Shifting gears to the Cloud: Unlocking the power of automotive innovation

Cloud-based labeling improves efficiency, ensures compliance, and reduces costs

Loftware™

White Paper

Successfully navigating the long road ahead

The automotive industry has undergone some transformative changes over the last few years and the shifts aren't over yet. The transition to electric vehicles (EVs), the drive to develop more sustainable products, the persistent labor shortage, and the ongoing need to balance innovation with safety are some of the top challenges that automotive companies of all sizes are managing right now.

Companies are also integrating more robotics on the factory floor, where co-bots are working side-by-side with humans to improve efficiencies and enhance productivity. Automakers are also under pressure to set and achieve sustainability goals that range from using more recycled materials to reducing greenhouse gas (GHG) emissions — and all points in between.

Externally, automotive companies are also serving consumers whose tastes, preferences, requirements, and budgets have all morphed over the last few years. The catchy advertising phrase "This isn't your grandfather's Oldsmobile," has truly become an understatement as consumer priorities impact all aspects of the vehicle production, distribution, selling, and buying process.

To effectively manage these and other demands, automotive organizations need advanced cloud-based solutions that eliminate data silos, enable fast scaling up or down (based on needs), support fast data processes, provide valuable analytics, and allow companies to collaborate across their end-to-end supply chains.

Keeping the wheels turning despite the headwinds

There are nearly 1.5 billion vehicles on earth right now, 19% of which are located in the U.S. China is the largest producer of vehicles, followed by the U.S., Japan, India and Korea. The industry also relies on an expansive ecosystem of global providers that include (but aren't limited to) global IT companies that make semiconductor chips, transporters of raw materials, makers of factory robotics, logistics companies that haul the finished products, and the dealers who sell those vehicles on their lots.

Working in concert, these different entities form one of the world's largest industries — and one that continues to expand year-over-year. According to S&P Mobility, global new light vehicle (those weighing under two tons and designed to transport passengers and/or goods) sales are expected to increase by 2.8% this year. This level of industry growth continues in the face of challenges like high interest rates, the push to "electrify," a chip shortage that continues to impact the automotive sector, and the fact that rising vehicle prices are testing the limits of affordability for some consumers.

"2024 is expected to be another year of cagey recovery, with the auto industry moving beyond clear supply-side risks, into a murkier macro-led demand environment," said Colin Couchman, executive director of global light vehicle forecasting for S&P Global Mobility, in a recent press release. "A major concern is how 'natural' EV demand will fare as governments consider scaling back interventionist policy support – especially for incentives and subsidies, industrial policy, and OEM planning targets."

Automakers are also operating in one of the world's most highly regulated industries, where companies must adhere to constantly evolving safety, fuel, emissions, trade, and related regulations. One of the newer requirements is the EU Digital Battery Passport regulation, which applies to the rules for the design, production, and waste management of all types of batteries sold in the European Union. The new rules mandate the use of Digital Battery Passports for all industrial batteries above 2kWh.

Beginning this year, manufacturers in Europe have to disclose the carbon footprints of their batteries. All new industrial batteries must include physical labels that link those batteries to their Digital Battery Passports. Populated with dynamic data, the passports must be stored in the Cloud for easy access by authorized users. To meet this requirement, companies will need cloud-based solutions that can generate the battery passports and print systems to mark or label every battery with its unique digital passport.

As automotive companies grapple with these and other regulations, more of them are turning to cloud-based labeling solutions to help streamline compliance. Being able to create accurate labels that seamlessly meet regulatory requirements across different jurisdictions — and without data replication — ultimately reduces mislabeling and the risk of fines and penalties. Integrating labeling directly with data sources of truth ensures consistency and precision while the software's real-time checks instantly flag any non-complaint elements or labeling errors.

Labeling drives automotive excellence

Labels play a vital role in the auto industry, where safety stickers, vehicle identification (VIN) labels, and auto labels all store critical safety, inventory, quality control, warranty, and other information. Accurate labeling also ensures clear identification of parts, components, and vehicles as they make their way through the manufacturing process, across the supply chain, during product recalls, and within the automotive aftermarket. When the right labels are placed on the right products, potential issues and safety hazards can be more quickly identified and addressed.

Some of the labeling complexities that automotive companies are managing right now include:

- An uptick in customer-specific labeling and packaging artwork requirements
- Regional and global requirements for including multiple languages on labels and artwork
- Relabeling
- Non-traceability for products coming from various suppliers
- The rise of counterfeit auto parts — a black market sector that's valued at around $12 billion annually
- Varied labeling applications that result in fragmented labeling processes and poor visibility of data across those applications
- No way to build templates that comply with EDI exchange, Odette, AIAG, JAMA, and/or VDA industry standards
- The need for more labeling accuracy to avoid penalties
- No centralized integration with master data or easily accessible "single source of truth"
- Evolving labeling requirements for the EV segment

Label failures can also impact the bottom line, business relationships, and customer service levels. According to a recent Loftware customer survey, 86% of companies say that any labeling failures directly impact their bottom line and 85% say extending labeling access to business partners streamlines operations and supports fast onboarding of new suppliers. Nearly half (48%) of companies say the inability to track products across the global supply chain hampers efficient recall management, and 71% credited automated labeling with reducing labeling and artwork errors.

