How to Expand the Scope of Your Transportation Visibility to Inbound Movements

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Initiatives: Logistics and Customer Fulfillment, Supply Chain Technology Strategy and Selection

Many companies have begun to expand their visibility requirements beyond the initial scope of outbound movements. Logistics leaders can use this research to get a better understanding of how to leverage transportation visibility platform technology for inbound transportation visibility.

Overview

Key Findings

- Accessing data and gaining insights for in-transit inbound shipments can be more difficult and complex for companies to navigate than visibility to outbound shipments. Improving inbound visibility is highly dependent on external influencing factors such as suppliers, carriers and other service providers.

- Companies’ logistics leaders are looking at their inbound processes to get more accurate receiving ETA insights. This enables supply chain leaders to better plan the amount and the flow of inventory to manufacturing sites, the yard and warehouse locations.

- For many companies, recent supply chain disruptions, along with increased customer demands and internal needs, have increased the importance of having greater visibility and transparency into the transportation of inbound shipments.

Recommendations

Logistics leaders managing logistics and customer fulfillment who are looking to gain transportation visibility to inbound shipments should:
Leverage your RTTVP for inbound visibility by defining and documenting your internal processes and requirements for inbound visibility connections. Include your supplier list, their current freight terms and the method by which they currently provide inbound shipment data, if they do.

Speed up the visibility vendor selection process by defining your requirements based on supplier documentation availability and shortlisting vendors that can execute your requirements. Favor those that already have your suppliers onboard their platform.

Make better-informed decisions by leveraging inbound visibility. Regarding inventory, visibility can highlight information about in-transit stock and the potential actions or events that may cause service failures. This will allow you to take actions to mitigate stock shortages or outages.

**Strategic Planning Assumption**

By 2025, one-quarter of real-time transportation visibility users will use RTTVP for inbound visibility.

**Introduction**

Using real-time transportation visibility platforms (RTTVPs) and other tools to gain visibility to in-transit shipment information has gained more traction and adoption in the market in recent years. Originally, the focus was to provide visibility to in-transit locations, status and ETAs (estimated time of arrival), and overall progress of a company's outbound shipments to its customers. Due to recent disruptions and extreme delays being experienced in the supply chain, many companies now want to extend visibility to their inbound raw materials, components, finished goods or other shipment activities. It’s just as critical to know when these shipments will be arriving at internal locations when trying to improve things like customer service, inventory planning, inventory location and safety stock levels. Figure 1 illustrates the typical prioritization of outbound transport visibility milestones over those associated with the inbound transport process.
Figure 1: Typical Transportation Visibility Priority

Typical Transportation Visibility Priority

Extending visibility to inbound shipments can pose a slightly more complex setup or configuration than what is required for outbound shipment visibility. The management of inbound transportation is not typically controlled by the company looking to gain this visibility. When a customer is in charge of the transportation, it is categorized as customer pick-up (CPU) or Ex Works (EXW) as defined by Incoterms 2021. More often than not, inbound transportation contracts and execution are managed and controlled by the supplier and not the customer/receiver. They are sometimes referred to as prepaid or Carriage Paid To (CPT). This additional complexity can make it more challenging for a visibility platform to gain access to the shipment data from the supplier. With the growing pressure to gain this layer of visibility, many of the vendors providing real-time transportation visibility platforms and other transportation visibility solutions have worked to extend their solution to solve this gap for their customers.

Analysis
Define Your Internal Processes and Requirements for Inbound Visibility

Determining your internal processes and requirements is a critical step to leveraging your RTTVP for inbound visibility. Figure 2 details the importance of understanding who all your suppliers are, how they can connect to a platform, the modes your inbound freight is moving on and the carriers that are hauling it.

**Figure 2: Define Internal Processes and Requirements for Inbound Visibility**

<table>
<thead>
<tr>
<th>Suppliers</th>
<th>Data</th>
<th>Modes</th>
<th>Carriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Number of suppliers already connected to RTTVP</td>
<td>• Types of data available to feed shipment information (e.g., ASN, PO, flat file)</td>
<td>• All modes for moving your inbound shipments</td>
<td>• All carriers hauling inbound shipments</td>
</tr>
<tr>
<td>• Connection capabilities of each supplier</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Freight terms of each supplier</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

In addition, shortlisting the technology vendors that have more carriers, modes and suppliers already connected will help you to determine the level of work that will be required to integrate your suppliers. When your company controls the freight or pays the freight bills, it can be simpler or more direct to create the integration from your host system to the RTTVP in order to feed your shipment data. When you do not control the freight or the supplier owns the carrier contracts, then it becomes more important to understand the methods by which the suppliers can or will feed that shipment data.

