

# Supply & Demand Planning Optimization for Transportation

## What is it?

SAS-powered Supply Chain Solution for Transportation Delivering Efficiency and Scalability with Positive Business and Financial Results

SAS provides a highly automated, fully integrated, supply and demand planning optimization solution for railroads, airlines, freight companies, third party logistics and other transportation companies. The SAS solution breaks down traditional barriers between planning steps for products, transforming revenue and demand-capacity planning into a continuous, flexible process with an integrated and modular suite of products that enable the **demand driven** Integrated Business Planning (IBP) process. It includes advanced analytics for hierarchical demand forecasting, **long and short-range** capacity, asset, revenue, and labor planning managing planning data by revenue, profit, product category in a multicurrency environment.

**Key Differentiators are the ability to perform demand sensing, demand shaping (what if) using data like price, demand shifting, and supply (inventory) scenarios.**

**Forecast accuracy** is the key to better asset, labor, and revenue management. Poor forecast accuracy leads to excess or misaligned assets or lost revenue, obsolescence, excessive expenses, and poor marketing decisions. While you hear a lot about AI and ML (Artificial Intelligence and Machine Learning), SAS has deployed these concepts in thousands of companies. Patents for AI and ML enable SAS to easily handle complex hierarchies and networks. Forecasting demand include **automation**, which allows clients to deploy advanced models (for example: causal models) without statistical knowledge. This combined with **scalability**, allows millions of forecast combinations (example: lanes, products, networks) to be deployed quickly and seamlessly with a greater degree of accuracy providing less human intervention for demand overrides – leading to greater trust and **productivity**. Furthermore, scenario provides simulations needed to improve asset availability at a lower cost. SAS forecasting models include and report the impact of demand drivers on revenue for promotions, subsidies, price elasticity and other external variables. This SAS capability supports eventual demand sensing and shaping (what if) including price and network optimization at location and regional levels.

### Quick Facts

- > Visually analyze route demand data to spot patterns and insights related to sales, expenses, revenue, and exceptions
- > Revenue, profit, labor, product planning
- > Short- and long-term capacity, asset, and labor planning and optimization
- > Integrated strategic and operational planning
- > Monitor revenue planning performance to understand value added or lost at each step
- > What-if scenarios to find out how different variables (like employment, GDP, or pricing) will affect the supply/demand balance
- > Revenue, profit, promotion, and price optimization
- > Integrated multi-currency financial and profit planning

**Consensus Planning** integrates and deploys, with workflow, the demand, revenue, and capacity and labor plans in a friendly workbench environment. This allows demand planners and market planners to coordinate their efforts to enable IBP and revenue planning processes. The ability to integrate customer location, suppliers, transportation networks and macro-economic data with forecasts is also supported. SAS can express demand, capacity and revenue plans using different unit of measures, convert to financial plans in different currencies, provide comprehensive reconciliations, and integrate profit and revenue planning as well as price optimization. **Forecast Value Add** guides demand planning with optimal collaboration.

**Capacity Planning (Supply)** uses SAS' award-winning multi-echelon optimizer to ensure optimized supply (asset) based on input parameters and constraints such as forecast variance, lead time, various costs, network constraints, etc. Included is what-if analysis on complex configurations such as internal and external nodes for store-product, distribution centers, suppliers, networks etc.


**Visual Analytics** provides the ability to visually analyze demand data to spot patterns and insights related to sales, shipments, pricing, promotions, revenue, etc.

**Data Access and Data Quality** is often the keystone to the project's success. Therefore, included in the product is your choice of access engines (SAP, Oracle, etc.) to automate feeds from any data base, and data quality products to flag/impute missing values, duplicates, time stamps.

## Who uses the proposed solution?

95% of fortune 1,000 companies rely on SAS for analytics and especially forecasting to better their supply chain results. These include some of the largest and well-known railroad, airline, freight and logistics companies.

## The Power of the PARTNER

 **CT Global Solutions** is a strategic SAS partner that helps turn your data into profits. A Gold SAS alliance partner for 15 years, CT Global has demonstrated domain expertise in profit analytics, financial management, demand planning and decision optimization. CT Global puts SAS to work and amplifies its value to MAKE EVERY DECISION COUNT.

**SAS** is the leader in analytics. Through innovative software and services, SAS empowers and inspires customers around the world to transform data into intelligence. SAS gives you THE POWER TO KNOW®. 92 of the top 100 companies on the 2018 Fortune Global 1000® use SAS customers, [see their stories here](#).

Creating an enterprise analytics platform culture with an emphasis on forecasting leveraging time-series, machine learning, deep learning algorithms, and causal factors, should be #1 in corporate IT priorities. SAS & CT will get you there.

### Customer Validation

- > Improved precision for origin-destination revenue management at multiple rail & logistic companies
- > Optimized labor management with improved availability of drivers and engineer
- > Improved short term and long-term equipment planning lowering costs and asset availability
- > Increased fleet readiness with improved predictive maintenance
- > Lower service parts inventory
- > Route network optimization reducing delivery lead time
- > Improved profitability by lowering labor, equipment, delivery and inventory costs



To talk to a CT Global specialist, please contact us at [info@ctglobalsolutions.com](mailto:info@ctglobalsolutions.com)