



Cross-docking

Waste not. Store not. The shortest and fastest distance between supply and demand is in one door and out another. Enterprises rocking high velocity cross-docks, like Transportation of America (TOA) wield greater power flowing visibility and freight through the supply chain.

In a perfect world, inventory would never remain static. Product would flow from manufacture to consumption in a steady demand-driven stream-between plants and warehouses, among suppliers and 3PL's, along rutted roads and reticulated conveyors, to retailers and residences alike. In the absence of perfection, a cross-dock works just fine.

Cross-docking eliminates storage by seamlessly moving product through a warehouse or distribution facility, synchronizing inbound material movement with outbound deliveries. Conceptually, the idea is to reduce warehousing touches, eliminating put-a-ways and picks, and immediately transferring product from transport to transport.

Businesses often use cross-docks to consolidate shipments and pool deliveries, thereby filling and transporting more complete loads to customers, reducing inventory and carrying costs, and optimizing transportation and labor utilization and spend.

As a tactical, distribution-oriented activity, cross-docks command attention both upstream and downstream in the supply chain, driving visibility into purchase orders and asset requirements, setting the table for more strategic lean initiatives elsewhere in the supply chain.

Simple in theory, yet complex in execution, the art of cross-docking provides optimal returns on investment when all its parts operate in unison. Eliminating safety stock, shortening lead times from make to sell, and scaling down expensive storage facilities are goals all companies strive to attain. Getting there requires a great deal of collaboration and communication.

Cross-docking presents a different type of sophistication than high-end distribution facilities touting state-of-the-art conveyor and sortation systems. With a fleet of lift trucks and room to roam, shippers are tasked with managing freight flow through time-sensitive transportation windows.

Cross-docking means managing high volume, high velocity and highly variable flow on a dock typically no larger than 100,000 square feet. The challenge is trying to get the basketball through the garden hose on any given day.

Successful cross-docks like TOA's pause flow only as long as it takes to receive, consolidate and ship. It works most efficiently when the ordering unit is in pallet quantities, but can just as easily be applied to case pack or break pack with the right sortation equipment. The key point is that inventory is held at the manufacturer, in-transit, and at the retail unit, but not at the centralized DC's.

As a third party provider, TOA manages inbound containers and OTR Trailers, receives and checks product, performs quality inspections, and builds outbound cube density as well as route optimization to drive productivity and reduce cost for our clients.

Perhaps more than any other transportation and logistics process, cross-docking demands an extra dose of collaboration between consignees, 3PL's, and vendors from placing orders to building outbound loads. It places pressure on execution at every juncture in between to make sure processes are aligned and visibility is robust.

Because buffer stock, doesn't exist to accommodate variability in manufacturing, transportation, or DC handling performance, it requires greater visibility of performance exceptions at all touch points in the supply chain. The key to great cross-dock service is to ensure predictable and high velocity flow. Cross-dock operations cannot create any additional uncertainty in lead-time as inventory grows in the system.

With their just in time approaches to inventory management and product flow, retailers have historically leaned on cross-docking to speed product to market. But upstream partners are quickly gathering its import value as well.

Outside the retail/ wholesale context, cross-docking lends itself to consolidating inbound shipments versus outbound delivery to retail units, and therefore, optimizing truckload utilization. In a down economy, it doesn't make sense to use two trucks a day if only one and a half are full. Companies need to be able to flex transportation. Dedicated fleets are great when they are full, but when they aren't you have to look elsewhere. Businesses can partner with suppliers upstream and consolidate on the front end to pool shipments, not just deliveries.

Transportation of America (TOA) has witnessed a growing interest in cross-docking from suppliers and manufacturers shipping multiple SKU's. Even companies with a mix of different types of product and speed-to-market variables can find opportunities to take storage out of the equation.

As an example, some companies are co-opting standard warehouses as modified cross-docks, cutting a corner out of the facility and using two doors to keep high-velocity product moving, while storing less time-sensitive shipments.

In terms of cost breaks using less-than-truckload (LTL) cross-docks, consignees can reduce overall transportation costs for small suppliers with low-volume orders by consolidating and fully utilizing trailer capacity.

Shippers can similarly manage costs in the distribution facility by flowing as much inventory as possible through cross-docks. If three TL shipments come into a facility and one can be immediately cross-docked, that is a gain. With a cross-dock, the product is touched once, as opposed to storage where the product is touched once in put-a-way, then twice when it is picked and put on a truck. By identifying cross-docking opportunities, companies can reduce associated warehouse labor and materials management costs.

