E2open Demand Sensing
Near-Term Forecast Accuracy Improvements Based on Real-Time Data

Next-generation forecasting with E2open’s Demand Sensing application creates the most accurate picture of near-term demand. The application uses automation and machine-learning technology to analyze real-time supply chain data that includes orders, point-of-sale data, social media sentiment and more. Demand sensing algorithms determine the predictive influence of each signal and produce an accurate daily forecast for every item at every location.

Fast-moving trends and changes in consumer behavior make it critical to track demand closely. Traditional demand planning techniques were developed decades ago when distribution channels were few and history was a relevant predictor of future events. Today this method is insufficient. A number of obstacles pose problems with predicting near-term demand:

• Volatility driven by changes in consumer preferences and social sentiment
• Growth-through-innovation strategies and rapid stock-keeping unit (SKU) proliferation
• Promotions and marketing programs designed to shape consumer behavior and change buying patterns
• Omni-channel and e-commerce strategies that disrupt traditional distribution and make historical orders even less relevant to future demand

One of E2open’s Demand Sensing intelligent applications, E2open Demand Sensing does not rely on historical information. Instead, the application uses real-time data across the supply chain to accurately predict near-term demand for make-to-stock products. The result is a 30 to 40% improvement in short-term forecast accuracy compared to traditional time-series approaches. Field-proven with more than a decade of use in over 180 countries for $250 billion in annual sales volume, the application is a core part of the demand-driven digital transformation strategies of leading global companies.

KEY FEATURES
- Senses market shifts using real-time data for timely responses to opportunities instead of relying on historical data
- Leverages multiple predictive demand signals, such as orders, shipments, point-of-sale data, customer inventory, weather and social sentiment data
- Uses advanced machine-learning algorithms to quickly process all data, identify predictive patterns and produce a far more accurate forecast of near-term demand
- Creates daily automated forecasts and publishes them to supply planning systems without human review or assistance
- Scales across large numbers of items, locations and channels, with a track record of proven effectiveness in some of the world’s largest supply chains
- Works without disrupting current demand and distribution planning system architectures

KEY BENEFITS
- Improve short-term forecast accuracy by 30-40%
- Reduce inventory by 10-15%, freeing up cash and improving return on capital as a result
- Improve customer service by ensuring that each product is on the shelf when and where it is needed
- Capture sales growth by sensing and responding to real-time market opportunities
- Maximize the return on investment (ROI) for product innovation and promotional events
Best-in-Class Demand Sensing

While demand planning is typically a monthly process with monthly forecasts, near-term activities such as replenishment are usually planned daily. The traditional approach to bridging this gap is to use simple proration logic following a rule of thumb to convert monthly forecasts into the daily granularity required by distribution requirements planning (DRP). However, this conversion step impacts the quality of the forecast. E2open Demand Sensing eliminates the need for approximations or unreliable rules of thumb. Every day, organizations can receive accurate daily granularity forecasts for six to 13 weeks that can be used directly for replenishment or any near-term supply decision. The result is a much better quality supply decision – each and every time.

Designed for intelligent forecasting, the application combines critical signals and predictors:

- **Real-time data analytics** identify markets shifts in time to respond to opportunities — instead of counting on history to repeat itself.

- **Multiple demand signals** include anything that can be predictive, such as orders, shipments, point-of-sale, customer inventory, weather or even social sentiment data.

- **Machine learning pattern-recognition algorithms** identify predictors, determine influence factors and continuously self-tune to changing environments.

- **Automatic clustering** of SKUs with similar demand profiles aids the prediction of newly introduced products.

End-to-End Supply Chain Management Platform

Once an organization implements any E2open platform application, it is easy to add more capabilities in the future for better visibility, coordination and control over the end-to-end supply chain.

The E2open platform creates a digital representation of the internal — and optionally external — network, connects internal enterprise resource planning (ERP) and financial systems using SAP® and Oracle® certified adapters for timely data feeds, and normalizes and cleanses the data to make it decision-grade. Using machine-learning enabled algorithms and supply chain management applications, the platform processes the data and provides bi-directional, closed-loop communications back to ERP systems for execution. This facilitates the evolution of supply chain processes towards true convergence of end-to-end planning and execution.

Companies that use E2open Demand Sensing receive the best forecast for response and execution time horizons. A real-time response to real-time demand enables an agile and demand-driven supply chain that is always aligned with current market realities.