



Anticipate Demand. Drive Growth

Among the challenges faced by retailers and CPG companies today, some familiar refrains are frequently heard:

“It’s amazing how a demand forecast can vary depending on the data incorporated in the model and the functional area within our organization doing the forecasting. There has to be a way to tie this all together for greater accuracy and consistency.”

“Our business model has some unique attributes that are not usually considered in off-the-shelf forecasting solutions. Our data scientists can whip up better test models, but they don’t have the time or experience to scale and maintain them for the ever-changing consumer environment we live in today.”

“The challenges around anticipating customer demand have multiplied in complexity due to multi-channel buying behavior. It was hard enough for our planners before. Now with more SKUs and channels, we don’t want to waste their expertise on simply filling the cells of larger and larger spreadsheets.”

Planner productivity, and the precision of the forecasts with which they work, are a significant hurdle for retailers and CPG companies. These challenges have only been exacerbated by the variable state of the economy and the growing variations in consumer buying behavior. Companies need a forecasting and analysis solution that will:

- **Surface the product forecasts that are at higher likelihood of requiring review** so as to help expedite decisions that require their expert judgment. They can’t afford to get bogged down in spreadsheet or manual driven processes for those predictable areas of demand that are better served by a data-crunching computer.
- **Consider all possible demand drivers in the forecast**, like price elasticities, promotional lifts, trends, seasonality and events, in a more accurate forecast that can be leveraged universally across all functions of the organization.
- And finally, as companies build data science teams to finely tune the forecasting models to the nuances of their business, **provide the sandbox, and the support of an AI/ML-experienced partner, to operationalize their in-house work at scale.**



Zebra's Workcloud Forecasting and Analysis Solution

The Zebra Workcloud Forecasting and Analysis Solution, composed of Demand Analysis, Enterprise Forecasting and Modeling Studio modules, leverages cutting edge AI and ML (machine learning) technologies to accurately forecast and analyze demand to meet various challenges across your organization. With advanced analytical capabilities, the suite enables businesses to anticipate consumer trends in order to make informed decisions for driving revenue and customer satisfaction and to capture more market share. With the suite's comprehensive insights, organizations can align and optimize departmental collaboration, increase planner productivity, and customize the science to their particular business needs.

Workcloud Enterprise Forecasting—Generating Cohesive and Accurate Demand Forecasts for Retailers and CPG Companies

Zebra's Workcloud Enterprise Forecasting Analysis—analyzes every demand driver to determine the real need for a product at any point in time. Powered by Zebra Workcloud's extensive and proprietary forecast libraries, the solution learns and self-tunes to generate highly accurate forecasts for all products—including new, slow-moving, and end-of-life products. That accuracy becomes self-propagating with each forecasting round, streamlining the planning process and enabling the best decisions.

The solution achieves a unified demand signal by combining all available demand drivers, such as price elasticities, promotional lifts, trends, seasonality, and event data to deliver the forecast at the necessary product, geography, and time level for all organizational processes. From sales planning to supply chain planning to store fulfillment, a unified demand signal helps grow sales, eliminate inefficiencies, and lower costs.

Workcloud Demand Analysis —Optimizing the Time and Expertise of Planners in the New Norm of Demand Variability

Put simply, Zebra Workcloud Demand Analysis enhances the demand planning process with forecast accuracy. With the world's best forecast and AI embedded seamlessly into the existing planning UI, the solution expedites collaboration, decision making, and troubleshooting via AI-driven recommendations that take care of the "no-touch" and "low-touch" areas. In addition, AI-driven alerts surface the areas requiring "high-touch" review.

The solution delivers this exception-driven efficiency for planners through a resolution-management UI, powered by visualizations, rapid drill down, tagging and easy overriding for when the plan and forecast need to diverge. As a result, planners are able to work at scale across tens of thousands of existing and new categories, reducing their cycle time while fostering consensus with retail customers, independent distribution partners, and within the rest of their own organization.

Workcloud Modeling Studio—Low-code/ No-code DSML (Data Science Machine Learning) Platform for DIY Model Building and Deploying

Zebra Workcloud Modeling Studio is a platform built for data scientists and machine learning engineers to train and test machine learning forecasting models and deploy them in production with a single click. It is an easy-to-use, scalable, and fully-managed machine learning platform that increases the machine learning experimentation velocity and speed of model deployments. Zebra Workcloud Modeling Studio shortens the time-to-value from an investment in AI and democratizes the use of data science, bringing its value to an ever-larger audience of less technical experts.

