

# Whitepaper

## **Simplified Supply Chain Solutions**

- **Simplified Analysis and Model Development**
- **The User Perspective**
- **Fast and Accurate Results**
- **Case Studies in Supply Chain Planning**

**Logistix Solutions**



## Simplified Supply Chain Solutions



**Software as a Service fills a gap that's not being met by traditional supply chain planning and optimization tools that are too complex, too data intensive and ultimately too expensive.\***

The driving force behind historically low inflation and consumer prices has been attributed to a number of factors including global outsourcing, new technologies and improved manufacturing productivity and efficiencies.

But rising fuel and labor costs, supply disruptions and transportation shortages have lately put pressure on global transportation costs and lead times.

A renewed emphasis on distribution network planning and enabling technologies continues to be at the forefront of industry's ability to produce and distribute goods more efficiently while balancing inventory and transportation costs against ever increasing customer demands for shorter lead times and better service.

Next generation Supply Chain Network Design and Transportation Optimization software applications and Software-As-A-Service (SaaS) licensing options are making this technology not only more affordable but are also cutting the learning curve dramatically.

Solutions are becoming much easier to use and lower in overall cost so that supply chain planning with continuous improvement and collaboration is more widely available today for any sized enterprise.

## Simplified Analysis and Model Development

**“Logix was designed to handle complex supply chain and distribution problems that used to require ERP-class distribution network modeling tools and time-consuming set-up and customization.”**

Food Logistics, Intelligence for Food Warehousing, Transportation, and Information Technology Executives

One of these cutting-edge applications is the latest release of Logix<sup>®</sup> from supply chain software developer Logistix Solutions.

Logix is an on-demand Supply Chain Network Design and Transportation Optimization Software application that enables logistics managers to quickly model their operations and optimize their distribution strategies, supply chain decisions and transportation policies.

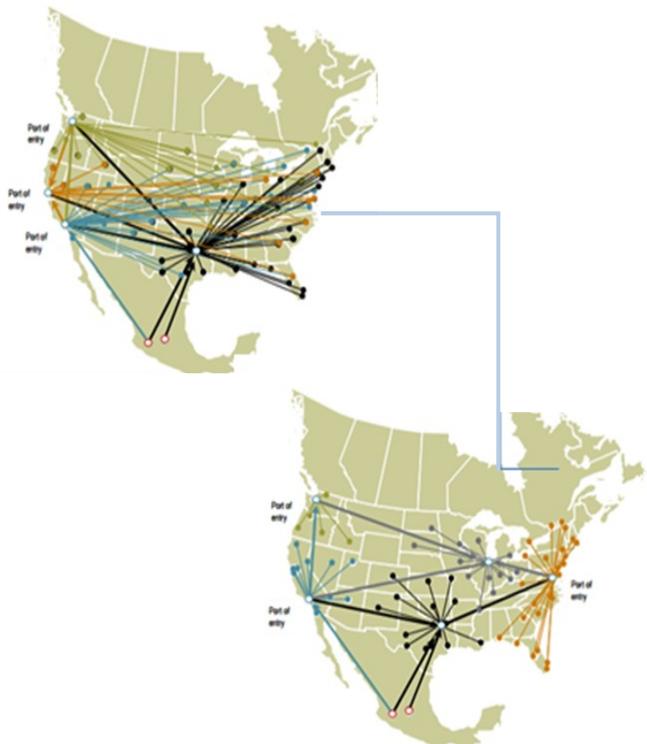
Typical projects include:

