white paper

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Enabling Technology Through Outsourcing

In the mid-1990s, Mobil replaced its decentralized supply chain approach with a streamlined 3PL approach, contracting supply functions to the MSAS Supply Chain Solutions Group. In utilizing MSAS, Mobil hoped to reduce its fleet, centralize its railcar management, and increase its shipment visibility; MSAS (and its Mobil-targeted Rail Transportation Service Group) successfully achieved these goals, reduced costs, and increased productivity and efficiency as well. Current objectives for both Mobil and MSAS include customer order placement and on-time delivery in a JIT environment; the future includes increased effiency through technological and software solutions.

The Beginning of a Partnership

In 1995, Mobil Oil began an extensive process of evaluating various components of its supply chain, including its rail transportation management programs. Its goal was to assess the entire process, develop system improvements, and maximize efficiencies throughout the organization. Based upon recommendations presented to Mobil by Andersen Consulting, Mobil recognized the value of outsourcing the necessary expertise relative to rail transportation management.

Until this point, the Mobil operating model was a very decentralized approach, with each individual plant site operating its own rail program. Economies of scale and a network view of rail fleet activity were lacking. Mobil realized that developing the internal resources to accomplish the mission would take longer and would be a greater expense than acquiring the systems and the knowledge from an experienced third party logistics provider such as MSAS Global Supply Chain Solutions Group.

MSAS offered Mobil customized solutions to address its areas of need quickly, efficiently, and cost-effectively. The components of the solution included trained personnel, tested systems, customized reports, and a proven continuous improvement methodology. Additionally, MSAS's core focus of acquiring continuously improving technology and supply chain process knowledge afforded Mobil the benefit of ongoing enhancements, which were not a core competency within the Mobil organization.

Program Objectives

The relationship between the two companies group began with MSAS managing the Mobil Lubes Division fleet (approximately 1,100 cars). Specific objectives outlined within this program were to achieve three primary goals: fleet reduction, centralized railcar management, and increased shipment visibility. MSAS, utilizing QTSI's track and tracing system, helped reduce Mobil's lube fleet by approximately 150 railcars. MSAS provided centralized management of rail cars by staffing resources in a command center environment, as well as at high-volume shipping locations.

MSAS has been successful since the program's inception in reducing cost, increasing productivity, and keeping Mobil Lubes product moving efficiently through the supply chain. This success opened the door for MSAS to manage the bulk of Mobil Oil's rail movement. Through this evolution, the Rail Transportation Services Group (RTSG) was created.

Regarding rail transportation specifically, increased focus is now given to customer order placement and on-time delivery processes, including plant sourcing, order quantity, order frequency, and lead times in a JIT environment. Loading cars to maximum capacity, railcar turnaround time, scheduled ship date compliance, intransit, and on-hand inventories at destination are all reviewed daily and measured. Additionally, entirely new scopes of work have been introduced, including managing the export of product destined for South America

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through all transportation modes for the Chemical Products Division.

The program objectives included reduced rail transit times, decreased variability, fleet sizing analysis, rail car availability, and mode selection optimization. In addition to fleet reduction and freight management, the RTSG has moved to include program performance and on-time delivery. Over time, the objectives expanded significantly to include an end- to-end Supply Chain Management concept.

MSAS Resources

MSAS has provided Mobil with a broad scope of tools to create customized solutions. Technology-based resources such as computer networking, e-commerce capability, and state of the art software tools form the backbone. MSAS personnel offered professional logistics training and experience that, combined with a focus on identifying opportunities and improving processes over time, provided the intelligence to effectively utilize the technology tools. MSAS' financial depth and stability ensure longevity and ability to stay current with advancing technology. Additionally, MSAS provided global reach through all modes of transportation and pack types, including specialized containers like ISO tanks.

Mobil Super Distributor Center (SDC) program

An example of combining technology and transportation process management capabilities into a customized solution is the Mobil Super Distributor Center (SDC) program, which MSAS developed and operates for Mobil.

The SDC program includes optimizing inbound transportation of chemical additives from multiple supplier locations to a warehouse in Beaumont, TX, and managing the physical distribution of product from the warehouse to South America. The outbound leg includes the movement of freight inter-modally from the 31 chemical additive suppliers are located on the East Coast, with several in the South and Midwest. The outbound container shipments are transported to ports in Houston and loaded on vessels for various destinations in South America.

Key to the success of the SDC is MSAS's custom-designed Distribution Center Application (DCA), which is used for warehouse management, inventory control, and order processing. This Internet-enabled system is fully scalable for current or future programs, and features a Sequel Server back end with a Visual Basic front end. The system was designed and built exclusively for the Mobil SDC to fully interface with MSAS' transportation management application (TRACS). The DCA optimizes inbound orders by consolidating several supplier orders to achieve order efficiency.

The core of optimization in TRACS is the TRACS Load Builder. The Load Builder can accept a set of filtered orders or can be triggered to dynamically run a filter against all shippable orders. The Load Builder considers all delivery options, based on all carrier, consignee, and ship point parameters, and develops the optimum shipping plan to meet service requirements. All shipments that are run through TRACS are assigned a unique reference number that is exported to our Multi Modal Billing System. Invoices are then generated with all pertinent load information.

This powerful combination provides MSAS with the ability to manage warehousing operations and optimize the transportation of the freight. Prior to the implementation of the SDC, Mobil had neither warehousing capability nor transportation optimization capability to combine larger quantity warehouse replenishment orders into truckload shipments.

The Future

The SDC program is expected to grow, with plans underway to expand into other countries. MSAS is also developing another initiative for Mobil Chemical Products division, to implement and execute transportation of freight via truck, rail, inter-modal, and ocean vessel.

The ultimate vision for the program includes end-to-end Supply Chain Management for all Mobil products moving through the physical distribution network. A key driver is the customer's desire to optimize manufactured and purchased materials (finished and raw), transportation processes and inventory pipelines, compress order to delivery lead times, and improve on-time customer delivery. Competitive advantages of cost savings and service improvement enhance customer loyalty, market share, and profitability.

MSAS Supply Chain Solution Group operates as a non asset-based, full-scope logistics services provider. As a result, MSAS maintains no bias in the solutions created for specific customer needs. Strategic alliances and licensing agreements with top industry software creators like i2 Technologies, McHugh Software, and Insight provide internal data collection, analysis, and distribution expertise in a Citrix and SQL Server environment. EDI functionality and Internet-order entry and visibility capabilities provide the advanced technology and flexibility to design each program to meet individual needs.

This plug-and-play approach has enabled the creation of powerful networks of data collection, analysis, and exchange to create both process knowledge and tactical decision support information. The opportunities to streamline and improve processes using MSAS capabilities are clearly evidenced by the Global Optimization program underway for Mobil CPD. The ability to link customized tools together to provide end-to-end supply chain inventory management and visibility in a multi-source, multi-customer, multi-modal environment will optimize resources and assets on a global scale.

The key to the success of Mobil and other MSAS customers is to continue our commitment to providing an objective execution of integrated logistics networks. We recognize that we must provide cutting-edge, forward-thinking technology solutions to every challenge our customers face. We are also focused on continued development of strategic relationships in software solutions, and to remaining highly competitive as technological advances in the industry emerge.