The Benefits of Zebra Workcloud's Feature-Rich Solution

Workcloud Enterprise Forecasting

Unified Demand Signal—Senses where omnichannel shoppers will buy their products when determining demand and future prices

Inventory Fluidity—A forecast that adjusts for both the differences in time horizons and the differences between regions, stores, online, and even the fulfillment type, and serves as the connective tissue across financial, assortment, allocation, size, and pricing decisions.

New Product or Location Capable—Ensure that the forecast can cover everything you sell, including all new products and locations before they start selling.

Incorporates Exogenous Data—Key exogenous drivers of consumer demand, like price, promotions and holidays are explicitly modeled and accounted for in the forecast.

Dynamic Aggregation—The right level of aggregation for forecast accuracy is automatically determined by considering data sparsity and slow movers.

Model Selection Expertise—All best-in-class AI/ML open source forecasting models, including artificial neural networks, tree-based models, and classical time series techniques, are leveraged to drive forecast accuracy.

Workcloud Demand Analysis

Planning Workbook—Easily navigate a multidimensional view of all configurable measures and key figures with the ability to conduct root-cause analysis. This planning workbook accommodates planner adjustments, including the ability to edit demand drivers, introduce new driver events like holidays and promotions, automate the disaggregation of edits made at higher levels of aggregation and lock values where appropriate.

30%

reduction in time spent on demand planning



60%

improvement in planner productivity



30%

improvement in forecast accuracy





Analysis and Collaboration Toolset—Leverage intuitive tools to drill through the product hierarchy, edit aggregation hierarchies, and graphically view and analyze the performance of overrides while easily adding comments and annotations.

Alerts-based Workflow—Manage the demand plan by focusing on exceptions and outliers triggered by unplanned events or external conditions, leaving every-day demand to the AI forecast.

Workcloud Modeling Studio

Data Science Democratization—Enjoy the benefits of data science and AI across operations with an easy-to-use tool to experiment and deploy forecasting and machine learning pipelines.

Pre-canned Templates—Leverage battle-tested, production-ready, Retail/CPG forecasting & machine learning models that will yield high accuracy for your tasks.

The Flexibility and Power to Address All Business and Data Environments

Extensive Forecasting Libraries—Analytic methodologies to address data sparsity, avoid the impact of fringe sizes, handle new items, and protect unit minimums.

Omnichannel Profiling—Demand profiles that consider store and online sales, down to the SKU and zip code level.

Channel Data Incorporation—Forecasting models and algorithms that seamlessly incorporate channel-specific data to drive accuracy improvement.

Seamless Integration—Forecasting and pricing results delivered through solution integration, feeding other Zebra Workcloud solutions or existing planning solutions.

Scalable Data—AI models capable of digesting data that accounts for every demand driver—including seasonality, price, product lifecycle, trends, and local events.

Cloud Native—Native to the cloud with scalable distributed processing.

“We were impressed by Zebra Workcloud’s domain expertise and ability to demonstrate the positive impact of advanced analytics on our business. I’m confident that Zebra Workcloud’s platform will transform our supply chain planning into a data-driven, customer-centric strategic business enabler.”

Our Solutions are Built Upon Zebra Workcloud's World-class AI Demand Forecasting

Unified Demand Signal

Adjust for the differences between regions, stores, online, and even the fulfillment type, and serve as the connective tissue across financial, assortment, allocation, size, and pricing decisions.

Dynamic Forecasting Libraries

An analytic methodology to address data sparsity, avoid the impact of fringe sizes, handle new items, and protect unit minimums.

Omnichannel Profiling

Delivering demand profiles that consider store and online sales, predicting down to SKU and location.

Seamless Integration

Delivers pricing and forecasting results through simplified solution integration, feeding either Zebra Workcloud Inventory Optimization Suite or existing ERP solutions.

Scalable Data

AI models capable of digesting data that accounts for every demand driver—including seasonality, price, product lifecycle, trends, and local events.

Cloud Native

Built natively in the cloud with scalable distributed processing.



Contact your Zebra Partner or visit zebra.com/contact to request a meeting with our sales team to learn more about Zebra Workcloud Forecasting & Analysis



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