



Navigating Labor Uncertainty: Optimizing Supply Chain Resiliency



DUCKER  CARLISLE

GLOBAL CONSULTING, STRATEGY AND M&A SERVICES



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Introduction to the Macro Environment

In the years following COVID, the US labor market has seen increased rates of labor negotiation actions across most industries including healthcare, service, manufacturing, film, and automotive logistics.

This shift in labor's role in the broader macro environment is characterized by notable labor victories in 2023 and 2024 including:

- (2023) Teamsters Union's victory to secure demands for increased pay for 340,000 United Parcel Service (UPS) workers
- (2023) United Automobile Worker's (UAW) victory in scoring a record deal with the "Big-Three" domestic OEMs for 150,000 auto workers
- (2023) International Longshore and Warehouse Worker's (ILWU) victory in ratifying a 6-year contract for 22,0000 west-coast dock workers and longshoremen inclusive of a 32% pay increase and one-time bonus for pandemic workers
- (2024) International Longshoremen's Association (ILA) went on strike starting October 1st, the strike lasted three days. An agreement was reached to raise wages by 62% across a six-year contract, equivalent to a \$4 per hour raise each year of the new contract. Union members have returned to work as the union agreed to an extension of its contract through January 15th 2025, as final details of the new contract are finalized.

While the latest strike has been resolved, the trend of demand for increased wages and strikes to obtain wage increases is unlikely to go away. There is still potential for rough waters as the new 1/15/2025 contract expiration draws near, and OEMs must actively plan for the potential of future strikes across different areas of the supply chain.

Nearly 70% of all auto parts are imported through affected ports, and potential aftersales losses are estimated at nearly \$340 million per day. The threat of continuing strikes will disproportionately negatively affect motor vehicle OEMs and their respective aftersales business units due to the high exposure to imports for foreign-sourced parts and reliance on east-coast ports to execute export operations.

OEMs were largely unaffected by the most recent port strike as they had been building finished vehicle inventory over the last few months, and the strike itself lasted a mere three days. However, Ducker Carlisle maintains that labor uncertainty will continue as the global economy seeks equilibrium amid post-COVID headwinds and political instability in key logistics corridors. Key drivers of this trend, including growth in wage gaps between key executives and labor, high inflation growth, a tight labor market, increased political instability, and emboldened labor unions, will continue to stress domestic labor markets and create uncertainty for supply chain executives. Key wins for union-labor will also drive competition in non-union environments, leading to a rise in overall labor costs and continuing shortage of available, high-quality labor.

To stay competitive in the uncertain labor market, Ducker Carlisle advises motor vehicle OEMs to continue investing in their workforce, build a resilient network infrastructure, adopt flexible planning and deployment strategies, and integrate best-in-class technology to enhance profitability.

Pillars of Resiliency Overview

Building a resilient supply chain falls into four main categories:



INVESTMENT IN PEOPLE

Employee Retention | Upskilling | 3PL vs. In-House Labor



OPTIMIZED AND RESILIENT NETWORK FOOTPRINT

Nearshoring | Diversified Import/Export Channels | Distribution Center Optimization



FLEXIBLE INVENTORY PLANNING AND DEPLOYMENT STRATEGY

Strategic Sourcing | Availability and Service Level Focus | Cost Optimization



BEST IN CLASS TECHNOLOGY

Supply Chain Visibility | Automation in Operations | AI Integration

A focus on developing people, optimizing fixed infrastructure resources, refining inventory planning processes, and leveraging best-in-class technology solutions will drive supply chain resiliency and improved profitability.



Investment in People –

Investing in the current labor force supports employee retention and lays the foundation for a smoother transition to an automation-focused future

Employee Retention: Retention of hourly employees is key to ensuring continuity in operations. OEMs that are successful in building an environment where employees come to work consistently can plan and execute operations more efficiently. OEMs that exhibit high absenteeism in their operations are less able to absorb supply chain shocks. Ducker Carlisle has also found that organizations with more tenured leadership drive success in operations, further underscoring the importance of retention across all levels within an organization.

Industry Example: Ducker Carlisle sees management team tenure, coupled with robust training and process auditing of hourly employees, as a driver of best-in-class warehouses across all key quality and productivity performance metrics.

