Mobility with Care in Novel Coronavirus (COVID-19) Crisis

Snapshot Highlights – Week of March 23, 2020

About This Document
Given the fluid situation, this document is prepared to provide a snapshot of trends and practices in freight transport and logistics in lights of production recovery in China, US restrictions and preventative measures, and continued growth in online shopping, notably in grocery and food categories. Data are based on a review of literature published during March 18–March 24, 2020, including managerial journals, industry reports, and relevant web resources. Content was analyzed to discern actions taken and industry opinions at the time of this review to get supply chain managers up to speed on how companies are responding to the COVID-19 crisis.

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Key Developments Impacting Transportation and Logistics Operations

The following key developments are driving an increased need for infrastructures, technical means, and creative operational practices to mobilize freight within global and US supply chains, while ensuring health and safety of employees and customers.

China Production Recovery

- **China production recovery.** Companies in China are resuming their normal productions, under the stringent requirements for companies to establish adequate protective measures and provide an adequate supply of protective gears for employee (Betti and Ni 2020). As factories in China continue to come back online, products are now flowing again. Thus, international freight volume could begin to increase as Chinese exports pick up (Agility 2020a; Bloomberg 2020; Mongelluzzo 2020).

- **Chinese exports still limited by domestic truck driver shortages, but gradually improving.** There are still issues affecting cargo movement, including the availability of truck drivers to move cargo to Chinese ports. However, domestic trucking is gradually improving in China as most truck drivers are back on duty (Agility 2020a; Bloomberg 2020; Close-Up Media 2020; Crane Worldwide Logistics 2020).

More Stringent Restrictions by US Government

- **US restriction update.** At a varying scope, various restrictions have been placed at the local, state, and federal level—from bans on social gatherings, widespread school closures, to travel restriction. While some of these restrictions applies to passenger traffic, resulting consumption behavior change, notably increased online shopping, have direct implications for freight transportation and logistics operations in terms of order fulfillment and delivery.

  - **Social distancing.** Massachusetts joining other states in social distancing mandates, including California, Colorado, Connecticut, Illinois, Indiana, Kentucky, Maryland, Michigan, Minnesota, New Jersey, New York, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, Vermont, and Washington (Cunnane 2020).

  - **Stay-at-home/Shelter-in-place orders taking social distancing to a new level.** On March 24, the states of New York, New Jersey, Connecticut, Massachusetts, Delaware, West Virginia, Michigan, Ohio, Indiana, Illinois, Louisiana, Kentucky, and California have “stay at home” orders (Bolloré Logistics 2020; Cunnane 2020).

  - **Transportation and logistics among 14 essential categories in advisory list by DHS.** The US Department of Homeland Security (DHS) has listed 14 industries and employment categories that the agency identifies as Essential Critical Infrastructure Workers. The list is advisory, not a federal directive. These include: (1) Health care and public health workers; (2) Law enforcement, public safety, and first responders; (3) Food and agriculture workers; (4) Energy employees; (5) Water and wastewater; (6) Transportation and logistics; (7) Public works; (8) Communications and information technology; (9) Other community-based government operations and essential functions; (10) Critical manufacturing; (11) Hazardous materials; (12) Financial services; (13) Chemical workers; and (14) Defense industrial base (Collins 2020).
— **State-level orders for non-essential business closure.** Michigan and Massachusetts ordered non-essential businesses to close and advised residents to stay at home Monday 23, joining several other US states in imposing this measure (e.g. Pennsylvania, California) (Calfas, Khan, and Coles 2020; Cosgrove 2020; Heavy Duty Trucking 2020).

— **Transportation and logistics deemed essential workers in all state-level orders.** No state-level order has yet sought to curtail transportation and logistics as essential operations. This includes mass transit workers, auto repair and maintenance workers, trash collectors, postal and shipping workers, air traffic controllers, air transportation employees, dispatchers, maintenance and repair technicians, warehouse workers, truck stop and rest area workers, and workers who maintain and inspect infrastructure (Collins 2020; Heavy Duty Trucking 2020).

■ **Tightened US border: International traffic restriction update**

— **Land borders: Canada and Mexico.** On March 18, by mutual consent Canada and USA are temporarily closing the border between Canada and USA for all non-essential passenger traffic. The US closed its border to non-essential travel with Mexico starting on March 21. While movement of cargo and trade workers will continue to be able traverse the borders, truck drivers will face additional scrutiny and questioning. US-bound truck drivers that have returned from a known international “hot spot” for the virus in the past 14 days will be denied entry (Agility 2020b; Bolloré Logistics 2020; Hackman 2020; Hylton 2020; Smith 2020b).

— **Europe.** US passenger travel restrictions from Europe have widened to include UK and Ireland (Agility 2020b).

