Navigating the new era of automotive procurement

Why direct materials sourcing is your strongest lever for resilience



In today's automotive landscape, "business as usual" is no longer a viable option for direct procurement. Automotive manufacturers are confronting a severe convergence of structural cost shocks, shifting trade policies, and intense supply chain volatility. As average new vehicle prices have climbed from roughly $37,000 in 2020 to $49,000 in 2025, vehicle affordability headwinds are contributing to longer ownership cycles and intense margin pressures for original equipment manufacturers (OEMs).[1]

Automotive leaders recognize that modernizing direct materials sourcing is the key to responding faster to volatility and improving sourcing outcomes.

Compounding pressures on automotive supply chains

The challenges facing automotive procurement are increasingly structural, not episodic. Manufacturers are absorbing massive financial impacts from multiple directions:

Tariff complexity and costs

The US auto industry has absorbed $35 billion in tariff costs since 2025, more than any other sector.[2] Recent overhauls, such as the Section 232 restructuring, mean derivative articles now pay a flat 25 percent on their full product value, heavily impacting structural components, engines, and electrical modules.

Commodity volatility

Elevated prices for critical inputs like steel, aluminum, platinum, and semiconductors are creating severe margin pressures that OEMs are struggling to absorb or pass on to consumers.

Supplier fragility

While OEMs may have the capital to absorb these financial shocks, the lower tiers of the supply chain do not. These critical suppliers—manufacturing wiring harnesses, fasteners, and rubber seals—simply cannot absorb tariff and commodity costs the way larger organizations can.

A modern vehicle contains approximately 30,000 parts spanning Tier 1, 2 and 3 components crossing dozens of borders, making traditional, fragmented supply chain integration a significant liability. Furthermore, generic sourcing tools consistently struggle with the unique complexities of automotive direct materials, such as complex bills of materials (BOMs), long lifecycles, and commodity indexation.

Automotive direct materials procurement today is inherently complex and difficult to manage with traditional, fragmented solutions. New product programs can drive hundreds of sourcing activities across thousands of parts, all moving at high velocity and at different stages of the lifecycle. Procurement teams must coordinate closely with engineering, suppliers, and internal stakeholders, manage constant changes to specifications and demand, and run repeated supplier interactions and negotiations while evaluating increasingly complex responses (cost breakdowns, timing, tooling, etc.). At the same time, all of this activity must ultimately translate into structured, compliant contracts and downstream execution in enterprise resource planning systems—creating significant manual effort, limited visibility, and challenges in maintaining alignment across planning, sourcing, and contracting processes.

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The SAP Direct Materials Sourcing Suite addresses these challenges by connecting planning, sourcing, and contract execution into a single, integrated digital flow. It enables tighter collaboration across suppliers and internal teams, a unified data model across product design, demand, sourcing, and contracts, and centralized control of sourcing and contract outcomes—reducing fragmentation and improving consistency. By aggregating demand, standardizing sourcing processes, and embedding collaboration and automation, it streamlines supplier interactions and accelerates decision-making while helping to ensure that sourcing outcomes translate directly into enforceable contracts and downstream execution. The result is faster time to market, improved cost and compliance control, and greater operational efficiency across the full direct procurement lifecycle.

The role of AI in procurement

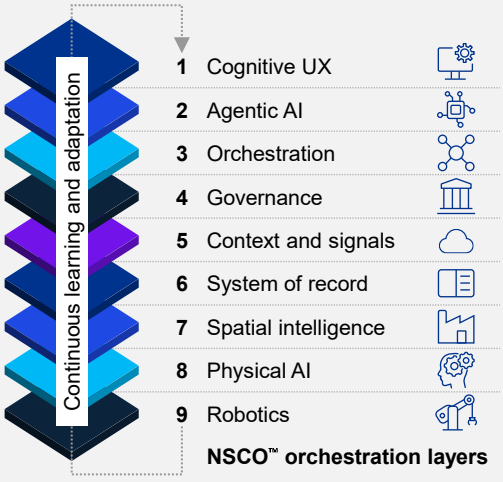


Artificial intelligence (AI) in procurement is moving through three stages, from basic productivity to sophisticated decision support, to autonomous orchestration of the supply chain itself. While current AI adoption takes the form of “Co-Pilot” use cases, today’s automotive leaders broadly agree that AI as part of solutions is the target capability to unlock value. The destination is an autonomous enterprise, where end-to-end processes run at machine speed with minimal human intervention. For automotive, this is the only response that matches the pace of **tariff shifts, commodity swings, and supplier disruption**. But autonomy without control is not a strategy. Automotive leaders require AI that is governed, explainable, and committee ready. The goal is not to remove the procurement leader, but to orchestrate a team of agents that act on their behalf at the speed the market demands.

