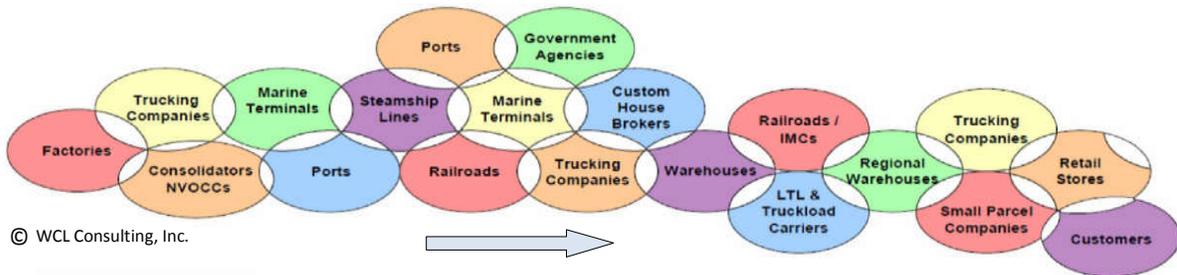


3PL Industry – Post-COVID Response

How the 3PL Market Changed as a result of the COVID-19 Supply Chain Meltdown and the 3PL Industry Response

COVID-19 caused severe disruption to the global supply chain and Third-Party Logistics (3PL) company operations - creating ripple effects throughout the global supply chain to the end consumer (refer to WCL supply chain stakeholders graphic below). Post-COVID, 3PL companies are adjusting their operations to the new environment and preparing to better respond to similar circumstances in the future.

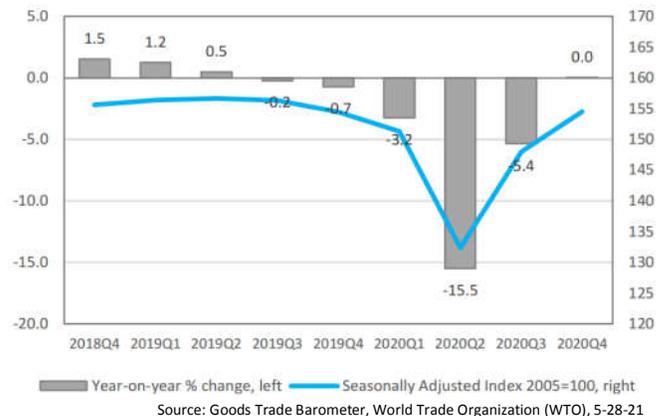


COVID-19 IMPACT

Example effects on goods transportation during the peak of the lockdowns and transportation restrictions in the 2nd Quarter 2020, include the following:

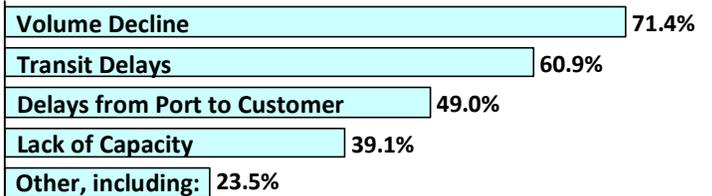
- **World Merchandise Trade** by volume dropped **15.5%** from the previous year (see WTO Chart on right)¹;
- **US Waterborne Container imports** by value dropped **23%** in May 2020 compared to the previous year²;
- **US Waterborne Container exports** by value dropped **19%** in May 2020 compared to the previous year²;
- **Intermodal Rail Freight** by volume dropped **17%** from February to April 2020³;
- **Truck Freight** (tonnage index) dropped **8%** in April 2020³.

World Merchandise Trade Volume



Most global supply chains were negatively affected by the COVID-19 Pandemic. A **Survey^a** of the **Impact of COVID-19 on the global supply chain operations** of 300 Shipping & Freight Professionals across the world, revealed that **83.6%** of the respondents were either **significantly or moderately affected⁴**. The Survey identified the **types of impacts** (see Chart on right (% responded)).

