ZEBRA

SUMMARY

BIMBO
Bakeries USA

Customer
Bimbo Bakeries USA

Industry
Manufacturing

Challenge
Improve order accuracy to minimize waste without losing sales from understocking and empower front-line teams with greater visibility to real-time data

Benefits/Outcomes
- Up to 30% reduction in forecast errors
- Modernized operations to help 20,000 associates maintain quality from the production line to store delivery
- Forecast consistency despite pandemic volatility

Solution
- antuit.ai's AI-powered demand forecasting

Bimbo Bakeries USA Reduces Forecast Errors by Up to 30%

Antuit.ai's AI-Driven Solution Helps Improve Order Accuracy and Minimize Food Waste

Bimbo Bakeries USA (BBU) is the largest bakery company in the United States featuring iconic premium brands such as Sara Lee®, Entenmann's® and Thomas'®. BBU operates 59 bakeries, employs more than 20,000 associates and distributes products through 11,000 routes that service the majority of store outlets offering baked goods in the U.S.

Forecast Accuracy Optimizes Product Freshness without Sacrificing Product Availability

Baked goods manufacturers distribute products that are considered substitutable and cannot afford missed sales from out-of-stock items. The perishable nature of baked goods also demands rigorous stock management for the freshness that shoppers expect. As a result, manufacturers, like BBU, walk a fine line between waste due to overstocks and lost sales from out-of-stocks.

Even before the COVID-19 pandemic, the high variability of local demand, due to weather, events and store operations, magnified demand forecast errors. This led to missed sales due to understocking as the company worked to reduce food waste from overstock. BBU wanted to improve both its over and out-of-stock efforts, but not at the expense of each other.

Leveraging AI Tools to Empower the Customer-Facing Front-Line

In addition to forecasting challenges, BBU recognized that major organizational obstacles stood in its way. It wanted to better coordinate a dozen fragmented regional bakeries and better connect with shoppers who expected the last two slices of their weekly loaf of bread to be as fresh as the first. BBU also sought to modernize their outdated operations using desktop calculators and manual spreadsheets and empower the company's front-line workforce with tools to maintain the highest quality from the production line through store delivery.

To achieve the organizational transformation needed, BBU's Vice President of Direct Store Delivery (DSD) Center of Excellence, Morgan Smith, directed an extensive program to ensure a terrific consumer brand experience. Smith wanted to better understand the challenges of veteran bakers on the production line as well as front-line workers such as DSD drivers. His findings included a new view of the production-to-consumer "chain of command" that inverted the order of importance and made everyday consumers the most important stakeholders, followed closely by the company's front-line teams that directly serve them.

To support this new customer-driven orientation, BBU's front-line workers needed purpose-built, data-driven innovations to help them do their jobs better and pass real-world insights "downward" to senior management.

Based on worker feedback on how an ideal solution would make their jobs easier, BBU introduced a new approach, christened Ion, which was anchored by a proprietary demand intelligence platform, envisioned to serve as a workplace assistant "for, from and by the front-line."

Ion, with AI-driven demand forecasting, proved to be ahead of its time, delivering results well before the buzz from the latest AI tools hit the market.

Predictive Ordering for DSD Provides Greater Forecast Accuracy and Intuitive Workflows

Antuit.ai delivered a "perfect order" solution for Ion using a user interface that enabled better collaboration between planners and route operators that helped improve forecasting, delivered more accurate orders and scaled effectively to support 11,000 routes across the U.S.

To improve forecasting, antuit.ai applied a rigorous AI workflow to analyze demand and detect data outliers. BBU wanted to identify demand drivers and their impact, test for the hierarchy level that would drive the highest forecast accuracy and finally leverage machine learning to break down the forecast to the appropriate consumption level for ordering purposes.

Antuit.ai's forecasting methodology considered more inputs—many captured directly from retailers and route drivers—and went beyond historically-driven base and promotion demand to include real- or near-real-time inputs, including weather, local events, store stocking constraints and actual point of sale (POS) data. As the technical engine behind Ion, antuit.ai's AI-powered demand forecasting and predictive ordering technology helped right-size production and localize delivery on a SKU/store/week level by factoring in this more granular-level data.

For perishable food categories judged by sell-by dates and minimized food waste, Ion quickly solved the chronic front-line problem of overordering, which often resulted in the oldest products possible stocked on store shelves. Facilitating even the slightest incremental uptick such as selling one more loaf of bread or one more box of donuts can translate into a huge difference in net revenue.

"Antuit.ai was the perfect collaborator for the complex and sizeable challenges of Ion. Their AI forecasting and fulfillment expertise, augmented by a custom-fit user interface, achieved a significant step-change in both our order accuracy and organizational productivity. And the best part is that we did not have to wait years to feel the business impact."

Morgan Smith, VP of DSD Center of Excellence.

Real AI. Real Results

When grocery demand patterns became all but unrecognizable during the pandemic, Bimbo adapted its forecasting and production far more quickly—even if it meant "all-hands-on-deck" at every plant to fill the delivery trucks. Changes that may have once needed four months to implement were accomplished in as little as three weeks.

Based on Mean Average % Error (MAPE) data tracking for 6-week intervals occurring at the same point in time each year, over the 5 years that included the pandemic, BBU was able to achieve, and then maintain, a greater than 80% forecast accuracy despite extraordinary events impacting their consumers' lives.

Antuit.ai's team employed a strategic approach to implementation to identify and address any data and technological constraints and lay a strong base for a solution on which Ion could rely. Antuit.ai's data, AI and delivery capabilities are all native to the cloud and scaled from a sample set to 11,000 routes within a matter of months.

Serving Fortune 1000 companies globally, antuit.ai—now part of Zebra Technologies—is rethinking the way retail and consumer products companies use AI to solve business problems. Antuit. ai offers solutions that inform the most important business decisions, empowering companies to digitally transform their businesses to achieve substantial business results.

Forecast Accuracy

72% | 81% | 82% | 81% | 81%

■ 2019 ■ 2020 ■ 2021 ■ 2022 ■ 2023
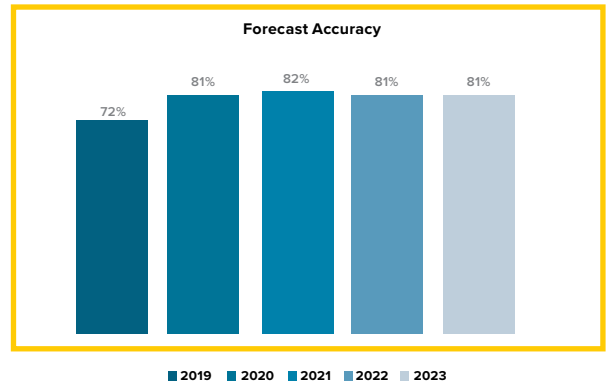
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