



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

Realtime Order –Optimal Source Assignment (S&OE) Case Study

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



Case study : Realtime Order-Optimal Source Assignment for Leading Indian Cement Manufacturing Company in Gujarat State

Challenge

A leading cement company in Gujarat initiated the digitalization of sales order processing using the Salesforce platform and engaged IGSA Labs to assist with real-time order optimal source assignment and the preparation of a daily dispatch plan for cement products across all markets in Gujarat. This was done under dynamic constraints, including order delivery priority, client-preferred sources, logistics resources, stock availability, and more, while also tracking plan versus actual order execution.

Solution

The IGSA team understood the objectives of real-time order optimal source assignment and configured their IDSPe S&OE module to meet the client's requirements. The OR model of the solution, developed by IGSA in GAMS/CPLEX, was modified to incorporate all dynamic constraints. The solution is integrated with the client's Salesforce application, Dealer Management System, and SAP for stock, SIT, and order fulfillment data.

- Order details will be entered by the sales officer or dealer and sent to the IDSPe S&OE module. The S&OE module will then return the paths with cost details, stock availability, delivery mode information, and the assignment of the optimal source based on dynamic constraints.
- The sales officer can proceed with the source and mode suggested by the S&OE module or seek approval for choosing a source and mode other than the one recommended by the S&OE module

Result

- Automation of sales orders, including optimal source and mode assignment for the sales team and dealers, compliance tracking, and analysis, resulting in managerial time savings for value-added analysis and decision-making
- Auto stock transfer generated by S&OE will streamline inventory management and facilitate a reduction in logistics costs of approximately 2% to 10%, resulting from optimal daily production and outbound logistics planning under several what-if scenarios.