KPMG LLP is advancing AI capability with a **Neural Supply Chain Orchestration (NSCO™)** architecture. Anchored in SAP S/4HANA and the SAP Business Technology Platform, the architecture introduces an agentic AI framework where role-based agents execute and coordinate decisions across the direct materials sourcing lifecycle. For automotive procurement, this means specialized agents working in concert, with deep integration into system solutions and data.
For example:

- A **tariff and trade agent** that monitors Section 232 changes and recalculates landed cost across the supplier base in real time to reduce landed cost shock exposure
- A **commodity index agent** that tracks steel, aluminum, platinum, and semiconductor exposure and triggers re-sourcing actions when thresholds are crossed to enable index-based renegotiation before margin erosion
- A **supplier risk agent** that fuses financial health signals, geopolitical events, and delivery performance to flag Tier-2 and Tier-3 fragility before it disrupts production and before traditional Supplier Relationship Management (SRM) systems would react
- A **sourcing and negotiation agent** that compresses cycle times by preparing Request for Quotation (RFQ) scenarios, generating side-by-side supplier comparisons, and drafting negotiation positions grounded in current cost models
- A **BOM alignment agent** that connects engineering changes in product lifecycle management (PLM) to active sourcing projects, accelerating new product introduction (NPI) and reducing late-stage cost surprises.

Each agent operates inside a governance shell that enforces real-time policy, audit trails, and human-in-the-loop approvals. The procurement leader stays in control while agents do the heavy lifting and an enterprise-wide coordinated execution.



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A collaborative approach to automotive complexity

Addressing these domain-specific challenges requires more than an off-the-shelf software deployment; it demands a strategic alliance and a tailored approach. SAP and KPMG work alongside automotive manufacturers to co-innovate and design procurement ecosystems that fit their unique operational realities.

Rather than forcing generic tools onto complex processes, we leverage the **SAP Direct Materials Sourcing Suite (DMS)** as a powerful, flexible foundation. Developed through co-innovation projects with automotive OEMs, this suite allows us to collaboratively integrate sourcing directly into the beginning of the product lifecycle. The suite also provides a common digital process platform that can generate clean and consistent data to fuel your agentic AI initiatives. Working together, we help organizations build capabilities that matter most:

Engineering BOM alignment:

Connecting PLM and engineering data directly to sourcing projects for faster NPI.

Advanced execution:

Facilitating multiround RFQs, central contract management, and automated commodity-index pricing to manage volatility dynamically.

Real-world validation: Driving transformation at scale

Company overview

Leading European premium automotive OEM operating a vast and highly complex supply chain with over 10,000 vehicles produced daily accounting for 36-million-part deliveries each day. This complexity—combined with its build-to-order model and heavy reliance on suppliers for over 70 percent of value creation—has made efficient, transparent procurement critical to maintaining production and innovation.

Business challenges

Procurement inefficiencies emerged due to fragmented systems and manual processes, limiting visibility, and slowing decision-making:

- More than 70 disconnected procurement systems
- Manual data transfers delaying sourcing cycles
- Limited cost visibility before start of production (SOP).

Approach

European OEM launched its connected procurement program, deploying the SAP Direct Material Sourcing Suite to streamline direct materials procurement processes and improve collaboration across internal and external stakeholders. The solution is currently deployed across 1,000 buyers and 1.8 million active supply contracts.

Business outcomes

The transformation is delivering measurable gains in efficiency, transparency, and control:

- Expect approximately 20 percent productivity improvement
- Faster quotations and improved sourcing speed
- Elimination of “black hole” with improved pre-SOP cost transparency.

Conclusion

By modernizing procurement with SAP, this European OEM has created a scalable, digital foundation that strengthens supplier collaboration and positions procurement as a strategic driver of resilience and innovation.

An alliance for the road ahead

The future of the automotive supply chain relies on resilience, trust, and intelligence. Whether your organization is ready to implement a clear vision, needs to validate a business case, or is just beginning to explore the opportunity, KPMG and SAP support the full journey.

By combining SAP DMS with the industry experience and governed AI frameworks of KPMG, we can enable automotive supply chains that think, adapt, and orchestrate responsibly, delivering resilience, intelligence, and trust in decisions.



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Contact us



Tushar Narsana
Principal, KPMG LLP
Industrial Manufacturing
tnarsana@kpmg.com



Matt Blyth
Vice President, SAP
Procurement Center of Excellence
matt.blyth@sap.com



Hernan De la Torre
Principal, KPMG LLP
SAP Supply Chain and
Procurement
hdelatorre@kpmg.com



Karolina Bombardelli
Global GTM Lead, SAP
Direct Procurement
karolina.bombardelli@sap.com



Len Prokopets
Managing Director, KPMG LLP
Industrial Manufacturing
lprokopets@kpmg.com

1. KPMG US Automotive Monthly Health Monitor, Volume 73
2. Crain's Detroit Business, March 16, 2026

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