

Role of Real-Time Transportation Visibility Technology in Handling Logistics Challenges Created by COVID-19

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Just as governments struggle to track the real-time status of COVID-19 spread, many supply chains lack tools to track product delivery to customers in times of disruption. CSCOs can use this research to learn the value of real-time transportation visibility technologies and scenarios.

Overview

Impacts

- Due to COVID-19, a black swan event, supply chains are struggling with logistical bottlenecks from restrictions on the flow of goods, increasing the importance of transportation and negatively affecting freight capacity.
- Lockdowns of cities/countries and border crossings are causing disruptions for shippers as well as confusion around actual status at multiple locations.
- Limited labor workforces at warehouses and distribution centers, as well as at brokers and logistics service providers, are causing delays at pickup and delivery locations. This might cause rerouting of products direct to stores.

Recommendations

Chief supply chain officers looking to boost delivery visibility as part of their supply chain strategy should:

- Identify the use cases where real-time transportation visibility technology can help you create better insights in your current transportation network and provide predictive insights going forward to prepare for other supply chain disruptions.
- Utilize real-time transportation visibility platforms to get better visibility of bottlenecks at borders and in cities, as well as of inventory in transit to distribution centers (DCs) or to stores.
- Use technology tools such as real-time transportation visibility to predict when and where labor issues might occur, causing misalignment between transportation and the loading/unloading locations.

- Position real-time transportation visibility tools to identify capacity when needed and to allocate resources rapidly to accommodate situational changes.

Strategic Planning Assumption

By 2023, 50% of global leading enterprises will have invested in real-time transportation visibility solutions.

Analysis

The World Health Organization declared the novel coronavirus outbreak a pandemic on 11 March. By 20 March, there were over 249,000 reported cases and more than 10,000 deaths worldwide, and the virus had found a foothold on every continent except for Antarctica.

One of the biggest challenges for countries in the current climate of COVID-19 is to get real-time visibility into what is happening. Governments and health organizations lack insight into the real-time status of the disease, the exact number of patients and the spread of cases around regions and countries. Similarly real-time visibility into the logistics network (aka real-time transportation visibility) is challenging supply chain companies. This affects both inbound products coming into their facilities from suppliers and contract manufacturers as well as outbound deliveries to the distributors, customers and consumers.

Real-time visibility is a key technology used to run a successful supply chain where products continue to be delivered to customers. In this research, we will describe scenarios showing the value of real-time transportation visibility and how these technologies can help companies better protect themselves from issues around the network and gain better insight into estimated product delivery times.

Figure 1. Impacts and Top Recommendations for Using Real-Time Transportation Visibility Solutions in the COVID-19 Pandemic

Impacts and Top Recommendations for Using Real-Time Transportation Visibility Solutions in the COVID-19 Pandemic

Impacts	Top Recommendations
<p>Supply chains are struggling with logistical bottlenecks from restrictions on the flow of goods, increasing the importance of transportation and negatively affecting freight capacity.</p>	<ul style="list-style-type: none"> • Identify the use cases where real-time transportation visibility technology can help you create better insights into your current transportation network. • Provide predictive insights going forward to prepare for future black swan events and other supply chain disruptions.
<p>Lockdowns of cities/countries and border crossings are causing disruptions to shippers as well as confusion around actual status at multiple locations.</p>	<ul style="list-style-type: none"> • Utilize real-time transportation visibility platforms to get better visibility of bottlenecks at borders and in cities/ regions. • Obtain real-time insights into inventory in transit to DCs or to stores.
<p>Limited labor workforces at warehouses and distribution centers are causing delays at pickup and delivery locations. This might cause rerouting of products direct to stores.</p>	<ul style="list-style-type: none"> • Use technology tools such as real-time visibility to predict when and where labor issues might occur causing misalignment between transportation and the loading/ unloading locations. • Position real-time visibility tools to identify capacity when needed and to allocate resources rapidly to accommodate situational changes.