Leading automotive manufacturer uses cloud-based labeling to save money and manhours

Freudenberg Sealing Technologies (FST) supplies advanced materials to companies that develop automotive, industrial, and alternate drivetrain applications. The company manages more than 400 unique templates — a process that used to take up to three months and depended on scarce development resources, effectively limiting the company's ability to respond quickly to changes in customer requirements.

The manufacturer's previous labeling solutions also took a long time to spool and print. Resources in the factory and warehouse often had to stand by waiting for labels to be printed. This wasted up to 33 hours per day and cost the company more than $128,000 in lost productivity annually.

FST deployed a new Loftware cloud-based labeling solution to serve multiple distribution centers and facilities in Europe. Currently, the Loftware solution is integrated with FST's warehouse management solution, SAP EWM, for printing labels automatically based on actions users take in the EWM. This allows users to perform their regular tasks in SAP, which triggers label printing without requiring additional action on the users' part. Because Loftware's solution can support multiple integrations at the same time, FST also integrates smaller sites that don't use EWM directly with their SAP ECC system to enable label printing.

Using Loftware, FST has reduced costs by eliminating printing delays and decreased its number of templates by 50 percent. With business users now able to make label format changes, they cut the time to make label updates from three months to one hour. In addition to improving its responsiveness to customer requirements, FST found the accuracy of their labels — driven by its SAP data — neared 100% accuracy. Loftware's cloud-based architecture supports greater agility and scalability as FST has expanded its cloud labeling implementation to serve even more locations.

Unlock agility and growth with a cloud-first software strategy

Advancements in technology and market demand are creating new complexities and opportunities for growing automotive companies. To keep pace in this changing global landscape, companies of all sizes need cloud-based systems that help automate tasks, streamline workflows, enable real-time collaboration, and provide multi-layered security that minimizes the chance of cyberattacks and data breaches.

As more companies shift computing resources, solutions, and processes like labeling into the Cloud, they're reallocating resources once spent on servers, equipment, and IT support to more strategic, business-building processes. The trend is gaining momentum: More than 60% of all corporate data is now stored in the Cloud — up from 30% in 2015 — and 94% of all enterprises are connected to online services that are hosted on the Cloud.

Companies are also using cloud technology to manage the complexities of logistics optimization, inventory management, and demand forecasting — all of which are crucial in the automotive space. In fact, Gartner predicts that by 2027, more than 50% of enterprises will be using industry cloud platforms to accelerate their business initiatives.

By taking a cloud-first approach, organizations can also fortify their supply chains against both current and future uncertainties. Cloud platforms offer the latest technological advancements, such as artificial intelligence (AI), machine learning, and data analytics, without the need for expensive hardware or software.

Introduce efficiency and save money with cloud-based labeling

Labeling today is complex; today's manufacturers and multi-tier suppliers are faced with a range of evolving requirements that complicate the process — and leave many companies accepting this process as the cost of doing business. But it doesn't have to be. Labeling can make a huge difference, enabling IT and supply chain decision makers to not just overcome challenges, but provide their company with a distinct competitive advantage.

The automotive industry's intricate supply chain is only growing more complex thanks to a broad range of players that includes OEMs, sub-tier suppliers, warehouse and transportation managers, distributors, retailers, and end consumers (among others). Labels are the common ground across all these entities, serving as product identifiers, determining those products' destinations, and carrying the data necessary to ensure the successful processing and receipt of the goods. Label data also invariably finds its way back into an inventory, work-in-process, or warehousing system, which means labels must provide an accurate snapshot of present state inventory across the end-to-end enterprise.

When labeling is optimized, suppliers can better control costs, monitor inventory, trace shipments, manage product recalls, and improve distribution operations. Cloud-based labeling solutions not only enable the foundation of a corporate-wide label catalogue for all valid production labels, but they also provide a chronology of changes to the various templates by means of version controls. This, in turn, accelerates the label's path to production.

To survive and thrive in today's demanding business environment, automotive companies must rethink their labeling strategies. Manual approaches and piecemeal solutions are quickly giving way to innovative cloud-based labeling solutions that are standardized and responsive to change. As the number of automotive suppliers that vehicle manufacturers work with narrows, the companies that view labeling as a critical element of the supply process, and that choose the right cloud-based labeling solution to manage that process, will rise above the rest in their sector.

Loftware™

The world's largest cloud-based Enterprise Labeling and Artwork Management provider

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No matter what the challenge – digital transformation, time to market, or brand authenticity - Loftware can help you make your mark. We understand how global supply chains work and know that each item you produce, and ship is an expression of your company's brand. We can help you improve accuracy, traceability, and compliance while improving the quality, speed, and efficiency of your labeling. Our end-to-end cloud-based labeling platform helps businesses of all sizes manage labeling across their operations and supply chain and our solutions are used to print over 51 billion labels every year. Loftware also fosters supply chain agility and supports evolving customer and regulatory requirements, helping companies save over $200 million in fines annually. And with over 500 industry experts and 1,000 global partners, Loftware maintains a global presence with offices in the US, UK, Germany, Slovenia, China, and Singapore making us a trusted partner for companies in automotive, chemicals, clinical trials, consumer products, electronics, food & beverage, manufacturing, medical device, pharmaceuticals, retail/apparel and more.

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