Transportation Guru™
Transportation Network Design Software

- Define Efficient Routes
- Model Asset Utilization
- Optimize Mix and Model
- Reduce Landed Cost
- Determine Facility Footprint
- Simulate Service Levels

LLamasoft®
Supply Chain By Design
Software for Transportation Network Design

Transportation Guru™ is the only application that gives designers the tools to integrate network design and transportation routing. By designing with these integrated technologies, users are able to:

- Simulate near-term cost and service improvements to existing transportation operations
- Identify longer-term strategic improvements to the global transportation network
- Run continuous what-if analysis of new strategies, disruptions, constraints and business challenges

Transportation Guru includes a wide range of analysis techniques, enabling users to identify optimal DC-to-customer assignments, determine the ideal mode mix, create optimal multi-stop delivery or pick-up routes, determine the best utilization of assets, evaluate driver work schedules, or even perform service-based greenfield analysis.

Using Transportation Guru, you can continuously improve your end-to-end transportation network and quickly adapt to business changes to stay ahead of the competitive curve.
Solve Complex Problems

...Through a Wide-Range of Modeling Options

Vehicle Routing
- Compare optimal multi-stop routes to less-than-truckload shipment costs to determine the ideal mode mix
- Identify the savings achieved by continuous moves on inbound and outbound loads, mode selection and DC location
- Develop alternative routes based on various vehicle sizes and carriers
- Analyze multiple cost types related to distance, stops, surcharges and discounts, driver time and overnight hauls
- Include constraints related to shipment time windows, business hours, and trip characteristics such as maximum route time or number of allowed stops by vehicle type
- Designate vehicle routes as round trip or one-way
- Enforce relationships to prevent incompatible products from being combined on the same route
- Include constraints related to shipment time windows, business hours, and trip characteristics such as maximum route time or number of allowed stops by vehicle type

Network Optimization
- Identify the optimal number and location of distribution, production, or sourcing locations
- Determine ideal mode and flow path for each product or business unit
- Optimize the network to ensure required service levels for each product
- Use multi-time period analysis to determine the right time to shift product flow or to add capacity
- Use advanced greenfield technology to locate new facility locations

Simulation
- Test for actual service and cost of any design by running historical or forecasted demand through a discrete-event simulation calendar
- Perform detailed ‘what-if’ analysis to identify risks or bottlenecks
- Identify the likelihood of unwanted occurrences such as late deliveries, missed delivery windows, or expedited shipments
- Incorporate probability distributions for all key time and quantity variables, such as demand, transportation time, load/unload, etc.
- Scale models to include all required SKUs, shipments, and points
- Animate shipments to visualize the performance of each scenario

Model Asset Utilization Against Service Metrics
Identify the most efficient use of your drivers, vehicles, containers, or warehouse capacity by modeling and optimizing the transportation network as it relates to customer service.

Identify Hub and Zone Skipping Opportunities
Determine if outbound customer shipments should move through a hub, and if so, which location is optimal.
Features

Integration Features

- Includes numerous data integration technologies to seamlessly connect to any type of enterprise data source
- Provides fully integrated visualization tools including maps, charts, and one-click connections to Tableau™ and Google Earth
- Integrates network optimization with transportation optimization or simulation within the same data model
- Integrated with Data Guru, which simplifies the transformation of model data and creates documented, repeatable, time-saving workflows. Includes SAP data connector for direct connection to ERP transaction data

Modeling Features

- Leverages advanced geocoding and mapping capabilities to build models and display vehicle routing results on maps in a visual, intuitive way. Supply Chain Guru supports use of Esri, Bing, PC*MILER, SMC³ RateWare® XL and nearly any other GIS or mapping provider
- Uses extensive scenario management capability to quickly run many “what-if” scenarios, altering cost or route parameters
- Models can be driven from shipment history, optimization results, or demand files

Who Uses Transportation Guru?

Carriers, Dedicated and Private Fleets
Haul more freight per mile with greater asset utilization, consolidating loads and creating continuous moves for higher operating efficiency. Know your cost-to-serve.

Shippers, Retailers, Etailers and Grocers
Determine ideal mode and flow path for each product or business unit, using predictive analysis to determine inventory position, timing, and needed capacity.

3PLs and Intermediaries
Identify and test stand-alone or collaborative best practices for your customer base, demonstrating proficiency in design as well as management.