COVID Impact on Global Supply Chains



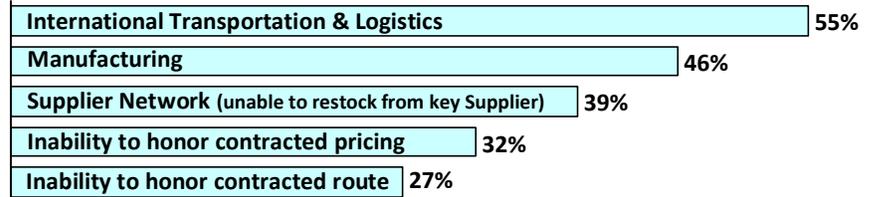
- Late or Non-Payment from Clients;
- Cancelled Credit Lines from Physical Carriers;
- Inconsistent Volume Demand;
- Increased Costs;
- Delayed or Scarce Communications

^a Survey of 300 Executives of Ocean Carriers, Logistics Providers, Freight Forwarders/Non-Vessel-Operating Common Carriers, Consultants, Shippers/Beneficial Cargo Owners (95.7%) and other industry professionals (4.3%), conducted by *Shipping and Freight Resource* and sponsored by *Ocean Insights* in 2020⁴

COVID-19 IMPACT (continued)

The majority of the **Third Party Logistics Company Clients** (Shippers) experienced **supply chain disruptions**. In a **Survey^b** of 421 Executives of the **effects of COVID-19 on 3PL Operations**, **58%** of 3PL Clients experienced at least a **25% reduction in supply chain operations** and **6%** of 3PL Clients experienced **total supply chain shutdowns⁵**. The Survey also highlighted the **areas impacted by COVID-19** by 3PL Companies & Clients (refer to Charts on right (% responded)).

Areas Impacted by COVID by Third Party Logistics Clients



Areas Impacted by COVID by Third Party Logistics Companies



^b Survey of 421 Executives of 3PL Clients (Shippers) (47%), 3PL Company Executives (43%), and non-Clients (10%) for the *Council of Supply Chain Management Professionals (CSCMP)* by *InfoSys*, performed during the summer of 2020⁵

ECONOMIC RECOVERY

After many COVID-19 restrictions were lifted in the 2nd half of 2020, the economy began to bounce back and the flow of goods began to rebound. Optimistic prospects for continued growth in **goods movement** is exemplified by a World Trade Organization (WTO) forecast of **8% growth** in world merchandise trade volume for 2021, after having fallen 5.3% in 2020. The forecast also included an upside scenario of an additional 2.5% growth, based on allowing pandemic containment measures to be relaxed sooner and a downside scenario of 2% lower growth should the pandemic take a turn for the worse⁶ (see WTO forecast Chart on right).



Sources: WTO and UNCTAD for trade volume data; WTO for forecasts. Source: Trade Statistics and Outlook, World Trade Organization, 3-31-21

CAPACITY CRUNCH

The easing of restrictions, along with strong pent-up demand and the free flow of delayed and backordered goods, created a significant **spike** in the demand for **3PL services**. The demand surge, coupled with Shipper tactical shifts to alternative supply sources, transportation routes, distribution channels, and modes of transportation, negatively affected the response of some unprepared 3PL's, which lead to significant **capacity shortages, increased costs, and performance failures**.

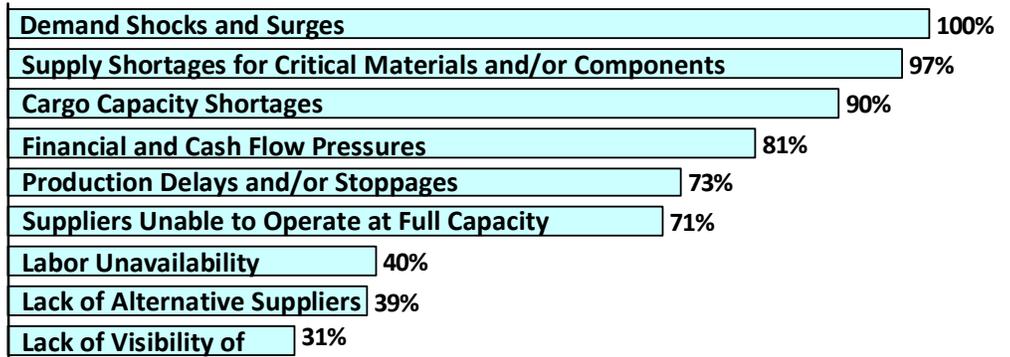
CAPACITY CRUNCH (continued)



An example of the **freight volume recovery** and subsequent **capacity crunch** is exemplified by the increased volume and subsequent rejection of **tenders** for U.S. long-haul truck freight (800+ miles) reported by *Freightwaves*⁷. The **US Tenders Volume Index** first decreased by 30% in April 2020 and then increased by 100% to October 2020. Subsequently, the **US Tender Rejections Index** rose 25% from Sept. 2020 to early 2021 (i.e., **25% of US contract loads tendered were rejected**), providing an indication of the capacity shortage and the need for Shippers to find alternative solutions (see Freightwaves Chart).