### Surge in Online Grocery Shopping

**Grocery orders and BOPIS surge**

<table>
<thead>
<tr>
<th>Category</th>
<th>Increase in ecommerce sales on March 12 through March 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-assortment grocery merchants*</td>
<td>210.1%</td>
</tr>
<tr>
<td>All BOPIS orders</td>
<td>151.1%</td>
</tr>
<tr>
<td>All ecommerce</td>
<td>111%</td>
</tr>
<tr>
<td></td>
<td>82.8%</td>
</tr>
<tr>
<td></td>
<td>35.6%</td>
</tr>
<tr>
<td></td>
<td>33.4%</td>
</tr>
</tbody>
</table>

- Dollar volume growth
- Growth in number of orders

*These merchants include Amazon.com Inc.’s Amazon Fresh service, Instacart Inc., Walmart Inc.’s Walmart To Go service, Kroger Co. and others.

**Source:** Rakuten Intelligence, 2020

**Source:** Melton (2020)
COVID-19-related spike in online grocery sales. With millions of Americans now on lockdown, home-delivery orders have soared. An increasing number of consumers are turning to delivery, curbside and buy online pick up at store (BOPIS) options to meet their needs during a time of social distancing (Abrams and Silver-Greenberg 2020; Melton 2020).

International Freight Transport Market Conditions

Ocean Freight Transportation

Global market development

- Sign of recovery. After a large capacity reduction due to low demand after the Chinese New Year and the extended shutdown, the situation is improving with factories moving back into production. The number of announced blank sailings has fallen compared with recent weeks. Demand for ocean freight transport on various trades is ramping up with improved utilization of vessels (Agility 2020a; Bloomberg 2020).

- Space and shipping container availability issues. The biggest current impact is on space and container availability throughout the world. The availability of cargo containers at Hamburg, Rotterdam and Antwerp in Europe and Long Beach and Los Angeles in the US are at the lowest levels recorded (Agility 2020a; Bloomberg 2020).

Source: DHL Global Forwarding (von Orelli 2020)
Note: Drewry, in USD/40ft container, including bunker adjustment factor (BAF) and terminal handling charges (THC) both ends, 42 individual routes, excluding intra-Asia routes.

US ocean freight transport

- US import outlook. NVOs expect imports to increase steadily in April compared to the first three months of 2020, first to the West Coast and then in late-April and May to the East Coast (Mongelluzzo 2020). The report by National Retail Federation (NRF)’s Global Port Tracker calls for imports to jump to 2.02 million TEU in May, a 9.3 percent increase year-over-year, on the assumption that Chinese factories will have resumed most production by then and will be trying to make up for lower volume earlier. June is forecast at 1.97 million TEU, up 9.6 percent year-over-year, and July is forecast at 2.03 million TEU, up 3.3 percent year-over-year (Close-Up Media 2020).
■ **US capacity.** Equipment availability is still an issue and space constrictions must be anticipated due to the significant number of ocean carrier blank sailings (Agility 2020a; Crane Worldwide Logistics 2020; Flexport 2020; Hylton 2020).

— **Blank sailings still in place, with improved vessel utilization.** With production improving in China, blank sailings that are still in place (e.g. total of 82 blank sailings announced from Asia to US West Coast from early February to early April), and route changes from US east coast to US west coast to shorten lead-time, vessel utilization is now reaching 95% to the US west coast and around 85–90% to the US east coast (Agility 2020a). Blank sailings are expected to decrease by end of April (Crane Worldwide Logistics 2020).

— **Vessels departing China remained few, expecting US export capacity shortage.** With fewer vessels departing China and completing their rotations to US ports, containers bringing consumer goods from Asia that are normally unloaded with goods then filled with exports of other commodities are in short supply. US exports to Asia will experience some vessel capacity shortages as Transpacific vessel strings reduce sailings from the Far East (Agility 2020a; Bloomberg 2020).

■ **US port, terminal, and port logistics operations**

— **Trade lane patterns to be observed.** As the supply side of manufacturing improves, US importers and exporters still need to bear in mind the cascading effects of COVID-19 on supply chain providers at U.S. ports (stevedores), motor carriers (drivers), rail intermodal ramp hubs (rail employees), ocean carrier crew members that interface at the various U.S. ports with U.S. workers, and others. Observations in terms of port areas with little to no exposure to COVID-19 and others with visibly substantial levels of the virus may dictate trade lane and sailing patterns in an attempt to avoid COVID-19 saturation (Hellenic Shipping News Worldwide 2020).

— **Seaports, terminal, and inland freight station operating hours.** Several US ports and inland container freight stations have announced a reduction in hours due to the decline in volumes (Hylton 2020).

  > **West coast ports.** Terminal operators in Los Angeles-Long Beach have posted almost 60 gate closures during either the day or evening shift from Monday through April 1. Seattle/Tacoma port announced some terminal closure same as Los Angeles/Long Beach. Oakland/San Francisco port may reduce hours due to mandatory restrictions on travel around the area.