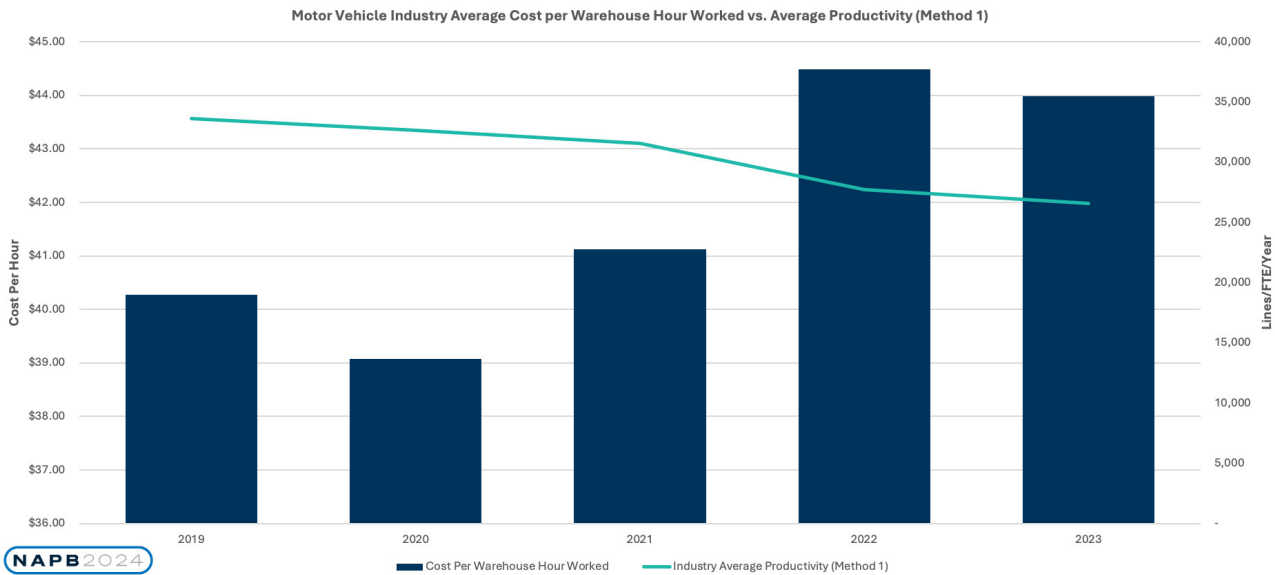
Employee Upskilling: Creating flexible operational plans where employees are cross trained in all process areas is fundamental to providing opportunities for vertical career mobility. Additionally, investing in vocational programs aimed at training existing supervisors and management team members on the latest technology will enable a smoother transition to an automation-focused future. Fears of automation eliminating jobs are pervasive in the current labor market, but by investing in employee upskilling programs, automation poses more of an opportunity than a threat to enable improved operational efficiency.

Industry Example: During a recent operational assessment for a domestic OEM, Ducker Carlisle observed improved retention, productivity, and quality performance at facilities where hourly employees regularly rotate through various warehouse process areas.

3PL vs. In-House Labor: Labor sourcing decisions are crucial in an uncertain labor market. In-house operations give OEMs greater control over operations and planning. Additionally, OEMs that employ in-house labor at key distribution points realize both improved productivity and quality.

Industry Example: Import OEMs are increasingly evaluating a shift of 3PL warehouse labor to in-house warehouse labor to realize improved productivity and quality.





Labor cost per warehouse hour worked has increased significantly post-COVID while productivity has declined over the same period. High turnover contributes to this apparent contradiction. However, the right operating model allows OEMs to implement programs to retain and upskill their current labor force, reducing turnover and improving productivity over time.

Optimized Network Footprint –

OEM network design is a key driver in building a supply chain resilient to labor disruptions.

Nearshoring: Throughout 2024, companies across all industries have continued to relocate inventory and key production sourcing closer to domestic shores to minimize supply chain disruptions and bottlenecks.

Industry Example: Tesla’s announcement of plans to build a factory in Mexico exemplifies the nearshoring production trend, reducing dependence on overseas labor and associated risks.