The challenges to supply chain operations continue after COVID-19 restrictions were lifted. In a **Survey** of 195 Supply Chain Professionals on the **impact** of the COVID-19 crisis on Supply Chain Operations and **post-pandemic adjustment strategies**, 100% of respondents indicated that **demand shocks and surges** would remain the most significant supply chain challenge for the **next 3-6 months**⁸. The Survey also identified other short-term supply chain challenge areas (listed on the right (% responded)).

Most Significant Supply Chain Challenge Next 3 - 6 Months



^c Survey of 195 Supply Chain Professionals spanning across multiple sectors and regions, performed by *Everstream Analytics*, a Supply Chain Risk Management Company of its customers, launched at the end of 2020 (after most COVID restrictions were lifted)⁸

LESSONS LEARNED

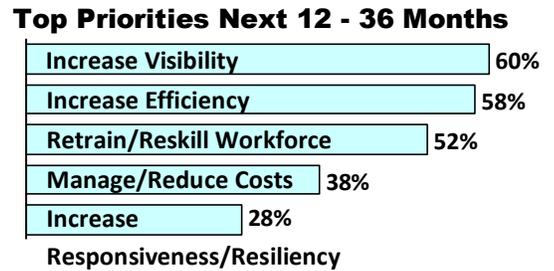
Few Supply Chain Professionals or their partners were **prepared** for the pandemic. The respondents of the Global Supply Chain Survey⁴ previously mentioned, indicated that **34.7%** of respondents were **not at all prepared**, 54.4% were somewhat prepared, and 7.5% were fully prepared. The same Survey indicated that **42%** of respondents **would change** their shipping and supply chain **strategy** based on their experience with the pandemic. As part of their **post-COVID recovery efforts**, respondents indicated they would invest in **Technology** [67%], **Employees** [33%], and **Assets** [26%].

COVID-19 provided **3PL's** the opportunity to **re-assess** their state of **preparedness** and **adjust** their practices to better respond to similar situations in the future.

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PLANS FOR RESILIENCE

To be **resilient, successful 3PL's** should adopt measures for maximum flexibility, agility, responsiveness, innovation, and close collaboration with stakeholders. A **Survey^d** of 200 senior-level Supply Chain Executives on how COVID-19 impacted supply chains and the priorities for the next 1-3 years, found that Executives plan to shake up their **supply chain strategies** to become more **resilient, collaborative, and networked** with **customers, suppliers, and other stakeholders**. The Survey also identified their **top supply chain priorities** over the **next 3 years⁹** (refer to Chart on right (% responded)).



The Survey also identified the **top supply chain measures** to be taken, as follows (% responded):

- Use of digital technologies [64%] will accelerate due to the pandemic to adapt to changing company strategies and ways of working;
- Enable Internet of Things (IoT) devices that provide valuable data on where the goods are in the chain;
- Increased Automation [63%] and Investments in Artificial Intelligence (AI) and Machine Learning, where 37% of respondents have already deployed and another 36% are planning to use soon, including use across supply chains to help make predictive and prescriptive decisions;
- Autonomous supply chains [52%] (e.g., robots in warehouses, driverless forklifts and trucks, delivery drones, and fully automated planning).

^d Survey of 200 senior-level Supply Chain Executives across many sectors in the U.S. with revenues over \$1 billion, performed by *Ernst & Young* in late 2020⁹

The respondents of the **3PL Survey** previously mentioned⁵, identified the top areas **3PL's** need to **strengthen** in their supply chains against **future disruption** to be as follows:

- 1) Readiness & Continuity Planning, 2) Data Analysis & Visibility, 3) Risk Management.