  > **East coast and gulf coast ports.** The majority of East Coast and Gulf Coast ports in the US are still operating at close to full levels. NY/NJ port operating on reduced hours and reduced staffing operations. Georgia Ports reduced gate hours due to low volume. Port Everglades is going to be operate 4 working days starting 19 March. Operations will be closed on Thursdays, Saturdays and Sundays. In Savannah, terminal hours remain the same Monday through Friday, but Saturday gate hours have been canceled through mid-April. The Seagirt Marine Terminal in Baltimore has closed twice this month because of lack of volume. Miami’s South Florida Container Terminal was closed Friday and the Port Miami Terminal Operating Co. will be closed Monday and Tuesday also because of low volume (Bolloré Logistics 2020; Crane Worldwide Logistics 2020; JOC 2020).

  > **Inland container freight stations.** A number of Container Freight Stations in inland areas have announced reductions in operating hours, including Dallas, Houston, Laredo and Denver (Hylton 2020).
- **US equipment shortage for export.** Industry experts are signaling equipment constraints could be expected at inland container yards. Significant numbers of suspended voyages have created a situation where containers that would normally have come in to the US with loads, been unloaded and ready for exports from the US, have instead accumulated in Asia as they wait to be filled. Equipment availability is becoming challenging especially in some inland locations. Equipment availability and associated concerns are expected to intensify over the coming weeks and last through late April (Agility 2020a; Crane Worldwide Logistics 2020; Hellenic Shipping News Worldwide 2020; Hylton 2020).
  
  - **Backlog of empty containers to increase cost for importers.** US Ports, including The Port of Los Angeles are experiencing an increasing backlog of empty containers. Some carriers are requiring customers to hold on to equipment until further notice. This will result in increased costs related to chassis or off-dock storage that will be the responsibility of the importer (Hylton 2020).

- **Rate and surcharge**
  
  - Carriers have implemented a general rate increase (GRI) for March 15, 2020. More recently, carriers have announced GRIs for almost every trade due to equipment and capacity shortages, which is expected to go into effect on April 1 from ports from inland origins (Agility 2020a; Crane Worldwide Logistics 2020; Hylton 2020).
  
  - Equipment shortages require carriers to reposition from other locations. Some carriers have announced Equipment Imbalance Surcharges (EIS) or Equipment Reposition Charge (ERC) to address repositioning of empty containers to deficit areas (Agility 2020a).

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**OCEAN FREIGHT RATES OUTLOOK**

<table>
<thead>
<tr>
<th>Route</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPA – EURO</td>
<td>Additional blank sailings have been announced to balance out the supply and demand, which will continue in the coming weeks to react to the uncertain market condition.</td>
</tr>
<tr>
<td>EURO – ASPA &amp; MEA</td>
<td>Space remains tight on all eastern hemisphere trades due to high amount of blank sailings. PSS and GRI’s are announced by several carriers in March. Rates are increasing as well.</td>
</tr>
<tr>
<td>ASPA – AMLA</td>
<td>Slow recovery from the China market is expected for 1st half of March, and carriers have continued to extend their blank sailings program. Capacity utilization have remained slightly high after the capacity withdrawals, and volume is expected to return only from 2nd half of March. FAK rates are on the decline and is expected to increase from 2nd half of March.</td>
</tr>
<tr>
<td>ASPA – AMNO</td>
<td>Demand expected to be weak 1st half of March and blank sailings will likely be extended into Mar 2020 as well. Potential service disruption prior to the new alliance network (2M, THE) in Apr 2020.</td>
</tr>
<tr>
<td>EURO – AMNO</td>
<td>Volume picking up, rates stable.</td>
</tr>
<tr>
<td>ASPA – MENAT</td>
<td>Uncertain outlook over early march as carriers continue to announce additional capacity withdrawal in reaction to delayed market recovery during end Feb/early march sailings. Middle East trades/ East Med expected to enter pre-ramadan only from mid - late march if any. General Rate Increase (GRI) has been published for South/West Africa trades.</td>
</tr>
<tr>
<td>ASPA – ASIA</td>
<td>Space and capacity severely reduced due to blank sailing and port omission. More capacity reduction expected in March with short notice if the demand remain slow from China. With production resuming gradually in China, most of the carriers are expecting rebound in volume from mid-March. For FAK, blank sailings have been announced for early March, that is mainly driven by carrier desire to keep the rates level at sustainable level. Pre-Ramadan rush will likely start in towards last week March.</td>
</tr>
<tr>
<td>AMNO – EURO</td>
<td>Foresee possible shortage of equipment at inland locations due to the Coronavirus, which might result in rate increases.</td>
</tr>
</tbody>
</table>

