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THE ODYSSEY Transloading

By Joseph O'Reilly

In today's lengthening supply chain, a mode alone is a road less traveled. Businesses shift gears and mix transportation options to account for fluctuations in capacity and freight costs. When shipments switch track, transloads take center stage.

The growing importance of intermodalism in the United States raises the stakes for efficiently managing transportation at key supply chain interchanges. This is where the value of transloading comes into play -- the process of transferring commodities from one mode of transportation to another to gain economies of scale and rail.

Wherever cargoes cross roads, rails, or water-borne routes, opportunities to drive efficiency abound. From coastal gateways to inland ports, in transload terminals or at rail-served warehouse crossdocks, businesses mix cargo with modes to reduce transportation costs, access capacity, and increase flexibility.

The inherent costs -- in both time and money -- that added touches require place a great deal of importance on fine-tuning these transportation exchanges. Working with third-party transloaders, and with rail and trucking partners, shippers can leverage mode shifts and pauses in transit to consolidate shipments and manage inventory closer to customer demand.

As a basic strategy, transloading gives shippers the flexibility to serve a diversity of logistics operations, while reducing transport costs by substituting rail line-haul for truck. More sophisticated supply chains can leverage these interchanges to postpone inventory, reduce or even eliminate warehousing, and act as a capacity release when ports are overcrowded.

Domestic shippers predominantly use intermodal transportation to mix and match rail and trucking efficiencies to derive the best total transportation cost per service and timeliness requirements. Transloading serves as the bridge between modes, offering a prime opportunity for businesses to not only eliminate inefficiencies at hand-off, but also use these supply chain breaks to strategically position and manage inventory.



Practically, shippers value opportunities where they can carry long-haul tonnage by rail, leaving more expensive over-the-road options to manage first- and final-mile delivery demands.

"Transloading gives shippers the ability to move products by rail to central locations, then reload to trucks for just-in-time (JIT) deliveries," says Larry Smith, executive vice president of sales for Bulkmatic, a Griffith, Ind., bulk carrier specializing in rail-to-truck transfer.

Shippers reap economies buying in rail car volumes while still having the flexibility to ship locally using truckload. Instead of shipping high-value goods long distances over the road, they can bulk ship freight on the railroad before product is manufactured or processed and redistributed to final destination.

Chicago-based Corn Products International, one of the world's largest corn refining and ingredient companies and a leading regional manufacturer of starches, syrups, and glucose, relies on Bulkmatic to manage its U.S. transload operations.

Bulkmatic serves as Corn Products International's terminal operator, and in many cases, transportation provider at seven railroad-operated sites and two private transfer sites in the United States.

"Transloading is a major distribution channel for us; it allows us to reach every major U.S. market with competitive service and pricing," says Tom Waskiewicz, director of rail transportation for Corn Products International.

Bulk commodities are shipped by rail to transloading sites, where materials are then transferred from rail cars (tank, covered hopper, or pressure differential car) into bulk truck movements (tank or pneumatic) for local delivery to market.

By placing product closer to end users, volumes are concentrated so Corn Products International can improve asset utilization. "Shipping weights can increase based on a customer's storage capabilities and we can exploit multiple-load opportunities with our customers," adds Waskiewicz.

As with a traditional continuous flow crossdock, consignees can build additional value into these transload touch points, often consolidating product even further to move fuller trucks outbound.

"Some food-grade transloads blend and mix product for redistribution," says Mike Devine, director, economic development for BNSF Railway. "A basic product comes in and a refined product trucks out. Or some plastics may be delivered to a warehouse bagged, then redistributed in a different type of packaging."

Using multiple modes is appropriate for commoditized products where demand is more consistent and timeliness is secondary to cost. The sacrifice in accommodating lengthier transit times and staging or warehousing freight for transload is often offset by the economy of minimizing long-haul trucking.

"Shifting products between modes sometimes can be more costly, but for the most part we can save consumers money by dealing with each

transportation leg separately," says Smith.

Conversely, a well-run transload can help businesses manage supply chain volatility simply by locating inventory closer to demand.

"Transloading improves the supplier's ability to react to emergency situations, short lead times, or changes in demand," says Waskiewicz. "Fixed cost is also minimized, so facilities can be increased or decreased based on volume demands."

Businesses must have visibility into forecasted demand to account for mode shifts and to flex with demand variability, which requires a great deal of communication among supply chain partners. When visibility becomes muddled at hand-offs, problems arise.

"Failure to follow the load through to delivery is one major way to lose visibility -- as well as business," notes Smith. "The technology is there, so we can monitor truck movements from beginning to end. We can show exact time of arrival and departure from the truck's cab."

The integration of computer systems and electronic communications (EDI, mainline, or Web-based access) has greatly improved and streamlined the process and enhanced intermodal transparency for shippers such as Corn Products International. Connecting all the different players together is crucial to ensuring compliance and seamless transloads.

