Using HaulPLAN, you can reduce linehaul costs and simultaneously improve service quality.
Let Our Software Drive Your Decisions

Large LTL carriers move hundreds of thousands of shipments through their networks every day. Movement of these shipments through the hub and spoke network, along with the scheduling of tractors, trailers and drivers, presents decision problems that are far beyond human capabilities to solve.

LTL carriers move goods through their networks, but the movement is not optimized. There is much room for optimization to reduce costs while simultaneously improving service quality.

Built upon decades of R&D, HaulPLAN is revolutionizing how LTL carriers create plans and optimize their network operations.
What Does HaulPLAN Do?

HaulPLAN creates an optimized linehaul plan based on historical shipment volumes and customer service commitments. This web-based decision support system determines the number of loads to make each day of the week on every lane in the network, schedules these loads, and routes shipments on these schedules so that they reach their destinations on time and at minimum cost.

HaulPLAN is revolutionizing how LTL carriers create plans and optimize network operations. The system can be used by linehaul planners, network planners and central dispatchers to create better linehaul schedules and shipment routes.

How Does It Work?

HaulPLAN was developed by a talented team of optimization specialists and computer scientists. It combines the latest optimization techniques with the newest software engineering and user interface development technologies.
Key Benefits

**Robust Linehaul Planning**
Only 70% – 80% of an LTL carrier’s shipments move as per the plan, with the rest of the routings decided dynamically each day. HaulPLAN creates better linehaul plans so that a larger percentage of shipments move according to the plan.

**Enhanced Strategic Planning**
Currently, the creation of linehaul plans is a manual process requiring months of painstaking effort; thus, it is done infrequently. HaulPLAN reduces this effort to days enabling faster and frequent changes to plans.

**Frequent Updates to Linehaul Plan**
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**Proactive Decision-Making**
Most LTL carriers operate reactively, and hotspots are dealt with on a daily basis as they show up. HaulPLAN uses historical shipment volumes to proactively create better linehaul plans and minimize potential hotspots.

**Reduce Linehaul Costs**
Large LTL carriers spend hundreds of millions of dollars in linehaul costs each year. Optimized load plans and schedules created by HaulPLAN can reduce your linehaul costs between 2% - 5%.

**Improve Service Quality**
HaulPLAN can reduce the number of service errors for various origin-destination services, resulting in greater customer satisfaction and higher retention.
At the heart of HaulPLAN lies a proprietary technique developed by Optym through decades of R&D – *simulation-guided optimization*, an ideal technique for solving complex planning and scheduling problems.

For a given load plan, this technique simulates the movement of shipments on a time-space network created by linehaul schedules and determines their complete routings from their origins to their destinations. Through this simulation, we determine the cost and service quality of the given load plan. Then we repeatedly modify this plan, evaluate it with respect to cost and service quality, and keep the better plan. We repeat this process until the load plan can no longer be improved, giving us an optimal load plan.

We have implemented this algorithm using advanced data structures so that hundreds of linehaul plans can be evaluated within seconds. Depending on the size of the linehaul network, we can determine an optimal linehaul plan within a few hours or less.
Day-of-Week Modeling

Shipment volumes vary by day of the week, with Mondays and Fridays often being the heaviest. HaulPLAN creates plans and schedules that change by the day of the week and keep the linehaul cost at a minimum.

Multiple Product Types

HaulPLAN can consider multiple product types (e.g., expedited or economy) with different service levels. It prioritizes the loading of shipments at terminals based on product types.

Rail and Purchased Transportation

HaulPLAN can also recommend an optimized plan for both road and rail purchased transportation, providing additional opportunity to save costs and reduce network imbalance and empty movements.
Relay Operations are critical for some LTL carriers to reduce their linehaul costs. HaulPLAN incorporates relay operations while creating linehaul plans.

Terminal Operating Windows

Each terminal can have a time window that permits different types of operations - for example, inbound operations, outbound operations, breakbulk operations, etc. These time windows can be set individually for each day of the week.

Different Equipment Types

HaulPLAN considers different equipment types operating on different parts of the network; some lanes may use single van, while some may use two pups and others may use three pups. HaulPLAN supports weight and cube based trailer capacities.
MULTIPLE MODES OF OPTIMIZATION

HaulPLAN can be used in four modes of optimization. These modes enable you to engage in a constant process of improving your linehaul plan and continuously adapt it to changing shipment volumes and service commitments.

User-Driven Optimization
HaulPLAN allows you to make selective changes to a given plan and evaluate the impact of these changes. You can delete a load, add a load or change the load plan of a service.

Full Optimization
In this mode, HaulPLAN allows you to do a clean-sheet optimization of the entire linehaul plan. The system makes as many changes as needed to reduce linehaul costs and improve service quality. The scope of optimization can also be controlled to make plan changes only in specific regions of the network.

Incremental Optimization
The system generates the best changes to improve cost and service. You can specify the number and types of changes you’d like to see, and HaulPLAN will generate those recommendations.