Source: Gartner

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Impacts and Recommendations

Supply Chains Struggle With Logistical Bottlenecks From Restrictions on Flow of Goods, Increasing Importance of Transportation and Negatively Affecting Freight Capacity

“A black swan event is an unpredictable event that is beyond what is normally expected of a situation and has potentially severe consequences. Black swan events are characterized by their extreme rarity, their severe impact, and the widespread insistence they were obvious in hindsight.”

– Investopedia

Given current conditions in March 2020, restrictions on travel networks have created logistical bottlenecks, exacerbating inbound and outbound supply chain challenges. Self-isolation and

forced isolation announcements have led many people to engage in panic buying, leading to empty shelves. This has placed strain on supply chains that are also struggling with logistical bottlenecks due to restrictions on the flow of goods and lack of critical personnel.

Visibility to the flow of goods has increased in importance as out of stocks and overstocks have become increasingly unacceptable for retailers. Standard pricing, promotion and trade spending discussions, which typically comprise the majority of key account manager/retail buyer conversations, are taking a back seat to more basic, survival-mode supply concerns including how to get products to the consumer. The flow of goods is similarly affected as shipments are diverted from DCs direct to retail stores or from the store to the consumer's home.

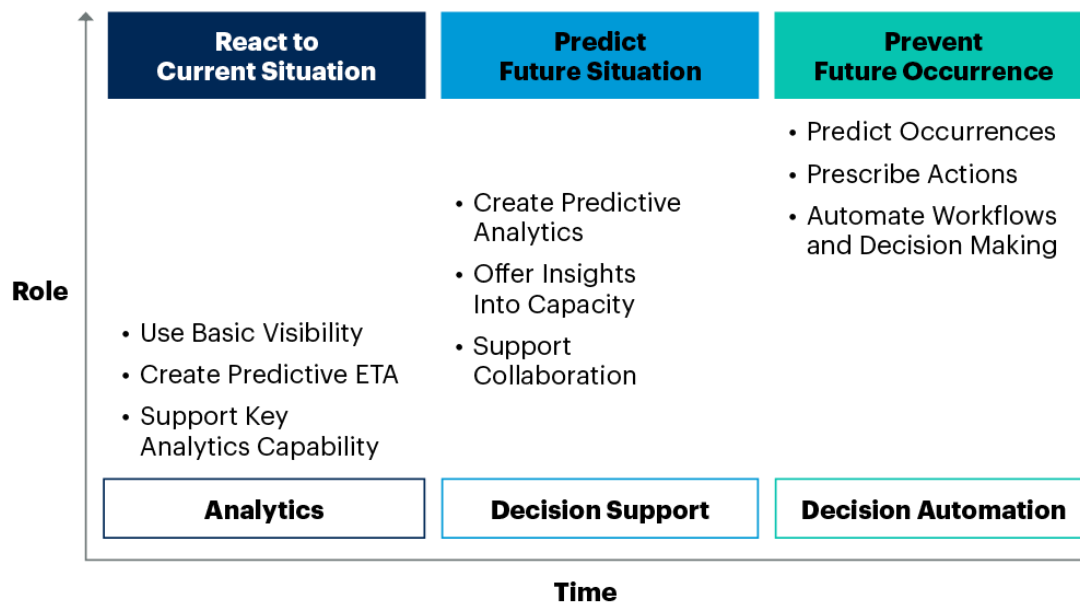
Some companies have referred to the term "turbocharge logistics flexibility." This includes many different steps companies should take to understand potential lockdown areas and how companies can continue to enable deliveries in those areas. Real-time transportation visibility technology plays an important role in helping companies assess these situations by providing valuable insights and tools to analyze and predict scenarios. Some companies already have these solutions and can start assessing and predicting impacts on their shipments. Many companies are still implementing these technologies and looking at the different capabilities these solutions can provide.

Gartner observes three major stages in which visibility solutions can contribute to a company's response to disruptions such as COVID-19, as well as many other current and future turns (see Figure 2):

- **Stage 1:** Use visibility as a way to get detailed analytics and basic capabilities such as predictive ETAs. This is mainly reactive in nature but provides great insights into current conditions around shipments in transit and any disruption at loading and unloading locations.
- **Stage 2:** Use historical and real-time data to make better predictions on future events as well as get insights around available capacity in the network. This can go from aligning truck arrival in the planning solution to improving appointment scheduling to increasing utilization of empty lanes in the network by predicting which lanes show backhaul opportunities.
- **Stage 3:** Create prescriptive/preventive actions around future occurrence and provide the capability to automate workflows.

