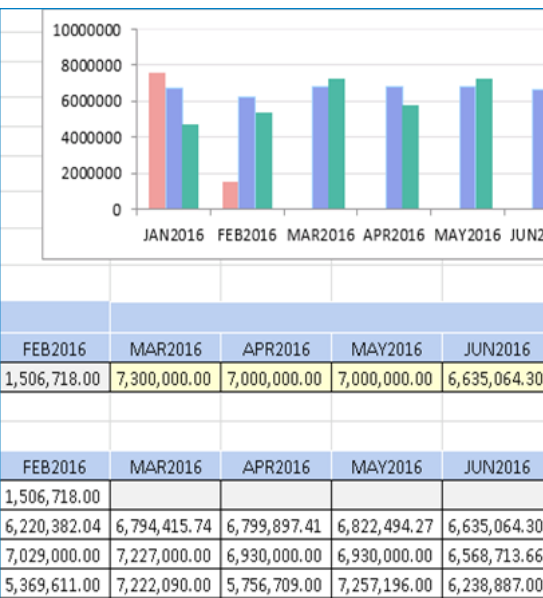


# SAS® Collaborative Planning Workbench



At most organizations, forecasting is not a one-person activity. It's a complex process involving lots of data and a diversity of stakeholders, reviewers and approvers. To build a successful forecast, a parts list may include:

- Source data, production data and EPR backlogs.
- Sales and shipment histories.
- POS/syndicated scanner and other channel data.
- Forecasts and trends from marketing, finance, industry and government data.
- Sales forecasts of various formats and reliability.

Reviewers and approvers might include marketing, sales, production, product and executive management. The final forecast may involve a weighted consensus of all parties. With tens or hundreds of millions of dollars of inventory and sales at stake, simple approaches (like email reminders) for achieving consensus are not enough. A more robust process supported by enabling technology is essential for an effective consensus planning process.

## What does SAS® Collaborative Planning Workbench do?

SAS Collaborative Planning Workbench provides a comprehensive demand planning environment that lets planners manage demand forecasts in a single screen with workflow for final approval. The purpose is to create a final consensus plan as an input to the sales and operations planning (S&OP) and integrated business planning (IBP) processes.

## Why is SAS® Collaborative Planning Workbench important?

Forecasts need to be developed and executed quickly before the forecast data becomes outdated. Often, the real challenge is completing the review and approval portion of the process. Because without enabling tools and technology, this step can be harder than developing the forecast itself.

## For whom is SAS® Collaborative Planning Workbench designed?

The product is designed for forecast analysts, business planners and senior-level managers who are responsible for creating sales forecasts that can be used in the consensus planning process.

## Key Benefits

- **Create more accurate forecasts based on true demand.** A demand-driven forecast is inherently a more realistic forecast than one based solely on historical shipment and replenishment data, or on a supply/production-oriented approach. By combining all of these approaches into one workbench, SAS delivers a more accurate forecast with significant other business benefits.
- **Improve communication and speed planning with workflows.** SAS recognizes the special process and workflow issues around consensus forecasting. Our analytically sound process includes a suite of forecasting and planning tools with a single point of administration - including an interface with the same look and feel as the standard SAS forecasting workbench.
- **Add measurable value to your forecasting process.** Forecast value add, or FVA, compares the accuracy of a statistical forecast (generated by forecasting software) to the accuracy of an analyst's or executive's manually adjusted forecast. SAS Collaborative Planning Workbench allows you to compute the FVA for each individual step of the forecast process.
- **Increase accuracy and efficiency of the demand forecasting process by reducing touch points.** The FVA process measures each touch point before and after someone manually adjusts the forecast. If they're not adding value, you can eliminate or discount that touch point through weighting to minimize forecast bias (and error).
- **Integrate with other SAS forecasting solutions.** SAS incorporates high-performance forecasting and optimization analytics into its user-oriented forecasting and planning workbenches, and integrates them with a smoothly functioning suite of supply chain management tools - including all the workbenches in the SAS for Demand-Driven Planning and Optimization suite.