Terminal Upgrade/Downgrade Studies
You can upgrade some terminals to hubs or downgrade some terminals to end-of-lines, or change their processing capacities, and generate a new load plan to study the effectiveness of these changes.
Multi-Scenario Capability  HaulPLAN allows you to create multiple scenarios, each representing a specific linehaul plan. All previously created scenarios are available to the user for review.

Comparison  You can compare a scenario with any scenario stored in the database using data grids, charts and maps. HaulPLAN provides different ways to compare two scenarios – from service, cost, load plan, schedule and shipment route perspectives.

INSIGHTFUL ANALYSIS  The capabilities of HaulPLAN's user interfaces provide deep insights into the input data and output plans.
Export
Data can be exported into spreadsheets to perform further analysis and generate reports. Comparison of scenarios, cross-referenced data and customized reports can also be exported.

Multiple Drill Downs
The HaulPLAN UI allows cross-referencing of data and multiple levels of drill down to analyze the plan from different perspectives, including services, loads, schedules and shipment routes.
DECADES AHEAD OF THE COMPETITION

HaulPLAN is more advanced than the software currently used by LTL carriers. It has features and functionalities that were always desired but unavailable until now. Further, our commitment to continuous innovations and to evolve HaulPLAN to meet evolving business needs will keep it the software of choice for LTL carriers for decades to come.

**DECADES AHEAD OF THE COMPETITION**

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Use Cases

With HaulPLAN, users can perform a variety of what-if studies and identify opportunities to reduce linehaul costs and improve service quality. Our clients continuously discover new ways in which the system can be used.

**Use Cases**

**User-Driven Manual Changes**

HaulPLAN allows you to make manual changes to the current load plan, such as adding loads, deleting loads or changing purchased or rail transportation options, and assess their impacts before pushing them into production.

**Determining Improvements to the Current Load Plan**

Find the best incremental improvements in the current load plan considering both the linehaul cost and service errors. You can control the number of changes and their scope (terminal, region or the entire network).
**Periodic Adjustments to the Load Plan**

Various origin-destination shipment volumes have strong seasonality in their volumes and density. Use HaulPLAN to periodically optimize your load plans, rail, and purchased transportation plans. We recommend performing these studies on a monthly basis.

**Service Rationalization**

HaulPLAN provides the capability to trade off between linehaul cost and service quality. You can perform studies to reduce costs by increasing service days, or improve service quality by running extra linehaul schedules.

**Complete Optimization of the Linehaul Plan**

HaulPLAN can help you perform a clean-slate optimization and choose some of the recommendations coming from this study. We realize that not all recommendations may be implementable due to reasons not modeled in HaulPLAN.

**Terminal-Related Studies**

Using HaulPLAN, you can perform studies to assess the impact of opening, closing, upgrading or downgrading terminals, as well as changing shipment processing capacities of hub locations.
Decision Automation Systems for LTL Carriers

Most decision making for LTL carriers is currently done manually, from linehaul planning to execution. Terminal management and central dispatch personnel make decisions related to linehaul dispatch, driver assignment and shipment routing. Decisions related to the pickup and delivery of shipments to and from customers are also made manually.

Optym is building systems to automate all of these decisions, from our existing HaulPLAN product to these future additions to the Haul by Optym suite:

- **HaulMAX**: A real-time dynamic execution system to be used by terminal managers and central dispatchers for linehaul dispatch, shipment routing and driver assignment decisions.

- **RouteMAX**: A real-time system to be used by city dispatchers for all decisions regarding the pickup and delivery of shipments to and from customers.

The Haul suite of software products will enable you to automate and optimize the end-to-end transportation of shipments, from initial pickup to final delivery. Contact us to learn more about these upcoming products.
What Makes Us Different

We are a highly innovative company, working at the leading edge of technology and bringing the latest advances from the disciplines of operations research, computer science and human computer interactions to the transportation industry.

At Optym, we create applications in an agile development mode. Using pre-existing intellectual property and modular pre-built components, we can deliver sophisticated applications quickly.

We realize that each client is unique, and this uniqueness makes them successful in business. We are willing to customize our solutions to meet our clients’ unique business needs.

We are a client-focused company. We treat our clients as partners and collaborate with them to design solutions to meet the challenges they face. Transparency, flexibility, honesty and integrity are at the foundation of our relationships with them.

“They are adaptive and agile and highly committed to our projects.”

Our Clients

From the ground to the sky, we’ve worked with some of the biggest names in transportation and logistics.
As communities grow, so does demand. People consume more goods, use more resources and travel to more destinations. Such growth, however, creates congestion and inefficiency in transportation networks. At Optym, we have made it our mission to bring efficiency to the movement of goods, passengers and services.

Founded in 2000, Optym is a leading provider of advanced analytical software for the global transportation and logistics industry. Our products are used by railroads, airlines, trucking and mining companies throughout the world. Our commitment to both our clients’ success and our own high standards sets us apart as a world-class provider of these solutions.