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WHITEPAPER

Outlook 2026: The Agentic Transportation and Logistics Enterprise

Introduction:
The Current State of Play

Transportation and logistics enterprises can see disruption in real time. They just can’t respond at the same speed.

The next 12–18 months will compress economic, geopolitical, regulatory, and structural pressures into daily operational reality. Macroeconomic volatility, trade realignments, tariff uncertainty, and shifting sourcing strategies will continue to reshape global flows. Nearshoring will expand, but uneven execution will limit near-term capacity relief.

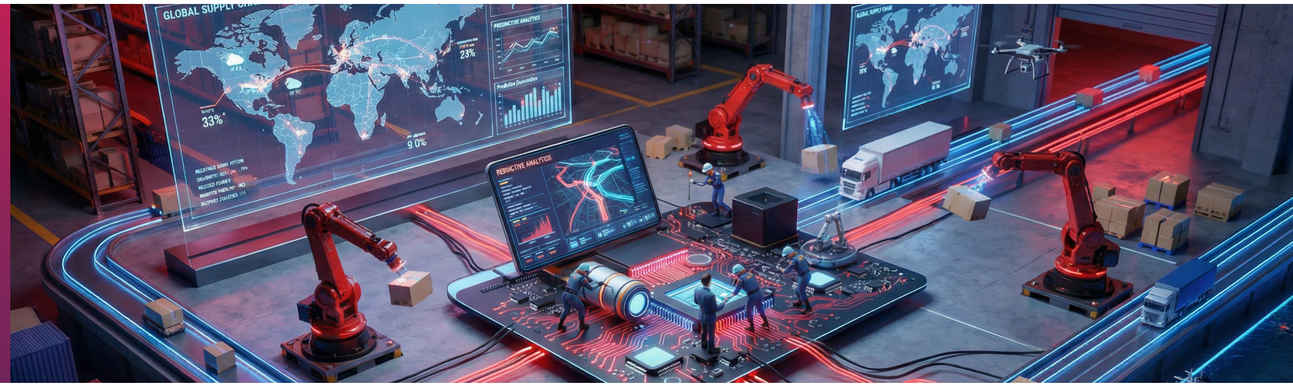
Cost pressure will remain structural. Energy volatility, labor constraints, and expanding sustainability and compliance requirements are keeping operating costs elevated, even during periods of soft demand. Leaders are being forced to scrutinize cost-to-serve at a granular level while assets remain unevenly utilized.

Customer requirements for precision, transparency, and proactive communication have become baseline, with little tolerance for unexplained disruption. At the same time, regulatory complexity is accelerating across regions, extending accountability beyond internal operations to carrier and supplier ecosystems.Failure to meet these expectations directly affects loyalty, brand trust, and competitive positioning in a market where speed and reliability.

Yet most logistics organizations remain constrained by operating models designed for predictability. Digital investments have improved visibility through dashboards, alerts, and control towers, but they have not solved the execution problem. Plans are still recalculated periodically. Decisions are escalated manually. Responses lag behind events.

Taken together, these forces have created a gap between seeing what is happening and acting in a way that changes outcomes – which is shaping the industry outlook.

Geopolitical uncertainty is driving up disruptions and costs for the industry. Kearney forecast that supply chain costs would outpace inflation by 7% by the end of 2025.[1]



1 https://www.kearney.com/documents/d/asset-library-291362522/supply-chain-navigator-2025h2-outlook-leading-in-structural-volatility-pdf

To compete in 2026 and beyond, logistics leaders must move beyond visibility-first investments and shift from reactive coordination to autonomous action – embedding intelligence directly into routing, capacity management, customer communication, asset utilization, and compliance. Disruption must be treated not as an exception to manage, but as a daily operating condition to design around.

