Cost Savings Thru Transportation Leveraging

Most manufacturers and distributors are positioned to secure Cost Savings Thru Transportation Leveraging …

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INTRODUCTION

The overriding objective of business logistics is to deliver the correct product, in the right amount, on time, undamaged, ***at least fully loaded cost***, and within defined customer service constraints.

PREMISE

Nearly all organizations are uniquely positioned to secure cost savings thru transportation leveraging, and as well, each company faces unique challenges.

- **IN GREATER VOLUME**
- **FROM FEWER LOCATIONS**
- **LESS OFTEN**

"IN GREATER VOLUME"

Larger volume shipments more fully utilize transportation assets, and typically require less handling and administration. For example, a fully loaded truckload shipment (TL) weighing 40,000 pounds will cost less than 1/3 of that same trailer loaded with 22 separate pallets, each an independent LTL shipment, assuming identical product, freight origin, and freight termination. In the LTL circumstance, each shipment has its own bill of lading, is typically handled at an LTL terminal at origin and destination and, many times, during the linehaul process as well.

Correspondingly, the cost per pound of LTL shipments weighing several hundred pounds to a few thousand pounds is vastly less than the cost per pound of parcel shipments, in some instances on a scale of 1/10 of the cost of parcel shipments; and again, parcel shipments are vastly more economical than overnight express envelopes, postal shipments; all based on more fully utilizing transportation assets.

"FROM FEWER LOCATIONS"

By reducing the number of disparate distribution centers, consolidating manufacturing locations, or aggregating originating outbound (or inbound, as the case may be) shipments, a manufacturer / distributor (indeed, virtually all manufactured products must be distributed!) can increase the size and decrease the frequency of their shipments.

"LESS OFTEN"

By creating larger shipments, given a specific finished product output, shipments will obviously accrue less often. "Fewer larger shipments" are much more cost effective than "many smaller shipments".

STRATEGIES TO ACHIEVE TRANSPORTATION LEVERAGE

- Economic Order Quantities (EOQ): By requiring larger minimum size orders from your customers, or correspondingly, by providing incentives to customers for placing larger orders, (1) shipments will be larger; (2) and less frequent.
- Contingency inventories: Creating geographically based finished goods inventories (1) that are designed be delivered in smaller volumes on a "just-in-time" basis, or (2) that might need to be delivered at a moment of spike demand, enables larger volume shipments to those stocking locations, and then smaller shipments only at the final stages of delivery.
- Consignment inventories: Providing incentives for customers to order larger volumes of products in trade for corresponding price concessions can lead to significant transportation related cost savings for shippers, and win-win opportunities for both shippers and consignees.

- Customer service requirements planning: In many instances, shippers replenish to their customers' stock, and not directly to stores. When shipments are not required "just-in-time", it often makes sense to extend the order to shipment (or order to delivery) cycle from, possibly 7 days to 14 days, or from 14 days to 21 days, etc. By so doing, it may create the opportunity to consolidate several shipments within the extended order to ship window, creating larger and fewer shipments, and driving down transportation costs.
- Shipment consolidation: Larger volume shipments can be created by consolidating multiple shipments to a given consignee, and then by compounding those consolidated shipments to multiple consignees that are geographically proximate. Ultimately, a delivery strategy such as multiple stop TL deliveries, or pool distribution deliveries must be engaged – but only after significant savings that are created by the larger volume shipments to the designated geography. Of note - the concept of "Zone Skipping" for parcel shipments is premised on consolidating shipments destined for a geographical area, and moving those shipments in volume to regional service centers, or even to their direct delivery unit (DDU).
- Flow or pool distribution: Large volume shipments to cross-dock distribution points that can be derived by consolidating many smaller shipments. A distribution agent can then make final deliveries of smaller shipments, after cross docking those shipments, for the last leg of their journey. Although the cost of the final leg is usually at a higher cost per unit volume than the larger (consolidated) inbound shipment, savings generated by the inbound consolidated shipment substantially offset the cost of the final delivery of smaller shipments from the flow distribution site.
- Shippers associations: Shippers with product and geographical similarities can associate, aggregating their finished goods for distribution, and create larger volume shipments, driving down the cost of transportation for all members of the association.
- Packaging: Besides protecting and unitizing products, packaging should be engineered to be as space effective as possible, and able to be filled to capacity, insuring maximum, product for example, in each package, on each pallet (if palletized), and for each shipment.
- Aggregating shipping locations: In planning business models, it makes great sense, when feasible, to co-locate manufacturing lines in order to create shipping volume from a single origin, as compared ultimately to shipping smaller volumes from more locations. Absent a single manufacturing location, it can make sense to aggregate outbound shipping volumes at a single rear area consolidation point, thus creating larger volume shipments from a single, location.
- Trailer loading optimization: Simply put, "shipping air" is not an operationally or financially sound practice. Loading transportation assets to their visual limit (cube) or to their legal weight limit will optimize the transportation yield, and obtain the lowest "per unit volume" costs. When less dense product is involved, it pays to investigate creative packaging solutions, and to any feasible extent, compress or seed products to optimize transportation yield. To assist, on the one hand, there are computer assisted load optimization models to assist, and on the other, packaging engineers.

