# ARGO EFESO MANAGEMENT CONSULTANTS

## CHEMICAL AND PROCESS INDUSTRIES

# RAIL LOGISTICS OPTIMIZATION



A Chemical Manufacturer Assesses Its Supply Chain To Identify Cost Savings Initiatives Across The Enterprise

### Situation

A private equity owned global chemical company wanted to assess its supply chain capabilities. The company had acquired numerous other businesses throughout North and South America, and ships chemicals globally from both continents.

The company had long been aware of the decline in its customer service. Despite the diligent efforts of associates to uphold customer relationships during order delays and respond swiftly to unexpected demand shifts, the delivery aspect suffered specifically in rail transportation. The company lacked clear visibility into the dwell times of their rail cars, making it difficult to ascertain costs or establish benchmarks. Additionally, the maintenance of railcars varied across different locations, resulting in inconsistent service and necessitating a larger fleet of rail cars, thereby escalating costs.

In the meantime, container port detention fees were nearing the \$1-\$1.5 million mark due to containers arriving at incorrect times at the port. Moreover, the system integration among different plants across North America lacked a standardized reporting process for inventory, resulting in inconsistent information for the team to effectively optimize monthly production. After recently investing in and implementing real-time data systems at its different plants, the company encountered a challenge where the production smoothing process was unable to access the same data. As a result, continuous emails and discussions became necessary across the various teams to compensate for the lack of data integration.

### **ARGO-EFESO's Actions**

ARGO-EFESO swiftly assembled a team comprising logistics, chemical, and rail experts to examine specific areas with the highest potential for cost savings. Over the course of an 8-week analysis, the ARGO-EFESO team conducted two comprehensive visits to production centers, identifying infrastructure challenges and assessing leadership behavior. They also began compiling a list of opportunities to measure potential savings and costs for various projects.

Through interviews with over +85 employees and the creation of numerous analytical studies on supply chain processes, the ARGO-EFESO team thoroughly explored potential opportunities for savings. Collaborating with the client's team members, they evaluated changes that had the greatest likelihood of long-term success and measured the potential impact. As a result, they proposed improvements across four distinct workstreams, projecting an annual savings potential exceeding \$6-\$10 million USD. After thoroughly examining over 100 potential company initiatives, ARGO-EFESO prioritized several workstreams with specific initiatives. Eventually, these solutions were categorized into four distinct workstreams. Each workstream focused on analyzing specific initiatives and identifying opportunities for cost savings. The four workstreams were as follows:

- 1. Fleet Sizing and Positioning: ARGO-EFESO delved into dwell times and rail car usage. revealing an average duration of over 20 days. By targeting a realistic reduction of 20%, the client could seize an opportunity to save nearly \$2 million USD. While rail delivery is cost-effective for long distances, it proved inefficient for shorter hauls. ARGO-EFESO analyzed that a significant number of customers received rail deliveries within 250 miles of the production facility. Transitioning some customers to truck delivery yielded savings exceeding \$1 million USD. Combined with two other initiatives, this workstream presented a potential savings of approximately \$3.5 million.
- Maintenance & Infrastructure: ARGO-EFESO identified substantial costs associated with sending railcars for maintenance, resulting in idle railcars and charged routine maintenance expenses by the rail carrier. Developing a maintenance program and constructing infrastructure for railcar storage and service/washout areas could generate savings surpassing \$5 million USD.
- 3. Plant to Port Costs: In examining transportation expenses, ARGO-EFESO's team discovered port detention fees amounting to almost \$1 million annually. A root cause analysis uncovered poor scheduling of product departures from the facility, contractual limitations with drayage, and overall challenges with brokers. Exploring alternative transportation broker options and enhancing coordination with port schedules should eliminate these fees entirely.

4. Numerous disconnected systems operated without proper coordination. The ARGO-EFESO team thoroughly examined the forecast and production scheduling processes and recognized the potential to harmonize them using an existing tool created by the client. Although process coordination itself didn't yield direct savings, implementing a rigorous and coordinated Sales, Inventory, and Operations Planning (SIOP) process, where all associates have access to real-time accurate data, enhances the effectiveness of other cost-saving initiatives, leading to maximum savings.

Having identified the workstream initiatives, ARGO-EFESO and the client steering committee assessed potential capital expenditures to prioritize the planned implementation of these initiatives. Simultaneously, ARGO-EFESO conducted evaluations to identify potential scenarios that could jeopardize the identified savings. For example, they discovered that some customers were utilizing chemical rail cars for storage, which impeded the conversion to truck delivery. Proper evaluation of savings was a critical final effort in the analysis final report.

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#### Figure 1: Shipment Weight Per Product and Delivery



Various types of logistics analysis helped lead to cost savings plans

#### Figure 2: Detailed GANTT



Each Workstream received a detailed plan for implementation

#### Results

- ARGO-EFESO conducted over +85 client associate interviews which provided a true collaborative environment at all levels in production facilities and at the headquarters
- Over 100 cost savings initiatives were identified and evaluated by the ARGO-EFESO team
- Total savings opportunities identified at over \$10 million USD
- Detailed implementation schedule delivered to client for each cost saving initiative with identified ARGO-EFESO team to help facilitate the plans.
- Scheduled follow ups by ARGO-EFESO to ensure processes and behaviors leading to changes are sustained long after implementation ends



ARGO-EFESO is an operations improvement consulting firm that breaks through the traditional barriers of the consultant-client relationship. We are hands-on consultants who deliver real results and no excuses.