Moving America Forward
Next Generation of Truck Freight Transport Summit

Digitalization in Logistics and Supply Chain

REAL OPERATIONAL AND LEGAL ISSUES
FACING THE DIGITAL SUPPLY CHAIN

The Lynch Law Group

FRANK C. BOTTA, CHAIR OF TRANSPORTATION
fbotta@lynchlaw-group.com | (724) 776-8000

Moving America Forward:
Next Generation of Truck Freight Transport Summit
October 24-25, 2018

Digitalization in Logistics and Supply Chain

Real Operational and Legal Issues Facing the Digital Supply Chain

1. Business and legal issues facing the future of digital supply chain.
2. Practical operational benefits with the implementation of digital supply chain.
3. The impact of digital smart warehousing.

(I) The Digital Supply Chain Basically Consists of 8 Key Elements:

1. Integrated Planning and execution.
2. Logistic visibility.
3. Procurement 4.0 (changes to global supply chain).
4. Smart Warehousing.
5. Efficient Spare Parts management.
6. Autonomous and B2C Logistics.
7. Presumptive Supply Chain analytics.
8. Digital Supply Chain Enablers.

*Overall this process will allow for Companies to manage its challenges:

a. Global competition.
b. Rising Consumer expectations.
c. Complex patterns of customer demand.

(II) Business and Legal Issues:

(A) Digital equals computers. To digital everything is still a great work in progress.

Operational technology includes:

1. Advance robotics
2. Drones
3. 3D Printing
4. Uberization
5. Internet of Things (IOT)

This is disruptive because it changes the way material and equipment behave.

(B) Global Supply Chain is still in the analog world.

Issue as to whether government regulatory bodies (U.S. Customs and Border Protection (CBP)) and the Department of Homeland Security lack modern day savvy.

1. Paper manifest remain.
2. Commercial invoicing continues.
3. Other hard copy documents are still required for import cargo (even with email manifest).

The U.S. Customs and Border Protection (CBP) Customs Trade Partnership Against Terrorism (C-TPAT) does not require disclosure of the containers contents and origin.

(C) Drivers' hours of service restrictions under DOT regulations plus the driver shortage conundrum has placed tremendous burden on all transportation entities.

There is a bright light, yet the tunnel is not here at this time although within site. Where drivers are restricted by law from driving more than 11 hours per day without taking an 8-hour break, a driverless truck can drive nearly 24 hours per day. That means that technology would effectively double the output of the U.S. transportation network at 25 percent of the costs.

(D) Legal concerns and potential future challenges include

1. Financial fraud.
2. Supply chain security.
3. Manipulation of data.

4. The essential need for artificial intelligence employed to manage both domestic and international movement of goods.

5. Cybersecurity treats.

6. Likely supply chain regulations that will need to be integrated into the mix.

Some legislation that has recently been introduced:

a.) Business Supply Chain Transparency on Trafficking and Slavery Act of 2015

Co-sponsored by House members from NY and NJ requires companies to file annual reports with SEC disclosing efforts to address specific human rights risks in the supply chain.

b.) FDA has tightened its legislation around food sanitation, requiring companies to ensure food safety with the FDA Sanitary Transport Rule of Human and Animal Food under 2017 FDA Food Modernization Act (FMA).

7. The Talent Gap. According to the U.S. Census Bureau 60 million Baby Boomers are predicted to exit the workforce of 2025 and only approximately 40 million new bodies will enter.

There will be a need for cross-training (Only 25% of firms offer cross-training today and only 16% are increasing their development budget).

(III) Practical Operational Benefits:

(A) The possibility of autonomous truck convoys (a modern-day wagon train) with multiple trucks in a line, will reduce the need for human drivers and allow the trucks to drive more closely together.

1. Internal sensors will help fleet operators assess damage to cargo and determine maintenance requirements.

2. Reduction of accidents eliminate human driver error/fatigue factor/labor cost.

3. Address the driver shortage conundrum facing the industry.

(B) The advent on the Hyperloop (Tubular Transport System) cutting an 80-mile trip (taking 90 minutes by rail) to 10 minutes. This mode of transportation has been introduced to transport people, yet the benefit will likewise exponentially benefit the movement of goods.

(IV) Smart Warehousing:

Smart warehousing will become a strategic tool in how companies operate and generate value for their customers. The future warehouse will not look anything like our current labor-intensive buildings.

Step 1: This begins with inbound logistics. Trucks on the way to the warehouse will communicate their position and arrival time to the intelligent warehouse management system, which will choose and prepare a docking slot; optimizing just-in-time and just-in-sequence delivery. RFID (Radio frequency identification) sensors will reveal what has been delivered and send the track-and-trace data horizontally across the entire supply chain.

Step 2: Inside the warehouse, the management software will consistently update inventory in real time, through the use of sensors embedded in the goods and the warehouse itself. Ultimately, the system will deploy flying drones to and in taking inventory, mapping the entire facility.

Impact:

1. Reduce labor intensive processes.
2. Reduce labor costs; wages; escalating Health and Welfare costs.
3. Reduce human error.
4. Reduce employee lawsuits/claims/workers compensation costs.
5. Address the labor shortage for labor intense jobs.
6. Reduce insurance costs to companies.
7. Increase productivity.
8. Reduce energy consumption for businesses by shutting of lights and heat in areas where work is being done by robots and autonomous vehicles.