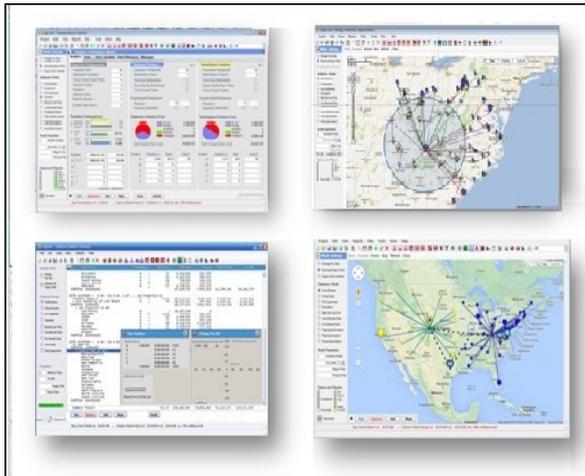
- Determine the optimum number and location of distribution facilities using existing, candidate or “Greenfield” sites.
- Optimize transportation including routing and scheduling, mode selection, fleet vs. carrier, backhauls and continuous moves.
- Optimize product flows through a capacitated network of distribution facilities, consolidation centers and cross docks.

Users can use the software for a month, a year or any time period they need and obtain smarter solutions to their supply chain problems with a minimal subscription.

Even the most complex supply chain problems can be solved in minutes so multiple scenarios and varying criteria are easily modeled resulting in more robust and timely solutions.

### Achieving **Clarity** from Chaos





“Even problems that used to require large investments in time and software can be answered quickly and presented in clear reports and map displays”.



Furthermore, changes to parameters, demand or assumptions such as projected growth or new acquisitions can be taken into account on a recurring basis enabling continuous improvement in a rapidly changing environment.

### The User Perspective

Navesink Logistics, a supply chain consulting and services firm based in Middletown, NJ, experienced first-hand how useful a quick solution capability can be in a recent consulting project for a defense electronics manufacturer.

The challenge was to find the next level of savings through multiple shipping point LTL (Less-Than-Truckload) consolidation, same destination truckload consolidation and multi-stop inbound route planning.

“Logix allowed us to quickly download inbound and outbound shipment transaction details from the client’s ERP system and pinpoint customer density and consolidation opportunities for LTL and truckload planning”, commented Tom McKenna, President of Navesink Logistics.

“Utilizing Logix’ simulation capabilities let us look at some “What-if” scenarios and produce reports and maps that supported our recommendations to the client that cut transportation costs by 12%-15%.”

## Fast and Accurate Results

Network design has also proven useful in areas beyond the typical manufacturing and distribution environments. Rich Thompson, Managing Director of Jones Lang LaSalle, one of the largest global commercial real estate firms, says:

“Logix helps us quantify real cost savings for our customers by locating the optimum industrial or commercial site with proximity to port and intermodal facilities with complex transport mode, demographic, tax and labor considerations and facility constraints to present the best real estate options for our clients”.

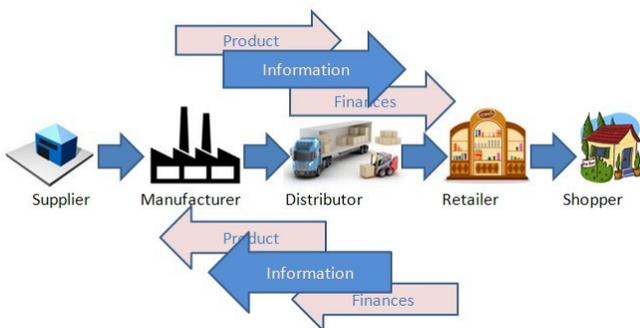
Customized solutions are crafted to support JLL’s real estate and client representative businesses with maps, reports and comparative analyses generated on the spot.



“Our users’ applications have included startups as well as complex, logistics redesign for one of the largest home improvement chains with nearly 2000 store locations and over 100 distribution sites”, Robert Camozzo, Logistix Solutions’ President added. “Results are often immediate easily justifying the project with costs savings of up to 30%”.

“One of the largest nationwide grocery chains uncovered several million dollars in savings in the first days of the project and went on to optimize cross docks and sourcing for over 50 product lines with over \$100,000 per week in transportation cost savings.”

“What each of these applications has in common is that an accurate analysis with tangible cost saving results didn’t take months but was completed in a matter of several days or weeks”.



## Case Studies in Supply Chain Planning

Companies that formerly relied on spreadsheets now routinely encounter logistics problems that are too complex to solve without a modeling or optimization tool to ensure that all the cost and service factors are considered and balanced in the final solution.