Actions taken by the **Intel Corp.** to address potential supply chain disruptions from COVID-19 included deployment of their Business Continuity Plan (refer to actions taken by Intel on right)¹⁰.

Intel Corporation

"We have taken several actions throughout the pandemic to address our supply chain. For example:

- Where feasible and practicable, we increased inventory of raw materials as well as our supply of our finished goods coming out of China in early February. It is our practice to plan for scenarios where supply will be restricted or compromised in our supply chain for 30-60 days or more.
- We activated backup planning to reroute and obtain charter flights if needed into and from China, securing capacity early. As the virus spread, we leveraged the successful methodology used in China for other parts of Asia and Europe.
- We evaluated the end-to-end supply line needs for all products ramping this year, worked on securing supply lines and deployed our business continuity plans to mitigate potential risks."

ACTIONS TO REDUCE RISK

WCL Consulting's 3PL engagements, which included assessment, analysis, development, and implementation assistance of business planning, strategy, organization, operations, and technology, identified common areas which should be addressed to **minimize the risks of performance failure** and to meet or exceed **3PL Client expectations** post-COVID. Example considerations are provided below.



- Increase the **digitization** of the supply chain to enable end-to-end visibility, predictive analytics, and control;
- Develop and implement **Supply Chain Risk Management** and **Business Continuity** strategies and training to identify and proactively respond to potentially disruptive events;
- Increase internal and external stakeholder systems **integration** (e.g., through EDI (Electronic Data Interchange), API (Application Program Interfaces), etc.) to facilitate better visibility, transparency, coordination, and responsiveness;
- Ensure adequate **cybersecurity** and **data protection** plans are in place to secure data integrity;
- Maximize use of **computerized supply chain management systems**, including Transportation Management Systems (TMS), Warehouse Management Systems (WMS), Yard Management Systems (YMS), Labor Management Systems (LMS), Order Management Systems (OMS), Enterprise Resource Planning (ERP) systems, on-line Intelligence services and, as appropriate, lower-cost Software as a Service (SaaS) or Cloud-based applications which could be accessed remotely (e.g., by home-based workers) to maximize efficiency and integration with stakeholder systems;
- Establish **multi-carrier** and **multi-supplier relationships** for volume surges and contingency flexibility;
- Establish overflow storage, processing, and yard **capacity** and vehicle and equipment **availability arrangements** to support demand surges;
- Establish formal **collaborative** relationships and protocols with customers and partners to improve communications, address common issues, and gainshare;
- Investigate capabilities to support a growing **e-commerce** market, with increased home delivery, Business-to-Consumer (B2C), Business-to-Business (B2B), and omnichannel distribution;
- Investigate supply chain **automation** measures (e.g., robotic process automation, office, warehouse, autonomous vehicle, Artificial Intelligence (AI), Internet of Things (IoT), etc.) to improve speed, accuracy, efficiency, scalability and offset labor shortages.

References:

¹ Goods Trade Barometer, World Trade Organization (WTO), 5-28-21; ² Port Performance Freight Statistics, Annual Report to Congress, US Dept of Transportation & Census Bureau, 2020; ³ The U.S. Railroads and COVID-19: Keeping Supply Chains Moving, Northwestern University Transportation Center (NUTC), May 2021 & Association of American Railroads (AAR) & US Bureau of Economic Analysis; ⁴ COVID-19 Impact Survey, Shipping and Freight Resource & Ocean Insights, 4-21-20; ⁵ 2021 Third-Party Logistics Study, Council of Supply Chain Management Professionals (CSCMP) & Infosys, Penn State, Penske, 2021; ⁶ Trade Statistics and Outlook, WTO, 3-31-21; ⁷ The U.S. Railroads and COVID-19: Keeping Supply Chains Moving, NUTC, May 2021 & Freightwaves SONAR Freight Benchmarking platform (based on operating data of over 200 Carriers); ⁸ COVID-19 Survey: Supply Chain Impacts and Post-Pandemic Adjustment Strategies, Everstream Analytics, 2021; ⁹ How COVID-19 Impacted Supply Chains and What Comes Next, Ernst & Young LLP (EY US), 2-18-21; ¹⁰ Intel Corp. Quarterly Report, Form 10-Q, 3-28-20

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