



Air Visibility in Global Supply Chains

Closing the Visibility Gap
to Enhance Resilience,
Performance, and Competitive
Advantage

A White Paper

Air Visibility in Global Supply Chains

Air freight drives speed and flexibility for time-sensitive and high-value products across global industries. Yet this segment has historically suffered a **visibility blind spot**. Once cargo is airborne, traditional tracking systems lose connection, leaving operational teams without real-time insights. This article examines the **systemic risk created by poor air visibility**, confirms the issue with **real industry impacts and data**, and proposes **Sensos Sync [Air Visibility](#)** as a solution that transforms supply chain performance. Real-world examples, research, and recent industry conditions are used throughout to underline the business case and urgency of implementing high-fidelity air visibility.



The Visibility Gap in a Complex Global Economy

Despite advancements in logistics technology, most organizations still lack **end-to-end visibility** into supply chain execution - especially across airborne segments. Cargo tracking devices often lose connectivity during flight; airline systems provide fragmented data that is hard to integrate; and stakeholders lack unified access to flight-level events. These gaps force reactive responses instead of proactive mitigation.

Industry research confirms that **visibility gaps directly harm operational effectiveness**: inadequate visibility into inventory and movement status limits responsiveness and contributes to missed customer expectations, increased costs, and lost revenue. In fact, 80% of supply chain professionals report that inadequate real-time shipment visibility constrains their operational effectiveness. Without proactive insights, companies risk losing as much as **10% of revenue** due to inefficiencies and disruption response failures.



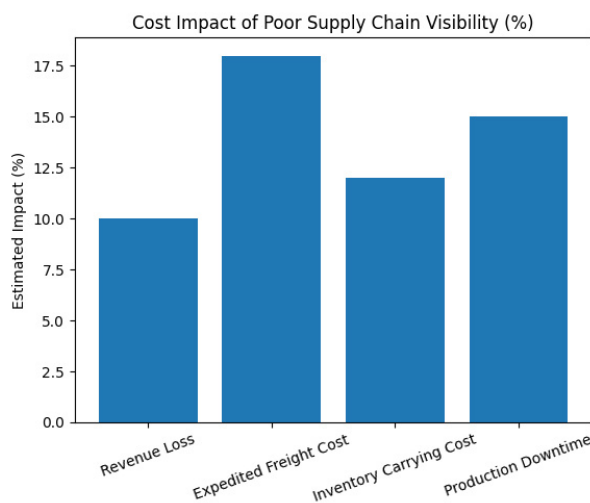
Real-World Impact of Poor Visibility and Systemic Disruptions

The Aviation Industry: Supply Chain Strain and Cost Escalation

Recent industry data demonstrates the magnitude of supply-chain strain across aviation logistics - a domain where air visibility is particularly relevant:

- The International Air Transport Association (IATA) [quantifies](#) that **global airlines face more than \$11 billion in extra supply-chain costs in 2025** due to delays in parts, maintenance, and component shortages. These costs arise from inefficiencies and disruptions that stem from poor visibility into upstream supply and execution, leading airlines to keep older, less efficient aircraft flying and hold larger inventories of parts.
- [Record](#) backlogs for new aircraft deliveries - exceeding 17,000 units - underscore how upstream supply bottlenecks ripple through global operations, affecting fleet planning, maintenance scheduling, and capacity deployment.

These industry pressures are not isolated: airlines face logistic



Why Traditional Visibility Platforms Fail to Reduce Costs

complexity where maintenance, parts delivery, and flight operations are tightly coupled. Lack of visibility into inbound parts or maintenance readiness directly affects aircraft availability, flight schedules, and customer service outcomes.

Geopolitical and Infrastructure Disruptions

Air-cargo and broader logistics performance are also shaped by external macro events:

- **Geopolitical disruptions**, such as airspace closures and tariff volatility, can reroute air freight, extend transit times, and increase costs. [These real events](#) demonstrate that unpredictable routing and denied or delayed flight corridors amplify visibility and planning complexity.
- **Cyberattacks and infrastructure outages** (e.g., breaches of airport check-in systems) have caused [widespread flight delays and cancellations](#), illustrating how external events can rapidly erode operational reliability.

Together, these factors highlight that organizations operating without real-time, integrated visibility are more exposed to cascading disruptions.



