



project44

E-COMMERCE DEMANDS

A NEW ERA OF PORT TECHNOLOGY

Tommy Barnes, President, project44, Chicago, USA

As the transportation and logistics industry continues to undergo a revolution in technology, different segments of the supply chain must adapt to meet the needs of their fellow stakeholders. Modern logistics technology centres around digitization and connectivity, and this grants us the ability to collect and share information across the supply chain. This model is particularly valuable for data driven industries such as retail, especially as it transitions towards eCommerce.

Unfortunately, the legacy technology and manual processes that have powered port operations for so long are incapable of transferring data in real-time, or normalizing disparate datasets so they can be put to use across multiple systems. In order to correct these issues, application programming interface (API) technology is being put into place to manage connections between shippers, carriers, third-party logistics companies, transportation management systems, and virtually any other technological format that can conceivably touch a boat, train, truck, shipment, container, or warehouse.

API TECHNOLOGY IN LOGISTICS

For decades, the transfer of information across a supply chain has been handled by a legacy technology called electronic data interchange (EDI). EDI was first created in the 1940s, and then refined in the 1970s—it's old technology, and it is incapable of transferring data with the speed and efficiency needed in today's market. That's why it is being replaced with APIs, which facilitate the transfer of data in real-time, promote information symmetry, and allow for multiple integrations from a single point.

APIs are also more secure as they're built on the latest cloud-based frameworks, allowing for the most up to date security features like data encryption, private subnets and VPNs. APIs are the technological focal point of connectivity and digitization in the freight industry.

RETAILERS DRIVE DIGITIZATION

It's no secret that the retail industry is leading the change in our logistics networks and ports. A record number of store closings in 2017, but an overall

growth in retail sales, signals that the industry is shifting. The cause of this shift is simple – increasing customer demands.

Commonly referred to as the “Amazon Effect”, consumers have new expectations on product availability. Thanks to their experiences with online shopping, they're used to being able to get exactly what they want, exactly when they want it. Free and fast guaranteed shipping means that customers don't have to wait very long, or break the bank, in order to get the products they want while shopping online.

Online shopping has more variety, more convenience, and better prices. It's also more data-driven, so eCommerce companies are able to constantly improve the experience based on solid information. This improved experience has carried over to in-store shopping, meaning retail locations need to adjust their strategies, avoid stock-outs, and drive more supply chain efficiency to create a customer experience that lives up to eCommerce.

Modern connectivity is hereby proving its worth. Many of the largest stakeholders across the industry are adopting API

technology to replace their older connections like EDI, FTP, rate bureaus, and other legacy solutions, as well as automating manual processes. What this has uncovered, however, is the realization that the effectiveness of connective technology relies heavily on collaboration among stakeholders.

If one company refuses to update their technology, but wishes to connect to the same systems as their peers, their inferior data can compromise the overall experience for everyone. If everyone collaborates, however, the result is more efficiency and cost savings across the board.

A RIPPLE FELT ACROSS THE SUPPLY CHAIN

At over \$22 trillion per year globally, changes in the way retailers operate their businesses can be felt across a wide range of industries, and of those industries, perhaps the most connected to retail are those directly related to supply chains. eCommerce demand is expected to grow to 17% of total retail by 2022, which may not seem like a large number on the surface, but it translates to hundreds of millions of small shipments being sent to unique locations each year. That’s an incredible level of additional complexity being added to the supply chain.

The third-party logistics market has been looking to digitization in order to drive additional value for their customers while maintaining competitive margins and increasing operational efficiency. In order to do that, they need more supply chain stakeholders to collaborate with the use of modern technology.

One of the largest 3PLs in the US Midwest is setting technological requirements for its carriers so that they can meet tighter demands from shippers. This involves utilizing APIs and a technology-forward transport management system, as well as getting more segments of the supply chain to participate in their digitization strategy. According to this 3PL, ports are a huge piece of the puzzle, but they aren’t all as far along as they need to be in terms of digitization.

In order to keep up with growing demand, these companies are turning to automation and digitization technology. Replacing old connections that used to handle the transfer of shipment data—but bottleneck automation because of their slow response time and inability to normalize data formats—with modern API technology capable of transferring information in real-time.

Major TMS providers, thousands of carriers, and other supply chain stakeholders, are already integrated with

API technology, and more and more are making the transition each day. APIs are the present and the future, but not every segment in the industry is there quite yet. Case in point: maritime shipping.

MODERNIZING PORT TECHNOLOGY

As one of the less technologically advanced modes in transportation, maritime shipping is feeling the pressure from supply chain partners to modernize. It is admittedly simpler for Less-Than-Truckload, Volume Less-Than-Truckload (and even Full Truckload and Rail) carriers to adopt API technology than it is for ports as they typically manage much less volume per transaction, and the TMSs, WMSs, and other shipping technologies they utilize were among the first industry technologies to embrace APIs.

Still, it’s a change that absolutely needs to be made in order to provide the data necessary for automation, so that retailers can deliver their customers the best-in-class service needed to compete, and so the day-to-day operations at ports can become more efficient.

Over the last few years, different ports around the world have been putting forth an initiative to digitize the way shipments are tracked upon arrival. The Port of Los Angeles manages shipments from roughly 2,000 ships per year, each with between 5,000-10,000 containers on board. Roughly half of these shipments are transferred to trains after they arrive at the port, and some go straight to truck. The Port of Los Angeles alone has 3,000-4,000 trucks arrive for shipments each day. While the Port of LA is the busiest US port, it’s nineteenth globally. Ports around the world keeping track of this massive amount of volume using manual processes simply will not cut it anymore.

CONCLUSION

Digitization is completely vital. Implementing technology to keep track of all a port’s shipments—enabling them to leverage the power of data to keep stakeholders informed of shipment status, and improve overall port operations—is the next phase in a recent wave of technological innovation for the logistics industry. Initial pilots are already underway at some ports, bringing the industry one step closer to total digitization.

A vital aspect in the next phase of this plan is going to be connecting these solutions to stakeholders in domestic shipping, since they’re already a few steps ahead with digitizing their supply chains. Major carriers, TMS providers, and 3PLs are already using the technologies that ports will need to integrate with in order to start feeding their new data to the people



who need it. Essentially, freight, chassis, and rail stakeholders are the furthest along in the industry as far as digitization is concerned—connecting an automated port system to them in order to automate outbound freight would only require some simple API integrations. Once that occurs, stakeholders across the supply chain will have increased visibility from the moment a shipment enters the port’s system, all the way to its final destination.

Collaboration among stakeholders is a crucial component. Ensuring that everyone receives the same data requires that everyone uses high quality integrations, and keeps a reasonably high standard for their data. Once it goes into wide practice, the level of automation that is possible will allow even small retailers to provide their customers with the same experience as eCommerce giants.

ABOUT THE AUTHOR

Tommy Barnes is the President of project44, responsible for driving the company’s portfolio of digitization products through relationship development with carriers, shippers, and 3PLs, as well as forging strategic partnerships with TMS and other technology platforms. Tommy relies on his decades of industry experience and leadership.

ABOUT THE ORGANIZATION

project44 enables you to deliver stronger value to your customers, through the power of information. By digitizing the entire shipment lifecycle, we ensure access to the right information, at the right time—creating a smarter end-to-end shipping experience. Just like Amazon.

ENQUIRIES

project44
105 W. Adams, Suite 3200
Chicago, IL 60603, USA
Tel: 312-376-8883
Email: info@p-44.com