Source: DHL Global Forwarding (von Orelli 2020)

Acronyms: ASPA – Asia Pacific; AMLA – Latin America; AMNO – North America; EURO – Europe; MEA – Middle East and Africa; MENAT – Middle East and North Africa

- **Ocean shipping contract negotiation delayed.** Shipping contracts in Asia and U.S. markets are annual affairs that culminate in March/April of each year. Due to the effects of COVID-19, negotiations for the oncoming season will undoubtedly be delayed significantly. This will cause major delays in establishing a new normal for global transportation, not only in pricing, but also on service levels (Hellenic Shipping News Worldwide 2020).
**Trade lanes-specific conditions**

<table>
<thead>
<tr>
<th>Trade Lane</th>
<th>Notes</th>
</tr>
</thead>
</table>
| **Asia - US West Coast** (Transpacific Eastbound - TPEB) | - Rates increased.  
- $300 GRI implemented on March 15.  
- Next GRI: April 1.  
- Space is steady and tight esp from NA and East China as well as SE Asia origins. South China and Taiwan origins are open and steady. Continue to book 2 weeks prior to CRD. |
| **Asia - US East Coast** (Transpacific Eastbound - TPEB) | - Rates increased.  
- $300 GRI implemented on March 15.  
- Next GRI: April 1.  
- Steady space. Space from East China has tightest capacity. South China and Taiwan origins are open. N. China and SE Asia origins are manageable. Continue to book 2 weeks prior to CRD. |
| **Europe - US West Coast** (Transatlantic Westbound - TAWB) | - Rates are steady.  
- No GRI implemented.  
- Next GRI: April 1 with an expected increase of $150-200/TEU.  
- Space is tight.  
- Space can be tight. Please book 21+ days in advance. Equipment shortages at ICDs (Inland Container Depots) due to extended blank sailings. Reefer containers in short supply across Western Europe.  
- Coronavirus causing large reduction in import cargo to North Europe, with equipment shortages likely near/mid-term. |
| **Europe - US East Coast** (Transatlantic Westbound - TAWB) | - Rates are steady.  
- No GRI implemented.  
- Next GRI: April 1 with an expected increase of $150-200/TEU  
- Space is full. Please book 28+ days prior to CRD. There are equipment shortages at ICDs due to extended blank sailings. Reefer containers are in short supply across Western Europe.  
- New Trans Atlantic weekly service operated by ONE, YML and COSCO will be introduced on April 1, 2020 connecting East and West MED with US East Coast.  
- Coronavirus causing large reduction in import cargo to North Europe, with equipment shortages likely near/mid-term. |
| **Asia - Europe** (Far East Westbound - FEWB) | - Rates are steady.  
- March 15 GRI cancelled  
- Next GRI announced for April 1.  
- Space is open for booking but affected by an extensive blank sailing program. |
| **India - US West Coast** | - Rates are steady.  
- No GRI implemented on March 1.  
- Next GRI: April 1.  
- Space is full due to blank sailings caused by Coronavirus on TPEB strings. Please book 3 weeks prior to CRD to ensure space and equipment will be available. There are equipment shortages at ICDs (Inland Container Depots).  
- China shutdown triggering equipment shortages. Ramped up ISC production is raising demand. Indian fiscal year closes 3/31, causing port congestion. |
| **India - US East Coast** | - Rates are increasing.  
- GRI was implemented March 1.  
- Next GRI: April 1.  
- Space is full and containers are rolling. Please book 3 weeks prior to CRD to ensure space and equipment will be available. There are equipment shortages at ICDs (Inland Container Depots).  
- China shutdown triggering equipment shortages. Ramped up ISC production raising demand. Indian fiscal year closes 3/31, causing port congestion. |
| **US Exports: US to Asia** | - Rates are steady.  
- No GRI implemented.  
- Next GRI: Carriers announced GRI’s from March 15-April 1.  
- Space and equipment can be tight. Please book 10-14 days or more in advance. |
| **US Exports: US to Europe** | - Rates are steady.  
- No GRI implemented.  
- Next GRI: N/A  
- Space and equipment can be tight. Please book 10-14 days or more in advance. |

Source: Flexport (2020), updated as of March 18, 2020

**Air Cargo Transportation Update**

- **Global market trend**
  - **Worldwide air cargo capacity still scarce.** Global air cargo capacity reductions, resulting from passenger flight and freighter cancellations, are a reality at this point (as of March 23, 2020), no longer just a China and intra-Asia issue (Agility 2020b).
Outbound freighter capacity from China under tremendous pressure, but improving.
Outbound air freight capacity is under tremendous pressure among all mainland China export markets as production resumes (nearing full production by the end of March) and passenger flight cancellations are sustained (Agility 2020b).