Whether trying to decide if supplier offshoring is a cost effective option or how a new acquisition will impact the current distribution network, supply chain professionals are using Logix to quickly answer these questions and optimize their decision making process.

- **Growing Pains Prompt Search for Optimized Distribution Network** – Fast growing “e-retailer” optimizes location of new distribution center with inbound sourcing, LTL freight, and UPS shipment for on-line sales.
- **3PL Optimizes Driver and Fleet Resources for Winning Bids** – Asset based logistics services provider optimizes driver and vehicle resources for winning bids.
- **Technology-Driven Site Selection** - Global Real-Estate and Financial Services firm provides property assessment, research, financial analysis and key value metrics spotlighting the right properties at the right cost.

\*SaaS: Beyond the Tipping Point, by Bill McNee, Saugatuck Technology, Sand Hill.com

**Growing Pains Prompt Search for Optimized Distribution Network**

A specialty manufacturer of women’s apparel was experiencing rapid growth. With most of their manufacturing overseas and goods arriving at a west coast entry point and shipping cross country for distribution to 60% of their market, they knew distribution costs were less than optimal.

Management wanted to know:

- Would a single, more centrally located distribution site maintain their customer delivery standards, or were two sites needed?
- Should they shut down their east coast distribution facility or keep it and add a second facility near the west coast?
- And, last but not least, with on-line sales growing nearly 10x faster than in-store sales, how would this factor into their decision?

Logix’ Distribution Network Design software was used to model single as well as multiple locations and ultimately obtain the optimum solution based on total end-to-end cost and, more importantly, delivery lead time. Using mainly UPS package delivery, the goal was to shorten average delivery time by as much as one-third while reducing or maintaining cost.

Using a combination of “Greenfield” solutions suggested by the Logix software as well as user specified distribution center locations, Logix modeled UPS air and ground rates, delivery standards and LTL freight charges together with inbound container and intermodal rates to provide the “best” and “nearly best” solutions to compare to the current distribution network.

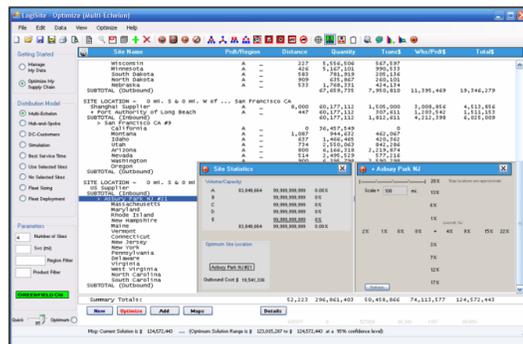
Logix looked ahead up to five years with forecasted growth by geographic market as well as by retail segment to model shifts in the optimum distribution network over time.



MAJOR SPECIALTY WOMEN’S APPAREL RETAILER USES LOGIX’ MULTI-ECHELON NETWORK OPTIMIZATION AND UPS’ PACKAGE SHIPMENT RATE ENGINE TO OPTIMIZE DISTRIBUTION CENTER LOCATION, SOURCING AND ENTRY PORT SELECTION, DOMESTIC PACKAGE DELIVERY AND CUSTOMER FULFILLMENT.

OPTIMUM DISTRIBUTION AND PRODUCT FLOW SOLUTIONS WERE EVALUATED FOR UPS GROUND AND AIR SHIPMENTS AND FAST GROWING INTERNET SALES FOR FASTER PRODUCT DELIVERY AND LOWER END-TO-END COSTS.

CONTACT [INFO@LOGISTIXSOLUTIONS.COM](mailto:INFO@LOGISTIXSOLUTIONS.COM) OR 571-426-5951 FOR MORE INFORMATION.



### 3PL Optimizes Driver and Fleet Resources for Winning Bids

An asset-based logistics services provider with operations in Washington, Oregon, California and Virginia routinely bids on new business requiring dedicated or consolidated fleet services, drivers, trucks and tight schedules that provide superior service.