Sutherland Point of View

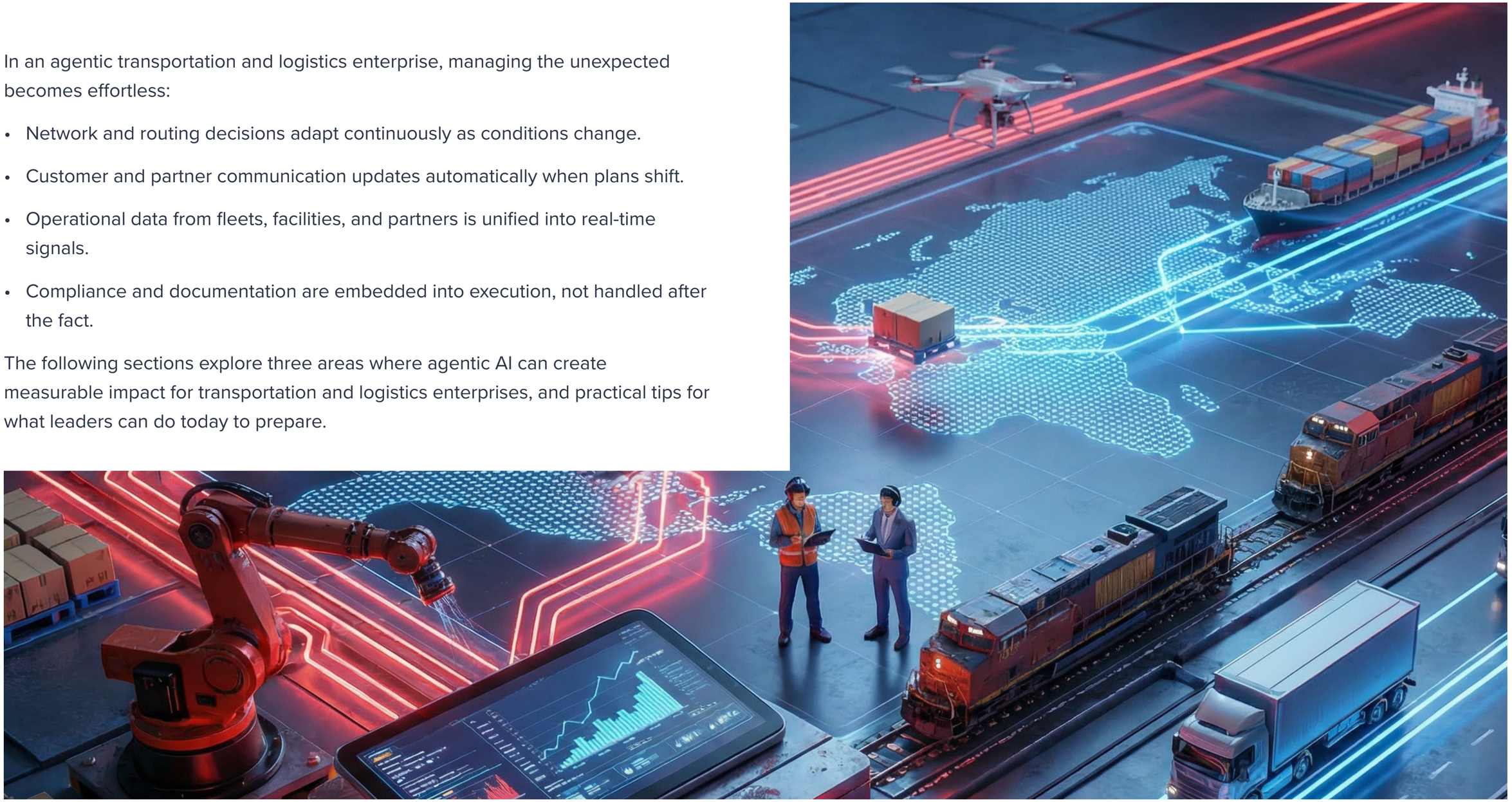
Agentic AI is an operating model shift rather than a technology upgrade. The next generation of logistics performance will not be driven by better dashboards or faster alerts, but by intelligence that is embedded directly into execution.

Working across global transportation, logistics, and supply chain networks, we see first-hand how sustainable advantage comes when orchestration, operations, finance, and customer experience are treated as a single, adaptive system. Agentic enterprises do not simply respond to disruption; they absorb volatility and act decisively, with humans and AI working together by design.