- **Ocean-to-air switch trend.** A trend of ocean-to-air conversions exacerbates pressure on capacity outbound China (Agility 2020b).

- **Freighter flight increases.** While passenger flight capacity is still squeezed, more freighters are entering the market, helping ease the outbound China capacity strain. Freighter flight capacity is now 1,300 tonnes higher than the same period last year, according to Seabury (Agility 2020b).

**Inbound capacity to China remains constrained.** Inbound capacity constraints from Europe, the Americas and the Middle East continue as all regions have reduced passenger operations to China (Agility 2020b).

**US air cargo transport capacity and rate condition.**

- **Capacity crunch due to passenger flight cancellation, shutdown of all domestic flights possible.** US airlines have already eliminated the vast majority of international flying and have announced plans to cut back domestic flying by as much as 40%. More recently, major US airlines are drafting plans for a potential voluntary shutdown of virtually all passenger flights across the US, according to industry and federal officials, as government agencies also consider ordering such a move. The prospect of an eventual halt has increased for various reasons, including mounting red ink from flying nearly empty planes, and that fact that additional positive tests for Covid-19 among agency controllers and technicians who maintain their equipment could unravel the nation’s air-traffic control system (Pasztor and Sider 2020).

**Major international lanes**

- **US-Europe.** Flights from Europe will still be able to operate to a limited number of American airports. While the ban applies to the movement of people, not goods, it puts constraint on the belly capacity. Significant capacity reductions in both directions (Europe–USA belly capacity has dropped by nearly 90%), with considerable increases to spot price rates. More flights are expected to be cancelled this week. Space is available with constraints; no transit time guarantees. Rates are currently double or triple normal levels. Due to fluctuations, shipments are quoted with spot rates (Agility 2020b; Bolloré Logistics 2020; Flexport 2020; Hylton 2020).

- **US-Asia.** Belly capacity still constrained, particularly flights into China, Hong Kong, Taiwan, and surrounding countries in Asia. Airfreight belly capacity from China remains offline until April/May for most major carriers, while scheduled freighters offering access to North America and the EU are full. Meanwhile, freighter schedules from the US are still inconsistent, but are ramping up and getting back to normal. Rates to and from China have spiked as carriers rush to address backlogs and rapid demand. At this time, rates of double or more the normal levels are being reported as space is limited (Agility 2020b; Flexport 2020; Hylton 2020).

**Cargo-only flights using grounded passenger aircraft.** Example: American Airlines is utilizing grounded passenger aircraft to move cargo between the USA and Europe. The first flight
departed Dallas Fort Worth airport on Friday, March 20, with the Boeing 777-300 scheduled to land in Frankfurt, Germany, on Saturday, March 21. Two route trips will be operated between Dallas and Frankfurt over four days, carrying cargo and necessary flight personnel (Muir 2020).

- **Dead-freight charges.** With limited space, carriers are rigorously enforcing dead-freight charges and are reticent to reserve capacity and/or make long-term commitments (Flexport 2020).

### US Freight Transport and Logistics Market Condition

#### Truck Transport

- **Demand and capacity trends**
  
  - **Demand varies by types of freight: Essential vs. Non-essential goods.** Non-essential business closure means that trucking companies that are not hauling essential, life-sustaining goods are not likely to have much to haul until restrictions on businesses and consumers are lifted, which may be in a few weeks or months. On the other hand, those that provide services for grocery retailers and deliver medical and industrial cleaning supplies are seeing a surge in activity (Cassidy and Ashe 2020; Smith 2020b).
  
  - **Expected capacity crunch after non-essential business closure restriction and HOS exemption for essential goods lifted**
    
    - Widespread business shutdowns in mid-March may be setting the stage for disruption in capacity when states and localities begin lifting restrictions. Shippers more than ever should stick close to their brokers and carriers and let them know in advance when they will reopen stores or plants and distribution centers (Cassidy and Ashe 2020).
    
    - Currently, the US Transportation Department’s Federal Motor Carrier Safety Administration allows a nationwide exemption to rules limiting daily driving hours for truck drivers delivering emergency supplies, hand sanitizer and food (Splitter 2020). If the exemption is seized to be in effect at the time when non-essential business closure restriction is lifted, capacity crunch can be expected.
  
  - **Truck capacity pressure expected from Chinese imports.** A surge in Chinese imports is expected to put pressure on truck capacity at some point in April and May (Cassidy and Ashe 2020).

- **Sudden and substantial increases in truck freight rates.** Due to the limited supply conflicting with increasing demand for certain goods (food, cleaning supplies, etc.) freight rates are seeing significant short-term spikes. Truck freight retail rates — prices charged to shippers — are up more than 5 percent in March versus last month in several key US freight lanes, according to JOC analysis (Cassidy and Ashe 2020; Dziak 2020).