Logistix Solutions worked with sales, operations and IT in the development of a driver and vehicle scheduling optimization capability that:

- Balances routes across a weekly schedule based on preferred return to depot times and route distances.
- Assigns drivers to daily routes that honor DOT's Hours of Service rules and reduces the total number of drivers and vehicles required.
- Meets vehicle capacity, equipment type and size restrictions for each customer while optimizing load utilization.

Using Logix' Fleet Optimization option, operations staff set up routes that meet its requirements for longer routes on certain days of the week and shorter routes as fillers on other days to provide the best use of fewer drivers and vehicles.

The optimum routing and scheduling results, including route details such as duration, distances and arrival/departure times at stops as well as at the depot combine to produce a Driver Scheduling report that shows driver route assignments, load utilization, total route distances and times, as well as DOT Hours of Service expended or remaining.

-- Driver/Vehicle Schedule --		Distance	Quantity	Loads	Total Tm	HOS D/Tm	WkTm	Ar/Tm	DptTm	Sun	Mon	Tue	Wed	Thu	Fri	Sat
DRIVER ... 1	Rte 1-3 Distribution Center	901	22	92%	00 13:19	10:02	10:22	09:19	20:00		Aug 5	Aug 6				
	Rte 1-7 Distribution Center	1069	24	100%	1D 03:35	02:44	02:44	23:35	20:00					Aug 7	Aug 8	
	Rte 1-4 Distribution Center	901	10	42%	00 09:02	09:32	09:52	08:39	23:37					Aug 8	Aug 9	
DRIVER ... 2	Rte 1-6 Distribution Center	970	22	92%	1D 01:49	00:32	00:32	21:49	20:00		Aug 5	Aug 6				
	Rte 1-5 Distribution Center	970	15	62%	1D 01:29	00:32	00:32	21:29	20:00					Aug 8	Aug 9	
DRIVER ... 3																



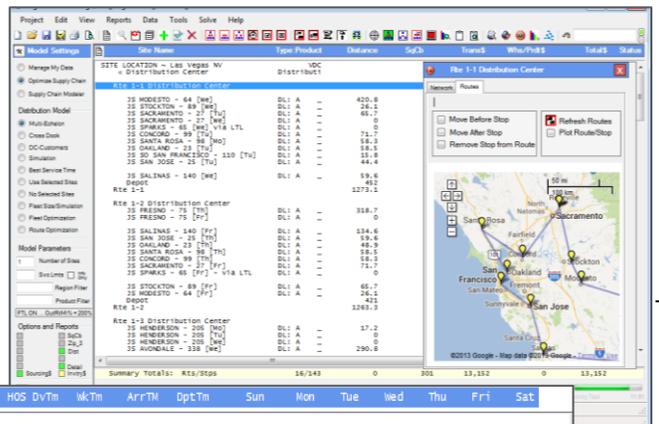
ASSET-BASED LOGISTICS SERVICES PROVIDER USES LOGIX'

TRANSPORTATION OPTIMIZATION AND DRIVER SCHEDULING FOR NEW BUSINESS DEVELOPMENT AND OPERATIONS PLANNING.

THE COMPANY'S DIRECTOR OF DEDICATED ENGINEERING AND PRICING STATES "OPTIMUM ROUTING, FLEET CONFIGURATIONS AND DRIVER SCHEDULES HELP US SUBMIT WINNING BIDS AT THE BEST MIX OF SERVICE AND COST."

DRIVERS ARE ASSIGNED TO MULTIPLE TRIPS ACROSS THE WEEK BASED ON DOT HOURS OF SERVICE AND OTHER CONSTRAINTS.

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## Technology-Driven Site Selection

Global Real Estate and Investment Management firm Jones Lang LaSalle® uses Logix® and its proprietary analytics for **site selection** and comparison of commercial properties – distribution centers, manufacturing sites, retail stores and shopping malls – based on key economic and geographic metrics such as transportation costs, proximity to ports, intermodal facilities and transportation infrastructure as well as leasing costs, capacity, labor rates, taxes and overall suitability.

