



# Collaborative Flowcasting

The completely integrated retail supply chain is now a reality – providing substantial bottom-line benefits for both manufacturers and retailers. Changes at the stores are instantly visible to the manufacturer’s plants, and everyone in the extended supply chain is working to a single set of numbers. Why has this been so elusive, and why is it now possible?

Traditional forecasting and demand planning systems have tackled the retail supply chain from the wrong angle – trying to forecast downward from manufacturing to distribution, never getting beyond shipments out of the DCs. But that doesn’t tell you anything about which items are actually selling in each store. In short, it doesn’t account for actual consumer demand, which is at the heart of the “demand driven” or “sense and respond” inventory strategies required in today’s consumer driven economy. What’s more, these forecasts are not linked to store and supply chain execution systems, such as perpetual inventory control, to react efficiently and effectively to changes in demand. Clearly, a new approach was needed.

Fortunately, there is a new approach that makes perfect sense: start your forecast at the item level within each store – where true consumer demand begins – and flow this up through the supply chain to drive all other activities, from the store shelf to manufacturing plants & raw material suppliers. This is Collaborative Flowcasting.

## How is Collaborative Flowcasting Different?

Collaborative Flowcasting is based on the principles of Distribution Resources Planning (DRP). In fact, the widely acknowledged “father of DRP,” André Martin, is the creator of Collaborative Flowcasting, and CEO of RedPrairie Collaborative Flowcasting Group, LLC.

## Where Collaborative Flowcasting departs from DRP is in three important areas:

- It is based on actual store level item demand
- It is scalable to handle the huge volume of data at the store level
- It is integrated to RedPrairie’s industry leading store and supply chain execution systems

Traditional DRP and demand planning systems have been limited to the DC level. They are not integrated with store POS and inventory systems to give the true picture of consumer demand. They also are not able to scale to the tremendous volume of data this entails.

Collaborative Flowcasting, in comparison, starts at the item by store level, tying in POS and store inventory data. This is far more accurate than any statistical forecasting approach, and the forecast is refreshed daily based on actual store results. A technology breakthrough allows Collaborative Flowcasting to efficiently handle the mountain of detailed data involved in this process.

What the joint venture with RedPrairie brings to the table is the integration to industry leading supply chain execution systems (WMS, WFM, TMS) and store operations systems (task management, inventory management) that cannot only efficiently direct the work and flow of goods throughout the replenishment process, but can also calculate the costs at each level so intelligent distribution decisions can be made.

## Benefits

Collaborative Flowcasting provides benefits not possible with traditional forecasting systems. It begins with a single set of numbers and a model of the business used by everyone in the extended supply chain from the store shelf all the way back to raw material suppliers. Now:

- Manufacturers have extraordinary, up-to-the-minute visibility into the needs of their retail customers, and as a result, can provide outstanding customer service
- Retailers get the products they need to satisfy their customers, reducing out-of-stocks and overstocks
- Both manufacturers and retailers can significantly improve promotion effectiveness & profitability through continuously updated store-by-store recalculations
- Both manufacturers and retailers can reduce safety stock at all levels because they have a more accurate picture of demand
- Stronger, more effective collaborative relationships are built between manufacturers and retailers, allowing both groups to grow and improve the business rather than fighting fires
- Inventory planning and replenishment execution become an integrated process, enabling manufacturers and retailers to model the costs of inventory decisions and react to changes in demand more quickly and intelligently

## Capabilities

Collaborative Flowcasting begins with a single model of your complete supply network, from the store shelf up through multiple levels of distribution to manufacturing. The system starts by analyzing up to two years of POS data for each item at each store, if available, smoothing demand aberrations to arrive at a detailed one-year store demand forecast. This item by store forecast is then “flowed” up through successive levels of the supply network, calculating each successive level as the sum of the levels below it.

The demand forecast is adjusted to account for planned promotions and new product introductions. Previous similar promotions or product introductions can be used to predict the impact on demand at a detailed store level. This also gets “flowed” up through the supply network forecast. The result is a single, consumer demand driven forecast across all levels of the supply network that is magnitudes more accurate, and longer range, than traditional DRP forecasts.

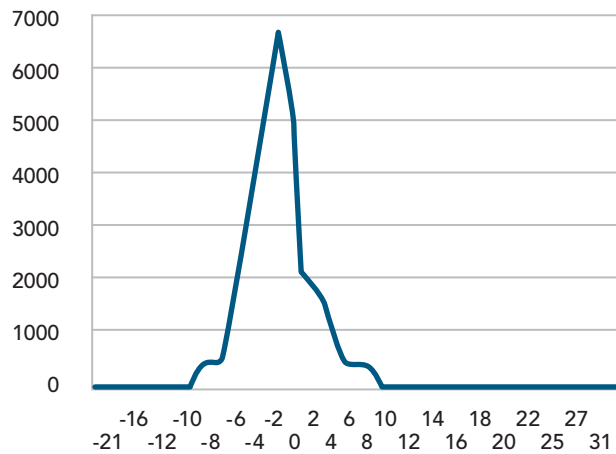
Of course, even the most accurate forecast falls victim to changing circumstances and events. That is where

RedPrairie Collaborative Flowcasting really differentiates itself. First, Collaborative Flowcasting analyzes actual store results daily to refresh the forecast at all levels. Not only can this be used to adjust production and distribution plans, it can directly impact execution of production schedules, distribution and replenishment at distribution centers, DSD depots and retail stores. And because RedPrairie systems understand the human, equipment and transportation costs to execute these tasks, they can help management make sound decisions on how best to react.

Figure 1 shows the accuracy of Collaborative Flowcasting predictions between a manufacturer and a retailer one month into the future. The actual orders are tightly clustered around the predictions, with an average absolute error of 2 to 3 days. This level of accuracy is a quantum leap in supply chain integration, with significant implications for inventory levels, customer service, and distribution channel selection (cross-dock, flow-through, etc.).

**Figure 1 – Flowcasting Accuracy**

Refer Date Variation



## Summary

Collaborative Flowcasting is a fundamentally different, and improved, way to forecast and execute consumer demand driven operations. More accurate forecasts, a single, mutually agreed-upon set of plans, and improved execution drive increased revenue and reduced costs. The results are real – one major retailer increased store sales of the supplier’s food products 20%, reduced DC out-of-stocks 86%, and increased DC inventory turns 10% over the 2008 holiday season. Thus, the manufacturer and the retailer were both more competitive and profitable. It’s time to put this dramatic new approach to work for you.