The Transportation Metrics that Matter the Most for Shippers to Track to Improve Transportation Performance

How do you measure logistics efficiency and transportation metrics performance indicators when you are already doing the best job possible? Talk to any over-the-road shipper that finds itself increasingly handcuffed by institutionalized transportation and fuel-related costs and it would likely tell you the “best job possible” doesn’t cut it anymore.

Still, invariably, that shipper may need to look outside its enterprise and consider outsourcing non-core transportation functions to a third party logistics company (3PL) or delegating more responsibilities to its core carriers to squeeze out hidden costs and further streamline its supply chain.

Outsourcing transportation functions can provide a more objective and relational context for understanding how transportation best practices can drive improvement elsewhere in the enterprise while simultaneously unbundling hidden efficiencies and costs in an otherwise tight market.

When the “best job possible” doesn’t feel like you are cutting it anymore, you can turn to data as a way to see how a shipper’s tactics and shipping activities create trends. Once a shipper either tracks this data themselves or a 3PL provides key transportation metrics the shipper can then implement and understand transportation best practices. Once understood, the shipper, along with the 3PL, are able to create new strategies and tactics for the logistics side of the business which will drive value and savings to the bottom line.

However, a shipper must first know the correct transportation metrics to track and understand. Using the correct set of metrics can lead you to realize if you have the proper balance between service and cost.

Using the correct transportation performance metrics will not only let you know your current performance, but will also lead you to change processes to become more efficient. Transportation measures of effectiveness should be considered critical to any improvement plan.

Although metrics do vary, we give you a general overview of some common transportation metrics in use today below, but first you must understand how to go about using these metrics.

**How can you use Transportation Metrics to Improve Your Logistics Operation?**

Follow these basic steps:
1. **Avoid “Analysis Paralysis”:** The first step is to identify the transportation metrics that you want to use. Do not use every metric available. Rather, focus on the vital measurements that mean the most to your business. These can be considered your KPI’s (key performance indicators). You should have 3-5 KPI’s per functional area. If you decide to include numerous measurements, you may encounter “analysis paralysis”. Remember, around your logistics and supply chain operation, and in your business in general, there are many metrics to measure.

2. **Understand the Meaning:** Next, you need to understand the meaning of these transportation metrics. It is not enough for management to simply view these measurements, they must also understand the meaning behind them. That means leadership must know and be on the same page with transportation terminology as well as the meaning of these metrics. Don’t take anything for granted.

3. **Learn the Mechanics:** The next step is to learn the mechanics behind the measurements. What drives them, both positive and negative? Try to understand the various factors that influence your results.

4. **Identify Weak Processes:** Using the insights gleaned from these core transportation metrics, identify any weak areas or areas of improvement in your current transportation processes.

5. **Set Aggressive but Obtainable Goals:** Set goals based on these improvement areas. The goals should be aggressive, but yet obtainable. Goals can be based on benchmarking against “like” companies or goals can be set to reflect a specific percentage improvement over past performance. As an example, improving your results by X% every year.

6. **Put corrective action in place to improve your processes:** Make sure that these corrective actions do not negatively affect other areas. Also, check that all affected areas have a clear understanding of the changes.

7. **Monitor your results:** Did your corrective actions yield your desired results? If so, what is your next area for improvement? If you did not get the desired results, what went wrong? Try to identify the root cause of your undesired results, then brainstorm new corrective actions.

**Transportation Metrics that Matter the Most**

- **Freight cost per unit shipped:** Calculated by dividing total freight costs by number of units shipped per period. Useful in businesses where units of measure are standard (e.g., pounds). Can also be calculated by mode (barge, rail, ocean, truckload, less-than-truckload, small package, air freight, intermodal, etc.).

- **Outbound freight costs as percentage of net sales:** Calculated by dividing outbound freight costs by net sales. Most accounting systems can separate “freight in” and “freight out.” Percentage can vary with sales mix, but is an excellent indicator of the transportation financial performance.