Figure 2. Ability to Use Visibility From Reactive to Preventive

Ability to Use Visibility From Reactive to Preventive



Source: Gartner
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Recommendations:

- Learn how real-time transportation visibility technology can help you create better insights into your current transportation network and provide predictive insights going forward to prepare for future black swan events and other supply chain disruptions.
- Work with customers to identify and understand the key constraints that will affect planned volume of shipments and changes in demand, as well as capacity based on operational and strategic needs.
- Use technology tools such as real-time visibility to predict when and where capacity will be needed and allocate resources rapidly to accommodate situational changes.

Lockdowns of Cities/Countries and Border Crossings Are Causing Disruptions for Shippers

Since the early days of lockdowns in countries like Italy, there has been a shortage of carriers willing to transport into heavily affected “red zones,” resulting in an inbound supply risk. Warehouses located in such areas have experienced a corresponding outbound supply risk. Additionally, many third-party distributors and wholesalers have faced the same turnover and inventory challenges as faced by consumer products companies. High-demand product categories proved vulnerable to insufficient supply, while low-demand categories were vulnerable to oversupply, creating cash flow issues. Similarly, in the U.S., we see certain states and cities going

on lockdown, which will ultimately impact the availability of carriers and their movements. This situation will only get worse in the next several weeks and possibly months.

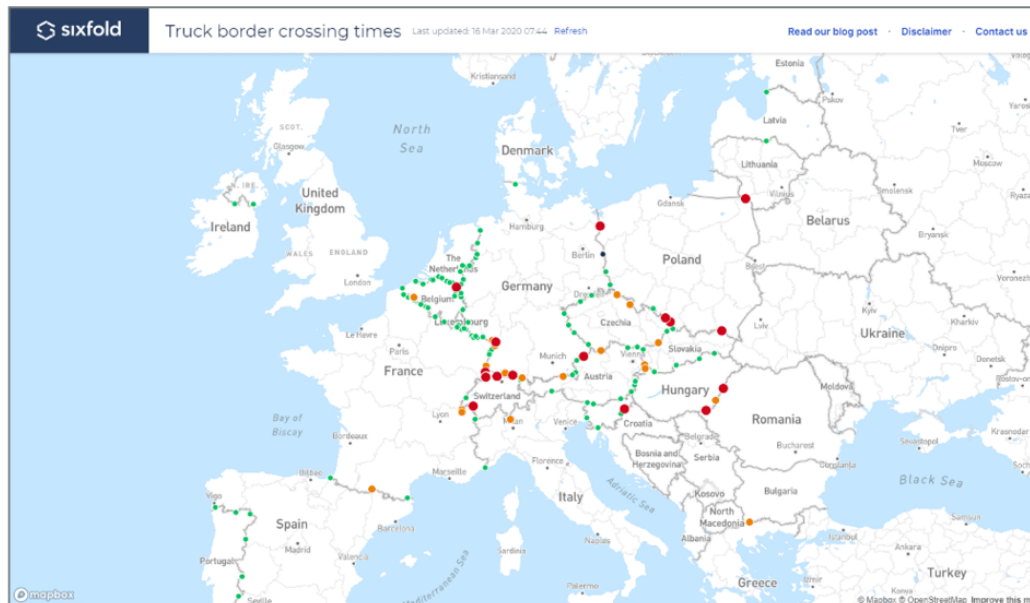
Real-time transportation visibility vendors (see [“Market Guide for Real-Time Transportation Visibility Platforms”](#)) can provide valuable insights into current product movements, show bottlenecks and predict ETAs. There are many different use cases real-time transportation visibility solutions can help with.

