

Future-Proofing the Supply Chain

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As a result of the COVID-19 pandemic, every sector of the economy was forced to adapt to a reality in which the availability of products we had all taken for granted suddenly and dramatically slowed. This “supply strain” affected virtually every industry, but construction was particularly hard hit, as the raw materials and components that builders need were suddenly harder to acquire. This created a ripple effect that included wild escalation in materials pricing and ever-increasing lead times on equipment – in the process revealing significant flaws in how construction companies order, ship, and store the products they need to complete jobs on time and on budget.

Even as supply chains are stabilizing in 2023, forward-thinking companies need to prepare for the next disruption. Smart procurement can play a pivotal role in preventing the kinds of problems we experienced during the first two years of the pandemic.

AI and Automation

Consider what happened to the global supply chain during the pandemic. China was the first country hit by COVID-19, and manufacturing there slowed significantly during the first quarter of 2020. This drew attention to the fact that many countries in the world were over-reliant on a single source of products and materials for their operations.

In addition, significant delays in shipping, particularly in and around the Pacific Ocean, meant that items that used to arrive in a matter of weeks suddenly took many months to reach their



destination—if they were available at all. This slowed many construction projects down.

But manufacturing companies didn’t just sit back as these disruptions affected their business. According to KPMG, over the last 18 months, companies in several industries have developed new technologies to make the supply chain more efficient, including “intelligent automation used to enable efficient, effective, and safe operations.” This is at the heart of smart procurement, and it is something that companies are increasingly considering to address the current and future risk in the supply chain.

Smart procurement: Companies should consider smart procurement as part of their core operation’s risk-mitigation strategy. Smart procurement uses artificial intelligence (AI), automation, analytics, and other modern technologies to find the best deals on materials, streamline delivery pipelines, avoid fraud, and even sort and store inventory. In a challenging materials market, a minor mistake at any step along the supply chain can stall orders or increase procurement costs. Smart

procurement leverages advanced computing to minimize these risks.

AI can collect data from a wide range of suppliers, then organize and analyze that data along every step of the procurement process to determine the most time- and cost-efficient choice at each step. AI systems such as Katalyst.DI can even identify the correct invoice and contract information for any vendor to flag and remove any suspicious or illegitimate contracts, cutting down on fraud.

Likewise, AI systems can plot out redundancies in supply chains and react quickly to find alternative routes in an emergency, stopping problems from becoming crises. These systems can also pre-fill contracts with all the proper legal language and conditions, to make purchasing and other agreements as seamless and stress-free as possible.

Automation: Automation is another key area where smart procurement shines. Robotics process automation (RPA) platforms use bots to operate other software, automating repetitive tasks ranging from organizing physical goods to administering the bidding and payment process. Effectively, RPA handles all the details and functions that make a procurement process work.

If AI is the software that finds the best sourcing, purchasing, and delivery options, RPA executes those options without the need for excessive human input. This software drastically reduces mistakes as well as potential loss and damage to materials, and ultimately delivers the lowest possible cost. Each order, payment, and delivery is guaranteed to save the buyer time and money by eliminating the potential for human error.

Countering Counterfeiters

Smart procurement not only makes finding materials easier and less expensive, it also protects companies against acquiring counterfeit materials. The worldwide counterfeit goods market is worth roughly \$1 trillion. In the construction industry, faulty goods can have a tragic human cost, as in the garment factory collapse in Dhaka, Bangladesh, in 2013, where shoddy materials resulted in the loss of 1,132 lives.

Big data and analytics are a crucial part of the smart-procurement package, helping AI processes parse the massive amount of information coming in from across the procurement space to find useful patterns and opportunities. Analytics finds the best deals at that moment and suggests the best overall strategy by predicting trends.


Analytics is also ideal for catching untrustworthy or counterfeit goods on the market, spotting major red flags in prices, availability, and more. Automated smart procurement protocols can then easily isolate and report them to the industry at large, as well as to the proper authorities who can end the threat.

The Proper Platform

Contractors and project managers looking to streamline the procurement process should invest in a comprehensive platform that integrates every step and aspect of the supply chain. The ideal platform should connect all parties involved in a pipeline, including contractors, engineers, offsite integrators and owners, and also automate collaboration and data exchange to keep everyone on the same page.

With the right supply-chain software platform, project leads can map their supply chain, integrate all their suppliers, automate data sharing, and exchange updates at every step of procurement. Such a platform would also automatically collate and analyze all the collected data, bringing the power of big data to procurement at a time when every bit of insight helps.

Construction executives must navigate a host of challenges with every project. Smart procurement takes the guesswork and uncertainty out of the procurement process at the very moment the market is at its most challenging. By using technologies that are already transforming business worldwide, companies can smooth the procurement process dramatically, eliminating counterfeit and shoddy goods and reducing the chance of signing a fraudulent contract.

A software platform engaging directly with smart-procurement partners is an essential tool for leaders in an increasingly competitive market. With reliable access to smart procurement and supply-chain management, materials will be more affordable and supply chains more reliable, an invaluable advantage when price and availability are both less than ideal. 



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