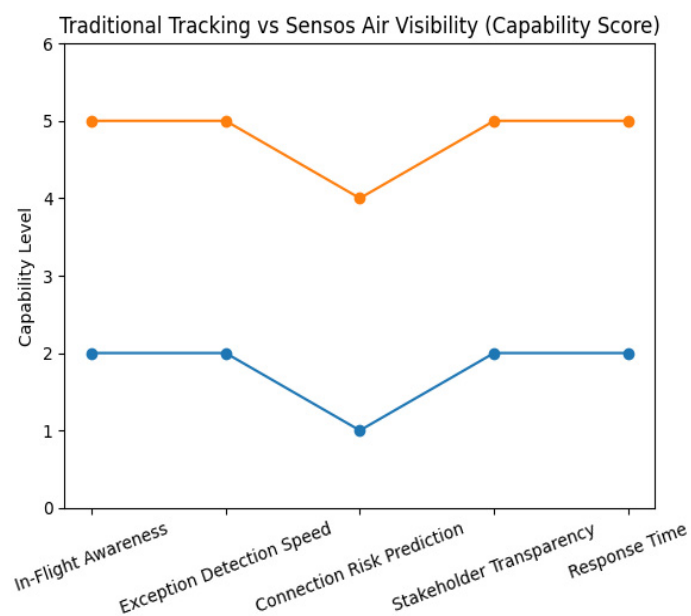
The Strategic Value of Air Visibility

Real-World Lessons from Inventory and Risk Management Research

Academic and industry research further validates that strategic visibility reduces operational risk and improves performance:

- [Studies show](#) that improved visibility into inventory flows and transportation execution increases supply chain resilience, enabling companies to respond faster and more effectively to volatility - reducing the impact of disruptions and buffering against inventory inefficiencies and stockouts.
- Organizations with [enhanced visibility capabilities](#) tend to suffer no measurable revenue or profitability impacts during disruptions, reflecting greater resilience even when disruptions occur.

These outcomes affirm that visibility is not merely a reporting function - it is a **strategic asset** that directly correlates with business continuity, risk mitigation, and competitive positioning.

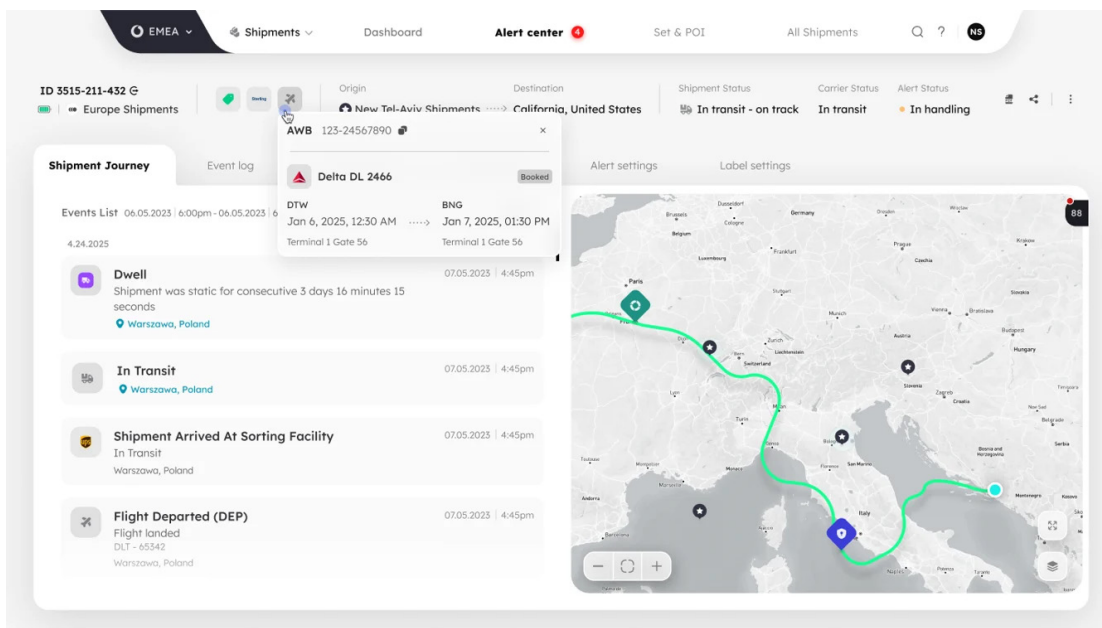


Sensos Sync Air Visibility: Bridging the Blind Spot

Sensos Sync's **Air Visibility** feature addresses these operational and strategic challenges by integrating **real-time flight information** into the shipment lifecycle. Instead of treating airborne segments as gaps, the system enriches shipment data with flight events, including:

- Flight number, departure and arrival times, delays, cancellations, and route changes
- Connection and misconnection risk analysis
- Event-driven alerts for exceptions
- Public viewing capabilities without user login for stakeholders

This integration effectively converts air transport events from blind spots into **actionable signals**, enabling downstream processes - such as warehousing, customs, final-mile planning, and customer communications - to operate with confidence.



Use Cases: Demonstrating Value Across Industries

Pharmaceuticals and Life Sciences

Challenge: Temperature-sensitive vaccines and biologics traveling by air require strict schedule adherence and environmental control.