Use cases for real-time transportation visibility in the COVID-19 crisis:

- **Access to real-time, actual data:** Several shippers have been mentioning that the lack of clarity around the situation and conflicting social media reports have led to uncertainty among their staff. Actual facts and data insights enabled by real-time visibility have enabled shippers to “calm down” their teams and make them focus on exceptions and actual delayed transports that need attention.
- **Visibility to crucial healthcare deliveries:** A Fortune 100 pharmaceutical company with more than \$32 billion in revenue is using project44’s real-time transportation visibility solution to deal with pressures to deliver crucial supplies to hospitals quickly and safely, while also overcoming current challenges with international freight.
- **Visibility to high-demand products:** A retailer with more than 15,000 stores in the U.S. and 135,000 employees is using real-time visibility to tag high-demand products, allowing them to track their location throughout their network, from their suppliers to their stores. Based on project44 user data on 16 grocery chains in North America, grocery chain outbound shipments to stores jumped more than 25% week over week as of 14 March, with 13 March shipments 60% higher than normal.
- **Detection of actual stops/breaks:** Visualizing whether and how long trucks have been stopped at certain points (e.g., loading/unloading points, borders, locked-down areas) has helped shippers and carriers to better understand the situation and potentially re-route the transports.
- **Country border wait times:** The legal situations at borders are changing rapidly and are quite uncertain (e.g., Are border shutdowns valid only for private persons or also for cargo?). Real-time visibility into movements at the borders — showing if they are crossable and whether delay is building up — is helpful for planning transports. This is especially valuable because there are major differences between car traffic and truck traffic, as well as differences by country/region. In Europe, vendors such as Sixfold are getting input from their customers and using their technology tools to do rapid prototyping of new ideas. New features such as interactive maps including waiting times, and advanced filters are being introduced at an accelerated pace to help shippers with their current transportation challenges. This overview is being made available for free to anyone as a way to help supply chains that need to get better insights (see Figure 3 and Note 1).

Figure 3. Visibility to European Border Crossings Provided by the Visibility Provider

Visibility to European Border Crossings Provided by the Visibility Provider



Source: Sixfold
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- **Activity of carriers/capacity:** Due to the lockdown of certain countries/regions (e.g., Italy), there are an increasing number of requests about whether/which carriers are actively working. Real-time visibility solutions can provide updates here as well.
- **Collaboration between shippers:** Real-time transportation visibility platforms (RTTVPs) can also provide insights into how multiple shippers can collaborate around capacity utilization. This will become even more important as capacity tightens. According to one of Descartes' visibility customers, "Dry van capacity is extremely tight, especially in states that have begun lockdown protocols like Ohio, Illinois and others." Several FMI and GMA members are already using tools such as FourKites to enable their transportation networks and make them more collaborative. These consumer products and food and beverage shippers are at the core of replenishing the different retail points that are currently being impacted by the sudden increase in consumption of certain household goods.

Recommendations:

- Use real-time transportation visibility platforms to get better visibility of bottlenecks at borders and in cities/regions.
- Obtain real-time insights into inventory in transit to DCs or to stores.

Limited Labor Workforces at Warehouses and DCs, as Well as at Brokers and Logistics Service Providers, Are Causing Major Delays

Drivers are not dealing with big groups of people that can be easily disrupted by locking down locations or prohibiting gatherings of larger groups of people. Factories and warehouses, on the other hand, where 200 or 300 people are working, are at risk of being disrupted and even closed. So while truck drivers continue to execute their jobs at this time, we may see some issues at warehouses where loads are not ready because they don't have the people to load them onto the trucks because their workforce is down.

On 16 March, New Jersey became the first state in the U.S. to impose a curfew on nonessential, nonemergency travel between 8 p.m. and 5 a.m. The state also wants nonessential retail businesses to close at 8 p.m. This will create additional delivery problems in New Jersey and beyond for companies that receive trucks and shipments after normal working hours. It will also raise demand for more precise delivery times during the day. Driver detention at supermarkets and cold storage facilities could become an even bigger issue than it's traditionally been, as restrictions on delivery times complicate driver work schedules. On 17 March, Pennsylvania closed all 35 of its highway rest stops to all activity following the declaration of a state of emergency.