  - **Increased spot rates, possibly driving up contract rates.** By state, March average inbound truck spot rates are up 19 cents in California and Washington, 12 cents in Pennsylvania, and 10 cents in Indiana and Florida, according to JOC’s analysis. Those states have major coronavirus outbreaks, large consumer markets, or are distribution springboards to neighboring states with major urban centers. Midwest markets with a high number of distribution centers for consumer
staples also saw inbound rates jump. Outbound rates from those areas also leapt in early March. If spot prices remain elevated into late spring, shippers may see contract rates start to move upward this summer (Cassidy and Ashe 2020).

- **Rest stops reduced services and closure.** For professional drivers, rest areas aren’t simply places to purchase snacks and beverages from vending machines—they are invaluable locations to rest when fatigued. In the coming weeks and months, it will be critical that these businesses remain open, 24 hours a day, providing America’s truck drivers with fuel, food, showers, repair services and opportunities to rest (Smith 2020a).

  - **Reduced services.** Most major truck-stop chains and many independent truck stops remain open, although some have closed sit-down restaurants and switched to preparing food for pickup or takeout to comply with health orders aimed at controlling the spread of the virus (Smith 2020a).

  - **Closures.** Example: On Tuesday, March 17, Pennsylvania closed its state-run rest stops, cutting back significant parking space along key logistics corridors. Pennsylvania is home to large clusters of warehouses and distribution centers, and serves as a major lane for freight moving through the East Coast and the Midwest. News that Pennsylvania was shutting down its state-run rest stops raised alarms among truckers. On Wednesday, March 18, the Pennsylvania Department of Transportation said it would reopen 13 rest areas by Thursday, March 19 for truck parking with portable toilets that would be cleaned once a day (Smith 2020a).

- **Drivers facing new procedures and restrictions at pickups/receiving docks**

  - **Social distancing measures to document pickups and deliveries.** Some customers are asking drivers to stay in their trucks or switch from paper to electronic methods to document pickups and deliveries (Smith 2020a).

  - **Coronavirus hot zone restriction.** Drivers are facing new restrictions at receiving docks if they have been in states considered coronavirus hot zones. This has led to some drivers unwilling to haul loads to states such as New York or Washington where the numbers of coronavirus cases are highest because when they go to other states, they are stopped at the gate and asked where they have been (Smith 2020a).

**Home Delivery Services**

- **Increased delivery speed during lockdown.** Convoy data show that rush hour deliveries in cities undergoing the most extensive lockdowns to slow the spread of COVID-19 are roughly 13% to 27% faster than they were before the lockdown measures went into effect. While there has not been a statistically significant shift yet in some markets, likely because the lockdowns are too recent to detect a change, average speed for local weekday deliveries in Los Angeles increased from 37 mph in the weeks before March 4, to 47 mph since March 4 (on surface roads and highways). Driving speed for Seattle deliveries increased from 37 mph to 42 mph in the same time period. Similarly, data from transportation analytics company INRIX shows that March 18 drivers (commercial and non-commercial) in Chicago drove 77% faster during rush hour periods than previous average speeds—Los Angeles drivers 53% faster, New York drivers 31% faster and Atlanta drivers 16% faster (Cosgrove 2020).
Transport and Logistics Workforce Condition

Transport and Logistics Workforce Shortages

- **General shortage of manpower.** Surge in demand for transport and logistics for grocery retailers and essential goods results in shortage of manpower both for drivers and warehouse/DC workers (Smith 2020b; Splitter 2020).

- **Aggressive hiring trend for transport- and logistics-related workers: Partial list of examples**
  - **7-Eleven.** 7-Eleven announced in a March 20 press release that it would add 20,000 jobs to meet increased demand due to the coronavirus outbreak (Biron 2020).
  - **Aldi.** Aldi is currently hiring in "all stores and warehouses," according to its website (Biron 2020).
  - **Amazon.** Amazon is looking to hire an additional 100,000 warehouse and delivery positions to accommodate the uptick in e-commerce orders during the coronavirus outbreak. According to the website, applicants can start within seven days and do not need previous experience. The company is also offering a temporary raise of $2 an hour through the end of April for hourly employees who work at its warehouses, delivery centers, and Whole Foods grocery stores. Hourly workers at the warehouses will receive double pay after 40 hours for overtime, up from the 1.5-times rate. This temporary increased overtime pay is effective March 15, 2020, and will continue through May 9, 2020. This is the second time the e-commerce giant announced an improvement in pay for its workers in a week (Cunnane 2020; ABC 11 2020; Biron 2020; Gelles and Corkery 2020; Hu and Mathew 2020).
  - **CVS.** On March 23, CVS announced that it plans to immediately fill 50,000 full-time, part-time and temporary roles in locations around the United States, according to a March 23 press release. The company says it will use virtual job fairs and interviews to hire store associates, home delivery drivers, distribution center employees and customer service representatives (ABC 11 2020; Biron 2020).
  - **Dollar General.** Dollar General is hiring for a number of full and part-time positions, with plans to double its normal hiring rate and add up to 50,000 new employees nationwide by the end of April (ABC 11 2020; Biron 2020; Gelles and Corkery 2020).
Dollar Tree. Dollar Tree announced on March 20 that it would hire 25,000 employees at its Dollar Tree and Family Dollar stores and distribution centers around the country (Biron 2020).