Importing customer demographics, economic factors, financial data and available properties and their lease rates, JLL couples this data with metrics on transportation costs to optimally select the site location that provides the best value and customer service, or compares all the options side by side.

Using a process JLL calls **Reverse Location Selection (RLS)** and using data, charts and reports from Logix including:

- Average weighted distance or maximum distance from customers or markets
- Sensitivity to transportation costs, lease rates, labor costs, and other factors,

JLL then ranks each property in terms of viability and preference for each client.

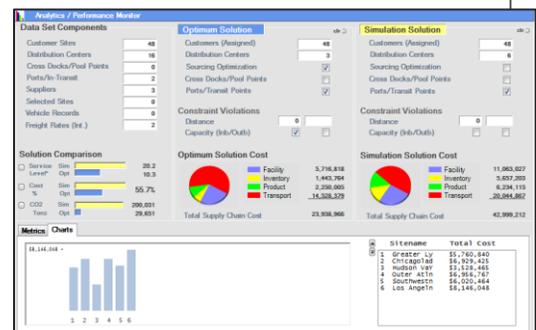
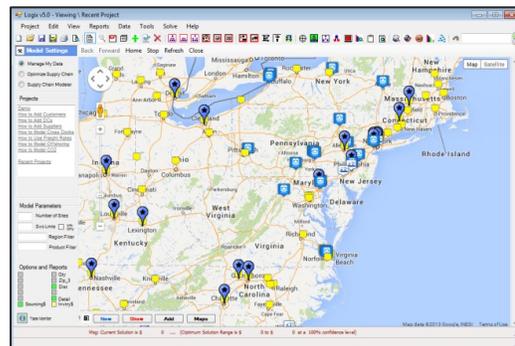
The end result is a highly accurate operating cost analysis of each property with a look forward as demographics and demand patterns change. Coupled with maps, reports, charts and other output from the Logix application, JLL can present highly specific and quantifiable information for each of its clients.



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IS A FINANCIAL AND  
PROFESSIONAL SERVICES FIRM  
SPECIALIZING IN COMMERCIAL REAL  
ESTATE SERVICES AND INVESTMENT  
MANAGEMENT.

JONES LANG LASALLE PROVIDES KEY  
INDUSTRY KNOWLEDGE AND RESEARCH  
FOR PROPERTY MANAGEMENT AND  
ASSESSMENT SUPPORTED BY  
TECHNOLOGY LIKE LOGISTIX SOLUTIONS' SITE  
LOCATION ANALYSIS TOOL. LOGIX  
HELPS IDENTIFY, FILTER, SCORE AND  
RANK POSSIBLE LOCATIONS BASED ON  
MULTIPLE CRITERIA, AND WEIGHT WHAT  
MATTERS MOST TO THEIR CLIENTS' BUSINESS.

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## **LOGISTIX SOLUTIONS – ON-DEMAND TECHNOLOGY FOR LOGISTICS PROFESSIONALS**

*Logistix Solutions was established in 2006 as a software and consulting company to provide premier technology solutions and in-depth industry knowledge for logistics professionals. We offer award-winning, on-demand Supply Chain Planning and Execution (SCP&E) applications at an affordable value for rapid ROI and benefit realization.*

- ❖ *Supply Chain Planning and Execution software solutions offered:*
  - *Distribution Network Design and Supply Chain Optimization*
  - *Sourcing and Procurement Optimization*
  - *Driver and Vehicle Scheduling*
  - *Routing and Scheduling Fleet Optimization*
- ❖ *Support, training and consulting services provided by experience supply chain practitioners and logistics software experts.*

*Based on extensive development working with Fortune 1000 companies, Logistix Solutions provides full-featured, on-demand supply chain solutions and consulting services for retailers, manufacturers, third party logistics providers, consultants, food and beverage and other distributors to support strategic planning and logistics execution requirements.*



*For more information on the Logistix Solutions suite of products, visit our website at [www.LogistixSolutions.com](http://www.LogistixSolutions.com) or contact Logistix Solutions at 571.426.5951 or e-mail [info@LogistixSolutions.com](mailto:info@LogistixSolutions.com).*