- **Inbound freight costs as percentage of purchases:** Calculated by dividing inbound freight costs by purchase dollars. It is important to understand the underlying detail. The measurement can vary widely, depending on whether raw materials are purchased on a delivered, prepaid, or collect basis.

- **Transit time:** Measured by the number of days (or hours) from the time a shipment leaves your facility to the time it arrives at the customer’s location. Often measured against a standard transit time quoted by the carrier for each traffic lane. Unless you are integrated into your customers’ systems, you will have to rely on freight carriers to report their own performance. This is often an important component of lead-time. Transit times can vary substantially, based on freight mode and carrier systems.

- **Claims as % of freight costs:** Calculated by dividing total loss and damage claims by total freight costs. Generally measured in total and for each carrier. A high number generally indicates packaging problems, or process problems at the carrier.
Freight bill accuracy: Calculated by dividing the number of error-free freight bills by the total number of freight bills in the period. Errors can include incorrect pricing, incorrect weights, incomplete information, etc. Generally measured in total and for each carrier.

Accessorial as percent of total freight: Calculated by dividing accessorials and surcharges by total freight expenditures for the period. Many freight carriers will charge extra fees for trailer detention/demurrage, re-delivery, fuel increases, and other expenses or extra services. Often, these are extra costs incurred due to inefficient processes.

Percent of truckload capacity utilized: Generally used for shipments over 10,000 lbs. Calculated by dividing the total pounds shipped by the theoretical maximum. For example, assume your trucks can hold 40,000 lbs. of product. During the prior month, there were 675 shipments totaling 22.95MM lbs. The percentage utilization was 85%. The 15% unused capacity is an opportunity for more efficiency.

Mode selection vs. optimal: This is calculated by dividing the number of shipments sent via the optimal mode by the total number of shipments for the period. To measure this, each traffic lane must have a designated optimal mode, based on freight costs and customer service requirements.

Truck turnaround time: This is calculated by measuring the average time elapsed between a truck’s arrival at your facility and its departure. This is an indicator of the efficiency of your lot and dock door space, receiving processes, and shipping processes. This also directly affects freight carrier profits on your business.

Shipment visibility/traceability percent: Calculated by dividing the total number of shipments via carriers with order tracking systems, by the total number of shipments sent during a period. This is an indicator of the relative sophistication of your carrier base, and one measure of the non-price value available from your carrier base.

Number of carriers per shipment: Calculated by counting the total number of freight carriers used in a given period, by shipment. This is an indication of your volume leverage and control over the transportation function.

On-time pickups: Calculated by dividing the number of pick-ups made on-time (by the freight carrier) by the total number of shipments in a period. This is an indication of freight carrier performance, and carriers’ effect on your shipping operations and customer service.

Keep the Following in Mind When It Comes to Tracking Transportation Metrics

1. Tracking your transportation metrics allows you to view your performance over time and guides you on how to optimize your logistics and supply chain operations. Tracking these core metrics allows management to identify problem areas and fix them with data AND experience. It also allows for comparison to other companies through like industry benchmarking.
2. Certain metrics have a widely accepted definitions. Other metrics may need to be customized for your particular industry or logistics business model.
3. Measurements alone are not the solution to your weak areas! The solution lies in the corrective actions that you take to improve the measure. The solution comes from process or system improvements. The measurements should be used to track the results of your improvement efforts.
4. Tracking transportation metrics should have an owner. This needs to be a person or department that is responsible for achieving an agreed upon target on the metric.
5. Management needs to adopt, encourage, and support the process changes to achieve the desired targets.

If you are not tracking transportation metrics today, we strongly encourage you to implement tracking these core metrics listed above today. It’s common knowledge that analyzing data combined with expertise can truly allow you to affect change in your organization. This is not change for change sake, but rather change to improve your business and impact your bottom line. If you are looking to track your transportation metrics better, feel free to reach out to us for a demo of our transportation management system or for a logistics consultation today.