

# SAS® Intelligent Planning Suite



## Overview

Retailers and CPG companies are under increasing pressure to speed customer-centric merchandising decisions. The effectiveness of assortments and new product launches depends on how effectively retailers estimate the demand and distribution of products and use customer insights to inform their strategies.

Retailers must drive customer satisfaction and enhanced financial results in the face of rapid industry transformation. The complexities arising from the volatility in consumer demand require higher degrees of efficiencies, automation and application of advanced analytics to be successful.

The SAS® Intelligent Planning Suite focuses on capturing demand signals for where, how and when demand is generated and senses customer demand across each channel. Patented forecasting techniques with machine learning and artificial intelligence (AI) allow you to generate precise forecasts even at the stock-keeping level. Accurate estimation of demand volatility in the forecasting process leads to tightening of safety stock levels. An accurate demand plan ensures the right products are stocked at the right time and at the right locations.

SAS is a leader in integrated intelligent planning solutions for the retail and CPG industries. We design our solutions to drive superior financial, assortment and demand planning decisions. And it's all based on the SAS Platform for open analytics. You can access SAS from the interface or coding language of your choice – Python, R and other APIs – giving you the freedom to experiment, act and achieve.

## Why SAS® for Intelligent Planning

SAS helps retailers:

- **Improve financial performance** with dynamic in-season reforecasting that proactively adjusts to changing demand and inventory conditions.
- **Increase customer satisfaction** with analytics-driven localized assortment plans that understand what customers are looking for in terms of style, color or size – and deliver a superior shopping experience.
- **Balance inventory levels and reduce stock-outs** by estimating demand volatility in the forecasting process, leading to tightening of safety stock levels.
- **Improve staff productivity and collaboration** by enabling sharing of strategic plans across the organization and guiding planners to manage their plans by exception, freeing them to focus on high-value tasks.

### Create the most effective local assortments

Shifting market conditions, new channels and elevated consumer expectations for different product options require retailers to predict and plan with precision to deliver an optimal assortment based on customers, products and locations that meet strategic objectives. The complexities arising from the volatility in consumer demand require higher degrees of automation and application of advanced analytics to be successful.

### Cloud-ready retail planning performance

Cloud-ready, high-performance computing capabilities leveraging the SAS Platform provide an open standard approach that combines SAS embedded retail forecasting and planning best practices and

process automation with flexible deployment options. This allows merchants to find and act on hidden insights and enhances merchant and financial productivity. Reconcile plans top-down, bottom-up and middle-out to help retailers plan, execute and ensure that financial and merchandise plans work hand in hand.

### All-in-one planning and analytics

Built on the SAS Platform, the advanced planning engine integrates seamlessly with SAS analytics to enable demand sensing and shaping, forecasting and price elasticity estimation in support of today's planning needs and tomorrow's challenges.

Key features include:

- Multidimensional, multiuser collaborative planning with intelligent "plan seeding" allows rapid development of new plans.
- Integrated demand forecasts support both preseason and in-season planning.
- In-worksheet analytics determines which products and lines to grow, maintain or eliminate.
- Real-time attribute assessment and predictive recommendations on which attributes most influence customer purchases.
- Integration with SAS Visual Forecasting, SAS Visual Data Mining and Machine Learning, or open tools like Python or R.

### Demand-driven decisioning

Integrated worksheet analytics allows your staff to natively conduct ad hoc analysis, visually explore data, and develop reports and dashboards to share insights through the web and mobile devices.

## Key Capabilities

Create merchandise financial plans that ensure the right amount and type of inventory at each store to meet cross-channel consumer demand. Automated planning processes include:

- Reviewing demand history and developing a strategic plan.
- Creating a merchandise financial plan.
- Managing seasonal/nonseasonal open-to-buy.
- Planning optimized local assortments.

With the automated workflow design, your management team can have full visibility into the process, ensuring plans are aligned with corporate strategic objectives.

# Challenges

- Older planning approaches do not allow for rapid, consumer-based insight and analysis due to siloed design and performance constraints.
- Basic planning systems or spreadsheets don't facilitate data manipulation or allow executives to view corporate roll-ups from different vantages, making strategic planning across the enterprise impossible.
- Lack of automated processes results in manual, low-productivity tasks reducing planners' efficiency and ability to work strategically to improve results.
- Short product life cycles, proliferation of SKUs and lack of visibility to consumption data result in low sell-through rates.

# Components

The SAS Intelligent Planning Suite is a unique intelligent planning ecosystem built on a common planning engine and data layer with a common user interface. SAS software's superior design allows retailers to rapidly analyze assortments from any dimension to maximize gross margin dollars; optimize tailored, local assortments; optimize the use of store space; and increase customer satisfaction.

