



## Executive Brief

### Improving Forecast Accuracy with Demand Sensing

Operational forecasting is a daily battle, fought SKU by SKU. Aggregate demand plans provide input, but don't bridge the gap between longer term planning and daily operational needs. Typical problems include:

- Inaccurate forecast disaggregation
- Rudimentary consumption logic
- Persistent forecast bias

Each of these issues degrades daily operational forecast accuracy and prevents companies from achieving targeted customer service levels. Demand Sensing addresses each of these issues by providing accurate forecasts to the daily, SKU and account-location level.

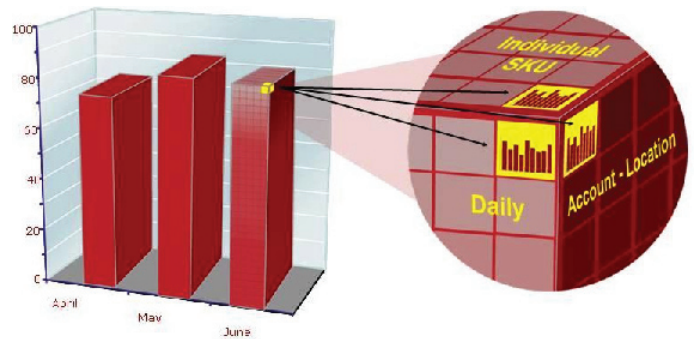
### Three Dimensional Demand Profiling

Demand plans are highly aggregated in three dimensions: Time (e.g., monthly), geographically (e.g., regional), and by product or product family. But achieving service level excellence requires forecasts that are accurate at the detailed level. So there is a gap between highly aggregates demand plans and the detailed "demand profiles" needed for daily operational planning.

**Demand Profiling** intelligently disaggregates the demand plan into a highly granular three dimensional operational forecast, creating a micro level plan allocated by day, SKU, and account-location. This disaggregated plan is adequately balanced and time-phased, taking into account trends, seasonality, product life cycle, exceptional demand and promotions.

### Real-time Forecasting

Traditionally, available demand data is not used very inefficiently. For instance, upstream POS data is rarely aggregated for use in operational forecasts. Or demand may be expressed in total quantity per period, with no order-line information. These approaches introduce delays into capturing changes in the demand signal, leading to poor forecast accuracy and an inability to "sense" demand.



### According to AMR Research:

"Demand forecast accuracy is one of the four most critical metrics a company can use to get a quick, balanced snapshot of its supply chain performance."

"Companies that are best at demand forecasting average 15% less inventory, 17% stronger perfect order fulfillment, and 35% shorter cash-to-cash cycles times, while having a tenth of the stock-outs of their peers."

"A 1% point improvement in demand forecast accuracy can yield a 2% point improvement in perfect order fulfillment capability."



[www.toolsgroup.com](http://www.toolsgroup.com)

The problem is exacerbated if rudimentary consumption techniques are used to consume the demand forecast. This is the critical point where planning and execution meet. If the integration between the two is weak, then execution diverges from plan, resulting in an unreliable or even unusable short-term forecast. In the worst case, planners ignore the forecast consumption and work manually outside the planning process.

**Real-time Forecasting** imports fresh daily demand data, and immediately senses changes in the demand signal by comparing the demand to expected demand patterns and evaluating the statistical significance of the change. This allows immediate review of end-of-month projections. And “smooth” high-frequency corrections prevent delays that typically generate abrupt end-of-period step changes.

This highly accurate demand signal is then netted out at a micro level using advanced consumption logic at the individual SKU-account level. This approach insures forecasts are consumed by the correct customers and according to the statistical characteristics of the demand. The net result is improved short term daily forecast accuracy and tight integration between the demand plan and daily operations.

## Persistent Forecast Bias Monitoring

Persistent forecast bias is inherent in most demand planning processes. Pressures to meet financial goals inflate and distort forecasts. Customer collaboration frequently turns into bargaining sessions that exacerbate over and under forecasting. And sales reward systems create expectations and pressure to perform that influence the demand plan.

**Forecast Bias Monitoring** provides specialized analytics that analyzes forecast performance against actual historical demand. It segments the analysis, identifying the owner of each forecast segment. And it provides a key control mechanism which is missing from most current S&OP processes: A continuous benchmarking of forecast owners that closes the organizational loop to stimulate organizational behavior change.

## Next Step: A Forecast Assessment

Have you benchmarked your current forecasting process against alternatives and quantified the areas for improvement? A ToolsGroup forecast assessment will analyze your short-term forecast down to the individual SKU-Location level, identifying issues with forecast bias, forecast disaggregation (split), and consumption logic. Then we map these analysis onto your other S&OP or other operational processes to identify organizational responsibilities and key issues.

## Demand Sensing Solution

Demand Profiling

Real-time Forecasting

Forecast Bias Monitoring

### About ToolsGroup

With more than 180 implementations in 31 countries, **ToolsGroup** offers the most widely deployed demand-driven inventory optimization solution available today. Our customers improve short-term forecast accuracy and correctly set safety stocks, achieving up to 99+% customer service levels while significantly cutting inventory. We challenge you to a “forecast” assessment that can tell you how much savings potential is in your supply chain.

Visit our web site: [www.toolsgroup.com](http://www.toolsgroup.com) or contact your local office to learn more.

#### UNITED STATES • BOSTON

1 617-263-0080 • [us-info@ToolsGroup.com](mailto:us-info@ToolsGroup.com)

#### THE NETHERLANDS • AMSTERDAM

+31 20 561 6410 • [nl-info@ToolsGroup.com](mailto:nl-info@ToolsGroup.com)

#### ITALY • MILANO

+39 02 48022810 • [it-info@ToolsGroup.com](mailto:it-info@ToolsGroup.com)

#### CANADA • TORONTO

+1 416 2195424 • [ca-info@ToolsGroup.com](mailto:ca-info@ToolsGroup.com)

#### SPAIN • BARCELONA

+34 93 4125768 • [es-info@ToolsGroup.com](mailto:es-info@ToolsGroup.com)

#### UNITED KINGDOM • LONDON

+44 (0)207 629 1899 • [uk-info@ToolsGroup.com](mailto:uk-info@ToolsGroup.com)

#### FRANCE • PARIS

+33(0) 1 55 68 10 58 • [fr-info@ToolsGroup.com](mailto:fr-info@ToolsGroup.com)

#### MEXICO • MEXICO CITY

+00 52-55-11076238 • [mx-info@toolsgroup.com](mailto:mx-info@toolsgroup.com)