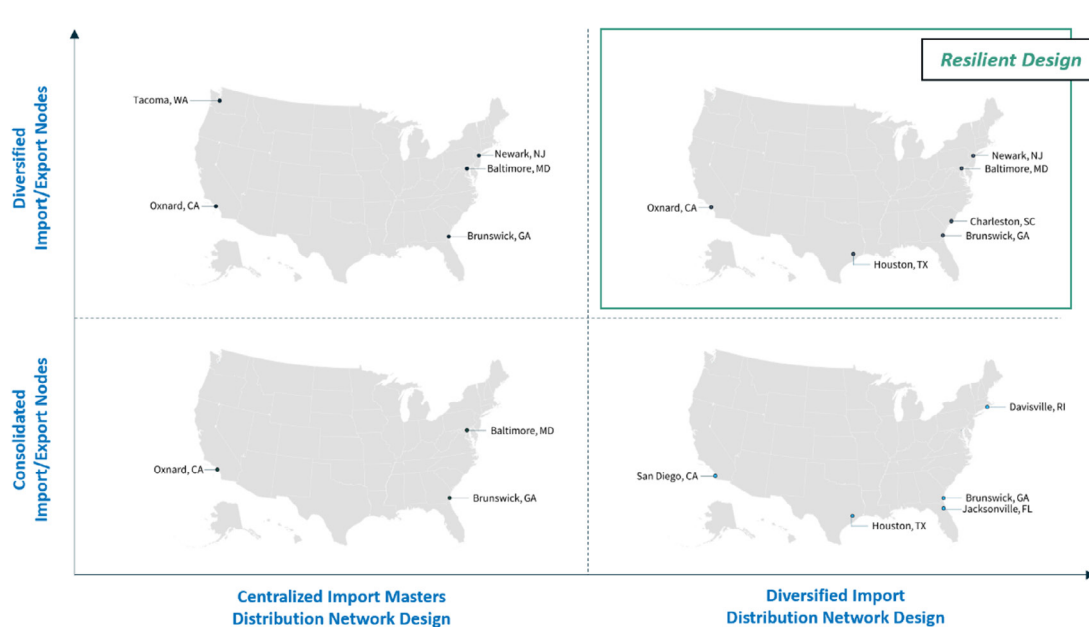
Diversified Import/Export Access: To combat supply chain disruptions, leading OEMs maintain operations at multiple US ports.

Industry Example: By leveraging access to multiple ports, Mercedes-Benz was successful in efficiently diverting shipments from Baltimore, MD to Brunswick, GA during a recent bridge collapse in the Baltimore harbor, minimizing disruption.

Distribution Network Optimization: Rising costs, labor turnover, and nearshoring/onshoring trends further necessitate reoptimizing distribution networks to meet changing market conditions. Outbound distribution strategies must align with evolving customer expectations, to maximize retention and market share capture, while remaining cost-effective.

Industry Example: Volvo opened a new distribution facility in Dallas, TX to enhance customer service and address challenges posed by an uncertain supply chain landscape.

Import/Export Nodes vs. Distribution Network Design



OEMs with presence at multiple US ports of entry often redirect shipments to nearby locations during supply chain bottlenecks. Operating across multiple import locations requires a sophisticated domestic distribution network to efficiently manage the increased complexity and ensure smooth operations.

Flexible Inventory Planning and Deployment Strategy –

Optimized inventory management processes enable OEMs to flex inventory, ensuring uninterrupted service to customers, even in times of disruption

Strategic Sourcing: Traditional supply chains pass through multiple global nodes before reaching the end-customer. Leading OEMs increasingly rely on local suppliers to simplify their distribution network for key components and parts, reducing complexity and improving responsiveness during supply chain disruptions.

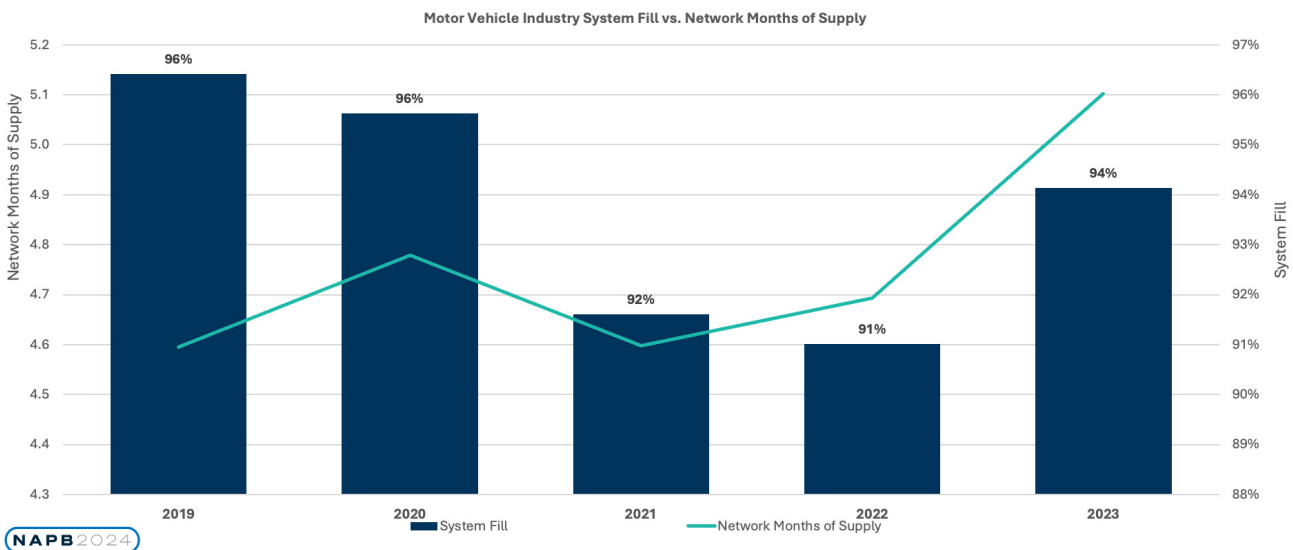
Industry Example: Multiple OEMs including Ford, BMW, and Hyundai have announced plans to build battery production plants within the US to combat supply chain bottlenecks and labor risks associated with sourcing key inputs from China.