# Overview

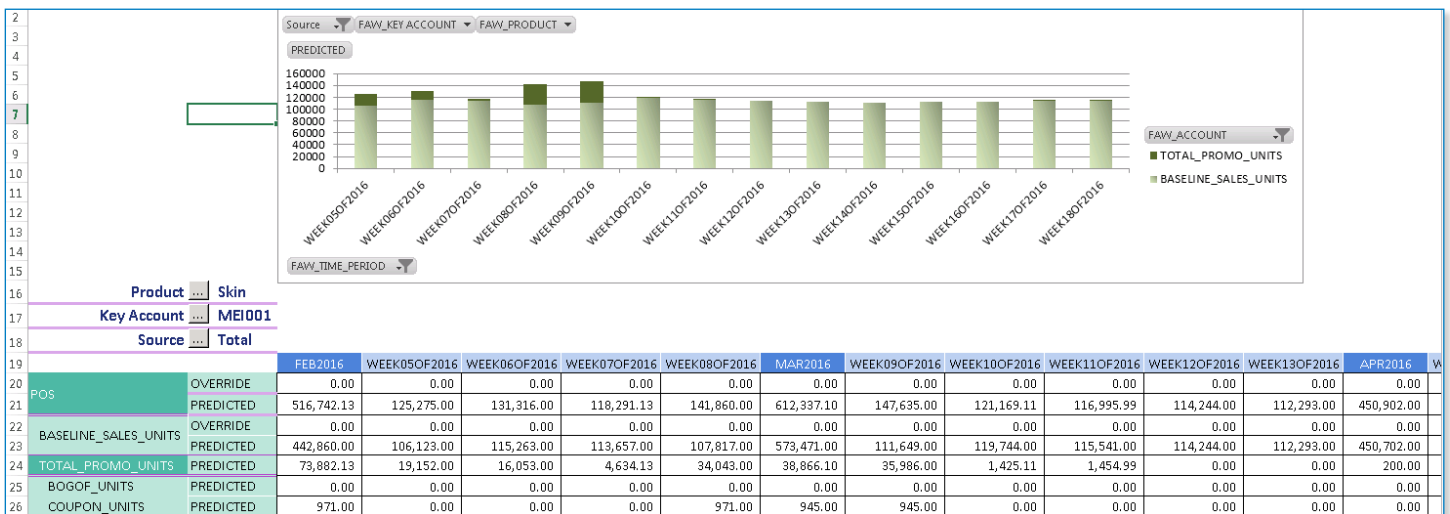
SAS Collaborative Planning Workbench facilitates the development of a consensus plan strategy by resolving gaps prior to the S&OP planning process. It allows you to import and consolidate internal and external customer forecasts (sales, marketing, finance, operations and others). And, using what-if analysis capabilities, it easily adjusts the statistical baseline forecasts based on a structured process that incorporates data

and analysis – rather than judgment – to enhance forecast accuracy. You can automatically create a consensus plan using a weighted statistical method embedded in the planning workbench.

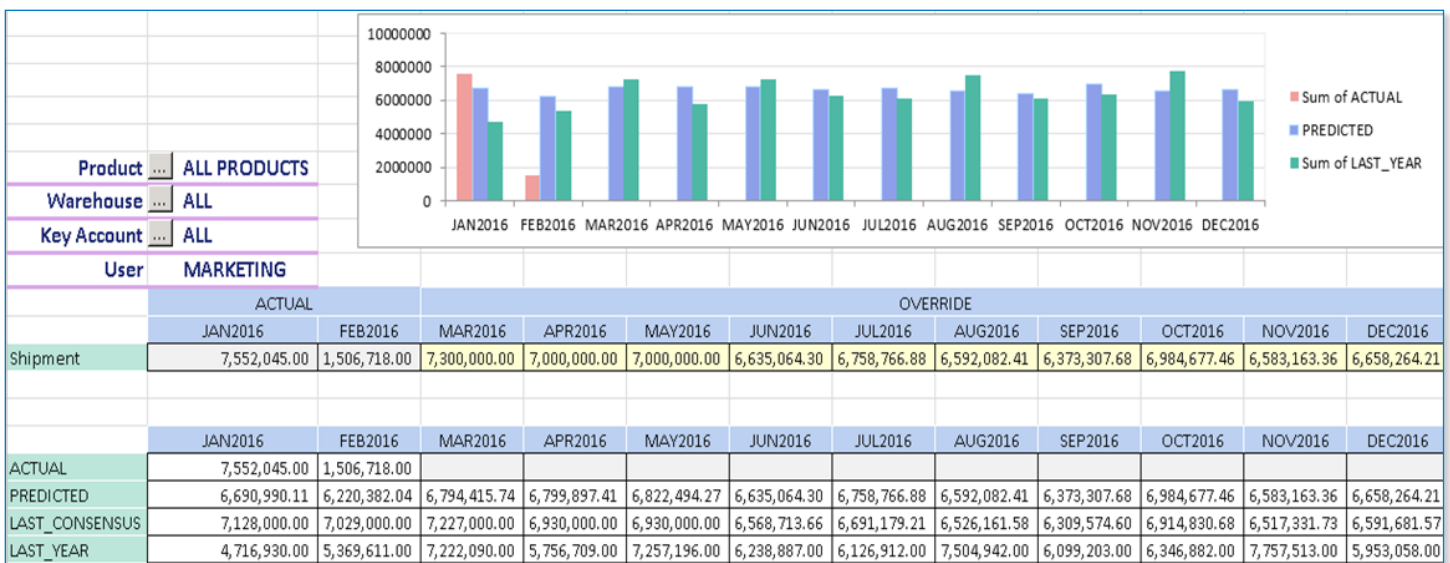
## Collaborative forecasting

An automated, interactive application and set of forecast comparison screens and reports to collect and consolidate internal and external forecasts allow you to create a

consensus plan to drive the S&OP process. Forecasts can be averaged or weighted based on past performance. Assessment routines can be performed against financial KPIs to determine financial impact from a revenue management standpoint. This proven consensus planning application is an automated, statistically driven solution that uses combined, weighted forecasting methods.