If widespread temporary closure of stores, distribution centers, warehouses and factories across the U.S. follows, shipping and receiving goods may become more than problematic just as a surge in imports from China finally arrives. When freight capacity won't be where it's needed, this will ultimately drive up costs.

At the same time, these limited store hours might impact stores' ability to get timely replenishment. Holdups at the manufacturer's loading sites or at the retailers' distribution centers will add to the already existing challenges.

In some cases, retailers are asking their suppliers for the carrier to ship the product directly to the stores and to bypass the retailers' distribution centers. According to one of Descartes' customers, "We are seeing high demand for loads to be delivered straight to retail outlets, and some are offering premiums to take (the load) into metro areas."

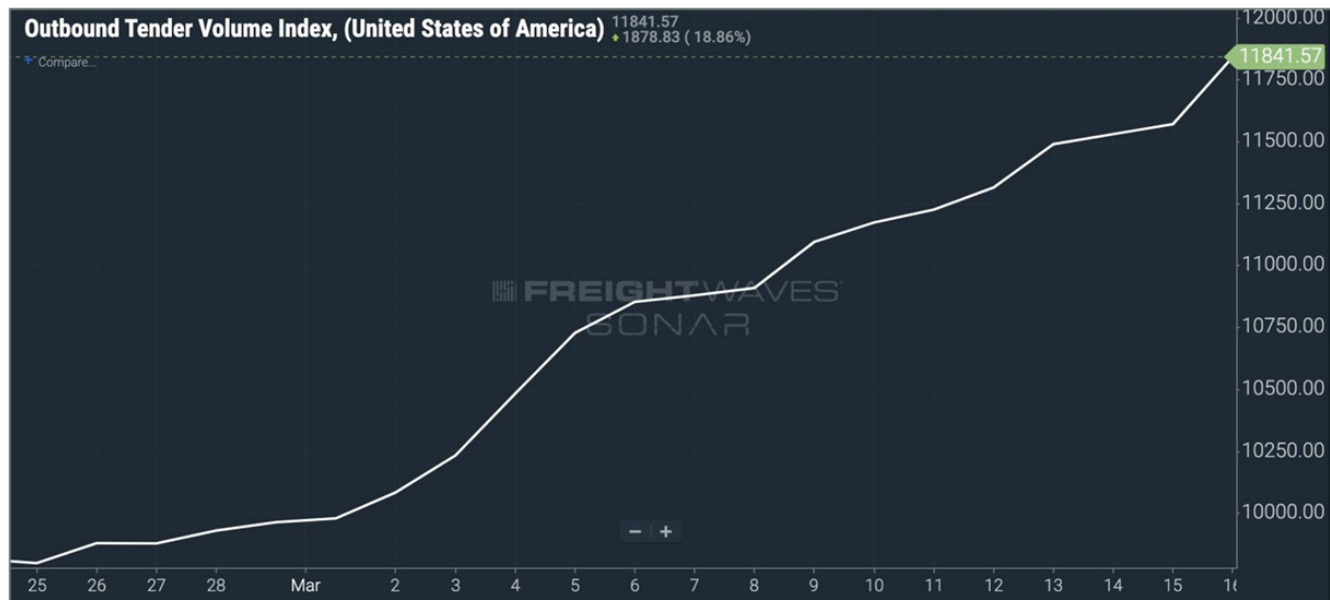
The world's leading e-commerce company is facing labor shortages, causing delays at fulfillment centers, as well as capacity uncertainty, which is extending lead times. Amazon is suspending some fulfillment services in order to "prioritize shipment of household staples, medical supplies and other high-demand products," the company said in a support document on its website. ² Based on project44 data from more than 400 distribution centers, dwell time has increased more than 15% in the last three weeks.

