



DIAGEO

Diageo North America

Diageo is the world's leading premium drinks business with annual sales of \$14 billion. Its many well known brands include Smirnoff, Guinness, Johnnie Walker, Cuervo, Crown Royal, Tanqueray, J&B and Baileys.

“Innovation is fuelling our growth and this growth puts pressure on us to improve our working capital.”

- **Flavio De Simone**
VP Supply Chain
Development,
Diageo NA

Project & Objectives

Diageo North America is supported by a complex supply chain of eight manufacturing facilities, 5 contract manufacturers, 13 overseas import flows and 42 warehouses.

In 2006, Vice President of Supply Chain Development Flavio De Simone was faced with conflicting goals. On one hand, continued innovation was creating new products, growth in volume, and increasing demand volatility. On the other, the challenge was to keep working capital in line, given the cash demands of a growing business. The supply chain group had already reduced finished goods inventory by 18% in the past two years. He felt that the “low hanging fruit” in improving inventories was gone, so his group had to work figure out how to not just work harder, but work smarter through improved technology.

... Day to Day

Diageo implemented an inventory optimization solution from ToolsGroup. The DPM-based solution bolts on to Diageo's SAP ERP platform and their Manugistics supply chain planning (SCP) system. Forecast and order data is fed to the DPM system, where the demand is analyzed and inventory modeled to create a high performance mix. Safety stocks and other inventory parameters are then fed back to Manugistics.

Diageo's inventory planning and optimization has gone from a static annual review to a dynamic monthly process.

Also, instead of targeting SKUs individually, the system optimizes across the entire SKU portfolio to meet an aggregate service target. Service levels are then calculated for each item at each location.

The inventory planning and optimization process has undergone a substantial makeover according to De Simone, that has resulted in a “step change” in Diageo's business processes.



Inventory Targeting “Makeover” Step Change in Sophistication & Accuracy

DIAGEO
Americas Supply

FROM

1. Annual static process
2. Data integrity issues between Planning system and Inventory Targeting Model
3. Monthly sales forecast error proportionately allocated to Replenishment Lead time
4. Variability over Replenishment Lead time only
5. Assume Normal Statistical Distribution of demand

TO

1. Monthly dynamic process
2. Integrated Planning and Inventory Optimization
3. Daily / weekly / monthly sales volatility measures by SKU location
4. Variability over Order Lead time and Replenishment Interval
5. Statistical Distribution of demand calculated for each item based on history

6. SKUs targeted individually
7. SKUs calculated individually
8. Warehouses targeted individually / no consideration for dependent demand
9. No scenario modeling capabilities
10. Rudimentary supply reliability input

6. Mix optimization across SKU location portfolio to meet aggregate service target
7. Calculating optimal service level for each item at each location
8. Overall optimization for dependent warehouses (multi-echelon)
9. Scenario modeling capabilities (strategically simulate service levels and inventory tradeoff)
10. Comprehensive production and transportation reliability input

Results & Benefits

In less than 6 months, Diageo began meeting the project’s goals, including:

- Improved service to customers
- New efficiencies to release working capital
- Reduce organizational disruptions caused by Out Of Stocks
- Less time spent justifying optimal stock levels

In one example, the US Spirit – Bailment Warehouses Network, which includes 21 warehouses in 18 states, achieved almost perfect service for its customers with a 99.6% case fill rate. This was accomplished in less than 6 months and with a 10% improvement in inventory turns.