In an agentic transportation and logistics enterprise, managing the unexpected becomes effortless:

- Network and routing decisions adapt continuously as conditions change.
- Customer and partner communication updates automatically when plans shift.
- Operational data from fleets, facilities, and partners is unified into real-time signals.
- Compliance and documentation are embedded into execution, not handled after the fact.

The following sections explore three areas where agentic AI can create measurable impact for transportation and logistics enterprises, and practical tips for what leaders can do today to prepare.



Three Agentic Opportunities for Transportation and Logistics

Opportunity 1:
Agentic Network Orchestration

The Challenge

Logistics networks are more interconnected than ever. But coordination across order intake, cargo booking, dispatching, routing, and customer communication is still largely manual and sequential.

Route congestion, weather events, capacity constraints, port delays, labor shortages, and regulatory changes introduce constant variability across multimodal networks. While most logistics organizations now have access to real-time data – from telematics, IoT sensors, carrier feeds, and control towers – decision-making has not kept pace. Signals arrive faster than teams can interpret them, let alone act on them.

As a result, network decisions remain largely reactive. Dispatchers and planners manually re-route shipments, rebalance capacity, and communicate changes after disruptions have already occurred. Exceptions cascade across downstream operations. Even well-instrumented networks rely on human coordination to resolve issues that unfold at machine speed.

When exception handling relies on individual heroics, consistency becomes fragile and performance depends on who is on shift rather than how the system is designed.

The outcome is familiar: missed SLAs, underutilized assets, rising operating costs, and eroding customer trust. In volatile environments, this model isn't built to scale.

From a customer perspective, these breakdowns manifest as missed commitments, reactive updates, repeated inquiries, and a lack of confidence during disruption. In logistics, where customer experience is defined by the absence of friction when plans inevitably change, misalignment between execution decisions and communication directly erodes transparency and trust.

The Agentic AI Opportunity

Agentic network orchestration transforms logistics coordination from reactive response to continuous control.

Instead of simply detecting disruption, agentic systems interpret conditions in context, determine the optimal response, and act across the network within defined guardrails. Routing, capacity allocation, and communication decisions are no longer handled as isolated tasks, but as coordinated actions across planning, execution, and customer engagement.

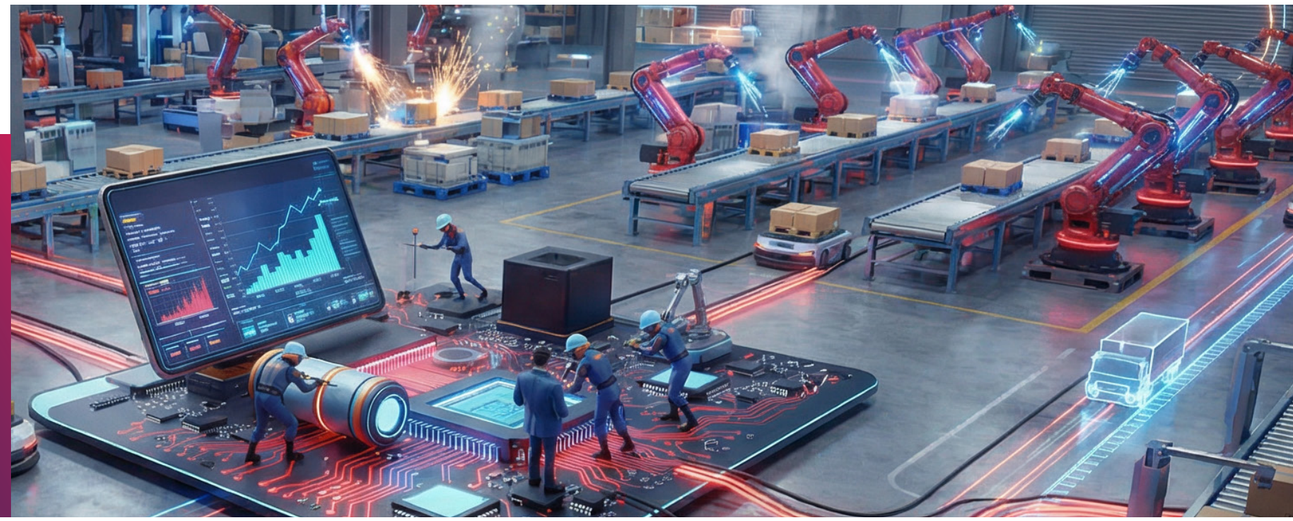
An agentic orchestration layer can:

- Detect emerging disruption signals (weather, congestion, capacity imbalance) in real time.
- Evaluate alternative routing and fulfillment scenarios based on cost, service, and sustainability constraints.
- Execute approved changes automatically across TMS, dispatch, and partner systems.
- Trigger proactive customer and partner communication the moment plans change.

In this model, frontline roles evolve. Planners and dispatchers shift from manual coordinators to supervisors of intelligent systems, intervening where nuance, risk exposure, or customer sensitivity matters most. When human intervention is required, teams are engaged with full context and clear recommendations, not raw alerts. AI handles speed, scale, and coordination, while human teams focus on judgment, empathy, and high-impact trade-offs.

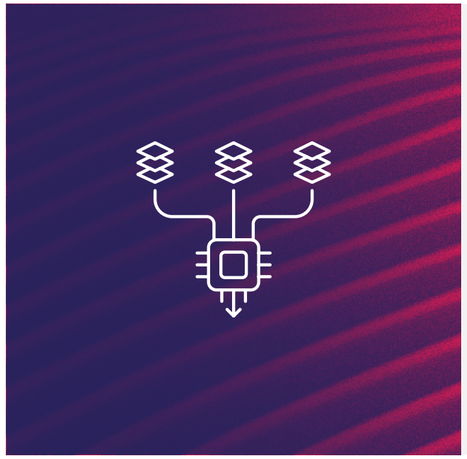
Over time, the system learns from outcomes, refining decision logic and reducing the frequency of manual intervention. The result is reduced cognitive overload, stronger decision quality under pressure, and greater confidence during disruption.

Sutherland achieved 100% on-time delivery while reducing TCO by 65% when working with Aleris, a consumer goods manufacturer.[2]

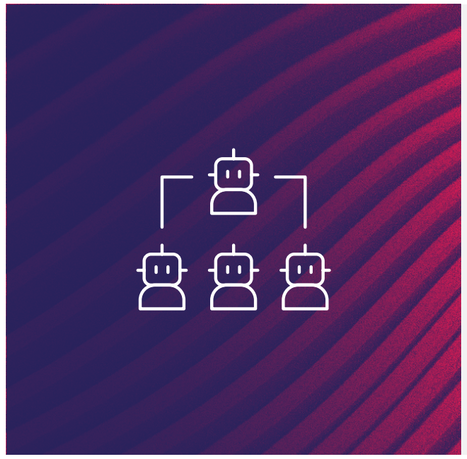


2 https://www.sutherlandglobal.com/insights/case-study/devops-automation-allows-aleris-to-make-its-supply-chain-more-efficient

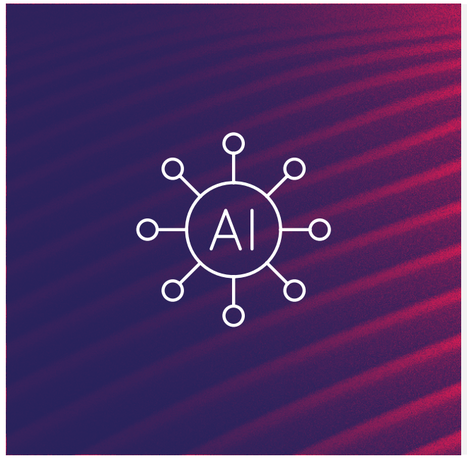
Practical Actions for Transportation and Logistics Leaders