There is typically a variety of methods that RTTVP vendors can use to connect to suppliers or obtain the supplier-controlled shipment information. These methods can include:

- Advanced shipping notification (ASN) duplication
- ASN integration from third-party partners
- Purchase order (PO) integration
Talking with your suppliers in advance to gauge their commitment and ability to connect can help set up your project for a more successful implementation as well. There are also a variety of benefits that the suppliers can realize through the collaboration on a RTTVP, so informing them of these benefits may also help enhance the success of your inbound visibility project. For some ideas about benefits for suppliers, see *How to Assess the Benefits and Return on Investment of a Real-Time Transportation Visibility Platform*.

**Shortlist Visibility Vendors Based on Your Requirements**

Once you've gathered all of your requirements and defined the process for creating inbound visibility, the next step will be to assess the vendors with the capabilities and network to best meet your needs. Many RTTVP vendors can extend your visibility solution to inbound. If you're implementing an RTTVP for the first time, leverage Gartner research on the RTTVP market to help shortlist vendors, conduct an RFP and select a vendor. Be sure to incorporate these inbound requirements into the project as well. You may already be using an RTTVP and want to confirm if your existing provider can meet your needs for inbound visibility. Or you may want to vet other vendors in the market. In either case, consider the inbound visibility influencing factors for vendor selection detailed in Figure 3.

- Freight forwarder integration
- Carrier integration
- Vendor portal or user interface
- CSV, Excel or other file upload
- File translation through middleware
- Existing connection to supplier as a customer integration to RTTVP
Leverage Inbound Visibility to Make Better-Informed Decisions

There are many benefits that could be realized by leveraging inbound visibility and data within the organization. As it relates to inventory, companies may be able to reduce safety stock buildup once real-time transit visibility is available and ETA prediction accuracy is proven. In some specific use cases, like those of perishable goods and shopping markets, companies are able to help improve turnover, making store operations smoother and optimizing the short shelf life of fresh products. Gartner has observed use cases where companies have realized between a 1% to 5% reduction in inventory carrying costs by leveraging RTTVPs. In addition to the value of the inbound scenario, many of the RTTVPs have been able to extend tracking not just to the shipment level. They are also able to track at a PO level and even an SKU level, providing more detailed and valuable insights to the customers using these platforms.
Leveraging inbound visibility can also extend collaboration within the supply chain. By using the data and information in RTTVPs, companies throughout the supply chain can collaborate together. Figure 4 details how suppliers, shippers, receivers and carriers can all use and benefit from the same data resulting in end-to-end supply chain improvements. From reduced detention to filing empty miles, these collaborations can be quite effective in optimizing the supply chain for all participants.

Figure 4: Real-Time Visibility as a Collaborative Platform

Once companies have insights and reliable predictions on their inbound shipments, they are able to use the visibility and reliability gains to achieve additional supply chain improvements. These improvements might include:

- Streamlining receiving and unloading operations in the warehouse or plant
- Improving synchronization of deliveries with production scheduling
- Reducing excess inventories across the network
- Better supporting purpose-built supply chains, such as agile, efficient and responsive
- Decreasing logistics lead-time variability
Working with sourcing to better coordinate supplier purchases for more efficient transportation

See Figure 5 for an action checklist you can use for expanding your transportation visibility to inbound shipments.

**Figure 5. Action Checklist for Inbound Transportation Visibility**

**Action Checklist for Inbound Transportation Visibility**

- Define your internal inbound process and requirement:
  - Define and list your suppliers — those already connected to RTTVP and which vendor, and the connection capabilities and freight terms of each supplier.
  - Define and list your data feed types (e.g., ASN, PO, flat file).
  - Define and list your modes for moving all inbound shipments.
  - Define and list all carriers hauling inbound shipments.

- Speed up vendor selection:
  - Shortlist vendors based on:
    - Modal coverage
    - Global presence
    - Carrier network
    - Data quality
    - Supplier network
    - Supplier connection methods

- Leverage inbound visibility for better decisions:
  - Streamline receiving and unloading operations in the warehouse or plant.
  - Improve synchronization of deliveries with production scheduling.
  - Reduce excess inventories across the network.
  - Better support purpose-built supply chains, such as agile, efficient and responsive.
  - Decrease logistics lead-time variability.

**Evidence**

This research incorporates vendor-provided process details, use-case examples and information gathered from our interviews with real-time transportation visibility vendors such as Blume Global, Descartes, E2open, FourKites, Infor, Logit One, project44, Shippeo, Transporeon and Trimble.

**Recommended by the Authors**

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**Magic Quadrant for Real-Time Transportation Visibility Platforms**