"The shipper, rail and truck carriers, and transloading operators have access to more information on each leg of the distribution channel," says Waskiewicz. "Real-time, online applications improve order processing, inventory management, and service."

Consequently, this forced data share allows companies to establish key relationships at the local level between the railroad, transfer operator, and carrier that similarly improves service and reduces costs.

Working together, transload partners can identify better means to optimize exchanges, maximize asset utilization, and improve efficiency -- for example, working three shifts a day instead of one eight-hour shift.

"We try and work with ocean and rail partners to package best-case scenarios for inbound products. Where is the best transfer site based on manufacturing? What railroad serves the ocean carrier as well as the inland site? The goal is to use fewer of the same modes to reduce costs," says Smith.

Invariably, businesses utilize transload terminals to align their upstream and downstream supply chains to be more efficient in terms of matching production flows and demand signals to intermodal transportation, thereby managing more responsive inventory.

"Production planning, inventory management, and sales forecasting are critical components of a successful transloading distribution strategy," says Waskiewicz.

"Production can be placed in strategic locations, improving our ability to service customers with less lead time, maximize truck and driver utilization as reloading opportunities are maximized, and respond more quickly to emergency situations -- all while reducing transportation cost and improving service," he adds.

This positional play lends itself to innovative inventory management designs and JIT, demand-driven supply chain strategies.

"Shippers across modes have been willing to exploit inventory in motion when delivery times allow for such flexibility," notes Devine. "It's common for shippers to use railcars and boxcars in a similar manner, but it is becoming more difficult to do with capacity limitations."

If a transload site has enough space, consignees can use it to store all or most of their daily replenishment needs.

"There is a cost for the storage, but if enough business is there, that cost can be spread out over several products," says Smith. "Companies can store product in rail cars or in a warehouse. Some items can be stored in an open field."

More purposefully, one benefit of using transloading is that it provides a flexible means for driving JIT efforts -- sometimes even before demand becomes manifest. Some plastics companies, in particular, will send product out the door without a destination in mind. "They'll deliver to the shipyards, then determine where it's going," Devine says.

The same theory applies for more common JIT scenarios. "Shippers can take advantage of rail pricing and leverage the transload to hold inventory until they need it," says Devine. In essence, consignees manipulate mode to match speed-to-market demands.

In terms of meeting demand-driven requirements, placing and holding product at strategically located rail facilities provides shippers and consignees with the ability to move product quickly.

"With the density of highway traffic in southern California, it's not uncommon to have transloads every 20 miles or so," says Devine. "You can't underestimate the value of having product staged close by, especially when you have to deliver to a site within a certain time frame."

Matching freight transportation needs and costs with production flows and lead times, and locating inventory closer to demand, make transloads a vital part of intermodal movements.

"Transloading establishes a platform that places the product closer to the end-user market, which provides opportunities to meet customers' needs efficiently," says Waskiewicz. "The challenge is to balance customer needs with optimization opportunities by working together."

A Multimodal Model

Given the inherent complexity in connecting modes, businesses and service providers approach transloading in different ways. Rail carriers, trucking companies, and third-party logistics providers fill management roles to varying degrees.

BNSF Railway, which operates some transload terminals within its network, often delivers to consignees in care of third-party transloaders. They, in turn, provide transportation services to final destination. Arrangement controls differ from railroad to railroad, and among trucking companies as well, with some owning their own terminals and managing the process across both modes.

"By our definition, about 500 transloaders serve multiple customers with multiple products," says Mike Devine, director of economic development for BNSF Railway. "It's about bringing products in and switching them out."

BNSF is currently studying different models to identify the best way to move forward with its transloading operations. "Obviously a railroad has more control over the process if it owns the site or even considers investing in trucking assets, as opposed to partnering with intermediaries that are operating on private sites served by the railroad," Devine says.

Shippers see these multimodal models through different perspectives as well -- and there are cost and control implications in the approaches they take. "The majority of our freight is shipped unbundled," explains Devine. So the rail and truck rates are separate, and the shipper reconciles the total cost with a transloader. In this manner, the third-party service provider connects both parts.

"We have some bundled rates that include freight transloading and trucking, but it's not as common," he adds. Shippers may prefer this method of buying transportation because it combines both parts into one freight bill, and creates one point of control in managing the process.

Sourcing decisions often depend on the product, storage capabilities, and how active the shipper wants to be, says Larry Smith, executive vice president of sales for Bulkmatic.

"If we can provide a complete service by monitoring the consignees' silos and the shippers' on-hand product at a transfer site, we then can provide complete service without the shipper or consignee being involved in that part of the process. We schedule the loads based on what the consignee is using and inform the carriers of inventory on hand," he says.

Alternatively, shippers can use a transloader to cut their own deals. Negotiating prices in lieu of a single freight bill takes on added complexity to break out costs. But it also gives consignees greater control parsing transportation costs by mode to identify the best price available and adapt it to unique requirements.

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