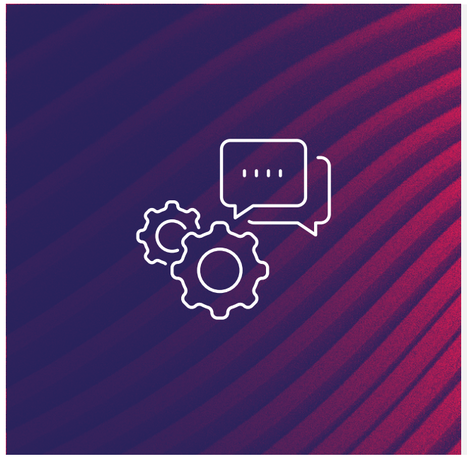
Assess network decision readiness. Begin with a structured **digital assessment** of routing, dispatch, and exception-management workflows to identify where decisions are repeatable, time-sensitive, and safe for autonomous execution. This establishes where agentic orchestration can deliver immediate ROI and where human oversight remains essential.



Unify real-time network data into an execution layer. Agentic orchestration depends on connected signals. Integrate telematics, TMS events, carrier feeds, weather data, and customer commitments into a unified operational data layer. Strong **data engineering** foundations are required to transform fragmented inputs into real-time, decision-ready signals agents can act on.



Deploy agentic routing and capacity optimization. Introduce **AI-driven orchestration** that continuously evaluates routing, load consolidation, and capacity allocation against service, cost, and emissions constraints. These workflows should integrate directly with TMS and dispatch platforms so low-risk adjustments can be executed automatically, while complex trade-offs are escalated to planners.



Automate exception-driven communication: When plans change, communication must change instantly. Deploy **AI-powered customer engagement** to trigger proactive notifications to customers and partners as routing or delivery commitments shift, reducing inbound inquiries and improving transparency.

Opportunity 2:
Agentic Asset, Warehouse, and Cost Optimization

The Challenge

Transportation and logistics organizations operate some of the most capital-intensive assets in the economy – fleets, yards, warehouses, equipment, and inventory – but utilization remains stubbornly inefficient.

Fleet and equipment maintenance is often reactive, leading to breakdowns and cascading delays. Warehouses struggle with labor shortages, manual processes, and uneven throughput. Assets may be underutilized during demand troughs, while peak periods strain capacity.

Meanwhile, operational, financial, and compliance data often reside in separate systems. This fragmentation exacerbates a critical but often overlooked dimension of asset optimization: financial execution. When data is siloed, organizations lose the ability to manage margin, working capital, and cost-to-serve in real time. By the time inefficiencies surface in financial reports, opportunities to intervene have passed.

In an environment defined by volatility, managing cost, compliance, and execution as separate conversations is no longer sustainable. Leaders need integrated visibility into margin, risk, and operational performance at the moment decisions are made, not after the fact.

The Agentic AI Opportunity

Agentic AI turns assets, warehouses, and cost structures into self-optimizing systems.

Instead of relying on fixed plans, agentic systems continuously sense utilization, demand signals, labor availability, energy costs, and inventory movement across facilities and fleets. They evaluate trade-offs in real time and take action to rebalance resources within defined constraints.

By connecting operational decisions directly to real-time cost and performance signals, agentic optimization moves financial intelligence upstream. Margin impact, working capital exposure, and cost-to-serve implications are visible as trade-offs are evaluated – not weeks later in financial reporting. Finance shifts from retrospective analysis to active participation in execution.

Agentic optimization can:

- Dynamically reallocate assets and equipment to reduce idle time.
- Adjust warehouse labor deployment and task prioritization as conditions change.
- Optimize inventory positioning based on demand variability and service commitments.
- Balance cost, throughput, and sustainability objectives simultaneously.

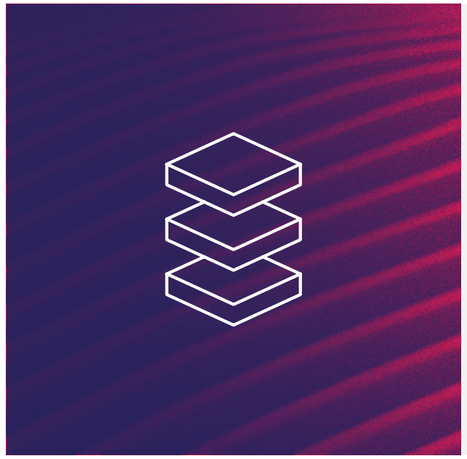
These systems act within guardrails set by operations and finance leaders. High-confidence adjustments are executed autonomously, while material trade-offs are escalated with clear recommendations and projected impact.