Availability and Service Level Focus: External shocks can drive unexpected fulfillment bottlenecks across the supply chain, including constraints to suppliers, transportation, and packaging. The resulting responses are often reactive and can lead to backorders and availability misses, which in turn drive lost sales and customer defection.

Industry Example: At the end of 2023, Jaguar Land Rover, had nearly 10,000 vehicles-off-road in the UK due to part backlogs. Executives attribute the miss to consolidating their eighteen distribution spokes to one master hub.

Cost Optimization: Supply chain bullwhip effects cause unexpected inventory surges, as pipeline lead times and customer demand change faster than anticipated. Cash and operational capacity become unnecessarily constrained through holding excess non-moving product.

Industry Example: Network months of supply for aftersales companies in Ducker Carlisle’s benchmark is at an all-time, driving excess cash tied to inventory. Additionally, system fill for the has only slightly recovered since COVID but remains below pre-pandemic levels indicating a need for a refocus on inventory optimization across the industry.



The industry has seen an increase in on-hand inventory while system fill remains below pre-COVID levels. A refocus on availability, service levels, backorder resolution, supplier on-time shipping, and inventory on-hand will enable OEMs to fulfill customer orders for the right part, at the right time.

Best-In-Class Technology Backbone –

A resilient network requires end-to-end systems integration, combined with automation in operations and advanced analytics, to streamline proactive decision-making and ensure supply chain agility

Supply-Chain Visibility: Employing the right tools to ensure full visibility across the entire value chain is a fundamental capability of leading OEMs. Leading organizations require accurate lead times, real-time inbound inventory visibility, and end-to-end systems integration with automated alerts at key gateways. This visibility allows for proactive management of distribution operations, helping to anticipate and resolve potential disruptions before they escalate.

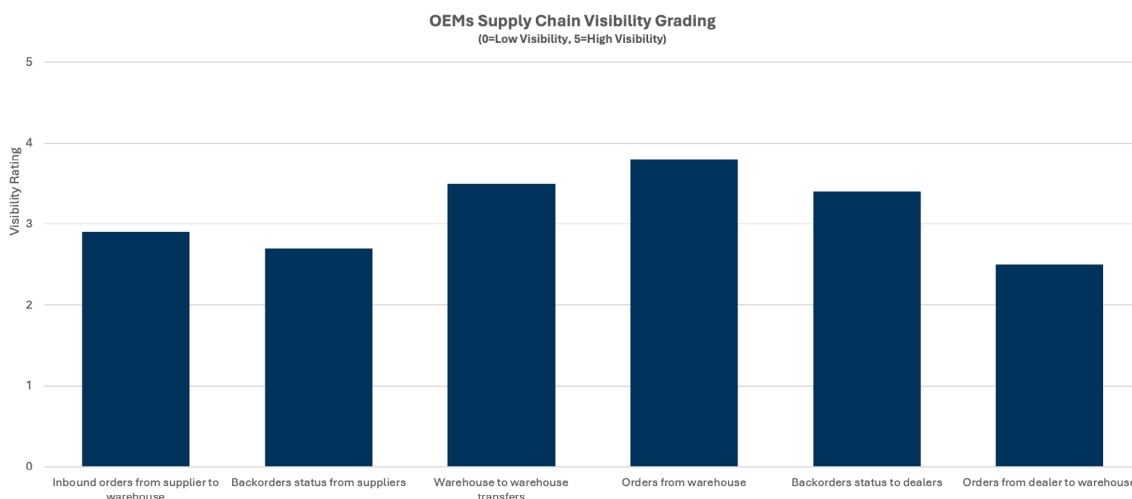
Industry Example: Honda’s motorcycle and power product division announced a partnership with supply chain visibility provider, FourKites, to gain greater visibility over ocean and land transport.