- Production scheduling and logistics integration: To the extent possible, it makes sense for manufacturers to schedule production in ways that will enable the creation of volume shipments that have similar termination geographies and service requirements.

WORKING WITH YOUR CUSTOMERS

It would be foolhardy to suggest that manufacturers and distributors are able to unilaterally implement logistics programs independent of the many important factors and constraints inherent in the relationships with their customers. Many factors drive ones' logistics constraints, including:

- Service requirements and performance clauses
- Competitor offerings
- Product pricing
- Existing client contracts
- Order quantity profiles
- Product shelf life
- Obsolescence and seasonalities
- Spike demands and promotions
- Product density (weight and cube)
- Product configuration
- Material handling requirements
- Time and distance to market
- Variations in production scheduling
- Operating contingencies, including weather, equipment failures, etc
- Domestic and international origins and terminations
- Special product transport requirements, including temperature and humidity controls, air ride, "stackability", buffering requirements, load securing and protection, and over-dimensional considerations

Success metrics: Change (or progress!) is often met with resistance. Before any changes can occur to reduce costs and improve fulfillment, both shipper and consignee must agree and both the financial and operational benefits of the proposed changes, and as well, agree on mutual new metrics to measure success.

INVENTORY DRIVEN SOLUTIONS

- Inventory performance: Most organizations will shy away from creating inventories whenever possible. However, inventories are important, as we know, in positioning products to meet spike demands, to cover forecast error, and to meet JIT delivery requirements. It should be noted, as well, that financed inventory might cost between .5 and 1% per month, while leveraging larger shipments might offset and return 300-600% of the cost of maintaining those inventories (assumption: TL shipment value of $40,000; max TL weight of 40,000 pounds; consolidated pallet quantity shipments). Service performance can often be enhanced, as well.
- Use of available space: In our experience, it is reasonably rare that shippers or consignees will seek to build inventories and increase space in order to accommodate more economical shipping. However, in many instances, SPACE

ALREADY EXISTS. It might exist because of changes in operation, or migration to a "just-in-time" shipping or receiving scenario. It is inadvisable to adhere to "just in time" dogma without considering feasible alternatives and their operational and financial benefits. The supplier who ships 10,000 pounds once weekly might as well ship once monthly at 40,000 pounds, and reduce transportation costs by 2/3. In the process, many factors must be considered, including the cost of the inventory, FOB terms, shelf life, available space, and win-win incentives.

CUSTOMIZED SOLUTIONS

Organizations must consider risk vs. reward criteria in reengineering their transportation / distribution operations to gain financial and operating leverage

- Intrusive solutions:
  - Changes in operation often required;
  - Opening or closing manufacturing and distribution locations;
  - Higher risk-higher reward;
  - Implementation over a longer period (1 year) at some expense;
  - Requirement to build specific capabilities to manage and measure the reengineered operation;
  - Often accompanied by systems selection and integration
- "Out the door" solutions:
  - Few changes in infrastructure or procedures;
  - Changes in how products are handled, and how distribution is managed, *once product leaves ones' facilities;*
  - Less risk-less reward;
  - Implemented relatively quickly (6 months) and inexpensively;
  - Contractors with core logistics competencies provide related logistics services;
  - Manufacturer/distributor required to build competencies to manage and measure new provider relationships

SUCCESS EXAMPLES

The opportunities for Cost Savings thru Transportation Leveraging are real! For example, in our experience we have seen the following successes:

- World class textile manufacturer improved transportation yield by nearly $30 million annually by compressing products in their overpacks
- Large valve manufacturer consolidated shipments by a ratio of 1.89:1, reducing transportation costs by 41%
- Soft drink manufacturer staged contingency stock in regional markets, improving spike demand fulfillment from 65% to 96%, reducing seasonal transportation costs by 60% and improving inventory performance
- LTL and TL motor carrier offered freight consolidation services, improving TL division profitability by 25%
- Competitive bid process reduced machine manufacturing freight costs by 35%.

CONCLUSION

Almost every organization that we have worked with over the past 30 years has had significant near term opportunities to reduce costs thru transportation leveraging. The path to better leverage is often not very clear at the onset: Opportunities may be parametered by changes in operation, and/or by solutions that take effect when freight departs shipping origins. Shippers are often required to negotiate “win-win” solutions with their customers, and better inventory performance throughout their supply chains can bring about transportation leveraging opportunities as well. The path to Cost Savings Thru Transportation Leveraging can be demanding and incremental, but very rewarding, as well.