



# DEMAND FORECASTING & PLANNING

Using sophisticated statistical modeling techniques and event models, Stratum™ Demand Forecasting & Planning is an industrial-strength application that creates demand forecasts for businesses that manage large numbers of SKUs and demand time periods.

Stratum Demand Forecasting & Planning assists planners and analysts in the creation of models using multiple sources of historic demand data such as sales history, shipment data, order bookings, point-of-sale data, and more. In addition, different departments across the organization can collaborate with one another in the planning process while working with data at levels that make most sense to their roles. Sales reps can forecast and plan at the customer and product line level, production managers can forecast and plan at the SKU and plant level, and so on.

### Expert Selection

Stratum Demand Forecasting & Planning will expertly select the appropriate forecast using the Bayesian Information Criterion (BIC). In this case, it attempts to find the model that minimizes the BIC and maximizes forecast performance. Or, it will allow planners to select the appropriate model after analyzing the different forecasts generated and adjusting where nec-

essary. In all cases, the results of the demand forecast reflect the demand patterns found in the data including trends, seasonal patterns, and causal events.

### Event Modeling

Certain events that impact demand patterns can also be considered during the selection of forecast models. Stratum Demand Forecasting & Planning lets planners define these events (such as promotional activities, production downtime, inventory shortages and stock outs), apply weighting factors, and then analyze and apply the events to future demand forecasts.

### What-if Analysis

Stratum Demand Forecasting & Planning additionally supports an infinite number of 'what-if' scenarios so that planners can change demand variables (inputs to the forecast) and forecast case parameters, including the model. Each individual scenario can then be reviewed against actual history related to sales, bookings, point-

of-sale, etc. to analyze where the least deviation occurred. This results in the most accurate demand forecast while minimizing inventory investment, reducing returns and optimizing customer service.