Automation in Operations: Integration of automation at key distribution nodes is key to ensure operational resiliency. Best-in-class OEMs integrate automated storage and retrieval systems (ASRS), autonomous mobile robots (AMRs), and automated guided vehicles (AGVs), to reduce labor costs and backfill labor needs, and improve operational metrics such as quality, productivity, and storage space utilization. Technologies enable faster, more efficient processing, enhancing overall operational flexibility.

Industry Example: BMW has integrated autonomous tigger trains and other smart transport robots in their Spartanburg, South Carolina, production plant to realize efficiency gains and reallocate workers to more value-added activities.

AI Integration: AI integration into the current tech stack reduces time to value for analytics resources through a properly democratized, synchronized source of truth for historical and forecasted data. Leading firms derive insights from news articles, social media posts, and other text formats using natural language processing (NLP) to make proactive supply chain decisions.

Industry Example: Kia, Geotab, and 42Point have recently signed a memorandum of understanding to create a strategic collaboration aimed at integrating advanced data solutions with enhanced in-vehicle technology to support fleets worldwide.



Ducker Carlisle’s survey on technological maturity in logistics reveals the industry-wide opportunity to improve solutions to provide full visibility across each step of the value chain.

Navigating Labor Uncertainty

Navigating the challenges in building a resilient supply chain requires a strategic approach that prioritizes high-impact initiatives. Focus on short-term, actionable goals should precede full-scale overhauls of current systems. Businesses looking to embed resiliency in their operations should follow a three-step framework:

01

360-Degree Supply Chain Assessment: An operational assessment is often the best starting point, identifying both immediate and long-term actions to optimize both central and facility-level processes. This assessment is a low-cost way to diagnose key improvement areas, identify quick wins, prioritize initiatives, and select the best software and automation solutions for your business. Ducker Carlisle, an industry leader in providing third-party operations and logistics expertise, supports leaders through:

- a. Performance benchmarking and industry trend alignment
- b. On-the-ground operations facility assessments
- c. Supply chain scenario modeling and data-driven network feasibility assessment
- d. Internal interviews to gauge organizational maturity and stakeholder theories
- e. 8-point inventory diagnostic rapid scan to assess current state gaps

02

Customized Supply Chain Roadmaps: Leverage industry benchmarking data and primary research to develop glidepaths to best-in-class targets. Ensure strategy is aligned with business objectives, current market position, and customer requirements. Following a Ducker Carlisle assessment of current state, our consulting team can offer:

- a. Performance improvement program development and management
- b. Greenfield or brownfield facility design
- c. Facility automation strategy
- d. Optimized future state footprint and flows
- e. Best-in-class implementation plan and support
- f. Program management and roll-out support



03

Market-leading software solutions: Integrate appropriate solutions most compatible with your business needs. Ensure standard processes are updated and adhered to following implementation. Ducker Carlisle can provide integration support through:

- a. Current state assessment and requirements to optimized future state
- b. Vendor stand-up and selection
- c. Project management and roll-out support

By focusing on investment in people, optimizing network footprints, creating flexible inventory management processes, and leveraging best-in-class technology, firms can navigate the complexities of building a resilient supply chain in an uncertain macro environment, ultimately driving proactive supply chain decisions and improved profitability.

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About Ducker Carlisle

Founded in 1961, Ducker Carlisle is a global market research, strategy consulting, and M&A Advisory firm that delivers custom, industry-centric solutions which improve client performance and enable business growth across complex markets.

We accompany clients at every step of their supply chain journey, from market research to strategy, process design, system implementation, change management and market communication.

Our knowledge of supply chain industry best practices, access to industry-benchmarked performance standards across all operational metrics, ability to execute boots-on-the-ground change management, and deep knowledge of supply chain and logistics software position us as a unique partner to unlock the value of resiliency to and safeguard your firm's key fulfillment network investments.

Refer to duckercarlisle.com for more thought leadership content and questions regarding supply chain thought leadership, assessments, and full-time engagements for your organization.



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