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Getting Onboard with Colla

In recent years, the transportation industry has been marked—and marred—by numerous challenges that have made it increasingly difficult for both carriers and shippers (manufacturers, distributors and retailers) to unite in support of a true capacity-planning process. Given these challenges, both carriers and shippers have been exploring collaborative processes and technologies that will enable them to reduce costs, ensure that more shipments arrive on time and improve both capacity coverage and asset utilization.

Shifts in carriers' demographics (an aging population of drivers, plus diminished interest in the job from a younger workforce) and increased federal regulations have resulted in a loss of 4–7 percent productivity in recent years, according to estimates from industry analysts. Geographic imbalances also play a part. While 75 percent of Americans live in the eastern, southern and midwestern states, the majority of goods coming into the United States are arriving on the West Coast from Asia. The result is longer hauls and higher fuel costs as well as empty truckloads returning west.

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Manufacturers, distributors and retailers have increasingly explored using the railways as an alternative means of transporting goods. However, there are still perceptions among many shippers that the railway companies are not as predictable with their deliveries. And the railway companies have not always been responsive to the rising demand—no doubt due in part to the significant capital investment required to meet the need. Customer expectations for “instant delivery” have further pushed carriers to their limits.

The conflicting objectives of carriers and shippers exacerbate the problems. Motivated by factors like inventory positions and turns, shippers are driven to shrink lead times and condense their peaks. Carriers, on the other hand, would prefer more ample lead times and more evenly distributed demand. Many shippers have not clearly understood, or at least fully appreciated, the implications of these conflicting objectives on carriers. Without an adequate shipment/capacity forecasting process, shippers often force their carriers into a reactive mode.

Three levels of planning

To overcome the significant challenges that inhibit the ability of shippers and carriers to optimize for capacity planning, they must improve collaborative processes. The most fundamental data necessary to drive a collaborative capacity planning process is historical shipping information. At a minimum, carriers should try to leverage their own historical shipment data—particularly since carriers can't always rely on the shipper to provide this information.

However, given the recent power shift resulting from costs and capacity within the industry, shippers must be more willing to share a complete and accurate shipment history with carriers. In a perfect world, this history would supply carriers with lane-level details and information on seasonal peaks, promotions and trends.

i2 has identified three levels of capacity planning that can help counteract the demand fluctuations and other roadblocks to more efficient and reliable shipments. At the strategic level, new or projected demand volumes and/or patterns derived from statistical methods, as well as historical shipment volumes, are used to create rolling 3–12 month plans. At the tactical level, shippers and carriers can synchronize transportation planning with master planning cycles (in a manufacturing environment) or replenishment planning cycles (in a retail or distribution environment). The tactical transportation-capacity plan projects 1–13 weeks out and can be determined by leveraging actual orders (or allocations) and/or projected demand volumes. Operational-level planning typically takes place 1–4 days out and is based on actual orders (whether they are inbound purchase orders, outbound customer orders or inter-facility stock transfers). The operational capacity plan communicates the actual tender, booking or manifest (depending on the transportation mode) being sent to the carriers.

Role of technology

Technology is the essential enabler of successful collaborative capacity planning. From the shipper's perspective, transportation management systems (TMS) should enable the company to review shipment history and incorporate that history into demand planning. It's not enough to look purely at purchase orders; the system must show data at the discrete shipment level, because the relationship between order and shipment is frequently “one-to-many.” And order management systems often don't have complete, accurate information with regard to actual shipment location/addresses.



Collaborative Capacity Planning

Traditional vs. Emerging Practices

- Short-term cost reduction focus
- Adversarial shipper-carrier relations
- Distributed planning and execution
- Manual processes with minimal automation

- Operational silos across inbound and outbound transportation management
- Reactive approach to managing exceptions and service disruptions
- Cost-center business model



- Sustainable cost-service optimization
- Collaborative shipper-carrier partnerships
- Centralized planning, localized execution
- Automated processes leveraging leading-edge processes and technologies
- Integrated inbound, outbound and interfacility transportation management
- Proactive and automated monitoring and resolution of exceptions and service disruptions
- Profit-center business model that can be leveraged as a strategic weapon

While some shippers don't utilize traditional TMS technology, many of these shippers access their shipment histories in one of two ways: through their own third-party freight payment company or directly from the carriers they've used. From a true collaborative capacity planning perspective, it's important that shippers are able to share with each carrier the historic business they've done with every carrier, at least within any specific mode. This is not to suggest that they must reveal the names of each carrier. And the shared data can be limited to a specific carrier's desired business and/or geographic area of operations. But for shipping data to be meaningful to carriers, it must be complete and detailed.

From a strategic planning perspective, the shipper's forecasting process/solution should be able to project shipment demand 1–12 months out, at least for the benefit of its core carriers, and have the flexibility to make adjustments for anticipated changes. The collaborative process often fails when shippers change or add sources for a specific line of business without sharing the information with their carriers. With this in mind, shippers need to work with their purchasing/procurement organizations to ensure that they are aware of these types of changes to their business. With this transparency, they can accurately portray these adjustments in their shipment-level forecasts to carriers.

On the carrier side, the technology that enables collaborative capacity planning should at least capture the carrier's complete business history for each of its customers—including, if possible, the business that the carrier has rejected. Few carriers track rejected business, but it can provide additional insight during pricing and negotiations or when exploring the possibility of expanding fleet operations.

The transportation technology solution should use all of the historical business data to create a demand forecast and incorporate a modeling functionality to enable the carrier to forecast future business, in support of a meaningful and comprehensive asset plan.

Shippers don't often provide carriers with a forecast, and when they do, it often offers only a best-guess scenario. By creating their own forecast using a traditional supply-and-demand match, carriers can determine whether they need to re-deploy assets elsewhere, acquire more assets or subcontract work to their own contracted/interline carriers.

Benefits of planning

By collaborating on capacity planning, shippers and carriers can achieve tremendous results. Shippers can ensure that more shipments arrive on time. They can also improve their capacity coverage by reducing tender rejects and minimizing last-minute fire drills to find capacity with contract carriers.

Carriers can ensure that the necessary assets are in place to meet demand, without overextending themselves. Most important, costs for both shippers and carriers can be reduced. Ultimately, the collaborative capacity planning process will enable shippers and carriers to build strong partnerships that foster trust, open communication and dependability—all leading to end-customer satisfaction.

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