Over time, optimization becomes adaptive. The system learns which actions improve utilization and cost performance, refining decision logic with each cycle.

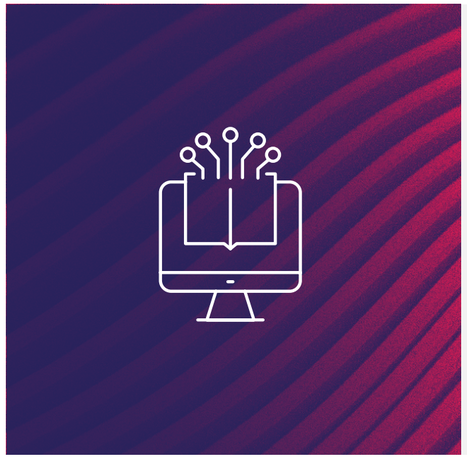
Sutherland reduced manual effort for a global courier leader by 93% while improving accuracy by 65% using a suite of AR solutions.[3]

3 https://www.sutherlandglobal.com/uk/insights/case-study/global-courier-boosts-payment-and-collection-efficiency-with-rpa-sutherland

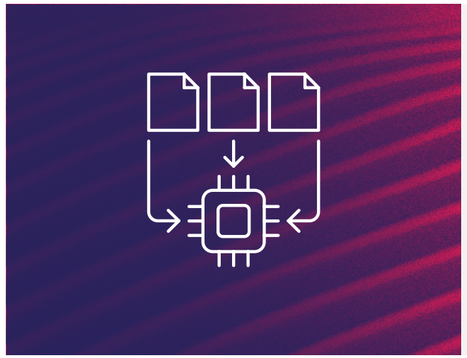
Practical Actions for Transportation and Logistics Leaders



Evaluate asset and warehouse variability drivers. Conduct a focused **operational assessment** to identify where utilization loss originates – idle assets, labor imbalance, inventory dwell time, or energy inefficiency. Prioritize areas where conditions change frequently and decisions are repeatable, making them suitable for agentic optimization.

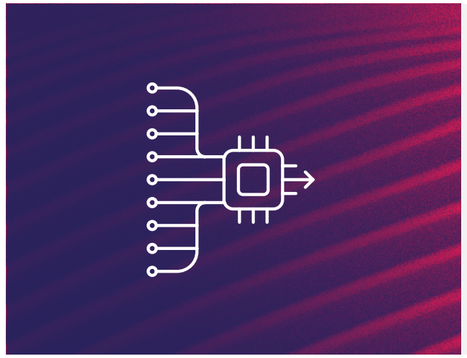


Create real-time asset and facility intelligence. Unify data from WMS, YMS, fleet systems, IoT sensors, labor management tools, and energy platforms into a single, trusted operational view. Strong **data engineering** is required to transform disparate operational and financial signals into AI-ready inputs for optimization agents.



Deploy agentic optimization for utilization and throughput. Introduce **AI-driven optimization agents** that continuously adjust asset allocation, warehouse task sequencing, labor deployment, and inventory flow based on real-time demand and constraints. These agents should execute low-risk adjustments automatically and surface high-impact trade-offs to human operators.

Embed cost and sustainability constraints into execution. Ensure optimization logic accounts for fuel, energy, labor, and emissions constraints alongside service targets. This allows agentic systems to balance cost efficiency and sustainability objectives dynamically rather than treating them as after-the-fact reporting metrics.



Establish governance for autonomous optimization: Define financial thresholds, utilization targets, and escalation rules for agentic decisions. Apply **digital assurance** practices to validate optimization outcomes, maintain explainability, and ensure autonomous actions remain aligned with operational, financial, and regulatory requirements.

