Supply Chains

Where to Find the Biggest, Fastest Transportation Savings
With all of these sand traps...
Would you know how to aim?
Optimization Tasks

**Example:**
Network Modeling is difficult to implement but yields high savings. Continuous Moves and Tours tend to be difficult to implement for very little savings.

**LEGEND**

1. Truckload Benchmarking
2. Truckload Weight and Cube Benchmark
3. Constraint Based Truckload Bids
4. Routing Guide Enforcement, Order Optimization, and Mode Optimization
5. Simple Consolidation
6. Pool Points or Crossdocking
7. Multi-Stop Truckload
8. Continuous Moves
9. Tours
10. Network Modeling
Truckload Benchmarking (1)

+ **What it is:** Uses basic shipping data to show how your historical truckload costs compared to industry standards. Also offers a baseline (a comparison of historical and future costs).

+ **Who benefits most:** Companies with a significant amount of truckload expenditures.

+ **How long it takes:** Depending on the quality of the data and the size of the company, this can take between two days and one month; most take less than 2 weeks if the data is relatively clean and accessible.

**Estimated Savings:** The first step in identifying the potential for savings when you renegotiate with carriers.
+ **What it is:** Analyzing how much product you can fit into a trailer before hitting the legal limit for weight, or before the product cubes out on a trailer. Study this task early in the process of optimizing the supply chain; it’s one that is most often overlooked, and savings can be significant.

+ **Who benefits most:** All companies shipping by truck.

+ **How long it takes:** The analysis is easy; it can be completed in about a week, as long as good shipment level mode, weight, and cube data is available. Implementing changes based on the analysis is much harder.

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**Estimated Savings:** It is not uncommon to see the potential to put 10% to 40% more product in a truck, which reduces your cost by an equivalent amount. Generally speaking, you will not find that kind of savings using any other method presented here.
What it is: Constraint based bid tools use math to not only allow you to optimize on price, but to also constrain carriers in different ways, and to penalize them when their actions cost you money. Constraint based truckload bids provide cost savings and set the stage for managing longer-term carrier relationships vs. managing carriers in a large, disparate network.

Who benefits most: Companies that spend at least $5 million in truckload transportation and want to become more strategic transportation buyers.

How long it takes: Depends on the size of the company. Typically takes six to eight weeks, once the carriers that will be involved have been chosen and a future demand file has been created. This file can be built from the same data used in a benchmarking exercise.

Estimated Savings: Typically less than 10% of total truckload spend. You should have a good idea of what is possible based on your truckload benchmark.
Routing Guide Enforcement (4)

+ **What it is:** Monitoring carrier load acceptance compared to the routing guide and its corresponding effects on costs.

+ **Who benefits most:** Any company with a routing guide.

+ **How long it takes:** Ongoing.

**Estimated Savings:** 0% to 10% of the entire transportation budget, depending on how much routing guide leakage you have.
Levels of Optimization (4-7)

- **Mode Optimization** - ensures the right mode is used.
- **Simple Consolidation (Aggregation)** - looks to consolidate orders from the same origin and destination which have overlapping shipping and delivery windows.
- **Multi-Stop TL** - uses either static (standing milk runs) or dynamic optimization (order by order typically run once a day).
- **Pool Point or Cross-dock** - is ideal for situations in which high volume of shipments weighing between 2,000 and 5,000 lbs. come or go to a relatively small geographical area.
Mode Optimization (4)

+ **What it is:** A TMS uses a routing guide and other data to automatically choose the most cost efficient mode every time for the freight and lane.

+ **Who benefits most:** Customers with a wide variety of products at different classes that have different break points between modes.

+ **How long it takes:** In most cases, setting up the TMS with rates for mode optimization takes less than a week. The actual savings are process oriented, and will require ongoing work.

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**Estimated Savings:** There can be a 5% to 10% savings on the total budget when you use the right mode vs. the wrong, and a 1% to over 50% savings on individual shipments. Companies with rule based solutions that didn’t work well would be more likely to see the higher end savings.
What it is: Shipments from the same origin to the same destination are combined when they have overlapping shipping and delivery windows.

Who benefits most: Those who service the same customers on a regular basis and primarily ship LTL and small parcel, have multiple divisions that ship to the same customer, or have many minimum charge shipments.

How long it takes: This is an ongoing process that your TMS or hosted TMS does for you.

Estimated Savings: From 1% to 10% of the total budget; individual shipment savings can be as high as 100%, in the case of two minimum charge shipments that are still a minimum after being combined.
Pool Points or Crossdocking (6)

+ **What it is:** Bringing product to a central location, where it is broken into separate orders and shipped to multiple locations.

+ **Who benefits most:** Companies with a high volume of shipments weighing between 2,000 and 5,000 pounds; shipments coming or going to a relatively small geographical area.

+ **How long it takes:** Analysis to pick pool points typically takes a week or so, followed by setting up the actual operation and maintaining the ongoing process of assigning orders to pool point through a TMS.

**Estimated Savings:** Depends on the size of the average order.
Multi-Stop Truckload (7)

+ **What it is:** Multi-Stop Truckloads use either static (standing milk runs) or dynamic optimization (order by order, typically run at least once a day with a TMS, and sometimes more often).

+ **Who benefits most:** Companies with a significant amount of large LTL (from 5,000 to 20,000 pounds, or between one quarter and three quarters of a load for those that cube out) benefit most from multi-stop truckloads.

+ **How long it takes:** This is an ongoing process, requiring the same initial set-up time for the TMS that exists for other types of optimization.

**Estimated Savings:** From 5% to 90% per shipment.
Continuous Moves (8)

+ **What it is:** Combining full truckload orders into a string so you can leverage rates from a low cost area into longer moves.

+ **Who benefits most:** Those who have implemented all other methods of optimization.

+ **How long it takes:** Ongoing process for TMS. The big issue is the timing of pickups and deliveries.

Example: A load from Miami, FL, to Atlanta, GA, cost roughly $585, and a move from Atlanta, GA, to Chicago, IL, $870. But a combined load from Miami to Chicago with an Atlanta stop at that same time cost $1,355 – a savings of $100. The challenge – Timing the moves together

**Estimated Savings:** Total savings will probably be less than 1% of the transportation budget.
Tours (9)

+ **What it is:** A company and carrier work together to achieve continuous moves and to reduce deadhead miles, on the theory that the carrier will share the resulting savings and want to do more business with the company.

+ **Who benefits most:** Works best for short haul freight.

+ **How long it takes:** Typically found in an ongoing manner by using a TMS. If collaborating with other customers, you will have to reach out with data; overhead from these efforts can significantly cut into any savings on the rate side.

**Estimated Savings:** From 1% to 30% at the load level, with a total savings potential of less than 1% of the total budget, in most cases.
Network Modeling (10)

+ **What it is:** Network modeling compares transportation costs, but also considers inventory and manufacturing costs when optimizing a network. A model needs to be built at the item, family, or department level, depending on the company and mix of products. Cross functional teams are required to build and validate findings.

+ **Who benefits most:** Larger companies with multiple distribution points that are looking for the next level of growth, or those that have acquired companies recently and haven’t looked at how the distribution networks overlap. Also beneficial for companies that are reengineering networks and making strategic tradeoffs between inventory transportation, and service.

+ **How long it takes:** Depending on the company’s size, it can take three to six months to gather the data required to build and baseline a network model; costs easily run $100,000 or more. Maximizing the investment in network modeling requires ongoing management so that potential changes in the network can be constantly evaluated.

**Estimated Savings:** Savings can be very large (20% to 30% is not uncommon) if the company improves its in-stocks and if inventory can be eliminated with network changes.
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