Out with the Old - In with the New!
Managing Inbound Freight Fuels Greater Efficiencies

In the transportation business, there is constant pressure to reduce cost. Leading companies respond to this pressure by constantly improving how they manage inbound transportation. Best practice inbound management has improved as available tools and broader business practices evolved. Just as buying "delivered" gave way to the use of static routing guides, which in turn, gave way to dynamic management / optimization, simple optimization is now giving way to full-blown "PO Flow Management," generating greater savings, visibility, and value for shippers.

Understanding the Evolution of Inbound Transportation Management

As companies evaluate inbound transportation management options, it is often helpful to recognize how your company's current processes developed. It is also important to understand the broader development of the functional space around your transportation options.

Inbound transportation management has been an area of Supply Chain that was often overlooked or bypassed by companies of all sizes due to the very real difficulties of managing inbound. Poor and variable data, lots of entities/ suppliers, difficulty of communicating with vendors, and poor Transportation Management System (TMS) tool sets were all problems faced by transportation professionals.

Most companies asked their transportation professional to focus on outbound transportation, where transportation spend could be more easily managed. On the inbound side, even getting control of the spend required cross-functional cooperation between purchasing and transportation, as well as negotiation with suppliers to ensure appropriate cost was removed from the price of any items switched from pre-paid to collect (Freight Term Optimization). However, simply purchasing inbound products and materials on a "delivered" basis is often very expensive because suppliers can and often do ensure they are making money on their outbound transportation. So, with substantial money on the line, better solutions, processes, and toolsets developed. Comparing your inbound operations to the evolution stages described below can help you understand appropriate next steps to improve your inbound operations, and provide context to understand the latest PO Flow Management developments.

Delivered Freight?

Historically, the majority of inbound (IB) freight has been Prepaid or "delivered". This means the freight was arranged and paid for by the supplier. It is important to understand why. For most consignees, managing inbound freight on a collect basis has

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been extremely difficult. Consignees often had little visibility into their own company's purchase orders and even less visibility into real numbers and sizes of ship units (pallets or cartons) that the order would require, or the ready date for those ship units. With delivery dates tied to production runs or retail sales, it was often easier and safer to leave the freight terms Prepaid and give the vendor a delivery deadline. However, delivered freight resulted in very high costs for consignees.

Routing Guides

To reduce cost, leading shippers developed inbound programs using static routing guides. In this kind of program, suppliers were typically given a paper routing guide (or later an Excel spreadsheet) with instructions to use a particular carrier for shipments of certain sizes, weights, and count thresholds. The better programs asked the supplier to send information on TL-sized shipments to the consignee for routing. Problems associated with static inbound routing guides include:

- Missed opportunities for consolidation when multiple nearby or en route suppliers all have shipments below the truckload threshold
- The lack of operational control needed to pull a shipment forward a day or push it back a day to contribute to those consolidations
- The consignee's lack of visibility to inbound orders, since suppliers are tendering to carriers independent of the consignee (other than using their contract)

Dynamic Optimization for inbound transportation was developed as means to overcome these inefficiencies.

