Powershelf records how long a product has been out of stock, Power BI converts that time into a dollar amount of lost sales.

According to White, "That dashboard that can be opened up by anyone in the company and literally see a clock that's showing the money being lost minute by minute, live—that's the power of Azure."

White gives an example of that power. "We did this demonstration recently: Through the Azure cloud and Power BI, we sat in Seattle and watched on a dashboard as someone 2,000 miles away in Ohio picked up a loaf of bread from a rack.

"The action was instantly recognized, fed through Azure using the IoT Hub into Power BI, and the dashboard was updated. It was live, it was actionable, and it was visually appealing for managers who are trying to manage their company.

"It's not just data; it's data that's trackable—easy to understand and compare, so we can take corrective actions and drive solutions. That's the real beauty of Power BI and the team that's put it together."

## End-to-end support from the Microsoft team

On working with Microsoft, White says, "The team has been fantastic. They have real leaders—visionaries. They've leaned in and not only recognized the potential business opportunity but are really seeing they can affect in a positive way retailers, consumer products, and, ultimately, consumers."

The partnership goes well beyond the development of the shopping ecosystem. The Microsoft team has worked closely with Powershelf to get the company into the market, providing assistance with everything from data integration to supporting business development pitches in making the business case.

Long term, Microsoft senior management has also stepped in to help leaders at Powershelf think through the complexities of building the new ecosystem of software and hardware.

"The Microsoft team sees our product as part of their portfolio with which they're enhancing their offerings to their customers," White says. "We're walking hand in hand with Microsoft into our customers and collectively selling solutions and driving new innovations. It's really good."

## Challenges

- Create a revolution in an entrenched industry that's resistant to change.
- Out-of-stock (OOS) issues are a key industry focus area for consumer packaged goods companies and retailers representing a \$50 billion global sales opportunity. In an OOS situation, everyone loses—the consumer, the retailer, and the manufacturer.
- Push against the inertia of traditional brick-and-mortar stores to introduce a new, more efficient way of doing things.
- Move quickly—the consumer is pushing progress, demanding a better shopping experience both online and offline.

## Results

- Powershelf has constructed an end-to-end ecosystem powered by Microsoft Azure and Power BI that transforms the shopping experience by providing technology-enabled intelligence and action to fundamentally fix the manual inventory and OOS processes.
- Many national retail customers have seen improvements to everything from product merchandizing to inventory control and distribution through more visible and actionable data.
- Retail organization leaders are getting the real-time data and analysis they need to compete in a narrow-margin field that's being vastly disrupted by online competitors.
- Consumers across the country are getting the shopping experience they demand, with more desired items in stock, better pricing and information, and a more positive shopping experience.

## Snapshot

- Organization: Powershelf
- Industry: Retail ecosystem creation
- Location: Annapolis, MD
- Website: powershelf.net
- Customer since: 2016