



## SAS® Forecasting for SAP APO

Enhance SAP demand planning with the rich forecasting capabilities of SAS software

### Overview

Reliable, accurate forecasting is integral to succeeding in today's market. It can transform your organization from one that simply reacts to one that is proactive, ready for what will be. SAS uniquely addresses the forecasting and analysis needs of businesses and can now seamlessly integrate our award-winning analytics with SAP APO Demand Planning, combining the best from SAP and SAS.

SAS both enhances and simplifies the creation of statistical forecasting by applying our comprehensive set of forecasting techniques that use statistical significance (rather than personal judgment) to improve forecast accuracy. Additional enhancements from SAS include the ability for planners to easily modify forecasting hierarchies for what-if analysis, choose from a long list of standard reports to better understand the forecast and the facilities for planners to easily generate their own reports. Launching SAS forecasting from within the SAP interface also reduces learning time, speeding up return on your investment.



### Challenges

- **Reduce excess inventory costs.**  
Inaccurate forecasting results in costly overstocks. Low inventory turnover means storage costs and lower profit margins.
- **Eliminate out-of stocks.**  
When products are out of stock, you not only lose revenue and reduce profits, you also lose customers to companies with better forecasting and planning.
- **Improve downstream planning efficiency.**  
Inadequate downstream planning means high inventory for safety stock and frequent out of stock items, resulting in poor customer service and lower revenue.



# Take advantage of the best of both SAS® and SAP

## The SAS® Solution

SAS Forecasting for SAP APO seamlessly integrates with SAP while providing the rich, accurate forecasting you expect from SAS.

- SAS forecasting can be:
  - o Launched on demand from within the SAP GUI either with a SAS pull-down menu or using an SAP macro.
  - o Scheduled and launched as a batch job.
- History data is read from SAP liveCache at any hierarchy level configured in SAP. Once SAS generates a statistical forecast, the results are passed back to SAP liveCache and are viewable in the SAP GUI.
- SAS forecasting models can read data from SAP or other sources.
- Forecasting options can be selected in SAP and then passed through to SAS.
- What-if analysis provided for business planners through SAS Forecast Studio.
- Comprehensive reporting environment can be launched from within SAP and offers both standard and customizable reports.

## The SAS® Approach

The SAS Forecasting for SAP APO was designed to seamlessly integrate with SAP APO, providing businesses with a **balance** of powerful yet easy-to-use forecasting functionality and integration of planning components.

Both SAS and SAP have service-oriented architecture (SOA) within their technology platforms to request or provide services using published interfaces. SAS Forecasting for SAP APO utilizes multiple SOA methods: Web services to launch the request from SAP to SAS and remote function calls (RFC) to efficiently move data to and from SAP liveCache. This means end users can launch the power of SAS forecasting and see the results without leaving the familiarity of their SAP user interface.

SAS also understands that many businesses may choose to schedule forecasting jobs in the background. The SAS solution provides the ability to run forecasts as batch jobs.

By seamlessly integrating SAS with SAP, organizations can leverage their investment in technology to take advantage of the best of both SAS and SAP. From SAS, deep experience in analytics. From SAP, integrated applications and workflow that support business processes.

## Benefits

- **Maximize investment in SAP systems.**

Organizations have invested heavily in SAP to improve business processes. SAS can help them maximize their investment by boosting the effectiveness of the demand-planning process with a proven forecasting engine.
- **Improve statistical forecasting performance across your product hierarchy.**

SAS' patented forecast server engine has a complete array of advanced forecasting methods to model and forecast all products across your portfolio. Forecast methods include exponential smoothing, Winter's, ARIMA, ARIMAX, UCM and dynamic regression. SAS can integrate, model and forecast consumer demand automatically using award-winning data access tools. Improved forecast accuracy translates into improved business performance.
- **Reduce finished goods inventory levels and stock-outs.**

SAS provides forecasts that reflect the realities of your business, improving your ability to forecast and plan future events with confidence. As a result, safety stock levels and on-hand finished goods inventory can be tightened, adding more efficiency to the overall supply chain. Stock outs will be reduced as the right products are produced at the right time and stocked at the right locations.

## Capabilities

- **Select the best interface for each user.**

SAP users can use SAS Forecast Server without leaving the SAP interface. For enhanced what-if analysis and for user selection or creation of forecast models, planners can use the SAS Forecast Studio interface.

- **Automatically select forecast models.**

Patented expert-selection forecast engine analyzes and combines various models to produce a forecast that best depicts your business at every level of your product hierarchy. Model selection is based on statistical relevance, not personal judgment or bias.

- **Process high volumes of data.**

Designed to scale, the solution provides hierarchical forecasting for hundreds of thousands of data series at a time. Improved accuracy of SAS frees planners to focus on the most critical items.

- **Model the effects of sales promotions, marketing events and other external events with the event modeling console.**

Statistically models events to determine sales lifts associated with promotions, special marketing events and other irregular activities. Using patented technology, the event model console allows the user to choose among several event types including pulse, level shift, ramp up/down and temporary events.

Preprogrammed holiday events are available (e.g., Christmas, Easter, Independence Day, Thanksgiving).

- **Perform what-if analysis and scenario planning.**

Scenario analysis allows you to evaluate exceptions to your sales history and plan for future events, including new product, location and channel introduction. Conduct what-if analysis using statistical models to find the optimal forecasting scenario based on available marketing investment strategies or product mix. What-if analysis and scenario planning can be used for any situation including realistic, optimistic and pessimistic projections.

- **Customize reports in a comprehensive reporting environment.**

Integrated reporting provides users the ability to view reports generated by SAS in an SAP user interface or run custom reports using SAS Web Report Studio.

## The SAS® Difference

SAS Forecasting for SAP APO is a great choice for businesses that want to use SAP APO Demand Planning but need to improve the accuracy of their statistical forecast. SAS Forecasting for SAP:

- Is the only solution on the market today that offers all of the core modeling techniques as well as custom-developed algorithms to use within a hierarchy.
- Automatically generates forecasts for each item at every business/product-level hierarchy using the best fit model. The engine automatically determines appropriate forecasting model based on statistical parameters and business rules for each level.
- Is the most scalable statistical forecasting engine with on-the-fly hierarchical capabilities, including hierarchical reconciliation.

## About SAS

SAS is the leader in [business analytics](#) software and services, and the largest independent vendor in the business intelligence market. Through innovative solutions delivered within an integrated framework, SAS helps customers at more than 45,000 sites improve performance and deliver value by making better decisions faster. Since 1976 SAS has been giving customers around the world THE POWER TO KNOW®



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