

What Dynamic Routing Means for Today's Retail Supplier's

An emerging trend in the consumer goods industry, dynamic routing enables retailers to achieve significant transportation savings as well as reduced replenishment times. In order to realize these benefits, retailers are implementing new technologies and processes to allow for inbound advanced transportation planning and load tendering. In the supplier-to-retail supply chain, the customer traditionally pays the freight charges, so it is in the retailer's best interest to reduce transportation-related costs wherever possible. As progressive retailers adopt dynamic routing, suppliers must educate themselves and adapt from traditional static routing guides, issued by retailers, to new dynamic routing procedures. Suppliers are being forced to change systems and operations to satisfy their customers demands.

Static Routing

Before implementing dynamic routing, retailers previously issued a set of static routing instructions that applied to all of their suppliers. These guidelines, usually published either in hard copy or on a retailer's vendor compliance Web site, included fixed routing rules that applied to each individual supplier indefinitely, until the time that a new set of routing instructions were issued. For example:

Number of Cartons	Weight	Routing Instructions
1-50	>100 lbs	Parcel carrier to distribution center (DC)
50-200	100-1000 lbs	Less than Truckload (LTL) to Consolidator
200+	1000+ lbs	Truckload to DC

Because of the nature of "static" routing instructions, retailers were locked into certain carrier agreements and not granted opportunities to leverage load tendering to reduce transportation costs for each inbound load. In addition, each supplier would communicate individually with carriers to schedule shipments to the same retail customer, resulting in missed inbound freight consolidation opportunities for the retailer.

The following two scenarios describe how the limitations of static routing impede a retailer's ability to achieve efficient inbound transportation routings:

In **Scenario A**, three suppliers in North Carolina each have orders ready to ship that are destined for a retailer's DC in California. Based on rules in a retailer's static routing guide, each supplier is instructed to ship their orders via an LTL carrier from North Carolina to the west coast. The result is very costly for the retailer because an LTL carrier is handling three separate moves of orders across the country to one destination.



In **Scenario B**, three suppliers in North Carolina each have orders ready to ship that are destined for a retailer's DC in California. Based on rules in a retailer's static routing guide, each supplier is instructed to ship their orders via an LTL carrier to the retailer's consolidation center in North Carolina. At the consolidation center, the retailer combines shipments destined for the west coast and ships out orders on full truckloads to California. This option is also inefficient for the retailer because of additional handling of orders at consolidation center. Additionally, the results are negative for both suppliers and retailer because extra time is needed to get products from a supplier to a retailer's store shelves.



Dynamic Routing

In contrast with the static routing guides of the past, dynamic routing requires suppliers to communicate expected shipment forecasts in advance, to enable the retailer to determine optimal transportation plans based on the real-time information. Utilizing dynamic routing, suppliers send routing requests to the retailer either through an electronic data information (EDI) 753 transaction or via the Internet. The routing request communication contains supplier location and contact information along with store level or bulk purchase orders (PO) and the corresponding total cartons, weight, volume, and units the supplier expects to ship.

Upon receipt of the routing request, the retailer validates it against the PO in its own internal systems. If an order fails the validation check, the retailer communicates the errors to the supplier, who is then given the opportunity to correct the errors and resubmit the POs for routing. The most common reasons for a routing request to be rejected include: requesting routing outside the ship/cancel window, communicating an expected shipment that exceeds the number of units open on a PO, and miscalculations of the expected weight or cube of a shipment. These validations help ensure that orders are shipped to the retailer correctly and prevent costly charge backs to the supplier, which would have resulted without dynamic routing communications.

Once a routing request passes the retailer's validations, it is then submitted to transportation optimization software for routing along with all other suppliers' routing requests for the same scheduled shipping timeframe. The transportation optimizer processes the appropriate requests with the end goal of creating as many full truckload routings and bypassing as many consolidation receiving points as possible in the retailer's

distribution network. Once the optimization process is complete, the retailer provides routing instructions to each supplier through an electronic routing response, which can be sent through an EDI 754 transaction or communicated over the Internet. The routing response typically includes information about the ship to location, carrier/service level, load ID and load sequence. Additionally, at this time the retailer has an opportunity to issue load tenders with the appropriate carriers based on the full truckload routings and with the end goal of obtaining the cheapest cost for moving inbound freight.

Applying dynamic routing to the earlier scenarios, **Scenario C** shows a retailer that is able to combine shipments across multiple suppliers in North Carolina to create a single truck load move across the country to the its DC in California. One of the benefits of using the dynamic routing process instead of static routing is significant transportation savings for the retailer by utilizing one truckload move across the country verses multiple LTL moves. Additionally, eliminating the consolidator reduces the retailer's handling cost and speeds up the availability of products to end customer, which also benefits the supplier.



Impact on Retail Suppliers

Providing expected shipment information in advance most likely requires changes to a supplier's fulfillment processes. Suppliers must adapt their own operations and systems to plan future shipments, communicate accurate expected shipment information, receive real-time routing instructions, and execute on the committed fulfillment plan. To efficiently handle these requirements for a successful implementation of dynamic routing, suppliers need a robust warehouse management system (WMS) that has:

- **Advanced (or another descriptor since we use robust above) planning functionality** – allows a supplier to manage accurate expected shipment communication across customer base
- **Cartonization logic** – enables a supplier to provide accurate routing estimates
- **Flexible fulfillment methods** – accounts for varying fulfillment processes a supplier must adopt in order to meet multiple retailers’ routing requirements
- **Real-time visibility** – gives insight into dynamic routing communications
- **Integration with material handling equipment (MHE)** – merges dynamically routed orders into a supplier’s mainstream sortation for staging and shipping
- **Management of the exception handling process** – averts potential chargebacks for a supplier
- **A clear upgrade path** – ensures that a supplier will stay in compliance with both industry standards and vendor requirements from all of their customers
- **Proactive strategy for helping suppliers meet multiple retailers’ demands** - accounts for variations in requirements between retailers and ways that routing instructions may be communicated (both static and dynamic)

Despite the challenges and complexities suppliers face when adopting dynamic routing, there are many important benefits that are not just retailer specific. Implementing dynamic routing helps suppliers achieve their number one goal of satisfying their customers’ compliance requirements. This is especially important in the retail supplier industry where establishing a key differentiator can be a major competitive advantage for any supplier. With dynamic routing, suppliers can ensure they are shipping in the proper timeframe, to the right destination and via the correct carrier, thus reducing routing and shipping related charge backs. Finally, replenishing product and getting it on store shelves faster is something that benefits both retailers and suppliers by making goods available to the end customer, maximizing possible sales opportunities.

In our experience working with retail suppliers, adhering to dynamic routing initiatives led to improvements in accuracy of shipment planning, a more streamlined order fulfillment process and increased efficiency and productivity on the DC floor—something every supplier can benefit from.

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