

Supply chain management solution for hindustan unilever : case study

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Existing Situation With nearly 1000 products, HLL distributes them nationally through a network of four warehouses, more than 40 agents, 7, 500 wholesalers and a number of large institutional customers. HLL, in its endeavor to move from the existing push-based planning system to a pull-based system, wanted to build a Supply Chain Management (SCM) solution that would ensure informed decisions are made during procurement, manufacturing, replenishment and distribution. Specifically, the distribution operation was suffering because of a high margin of errors. There were frequent instances of excess finished-goods inventory reaching HLL's distribution centers. This problem was compounded by increasing instances of out-of-stock inventory, which led to demand-supply mismatches. Finally, the system was not able to handle the dynamic nature of the company's source-destination network, and adversely affected the demand-fulfillment rates.

HLL needed a solution that could provide visibility across its supply chain. Considering the diverse nature of the company's customer base, the solution needed to prioritize the demand-fulfillment process based on individual profiles. The company also required precise vehicle loading plans for the source-destination lane in tune with its dynamic network. Tool Selection In an effort to streamline its distribution network, HLL initiated a comprehensive project to seamlessly integrate its supply chain and promote collaboration. The key objectives of the initiative were: Implementation of a Supply Chain Planning and Optimization Tool. Development and

implementation of a Web-enabled solution to extend visibility across the company's network of wholesalers.

Adexa's iCollaboration Suite 5. (Supply Chain Planner and Strategic Planner) was selected as the tool for production, distribution and materials functions. The Supply Chain Planner's (SCP) powerful constraint-based planning capability delivers detailed-level plans. On the other hand, Strategic Planner allows HLL to decide on the product mix and manufacturing locations, and optimizes the source-destination network, on a long-term basis. Our Approach MindTree has a portfolio of process models, management tools, and operational best practices, which can be customized to address any SCM engagement. MindTree has a specific methodology for Adexa.

Adexa-certified consultants from MindTree worked closely with HLL's IT application team and consultants from Adexa in designing a detailed system architecture, system building and model, and system-verification steps. Solution MindTree evaluated the key supply-chain processes for each of HLL's lines of business. The solution is geared to fulfill supply and demand. It gives precise production plans for all the factories and a replenishment-based distribution plan for all the distribution centers. All entities in the supply chain were modeled on the Adexa iCollaboration suite.

The key inputs for building the SCM model were distribution demand for all stock keeping units (SKUs); factory-wise capacities; and linkages between the distribution centers, finished goods warehouses, factories and suppliers. With inputs from HLL's team, MindTree contributed towards modeling the following requirements with respect to key resource and material

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constraints: Shop-floor complexities (SKU-specific levels for bill of material, resource and capacity constraints) to arrive at a feasible production plan using discrete and continuous modes of consumption. Site-specific holidays as capacity patterns. Collaborative production planning optimizing individual plan utilization, time fences, customized threshold logic, and post-processing time for quality clearance at plants. Equitable demand fulfillment (both planned and extraordinary) for finished goods based on customer prioritization across the supply chain.

Periods of cover and safety stock at distribution centers for SKU rationalization, handling consumer promotions, etc. Handling in-transits on source-destination lane. Meeting the demands from individual whole salers by direct dispatches from factories. Precise vehicle load plans for shipments from the factories and warehouses. Dynamic allocation of source factories to each distribution center.

Data integration between the SCP and ERP systems was addressed with the implementation of MFG/PRO. Implemented specific requirements through plug-in business rules in Supply Chain Planner such as work-order sizing and method (production/transportation) selection. For implementing the requirements mentioned above, MindTree developed an exclusive set of the following algorithms: Demand prioritization and equalization logic, based on pre-determined “starvation levels”. Balancing and scheduling logic. Transportation logic.

Vehicle loadability logic. Results This Adexa implementation has improved HLL’s proactive planning capability and manufacturing and distribution

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efficiency, which have helped ensure a more responsive supply chain. The solution has also helped the company gain visibility across its supply chain, reduce distribution lead-time, and minimize the total supply-chain cost. Stock availability, measured in terms of Stock Service Index, has significantly increased, moving from 65% to 90%. The company has also realized a more equitable distribution of stocks with overall mal-distribution reducing from 19% to 6% of total volume transported. Manual intervention has come down from 40% to sub-zero levels.

Direct dispatches from the factories to the wholesaler network have increased. Finally, in terms of volume, indirect dispatches from finished goods warehouses have come down from a range between 70-80% to between 30-40%. Tools Used Sun Solaris (OS), Windows NT, Adexa iCollaboration 5. 0 (Supply Chain Planner and Strategic Planner) and TCL/UCL.