Opportunity 3:
Agentic Risk, Compliance and Trust Management

The Challenge

Risk and compliance have become continuous operational concerns for transportation and logistics enterprises.

Customs requirements, trade sanctions, safety regulations, sustainability reporting, and partner compliance obligations evolve constantly across jurisdictions. At the same time, logistics networks depend on extended ecosystems of carriers, suppliers, ports, and subcontractors, each introducing operational, financial, and reputational risk.

Despite this, most organizations still manage risk and compliance through periodic checks and after-the-fact audits. Documentation is assembled manually and exceptions are discovered late. Compliance teams react to issues once exposure already exists. As disruption accelerates, this model creates blind spots that increase regulatory risk, delay shipments, and erode trust with customers and partners.

Traditional digital tools provide visibility into compliance status, but they rarely intervene in execution. They surface risk rather than prevent it.

The Agentic AI Opportunity

Agentic risk and compliance management embeds prevention directly into logistics execution.

Rather than relying on static rules or retrospective reviews, agentic systems continuously monitor operational activity, documentation flows, partner behavior, and regulatory conditions in real time. They assess risk as actions occur and intervene before violations, delays, or exposure materialize.

Agentic risk systems can:

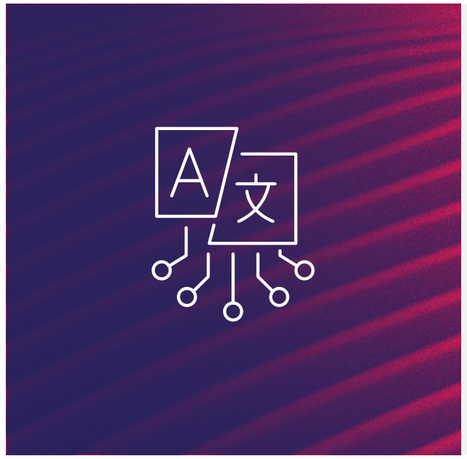
- Validate documentation and regulatory requirements continuously across shipments
- Detect emerging compliance gaps as routes, partners, or trade rules change
- Trigger corrective actions automatically, such as re-routing, re-documentation, or escalation
- Generate audit-ready records as part of execution, not post-processing

Logistics organizations applying AI-driven compliance monitoring have reduced shipment delays and audit preparation effort by embedding regulatory checks directly into execution workflows.

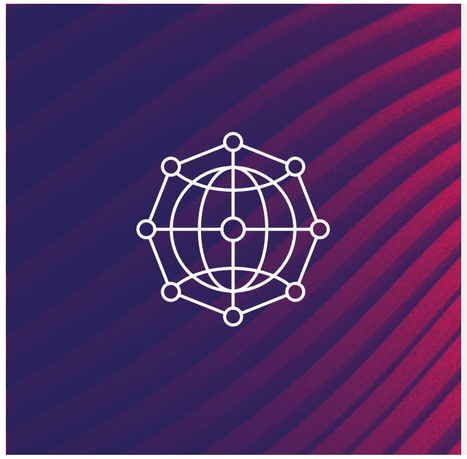
These systems operate within clearly defined governance frameworks, with embedded guardrails, explainability, and continuous assurance. Enterprise policy is codified directly into execution workflows, ensuring autonomous decisions remain compliant, continuously verified, and accountable. Low-risk interventions are executed automatically, while high-impact or ambiguous situations are escalated with full context and recommended actions, so speed never comes at the expense of auditability or trust.

In this model, compliance shifts from a cost center to an enabler of speed, reliability, and trust.