Domino’s. In a press release on March 19, Domino’s announced that it would be hiring for several immediate positions. Domino’s Pizza said it is hiring about 10,000 workers in the U.S. to meet rising demand for delivery and carryout. Domino’s put out the call for delivery drivers, pizza makers, managers and truck drivers. Domino’s U.S. stores remain open for carryout and it is also offering contact-less delivery (ABC 11 2020; Biron 2020).

Instacart. Instacart announced on March 23 that it would hire 300,000 full-service shoppers in the next three months to manage increased demand. The company said hiring will be prioritized in states currently experiencing the highest demand, including California, New York, Texas, Florida, Illinois, Pennsylvania, Virginia, New Jersey, Georgia, and Ohio (Biron 2020).

Kroger. The grocery chain Kroger is hiring 10,000 people across its retail stores and distribution centers across the US (Biron 2020; Gelles and Corkery 2020).

Lineage Logistics. Lineage Logistics, the largest refrigerated warehousing company in the country, is hiring 2,000 additional workers to meet a roughly 30 percent jump in demand in recent weeks. Lineage is doing much of its hiring from other companies that have done mass layoffs in recent weeks, including some of its customers, like major food service suppliers (Gelles and Corkery 2020).

Papa John’s. Papa John’s announced on March 23 that it is immediately hiring 20,000 team members as it works to deliver meals and offer carryout during stay-at-home orders in several states around the country (ABC 11 2020; Biron 2020).

Walmart. Walmart announced on March 19 that it planned to hire 150,000 hourly associates to meet increased demand during the coronavirus outbreak. These positions — which include roles at stores, clubs, distribution facilities, and fulfillment centers — will be temporary at first, but many will convert to permanent roles over time. To ramp up quickly, the retailer said it was speeding up the hiring process, which normally takes two weeks. The company’s goal is to place workers in jobs within 24 hours by conducting most of the screening process virtually and making a preliminary job offer without meeting the applicant in person. Walmart also said that it will be giving special bonuses to its hourly employees to reward them for their work in serving customers who are stockpiling toilet paper and other basics. Part-time workers will receive $150 while full-time workers will receive $300, provided they started March 1. The bonuses will be paid out on April 2. It will also move up quarterly bonuses for workers (ABC 11 2020; Biron 2020; Gelles and Corkery 2020).

Lessons from China factory: Addressing factory workforce shortage. To meet production needs, Chinese firms have become creative and resourceful to recruit workforce. Some firms negotiated with local governments for permission to send in charted buses and even airplanes to bring back workforce from remote regions. Others have started to adopt automations to make up for labor shortages. Some are also applying technologies to do crash training for newly recruited manual labor workforce. In some firms, salaried workers are temporarily taking on the work of hourly labor workforce in certain critical production areas (Betti and Ni 2020).
Protecting Essential Transport and Logistics Employee

- **Workplace and workers health and safety measures.** Various measures are implemented by leading companies like the Postal Service, FedEx, UPS and Amazon to protect their employees and customers amid the coronavirus threat. Measures range from basic precautions, such as encouraging employees to wash their hands and regularly disinfecting workplaces and equipment, to additional steps like limiting some shipments and eliminating signature requirements for some deliveries (*Transport Topics* 2020).

  - **Temperature and symptoms screening.** Companies should institute temperature and symptoms screenings on workers before entering facilities (O’Brien and Meyersohn 2020).
    - Example: Bolloré Logistics conducts temperature screening at each entry point for staff, temporary staff, subcontractors (including road drivers) visitors and customers who wish to enter its warehouse. The screenings will be carried out with a non-contactable thermometer (Bolloré Logistics 2020).
    - Example: At ShipBob fulfillment centers, all visitors, vendors, contractors, carrier partners, and drivers are required to complete temperature checks before entering for inbound freight drop off, outbound load pickup, or service work within its buildings (ShipBob 2020).

  - **Quarantine policy.** Example: At Bolloré Logistics, if the employee tests positive for coronavirus, then a 14 days quarantine is applied for all the employees who are working in the same workplace (desk adjacent to the employee in open space for example) or who have a direct contact (within 1 meter), face to face with the employee or until such time a test result is negative for those employees (Bolloré Logistics 2020).