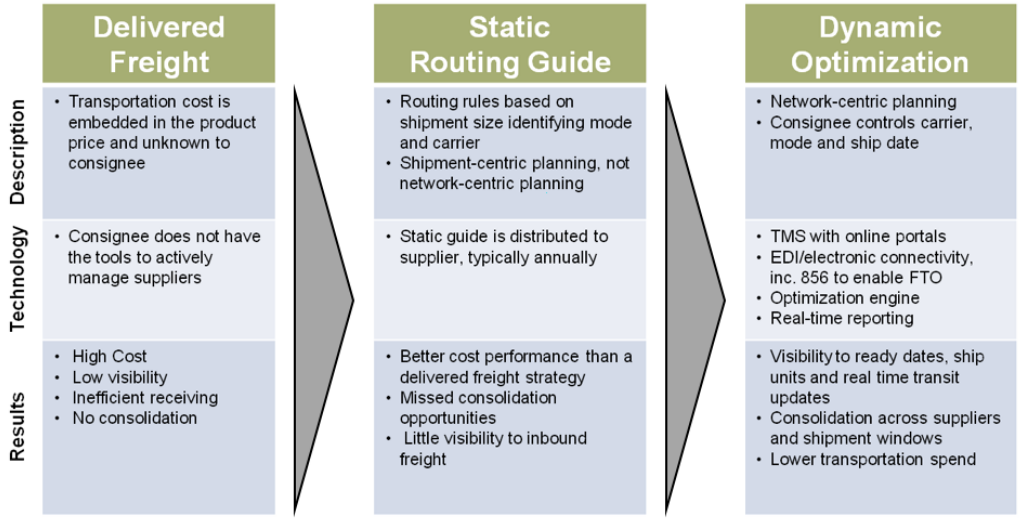
Dynamic Optimization

There have really been two phases to the use of dynamic optimization to drive inbound savings. In the mid-to-late 90's and early in the following decade many TMS applications had good optimizers;, however, web portal-based TMS had not yet been fully developed. Early optimization efforts based on PO's could create extremely good plans, but those plans were often useless due to supplier changes to item quantities or ship dates, carrier refusal of tenders, blown-up multi-stops, etc. In order to make these work well, consignees had to work with key suppliers, usually by phone, restricting these programs to only the orders that had the best chance of generating savings, usually based on order size or by vendor.

With the development of web-portal based TMS over the last 10 years, the communication difficulties that once limited the use of dynamic optimization have essentially become obsolete. Now a consignee can present PO's to suppliers in a supplier-specific, easy-to-use web portal. This enables suppliers to provide information about the order(s) and allows the consignee to plan the freight and provide routing information back in a systematic, repeatable format. Routing Request portals now give the vendor the ability to choose when their freight is ready, how much can actually ship, and from where it will be shipped. There is no need for fax, phone, or spreadsheets to transmit routing information. Best of breed web portals can also send out automated email reminders that include links to the portal, reports of pending or past due PO's and other customer service reminders.

As a supplier's order progresses closer to the end of a shipment window, the TMS can then create exception reports that notify the traffic team that a vendor is at risk of missing a ship window. Use of reminders and reports can

Best practice inbound transportation strategy evolves as TMS functionality improves



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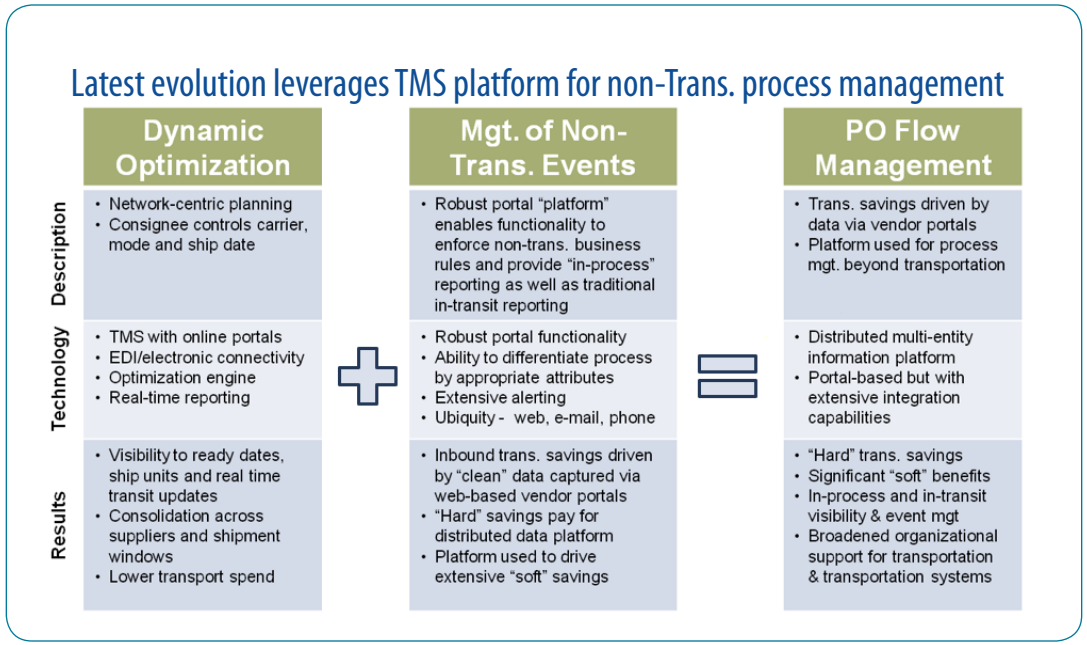
eliminate unnecessary phone calls, faxes, and time lost on the front end of a routing process, and ultimately drive better resource allocation and value.

More recently, in most TMS programs, the client can also push portals that allow vendors to see orders after the freight has been picked up. Using the updates that are provided in near-real-time by carriers (EDI/portal based), the same 214's that consignees seed can also be viewed by the supplier in a Shipment Status portlet. Providing the supplier access to their order throughout the planning and execution process is the kind of visibility that will reduce effort on the back end and increase compliance on the front end.

