



INTEGRATED GENERAL SYSTEMS ANALYSIS
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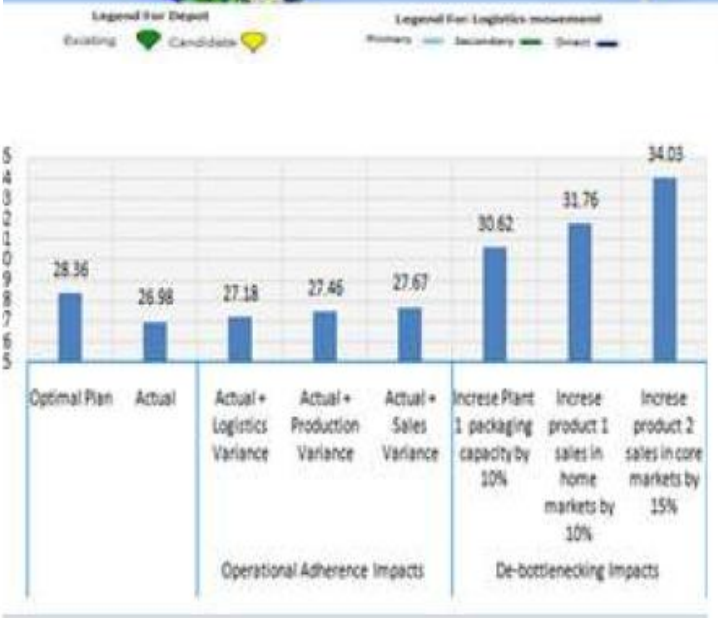
Integrated Demand-Supply Planning & execution (IDSPe) Platform

S&OP Case Study

Maximize Contribution / Minimize Total Cost to Serve with IGSA Optimization Platform



Case study : Reducing Total Delivered Cost through Optimized S&OP for Leading Indian Cement Manufacturing Company



Water fall analysis

Challenge

A leading Indian cement industry engaged IGSA Labs to assist its monthly production and outbound logistics allocation planning for the distribution of cement products across all markets in India. Prior to the engagement, the client was using an allocation planning system formulated in MS Excel with optimization in Excel-Solver. This system had several limitations, viz. it made allocation plan between plants and markets and did not consider warehouses, not consider rail and road as separate transportation modes, minimized only the primary transportation cost. In short, the system did not yield total optimal plan, and required lot of manual work required to arrive the dispatch plan.

Solution

IGSA team understood the objectives of cement logistics and production planning, inputs to the total delivered cost minimizing allocation plan, and IGSA configured its IDSPe S&OP module to the client's requirement. The OR model of the solution developed by IGSA in GAMS/CPLEX, was modified to incorporate all the components of total delivered cost and the constraints. The solution's user interface, developed with J2EE, and the Oracle database were also tailored to seamlessly align with the IT system and database used by the client. Deployed solution in cloud as SaaS software-as-a-service (SAAS).

Result

- Automation of the process of monthly production-logistics planning, compliance tracking, and analysis, resulting in saving of managerial time for value-added analysis and decision making
- Reduction in all India total delivered cost of about 2 % to 10% as a result of optimal production and outbound logistics planning under several what-if scenarios