

# Optimising supply chain functionality to better serve the customer

Anglo Vaal Industries and service provider VSc Solutions received a Silver Award for outstanding achievement in logistics for re-aligning distribution activities to optimise supply chain functionality.

**A**nglo Vaal Industries (AVI) distributes a diverse spectrum of beverages, snacking ranges, chilled and frozen foods, fashion items and out-of-home offerings. The AVI network was sub-optimal with multiple touch points and inefficient primary distribution lanes resulting in low customer service levels and high supply chain costs.

The assignment of customers to distribution centres was inefficient with some customers being serviced by more than one DC. Distribution planning was mostly manual and where planning tools were in use they were not being optimised. Distribution processes were inconsistently applied across multiple sites. There was no use-of-vehicle and driver management and tracking systems, and no ability to compare planned to actual route compliance.

Sales representatives were underutilised as call cycles were not aligned to distribution delivery cycles and inefficiently planned. Legacy demand forecasting systems in use were laborious and did not produce sufficiently accurate forecasts. Replenishment planning was conducted on a geographic/location based approach leading to sub-optimal product flows.

In summary, there was a litany of circumstances indicating a disaster: a combination that almost predictably resulted in low customer service levels and high supply chain costs.

The solution can be summarised into three components:

- A distribution planning centre of excellence was established to perform distribution planning on a national basis to replace the inconsistent and isolated planning at site level. A tactical distribution modelling exercise was performed to balance territories and assign optimal servicing days to customers.
- Roadshow Routing and Scheduling Software was deployed to optimise operational distribution planning. TrackSA, a vehicle and driver management and tracking solution, was deployed in all vehicles and Daily Route Manager (DRM) deployed. DRM, a route compliance solution designed exclusively by VSc Solutions, allowed the ability to monitor actual route compliance to planned route.



- The AVI network was remodelled using i2 Supply Chain Strategist. The replenishment rules (location based) were assessed to determine if they were still optimal (based on changes in costs and demographics).

A number of changes were implemented:

- The Middleburg and Klerksdorp depots were closed, and the Nelspruit and Bloemfontein facilities converted into stocking locations. Secondary distribution from Isando and Rosslyn were combined, and a DC established in Rosslyn.
- ToolsGroup DPM was deployed to optimise inventory levels to meet the required service levels. DPM replaced the existing demand planning solution, simplifying the process and improving demand forecasting accuracy.
- Planning processes were re-engineered, and organisational structure, roles and responsibilities re-aligned to supply chain requirements.
- The changed network structure resulted in reduced network complexity and streamlined inter-facility movements.

Some of the results included:

- 5 percent preliminary increase in customer service levels
- 18 percent Improvement in forecast accuracy
- R25,9-mn reduction in supply chain costs
- 23 percent reduction in National Brands and Retail Beverage fleet
- 30 percent increase in vehicle utilisation
- 25 percent increase in number of orders delivered per truck per day.