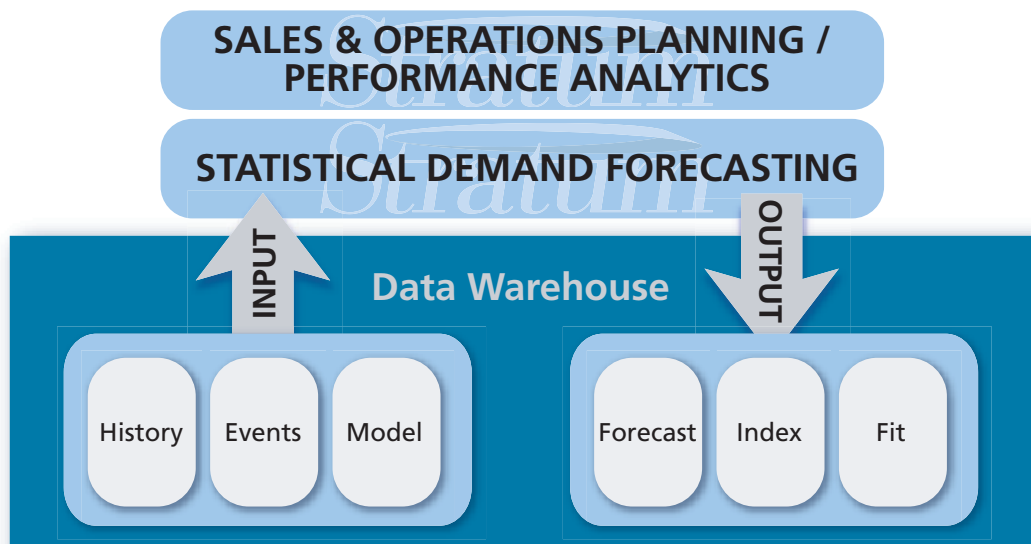
### Key Features

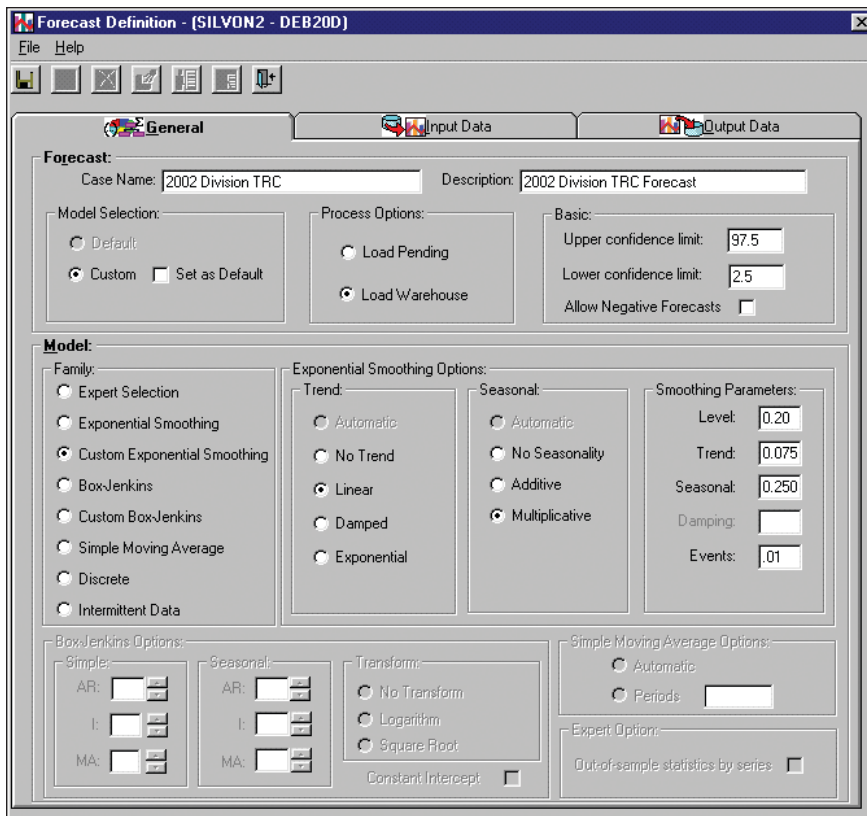
Stratum Demand Forecasting & Planning meets the requirements of organizations in an integrated and flexible framework.

- **Sophisticated Forecasting Methods** - multiple statistical forecasting algorithms are provided, including the ability for the system to expertly select the most appropriate statistical method for the historic data.
- **OLAP Capability** - storage and access to the data in a multi-dimensional format allows users to view summary and detailed data quickly and effectively, thus facilitating the planning process.
- **Event Modeling** - the ability to apply to future forecasts any promotions, inventory shortages, etc. that may impact demand patterns is pro-

**KEY BENEFITS**

- Improved Forecasts
- Reduced Inventory Investment / Increased Cash Flow
- Decreased Returns
- Improved Customer Service Levels (Fill Rates, Delivery Schedules)
- Single Repository of forecasted inputs and analysis of outputs





Stratum Demand Forecasting & Planning provides the controls you need to create accurate forecasts that ultimately lead to reduced on-hand inventory, decreased product returns and optimized customer service levels.

vided through event modeling. Management of these activities adds market intelligence to the process, which in turn creates a more realistic forecast of the future.

- **Flexible Time Periods** - forecasts can be generated in any number of time periods (e.g., daily, weekly, or monthly).
- **User-Defined Views** - data can be delivered in a number of flexible, easy-to-use methods that allow users to tailor presentations to their individual needs.
- **Exception Management** - using business rules for generating alerts,

only information that falls outside an acceptable range is reported, allowing users to manage by exception and to take corrective action to minimize negative impact.

- **What-if Scenarios** – the ability to create and evaluate multiple forecast case scenarios using different demand variables and forecast parameters is made possible through hypothetical scenarios.
- **Collaborative Process** – supports businesses that develop forecasts in a consensus format where multiple departments and individuals contribute data to the forecasting and planning process.

- **Multi-Level Allocation Planning** - incorporates top-down, middle-out, bottom-up forecasting capability and supports the use of allocations to apply overrides to the forecast at any summary or detailed level.
- **Closed-Loop Processing** - updates production planning and execution systems once the forecast has been agreed upon and approved.
- **Lifecycle and New Product Support** – allows for the forecasting and planning of new product introductions where no history exists, in addition to planning related to the sunset of products that have reached an end-of-life status.
- **Web Enabled** - allows internal or external customers to access the same plan remotely via a browser.
- **Scalability** – features a proven architecture that easily supports organizations with significant amounts of detailed data (e.g., SKUs and Ship-Tos) or large amounts of data that changes often.

## Packaging

There are two basic components that support Stratum Demand Forecasting & Planning:

- **Stratum Connector for Forecasting** – this includes a user interface, a statistical forecast engine and program interfaces that link it to the Silvon DataTracker database.
- **Stratum SPM** – a set of analytics specifically designed for saving forecasts, making adjustments to forecasts, analyzing forecasts, inputting events, inputting new product introduction indexes and weights (for forecast generation), inputting sunset product indexes and weights, and support for sales and operations planning.



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