



On-Site Fuel Service Transportation Optimization





On-Site Fuel (OSF) Service Overview

Founded in 1996 and located in Brandon, MS, On-Site Fuel Service (OSF) is a privately owned, 24-hour diesel and gasoline delivery service for clients in 10 states across the nation. With an estimated annual revenue of \$170 million, OSF uses their dedicated fleet of tanker vehicles to deliver fuel to client’s vehicles and equipment during off-peak hours, and in turn, enables clients to maximize productivity during working hours. OSF provides different levels of mobile or bulk fueling services for local, regional, and nationwide vehicle/equipment fleets. OSF has become extremely vital in the construction industry, where down time on equipment equivalates to lost profit. In addition, OSF enables emergency crews to keep working when an emergency outage occurs.

OSF Current Supply Chain Practices

OSF’s number and types of clients vary across different cities, states, and regions. Prior to this case study, OSF’s efforts have been focused on the operational level rather than the strategic configuration of their current network. For this reason, it becomes vital to optimize current resources such as fuel delivery trucks, truck drivers, and helpers for increased efficiency prior to expanding into new markets.

Applied Methodology

Utilizing Llamasoft®’s Supply Chain Guru X software, a baseline model of OSF’s current network can be used as a benchmark for comparison against alternative scenarios. The baseline model considers existing demands, asset allocations and usages, and other operating parameters. A summary of model elements can be found in Table 1. Utilizing a calibrated baseline model, Supply Chain Guru X allows for “what if” analyses to be conducted by relaxing various constraints and determining their impact on the overall optimization model.

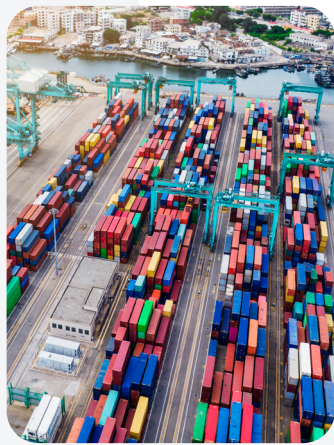


Table	Description
Sites	Customer Loacations
Products	Fuel Type Required by Customers
Transportation Assets	Assets (Equipment) Used for Routing
Demand	Demand for Fuel
Sourcing Policies	Origin of the Fuel
Rate	Vehicle Transportation Costs
Asset Availability	Vehicle and Driver Time Constraints

Table 1: Model Inputs



Results

Utilizing a week of data from OSF, the baseline model concluded a total operating cost of \$114k per week or \$5.9 million annually. Three scenarios were created and analyzed with respect to the baseline model. Figure 2 shows a sample optimized routing configuration for a single OSF location. In conclusion, utilizing transportation optimization, OSF was able to reduce their weekly operating cost by \$25.5k per week or approximately \$1.3 million annually, resulting in a 22% reduction compared to the baseline model.

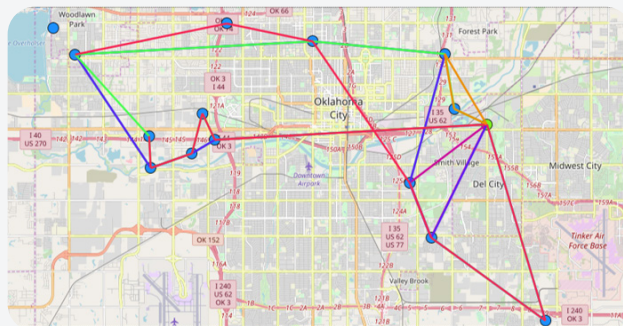


Figure 1: Granite City DC Site Layout

Model	Weekly Operating Cost	Weekly Savings	Annual Savings
Baseline	\$114,000	-	-
Scenario 1	\$108,000	\$5,200	\$270,400
Scenario 2	\$98,800	\$15,200	\$790,400
Scenario 3	\$88,500	\$25,500	\$1,326,000

Table 2: Model Results

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