Account managers and sales planners use the sales planning worksheet to collaboratively develop the sales forecast.



Demand planners use the shipment planning worksheet to develop shipment plans that will support the sales strategy.

## Consensus business process workflow

Being able to control workflow improves organizational collaboration, increases communication and speeds planning cycles. We provide form templates that establish consistency across the enterprise. The administrator can centrally control who can author and edit a form set, identify the form content owners, approvers and reviewers, and then publish the forms via the information portal. The process can be designed as a bottom-up, top-down or middle-out rollup of forecast data. Review can be either sequential or simultaneous. Role-based alerts and notifications are automatically generated at various steps in the process.

## Forecast value add

FVA analysis is used to identify non-value-added activities and streamline forecasting by eliminating wasted efforts. This enables you to direct resources to more productive activities and achieve better forecasts. SAS Collaborative Planning Workbench lets you compute the FVA for each set of forecast processes, events and activities. We invented the concept of FVA and are the only analytics forecasting vendor to incorporate this capability into a forecasting application.

## Integration with the SAS® for Demand-Driven Planning and Optimization suite

A tightly integrated suite of supply chain forecasting and planning tools means that the data moves seamlessly between applications, making it easier for demand forecasting and inventory planning team members to collaborate. As a result, it takes less time to go from initial forecast development to execution. And the smaller the gap between data input and execution, the more accurate the forecast.

## Key Features

### Collaborative forecasting

- Interactive consensus planner (workflow) with GUI.
- Automatic, weighted-consensus forecast generator.
- FVA analysis reports with drill-down/up capabilities.
- Web access for sharing, viewing and authorizing changes.
- Planners can easily override forecasts at any level of the hierarchy and instantly see the overall effect on geographies, markets, channels, brands, products, SKUs and even down to key customers and demand points.
- Wizard-driven, configurable views with multiple levels of security.

### Consensus business process workflow

- Configurable workflow and approval process integrated with email.
- Microsoft Excel interface reduces learning curve (with full access to Excel).
- FVA is used to track and measure touch points in the process to determine when value is added.
- Workflow control through a web portal that codifies approvals and routing, and alerts users and the system manager to events and deadlines.
- Workflow control of every phase of the forecast, reporting, input, review and approval process for each forecasting activity, period or scenario.
- Offline check-in and check-out of Excel-based, forecast data input worksheets.

### Forecast value add

- The FVA analysis process captures the forecast at each step:
  - Naïve forecast.
  - Statistical model forecast.
  - Inputs and overrides by forecast analysts, sales, marketing, finance, customers, etc.
  - Consensus planning.
  - Management-approved forecast with an automated data collection, analysis and reporting process.
- FVA analysis can be performed using whichever traditional forecasting performance metric you prefer:
  - Most popular are versions of MAPE, WMAPE or SMAPE.
  - Can also be based on bias, forecast accuracy or another metric of your choosing.
- Variety of forecasting models can be used to make your comparisons:
  - Random walk is traditional naïve model.
  - Seasonalized random walk will usually generate more accurate forecasts when using seasonal data.
  - Moving average and simple exponential smoothing are other models that are easy to compute.
  - Statistical baseline forecast generated in SAS Forecast Analyst Workbench using advanced methods, such as ARIMA, ARIMAX, dynamic regression, unobserved components models (UCM) and weighted combined models.

TO LEARN MORE »

To learn more about SAS Collaborative Planning Workbench requirements, download white papers, view screen shots and see other related material, please visit [sas.com/collaborative-planning-workbench](http://sas.com/collaborative-planning-workbench).

## Key Features (continued)

### Forecasting suite integration

- SAS Forecast Analyst Workbench: Uses SAS High-Performance Forecasting to generate large-scale forecasts.
- SAS Inventory Optimization Workbench: Multiechelon inventory optimization and optimal replenishment planning includes supply sensing and shaping using what-if analysis.
- SAS Demand Signal Repository: An integrated repository of demand information with tools to explore and analyze sales, products, stores, territories, promotions, inventory, price, performance and operations.

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