Inbound programs using Dynamic Optimization drive value by:

1. Improving vendor performance against PO's by dramatically increasing their visibility to the orders, enabling reminders about the orders and key dates, and enabling the supplier to request or communicate changes
2. Reducing transportation cost by:
    - Increasing order and shipment consolidations by enabling the consignee to run optimizations looking for consolidations across vendors and over ship windows
    - Evaluating multi-stop and pooling options (static and dynamic pooling)
    - Ensuring the appropriate mode and carrier are selected
    - Improving compliance with corporate contracts (eliminating maverick spend) by controlling the carrier tender process
3. Reducing receiving costs by providing better visibility of inbound loads and orders to the receiving facilities (up to and including receiving 856's from suppliers and sending them to DC's)
4. Providing in-transit visibility more broadly throughout the consignee company and supply chain
    - The particular decisions that are made differently on the basis of the visibility are difficult to predict prior to implementing such a program, but they regularly arise and are often far more valuable than the "hard" transportation savings
5. Enabling accurate freight costs allocations down to the SKU and PO level



PO Flow Management

Technological innovation beyond transportation and supply chain management systems has also spurred advances in the way inbound transportation is managed. Leading companies are exploring use of web-portal based TMS platforms beyond "simple" transportation management. Once a TMS i that connects vendors, buyers, receiving, inventory control, carriers, int'l freight forwarders, customs brokers, trade finance, and the transportation function is up and running and is being paid for by transportation savings, a very logical next step is to look for other ways to drive value from the near-real-time connectivity of these long separated entities and functions. PO Flow Management moves beyond Dynamic Optimization by incorporating communication about non-transportation processes, statuses, and events.

Some non-transportation processes, statuses, and events that we see beginning to be managed using leading web-portal-based TMS include:

PO Acceptance and Pre-Transportation PO Status

We have seen this usage both with smaller companies domestically in the U.S. and with international transactions. Many smaller companies are not making use of EDI 850's for communication of PO's and still primarily rely on e-mailed PDF documents. With web-portal-based TMS already sending some elements of the PO to the vendor to make routing requests, it is very easy to add PO Accept / Reject buttons and milestone tracking so that. For example, a buyer could receive a reminder to call any vendor that has not accepted a PO within 48 hours of it being transmitted. TMS's do not at this point have functionality with which to negotiate the transaction, but they can manage the acceptance / rejection process and tie date tracking and process management to the acceptance. For example, one client asked for a post-acceptance milestone to be set up a certain number of weeks prior to the requested ship date, at which point artisan suppliers had to affirm that the goods were "In Production" and others have asked for QA-related non-transportation milestones. Again, reporting and alerts can be driven by these milestones so that buyers, inventory managers, and transportation professionals are able to work on an exception basis with those suppliers that report delays or do not report.

Finance

Another non-transportation process we've seen managed in/with the distributed TMS platform is trade finance. Leading web-portal-based TMS can and do include trade finance in the network of portal users and are able to use generate documents, often based on a single entry of key data. Since transportation documentation and import/export documents are produced from the same data sets, they are more consistent. And, each appropriate document can be routed to trade finance partners as built in steps in the configured process, eliminating the need to create separate document packets for them.

Other Developments

Lastly, we have seen interesting developments with respect to management of processes generally related to transportation, but processes not necessarily directly tied to daily planning and dispatch operations. For example, since a web-portal-based TMS has information about underlying PO's and the Route Requests made against them, we have clients that are bringing EDI 856's into the TMS rather than having those messages go straight to the receiving facilities' systems. Advantages include being able to report on vendor performance from PO to Route Request to Actual Shipment and more easily being able to switch 3PL distribution facilities, since there is a single EDI 856 feed to redirect from a prior facility to a new one. A related benefit of receiving the EDI 856's into the TMS is that the TMS then has visibility to prepaid as well as collect inbound shipments. With visibility to prepaid shipments, reports can be built that estimate the collect transportation cost, assisting buyers with potential negotiations. Also, since the vendors and possibly their locations and some contacts are already set up in the system used to manage collect inbound transportation, the conversion process is faster and there is less risk of an operational error during the change-over. A final EDI 856 and web-portal-based opportunity we have seen is management of carrier appointments. With the EDI 856's coming in for both prepaid and collect moves, and given existing carrier portals, a single process can be configured that handles both flows without requiring a separate carrier interface and that can be communicated to receiving facility through their own portal views or through internal integration.

Summary

Best practice inbound transportation management is in the midst of another business/process evolution based on advances in Transportation Management Systems. Specifically, web-portal-based TMS that is used by the broad network of supply chain partners and is driven by and paid for with transportation savings is beginning to be used to report on and manage non-transportation processes, statuses, and events. Additionally, the creation of portal networks is redefining other transportation-related processes. Understanding where your strategies and operations fit in the evolution of inbound transportation will help you understand your opportunities and appropriate next steps.

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