While cross-docking facilities are tactically centralized, successful operations require compliance at both ends of the supply chain. For demand-driven enterprises, this begins at the point of sale and radiates out. Demand forecasting for retail replenishment needs to be more accurate farther away from the demand. Transportation capacity, both upstream and downstream, has to flex to more dramatic swings in volume as the system responds to what consumers are buying.

Cross-dock consolidation is at a premium when demand peaks. With greater volumes coming into stores, retailers need to be able to receive lots of freight in short windows. Once orders are cut to the suppliers, the merchandise can't be held up along the way.

This requires a great deal of communication and transparency between the consignee and supplier to ensure demand is aligned with available transportation options. Without accurate forecasts and well-managed transportation and cross-dock operations, retailers struggle with out-of-stocks or sitting inventory they can't move.

The risk of running lean often forces compliance in its unique way. Shippers and consignee's that operate cross-dock demand precise and predictive execution among all partners. This unexpected, yet welcome, dividend drives accountability throughout the supply chain.

Each party-vendor, consignee, and intermediary-is scrutinizing the supply chain, and is measured against each others performance. Customers have to order in the right batches and sizes to consolidate shipments, and suppliers have to load trucks properly to gain efficiency.

Cross-docking forces partners to work together. If something goes wrong or isn't working properly everyone sees it. If trailers are coming in half-full and associated costs haven't been reduced, everyone knows about it.

What companies may not easily recognize, or readily share in the face of competition, however, is the broader impact cross-docking has on strategic supply chain underpinnings. If a business is able to manage its operations without centralized inventory, cross-docks can provide a low-cost, fast method to flow freight. It works especially well with pallet level distribution. If case packs or break packs are required, cross-docks across a short span of real estate with high speed conveyors and sorters can be effective well-albeit more expensive.

Given the cost of transportation, particularly LTL, businesses are discovering that decentralized, quick-throughput facilities that can consolidate TL's are advantageous. The trend to pull networks back and consolidate in big box distribution centers has given way to more lean distribution approaches like cross-docking.

In years past, if a company was operating a distribution facility out of Charlotte or Florida, it shifted back to Atlanta. We now see companies use smaller cross-dock facilities in these secondary markets, with less inventory, to move product where it needs to be.

Companies still have to consider a full end-to-end supply chain review to identify the total cost of investment, beyond the cross-docking piece. Sometimes these circumstances may not accommodate lean distribution operations. Because cross-docks are cheap in comparison to big box DC's, inbound and outbound transportation becomes a bigger part of the overall cost structure. Then you have to balance all of that against the cost of inventory. Investment in distribution technology and centralized storage capacity makes sense if the centralized inventory management provides the lowest landed cost.

But when cross-docks makes sense, and businesses connect all the parts and standardize operating procedures, efficiencies team. In that one touch, shippers can build value into the process by consolidating shipments and pooling deliveries. Herein lies the real value.

For retail distribution, in particular, managing inbound freight is the most complex and expensive part of the supply chain. More money is spent moving merchandise from suppliers to central DC's than shipping

from those DC's to retail units. Supplier networks often overlap and have common retail customers. Prepaid consolidation or freight pooling can help leverage assets across suppliers. Cross-docking palletized merchandise is a cost-efficient way to get the final delivery closer to its final destination.

Aggregating and shipping high velocity shipments also has green implications. Cross-docking and consolidation take trucks off the road and reduce emissions and carbon footprints. A heavy load moving into a facility presents a huge advantage. Consequently, it forces businesses to reconsider the warehouse floor and how they manage equipment, labor and materials.

You can look at something as simple as pallet returns, and recycling materials such as corrugated packaging, when working a cross-dock. If companies don't operate a cross-dock they probably don't manage this aspect of their warehouse well. As distances are generally shorter, they can bring materials and equipment back for recycling or reuse.

As sophisticated as supply chains have become –with multiple management systems, eye-in-the-sky strategic leanings, and materials handling bells and whistles commandeering budgets and resources alike–shippers and distributors need to look no farther than the corner of their warehouse to find a radical means for transforming their business.

There is no more cost-effective or quicker way to distribute pallets than with the use of a forklift across an open 100 foot dock. With the right systems in place, predictive visibility, and compliant supply chain partners, cross-docking is the most efficient method for pulling product through the supply chain.

We tend to make logistics more complicated than it needs to be. Facilities with complex automation and technology have a place in the industry, but if it doesn't have a return on investment, it can't pay for itself. Cross-docks are simple, efficient, and low-cost facilities. It comes down to what optimizes the entire cost of the supply chain.