  - **Sanitize equipment, facilities, and vehicles**
    - Example: UPS had substantially increased cleaning and disinfecting surfaces throughout its facilities, equipment, and the delivery vehicles, with emphasis on interiors and frequent exterior touchpoints like door handles (Abrams and Silver-Greenberg 2020; *Transport Topics* 2020).
    - Example: Amazon says it has increased cleansings at all of its facilities, including regular sanitizing of door handles, stairway railings, elevator buttons, lockers and touch screens (*Transport Topics* 2020).
    - Example: Majority of container terminals at the Port of Oakland now employ a separate staff, rather than relying on longshoremen, for sanitizing equipment and facilities. Disinfecting worksite includes sanitizing equipment, work areas, terminal bathrooms, mechanic shops, tools, machines, turnstiles and gates (Narayan 2020).
    - Example: At ShipBob fulfillment centers, increased cleaning and disinfecting is to be done hourly, with cleaning all surfaces done multiple times per hour (ShipBob 2020).
    - Example: The Association of Bi State Motor Carriers, the largest trucker group in New York-New Jersey, said the marine terminal operators and the Port Authority of New York and New Jersey have implemented regular cleaning and sanitizing of pedestals and handsets that truckers use to communicate with clerks (JOC 2020).

    - **Include sanitation in vehicle inspection reports.** Ensure that drivers have the necessary sanitation supplies to disinfect their vehicles before and after use. This includes touch points like dashboards, controls, steering wheels, and handles. This should be included in their daily vehicle inspection reports (Dziak 2020).

- **Introduce social distancing measures in workplace/worksite**
— Example: Amazon places signs in dining locations inside its facility telling workers to “maintain minimum 3 feet of distance” at lunch tables. The company has also spread out tables in break rooms and shifted start times and break times to further promote social distancing (O’Brien and Meyersohn 2020).

— Example: UPS is changing the format of daily meetings at its facilities, staggering employees’ start times and increasing the distance between employees’ work stations (Transport Topics 2020).

— Example: ShipBob requires that all meetings at its fulfillment centers are held in small groups of 10-15 to follow social distancing practices, but are still able to hear the message (ShipBob 2020).

— Example: Longshore labor’s safety procedures at some union hiring halls, where the assembly of tens or hundreds of employees looking to find out whether they are going to be hired for the day, have been modified by requiring longshoremen to gather outside the hall, where there is more fresh air. They also have expedited the hiring process so casuals spend less time next to other employees, preventing longshoremen from hanging around in the hall once the hiring is over, as they used to in the past (JOC 2020).

— Example: The Association of Bi State Motor Carriers, the largest trucker group in New York-New Jersey, said the marine terminal operators and the Port Authority of New York and New Jersey have limited face to face interaction between drivers and clerks, and handled issues with paperwork over the phone. Drivers are not allowed to congregate in numbers at any terminal areas, and must remain in their trucks as much as possible (JOC 2020).

■ Ensure workers have necessary equipment and sanitation supplies. If operators must interact with a customer or vendor, ensure they are stocked with the necessary equipment such as gloves, masks, disinfectant, and other protective wear (Dziak 2020).

— Example: UPS drivers delivering to healthcare and other assisted living facilities get face masks and gloves (Transport Topics 2020).

— Example: At Amazon fulfillment centers, hand sanitizer is typically available. Workers can retrieve gloves out of the vending machines in warehouses, where workers can access items free-of-charge by swiping their work badges (O’Brien and Meyersohn 2020).

— Example: At ShipBob fulfillment centers, all associates within each fulfillment center are required to wear protective gloves and safety masks. All visitors, vendors, contractors, carrier partners, and drivers are also required to put on PPE (Personal Protective Equipment) before entering for inbound freight drop off, outbound load pickup, or service work within our buildings (ShipBob 2020).

— Example: Some fleets have been providing drivers with bottles of disinfectant for trucks, as well as protective gloves for drivers (Smith 2020b).

— Example: UPS are making masks available to drivers who made deliveries to health care and assisted-living facilities (Abrams and Silver-Greenberg 2020).

■ Change procedure to handle deliveries requiring a signature

— Eliminate signature requirement. Examples: UPS, FedEx and XPO is adjusting its signature guidelines so that many deliveries will not require a recipient to sign. That means no shared pens and no need to get within six feet of customers (Abrams and Silver-Greenberg 2020; Transport Topics 2020).

— Leverage mobile apps for no-touch delivery signature. Example: AxleHire, a last-mile logistics company, is using a flexible and innovative last-mile delivery system “No-Touch Delivery.” Consumers can now sign on their own mobile devices using the AxleHire app for
deliveries requiring a signature. No more touching the driver’s mobile device to sign for their package. This means its drivers and the recipient can maintain at least a safe six-foot distance from each other for deliveries requiring a signature (Business Wire 2020).
References


