

Report on Supply Chain Compliance Volume 2, Number 23. December 12, 2019 AI solutions for supply chains

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Artificial intelligence (AI) and machine learning are already reshaping the way companies approach supply chain management. The commercial use of AI is just beginning, but the adoption of this technology cannot be stopped — and for good reason: Every single task humans currently perform in their day-to-day working lives can be improved upon, sped up or made more efficient by the use of AI. Supply chain management is no exception.

How AI can be used in supply chains

AI has countless uses in the supply chain. Here are a few.

Logistics and warehouse management: The web that permeates all commercial activity is transport. Not only will AI significantly impact the transport industry through the slow but steady adoption of driverless trucks, but the use of AI to sift through manifests, declarations, bills of lading, and mountains of other relevant documentation will shave millions off operating budgets and streamline logistics operations.

Some warehouses and procurement facilities are already staffed by robots that flit from silo to silo grabbing goods, moving them to a set location for distribution and finalizing the actions required to get those goods to market. Drones bring packages to the countryside.

As RSCC reported back in May 2019,^[1] “Retail giants like [Amazon.com](https://www.amazon.com), Inc., China-based [JD.com](https://www.jd.com), Inc., Walmart and others are leveraging AI to streamline supply chains to where humans will be minor players, and in some cases, may be completely removed from the procurement process. Current developments include massive fulfillment centers delivering items using robots and drones; self-driving pods that can load and unload containers; self-driving trucks and cars; and sophisticated machine learning algorithms that optimize everything from loading trucks to locating certain items in a warehouse.”

Predictive analysis for demand forecasting: Predictive analysis involves crunching a vast amount of data and using AI to discover patterns that can help supply chain managers understand what to stock and when to do so. Data points can include weather patterns, historic sales figures, transportation rates and policies and product shipping routes. A deep AI dive into the data can help predict trends that will aid in decision-making.

Chatbots in procurement: Traditionally, an employee needed to call another human to obtain procurement information, which often led to forced waiting times. Companies can now reduce those waiting times by using chatbots with access to troves of data and the abilities to analyze customer history and “machine learn” through context and trend analyses.

As RSCC also reported in October 2018, “AI can also be used to help deal with global value chain issues, such as deciphering large amounts of foreign language data. Another way is by analyzing assessments, audits, certifications and credit scores to aid in supplier selection and supplier relationships to ensure compliance, especially in industries or regions with heightened supply chain risks.^[2]”

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