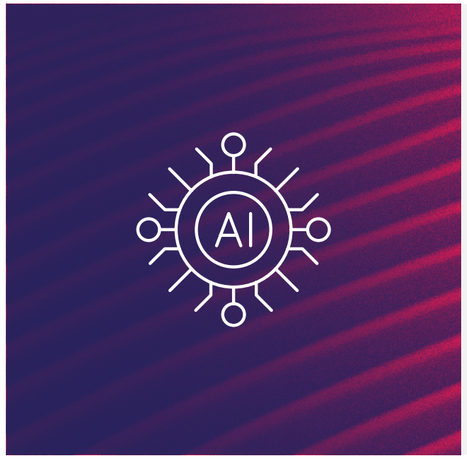
Practical Actions for Transportation and Logistics Leaders



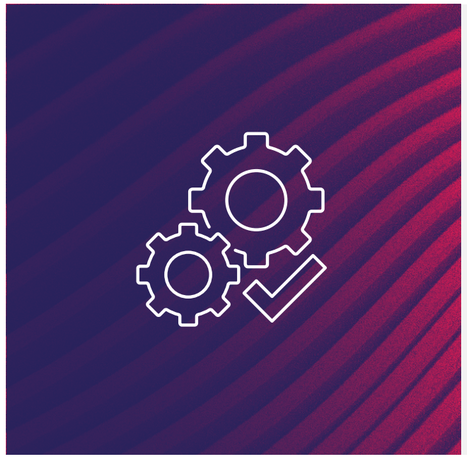
Translate regulatory and risk obligations into executable policy logic. Move beyond static compliance checklists by codifying customs rules, trade restrictions, safety requirements, and sustainability obligations into machine-readable policies that agentic systems can enforce during execution.



Embed risk controls directly into operational workflows. Rather than monitoring compliance separately, integrate risk controls into shipment creation, partner selection, documentation handling, and execution workflows. **Application integration and modernization** are critical so compliance logic can intervene at the moment decisions are made rather than after shipments are delayed or flagged.



Continuously qualify partners and lanes, not just transactions. Use agentic monitoring to detect patterns such as repeated documentation errors, sanction exposure, safety incidents, or sustainability breaches and adjust partner eligibility dynamically.



Establish continuous quality assurance and development. Define where agentic systems are permitted to intervene independently – blocking non-compliant partners or rerouting restricted shipments, for example – and where escalation is required. Apply **digital assurance** so autonomous actions remain explainable, consistent, and defensible across jurisdictions and regulators.

The Road to the Agentic Transportation and Logistics Enterprise

Where Logistics Leaders Are Investing in 2026

- Real-time execution orchestration across routing, dispatch, and partner networks.
- Cost-to-serve visibility embedded into operational decisions.
- Autonomous exception handling and proactive customer communication.
- Continuous compliance validation and partner risk monitoring.
- Workforce augmentation through AI copilots and decision support.
- The agentic transportation and logistics enterprise is already emerging.

The pressures explored throughout this POV – persistent volatility, rising costs, tightening compliance, workforce constraints, and escalating customer expectations – are not temporary disruptions. They are structural forces reshaping how logistics networks must operate. Traditional planning cycles, reactive coordination, and insight-only intelligence cannot keep pace with environments where conditions change continuously.

In every major evolution of the logistics industry, organizations that redefined how execution happens, not just where assets are deployed or which technologies are adopted, gained the strategic edge. This era is no different. The difference now is that innovation is no longer centered on new equipment, routes, or platforms – it is about a new operating model, where intelligence becomes operational and adaptive across the network.

Start with high-impact pilots:

- Deploy agentic orchestration for disruption-prone routes or lanes
- Introduce autonomous asset and warehouse optimization in a single region or facility
- Embed real-time compliance validation into customs or documentation workflows

These gains build on continued modernization of core platforms and sustained investment in real-time data, but with a sharper mandate: every investment must shorten the distance between signal and execution. Early wins in resilience, cost control, and execution speed will build momentum for broader transformation.

Agentic capability relies on the right foundational elements. Explore Outlook 2026: The Road to the Agentic Enterprise **for the fundamentals every organization needs.**

However, the agentic transportation and logistics enterprise will not be built by technology alone. It will be built by organizations that combine deep domain expertise, operational accountability, and AI-driven execution at scale – embedding intelligence directly into how works get done.

Transportation and logistics organizations that thrive in 2026 and beyond will be those that move decisively from insight to action. Agentic AI turns volatility into a controllable variable rather than a constant threat, if leaders are willing to activate it.

Disruption is inevitable. Make it intentional.