- **SAS Financial Planning** and in-season management provide an open and integrated planning framework. This supports intelligent automation with planning workflow and automated approve/reject and notify capabilities for better visibility into the planning cycle.
- **SAS Assortment Planning** helps you analyze and tailor customer-centric assortments based on any product attribute, from any dimension while controlling merchandise spending open-to-buy, optimizing inventory investments.
- **SAS Demand Planning** captures demand signals for where, how and when demand is generated and senses customer demand across each channel. Planning powered by machine learning provides scalability for rapid, yet detailed forecasting processes.



Assortment planning by customer clusters.

## The SAS® Difference

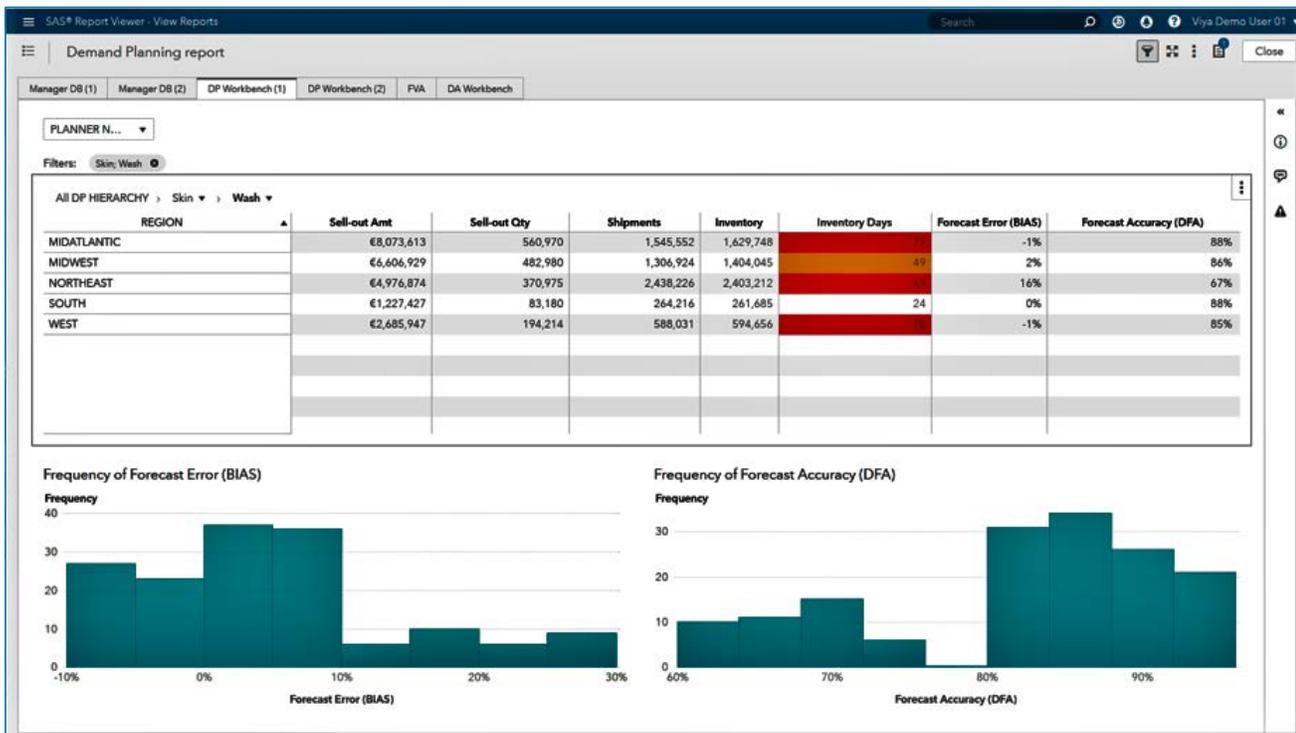
Now merchants can quickly analyze customer demand and collaborate across the organization to develop strategic financial plans, create and manage customer-centric assortments with unlimited dimensions, and dynamically adjust in-season forecasts to changing demand and inventory conditions. With the next-generation SAS Intelligent Planning Suite, you can change what's possible for retailers with innovative architecture coupled with a high-performance forecasting platform.

The **SAS Intelligent Planning Suite** is part of the SAS portfolio of retail and CPG industry analytics solutions. The following planning modules are available as a package or individually and include SAS® Viya® with planning services, unified data layer, common user interface, data visualization and Microsoft Excel add-in:

- SAS® Financial Planning.
- SAS® Assortment Planning.
- SAS® Demand Planning.

Related offerings include:

- SAS® Size Optimization (a solution for size profiling and pack optimization).
- SAS® Revenue Optimization (a solution for markdown and promotion optimization).
- SAS® Visual Analytics.
- SAS® Visual Data Mining and Machine Learning.



Demand plan showing BIAS and accuracy metrics.

To contact your local SAS office, please visit: [sas.com/offices](https://sas.com/offices)