Trucker Tools, provider of a real-time visibility solution for brokers/3PLs and shippers, has seen about a 19% increase in the real-time visibility of freight on its platform. This is to be expected as the overall freight volume has increased in the U.S. due to increased demand for consumable goods (see Figure 4). Brokers are handling a strong surge of freight. According to FreightWaves' SONAR, there has been an increase of over 10% in freight volume in the recent days compared to 2018 volumes and a 21% increase in U.S. outbound tender volume in the last month. Brokers are challenged with fewer staff members working and some staff working from home. This has

increased the number of tasks that a broker has to perform. Real-time transportation visibility reduces the burden of manual tracking so employees can focus on more critical tasks like finding available trucks.

Figure 4. Increase in U.S. Outbound Freight Tenders in the Last 30 Days (as of 17 March 2020)

Increase in U.S. Outbound Freight Tenders in the Last Month



Source: FreightWaves

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Use cases in this area of real-time transportation visibility include:

- **Visibility to in-transit inventory:** With high consumer demand on paper products, cleaning supplies, medicine and food, retail and e-commerce companies are struggling to keep up with the demand. Visibility to the inventory in transit to distribution centers, stores or warehouses could help these companies plan better. They could have a plan to communicate with the stores and employees on when certain products will arrive, allowing them flexibility and creativity on how to stock shelves, communicate with consumers and plan sales/allocation of the high-demand products.
- **Dwell time:** Using a real-time visibility platform can show the dwell time of a driver at any location, along with predictive ETAs. This can help companies preplan employees and drivers with protective gears/measures prior to arrival and can help them understand the potential impact to employees or drivers from dwell time.
- **Driver capacity:** In an already limited driver/capacity market, COVID-19 is causing further capacity issues – a more limited number of drivers on the road. With visibility to where delays are occurring, companies can make better decisions on how to expedite loading/unloading so that drivers who are on the road can stay moving and products can keep moving to end users quickly.

Recommendations:

- Use technology tools such as real-time visibility to predict when and where labor issues might occur causing misalignment between transportation and the loading/unloading locations.
- Use real-time visibility tools to identify capacity when needed and to allocate resources rapidly to accommodate situational changes.
- If you have already invested in these tools, make sure you utilize them to the full extent of the use cases described above.
- If you currently do not have access to these tools, prioritize investment into real-time transportation visibility solutions as the situation might still worsen and to prepare yourself for the next disruption.

Acronym Key and Glossary Terms

RTTVP	Real-time transportation visibility platform
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Evidence

This research incorporates results of our interviews with real-time transportation visibility vendors such as Descartes, FourKites, project44 and Sixfold.

¹ [“Truck Border Crossing Times,”](#) Sixfold.

² [“Temporarily Prioritizing Products Coming Into Our Fulfillment Centers,”](#) Amazon Seller Central.

Note 1: Border Wait Times in Europe

Examples of border wait times in Europe, dated 17 March 2020:

- **Poland** has opened a second border crossing from **Lithuania** in **Ogrodniki**. Current queue is 13 km. Main Suwałki crossing has an over two-day queue.
- **Germany** to Poland in Frankfurt/Oder has around a two-day queue
- **Czech Republic** to Poland near Ostrava. Both crossings have similarly long queues, about five hours to Poland.

Recommended by the Authors

[Supply Chain Brief: Global Logistics Networks Disrupted by Coronavirus](#)

[Supply Chain Brief: Global Supply Chains Prepare for Impact From Coronavirus](#)

[Supply Chain Brief: Navigating Procurement Challenges From Coronavirus Outbreak](#)

[The Pillars of Pandemic Planning](#)

[Engage Suppliers and External Manufacturers to Optimize Business Continuity Planning](#)

[Collaborative Efforts When Responding to Disruptions](#)

[Market Guide for Real-Time Transportation Visibility Platforms](#)

[Smart Insights for the Real-Time Transportation Visibility and Monitoring Solution Market](#)

[Toolkit: RFP for Real-Time Transportation Visibility Platforms](#)

[Supply Chain Operational Visibility Vendor Guide](#)

Recommended For You

[Video: Uber – How On-Demand Networks Are Reshaping Logistics](#)

[Supply Chain Brief: Global Logistics Networks Disrupted by Coronavirus](#)

[2019 Strategic Roadmap for Moving From Stage 2 to Stage 3 Logistics Maturity](#)

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