

# How Digitized Bill of Lading Can Help Shipping Companies Navigate Choppy Waters

Pratik Barman & Steven Helm, Subject Matter Experts, Shipping & Logistics

Every year, Less-than-Truckload (LTL) carriers in the US earn approximately USD 42 Billion in revenue.¹ Each shipment moved by carriers is accompanied by a Bill of Lading (BoL) that carries information on the route, invoice and pass-through data for supply chain visibility. While many large shippers and Third-party Logistics Providers (3PLs)² have turned to electronic documentation, a vast majority continue to rely on paper-based bills for shipment information. Though all BoLs contain the same basic information, there is no standard format. This not only makes the data entry process tedious, it adds layers of challenges in carrier billing operations as well.

### **Lack of Accuracy**

Manual data entry can never be 100 percent accurate. Often, BoLs filled by shippers are incomplete. While carriers have instituted client-specific business rules, automated corrections and audit processes to resolve BoL inaccuracies prior to invoicing, the First Pass Yield (FPY) on original invoices still hovers around 97 percent.<sup>3</sup>

#### **Slow Turnaround Time**

Paper BoLs are picked up along with shipments throughout the day and are transported back to the carrier's service center for processing. By the time a shipment is entered into the carrier's system, it may be six to eight hours from the time it was picked up. A six-hour gap in shipment visibility is a clear disadvantage in a digital world.

#### **High Costs**

Apart from the cost of labor involved in manually entering BoLs, process inefficiencies and inaccuracies lead to increased costs throughout the supply chain. Carriers then need to employ teams in revenue management that focus on resolving invoice issues. Shippers should employ freight audit and payment companies to process invoices, and ensure that all errors are caught and resolved prior to payments.

# Working Towards a Bold Vision

The bill entry process has not changed much in the last 40 years. Over time, carriers have added imaging technology that has allowed the process to be centralized, and systems have been equipped with a better user interface. Rules engines and validations have also been added to the system in an attempt to drive accuracy. Many companies have tried to implement Optical Character Recognition

https://www.joc.com/trucking-logistics/ltl-trucking-logistics/us-ltl-carriers-proceeding-caution-after-flat-revenue-growth-2019-20200309.html

 $<sup>^2\</sup> https://www.wns.com/solutions/industries-we-serve/shipping-and-logistics/third-party-logistics-providers$ 

<sup>&</sup>lt;sup>3</sup> https://www.joc.com/trucking-logistics/ltl-shipping/contrary-perception-ltl-billing-accuracy-impressive\_20161203.html? destination=node/3310191

(OCR). However, the capture rate of BoLs with template-based OCR engines is still low due to high variation in formats presented by shippers. The result is a manual process that remains vastly dependent on paper.

All stakeholders in the shipment journey have the same vision and goal — to achieve a digital flow of information that is transparent, and delivers real-time visibility and accurate invoices. Getting to this point will be an evolution that will begin with new ways to digitize the current paper documents. In the past few years, a plethora of technologies has enabled mobile image capture backed by workflows with artificial intelligence-enhanced OCR and Machine Learning (ML) to transform bill entry. Our proprietary platform, WNS Malkom, is one such system that is a leader in this first stage of evolution and includes the following elements:

- An intuitive mobile application that allows the driver to scan the BoL at the time of pick-up. This erases the six-hour lag in scanning bills and moves the process closer to real-time. The ability to process BoLs throughout the day enables shippers to have near real-time visibility on shipments as they move through a carrier's network
- Pattern recognition and ML that automate a majority of the process. This eliminates a large portion of manual entry and the algorithms use information from past shipments to validate the BoL image for the current shipment
- Workflows integrated with the carrier's database allow automated customer-matching. Once done, the rules engine ensures the application of specific business rules for improved accuracy
- The ultimate goal in automated workflows is to drive truly touchless bill entry. This can be

achieved as more bills are processed and the ML algorithms develop further

## Next Phase in Digital Evolution

For the shipping industry, going completely paperless through the adoption of blockchain and Internet of Things (IoT) is the next exciting possibility. These technologies will further facilitate the digital transformation journey. Blockchain can enable shippers and carriers to view all documents relating to a shipment in a single digital window, while making way for digital payments of invoices. IoT sensors on trucks and containers will enable smooth transfers between trading partners and across the carrier's network.

Organizations such as the Blockchain in Transport Alliance are working with carriers, brokers, 3PLs and shippers to create industry standards.<sup>5</sup> Multiple technology companies are working with shippers and carriers to provide complete and real-time supply chain visibility across the globe with Application Programming Interface (API) integrations.<sup>6</sup>

However, these platforms do not address the financial aspect of the shipment. Further, as the current platforms are closed networks that do not interconnect, carriers will have to integrate with multiple networks to communicate with all shippers. Ideally, a blockchain solution should be more futuristic — be open and allow for easier integration with all parties in a supply chain.

It is heartening to see the shipping and logistics industry shedding its laggard status in technology adoption. Companies should now focus on accelerating the pace of digitization as they make the shift in the new normal.

<sup>&</sup>lt;sup>4</sup> http://www3.weforum.org/docs/WEF\_Windows\_of\_Opportunity.pdf

<sup>&</sup>lt;sup>5</sup> https://www.bita.studio/

<sup>6</sup> https://www.project44.com/

