

Aspen Fleet Optimizer

An enterprise-wide solution for inventory management and truck transportation optimization, enabling visibility and flexibility across the supply chain.



Aspen Fleet Optimizer delivers value by:

- Forecasting product demand for each site
- Enabling inventory control to minimize runouts and haulbacks, maximize delivery windows and reduce excess inventory
- Optimizing transportation schedules to minimize distribution costs and lower cost per volume delivered

Aspen Fleet Optimizer (formerly Aspen Retail) is a web-based solution that offers the capabilities required to achieve integrated supply chain management in secondary petroleum distribution. It is designed to meet challenges related to order management, demand forecasting, fuels inventory management, replenishment planning, transportation scheduling and execution management. With Aspen Fleet Optimizer, organizations can realize the most profitable schedule to fulfill demand and maximize margins.

The Challenge: Managing Supply Chain Logistics in Real-Time

In today's complex and dynamic downstream environment, secondary petroleum distribution teams are dependent on instant and accurate information to make decisions about supply, inventory, customer demands, and scheduling. Poor interaction and limited visibility across the petroleum supply chain, however, have historically led to increased overhead, excess inventory, increased supply shocks, and high distribution costs.

The AspenTech Solution: Improved Visibility Drives Efficiency

Aspen Fleet Optimizer is the only secondary petroleum distribution solution with the ability to address the entire "order-to-cash" business process workflow to deliver maximized margins. Aspen Fleet Optimizer uses two advanced decision support tools — Automated Stock Replenishment and Resource Scheduling Optimization. These tools enable petroleum marketers to financially and operationally optimize each component of the overall logistics business process with a new, intuitive graphical user interface.

The ability to support and exploit a real-time information environment ensures that the organization is consistently able to evaluate and optimize trade-offs, achieving the best possible results. The new Map Monitor allows the dispatcher to visualize the schedule as it is being executed. Boasting the largest petroleum client base of any secondary distribution solution, Aspen Fleet Optimizer is designed to support the diverse users and business cases that characterize the petroleum secondary supply chain.

Automated Stock Replenishment (ASR)

The Automated Stock Replenishment (ASR) module manages petroleum product inventories and creates demand forecasts and replenishment plans for service stations, convenience stores, truck stops, airports, and other commercial operations. The ASR module consists of four components that manage data, demand, proportionality, and replenishment planning.

- **The Data Quality Manager:** Ensures rapid consolidation and automatic reconciliation of sales and inventory information.
- **The Demand Planner:** Analyzes historical sales patterns and selects the optimal forecasting algorithm to predict future sales.

Aspen Fleet Optimizer offers a total solution footprint covering the entire order fulfillment process of petroleum products from order placement via phone or web, through to product sourcing, transportation scheduling, carrier nomination, and loading and delivery confirmation. Using the industry-recognized best practice of “proportional inventory management” and proprietary heuristics from AspenTech, Aspen Fleet Optimizer guarantees the lowest cost-per-volume delivered scheduling solution and has been adopted by several major oil companies worldwide.

- **The Proportionality Manager:** Uses the Demand Planner sales forecast to establish the runout point and maintain inventory in proportion to sales activities.
- **The Replenishment Manager:** Matches perfectly proportional replenishments to transportation resources and generates a “can fit” replenishment plan with the largest possible “delivery window.”

Resource Scheduling Optimization (RSO)

The Resource Scheduling Optimization (RSO) module generates the most profitable over-the-road transportation schedule to fulfill demand along the retail portion of the petroleum supply chain.

The RSO module consists of four components that manage replenishment and transport resources, provide an optimized solution and allow users to edit the solution:

- **The Replenishment Manager:** Consolidates all future replenishment into an easy-to-sort list.
- **The Transport Resource Manager:** Manages available scheduling resources.
- **The Heuristic Optimizer:** Provides a core scheduling algorithm that develops the most profitable resource schedule.
- **The Solution Editor:** A graphical user interface that displays the final scheduling solution and the financial scorecard.

The new Map Monitor in Aspen Fleet Optimizer allows the dispatcher to view groups, terminals, customers, and trucks in an intuitive environment.



Function	Benefit
Automated Stock Replenishment	
<ul style="list-style-type: none"> ▪ Automated reconciliation of sales and inventory data ▪ Generation of demand forecast ▪ Establish inventory runout point and maintain inventory proportionally to sales activities ▪ Generate a replenishment plan with the largest possible delivery window 	<ul style="list-style-type: none"> ▪ Diminishes runouts and no-fits ▪ Reduces forecast error ▪ Reduces supply chain failures ▪ Minimizes excess inventory ▪ Lowers working capital ▪ Improves resource utilization ▪ Maximizes usable storage
Resource Scheduling Optimization	
<ul style="list-style-type: none"> ▪ Consolidate replenishment management ▪ Manage available scheduling resources ▪ Best-in-class vehicle and routing optimization ▪ Graphical user interface displays the final scheduling solution and financial scorecard ▪ What-if capabilities 	<ul style="list-style-type: none"> ▪ Quickly identifies supply emergencies ▪ Enables fast and automatic truck scheduling ▪ Improves user productivity and manpower savings ▪ Maximizes schedule flexibility ▪ Minimizes transportation costs ▪ Provides visibility into critical operational and financial KPIs ▪ Identifies tactical and strategic operational problems
Automated Customer Service	
<ul style="list-style-type: none"> ▪ Integrated, interactive voice response system for order management, automated stock replenishment and delivery confirmation ▪ Web-based visibility and reporting 	<ul style="list-style-type: none"> ▪ Enables unattended order creation, review and modification ▪ Provides 24/7 access to order status ▪ Improves customer service ▪ Allows daily inventories to be reported and tracked via the web
Data Quality and Error Trapping	
<ul style="list-style-type: none"> ▪ Data accepted into the system is validated and reconciled against past inventory and delivery data ▪ Data discrepancies are highlighted for the user, so that data errors can be scrubbed before beginning the optimization process 	<ul style="list-style-type: none"> ▪ Eliminates “garbage in, garbage out” issue to improve quality of system output ▪ Identifies problems such as bad telemetry readings and detects delivery modifications/cancellations
Integration to Other Systems	
<ul style="list-style-type: none"> ▪ ERP systems such as SAP via light weight adaptors ▪ Automatic tank-gauging systems ▪ Terminal automation systems ▪ On-board truck computer systems 	<ul style="list-style-type: none"> ▪ Facilitates data exchange and collaboration ▪ Reduces operational overhead requirements

AspenTech is a leading supplier of software that optimizes process manufacturing — for energy, chemicals, engineering and construction, and other industries that manufacture and produce products from a chemical process. With integrated aspenONE® solutions, process manufacturers can implement best practices for optimizing their engineering, manufacturing, and supply chain operations. As a result, AspenTech customers are better able to increase capacity, improve margins, reduce costs, and become more energy efficient. To see how the world's leading process manufacturers rely on AspenTech to achieve their operational excellence goals, visit www.aspentech.com.

Worldwide Headquarters

Aspen Technology, Inc.
20 Crosby Drive | Bedford, MA 01730 | United States
phone: +1-781-221-6400 | fax: +1-781-221-6410 | info@aspentech.com

Regional Headquarters

Houston, TX | United States
phone: +1-281-584-1000

São Paulo | Brazil
phone: +55-11-3443-6261

Reading | United Kingdom
phone: +44-(0)-1189-226400

Singapore | Republic of Singapore
phone: +65-6395-3900

Manama | Bahrain
phone: +973-13606-400

For a complete list of offices, please visit www.aspentech.com/locations.