Air Visibility Benefits:

- Proactive identification of delays or route changes that could compromise product viability
- Automated exception alerts enabling operational teams to adjust cooling plans or reroute

Business Impact: Reduced waste, fewer regulatory risks, and improved patient outcomes.

Aerospace and Manufacturing

Challenge: Production lines rely on just-in-time delivery of critical parts.

Air Visibility Benefits:

- Early warnings of delays affecting assembly schedules
- Transparent linkage between flight delays and part arrival timing

Business Impact: Reduced production downtime, more accurate scheduling, and lower premium freight expenses.



Use Cases: Demonstrating Value Across Industries

Retail, Consumer Electronics, and High-Value Goods

Challenge: Seasonal demand and tight delivery windows strain inventory and fulfillment systems.

Air Visibility Benefits:

- Forecast-driven planning via enriched movement data
- Better alignment of sales commitments with actual shipment status

Business Impact: Lower backorders, improved customer satisfaction, and reduced expedited shipping costs.

3PLs and Logistics Service Providers

Challenge: Third-party logistics firms must coordinate multi-modal flows and assure delivery performance.

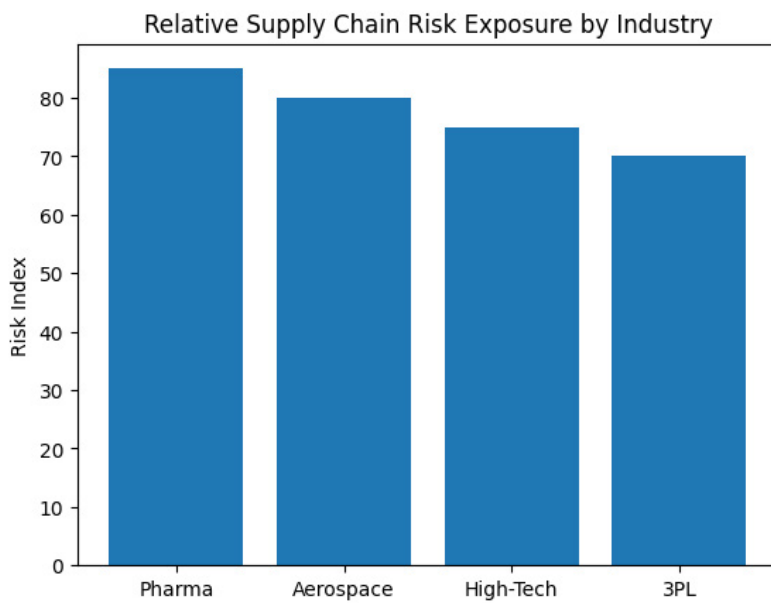
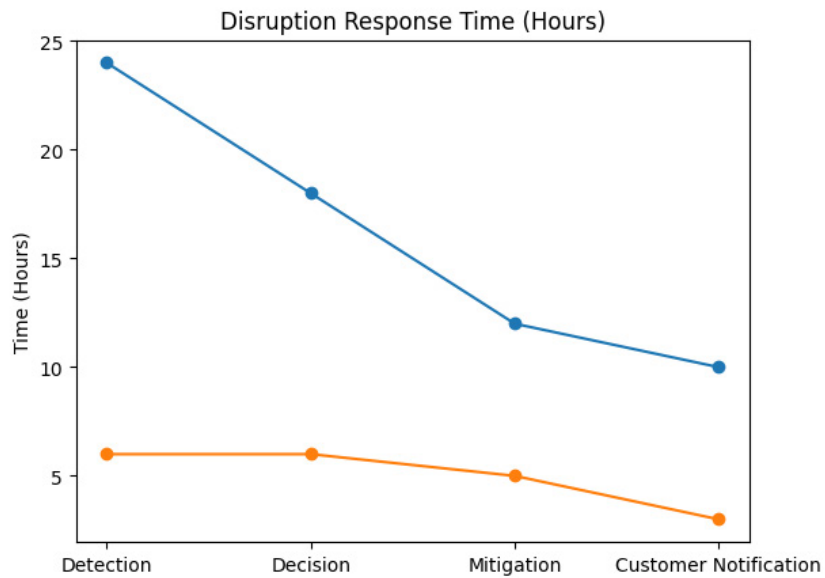
Air Visibility Benefits:

- Integrated flight data reduces manual tracking and redundant queries
- Accurate, customer-facing visibility dashboards

Business Impact: Enhanced service differentiation and reduced operational overhead.



Use Cases: Demonstrating Value Across Industries



Quantifying the Benefits: What Firms Stand to Gain

Real-world implementations of real-time visibility technologies provide compelling benchmarks:

- Leading companies like Procter & Gamble, Walmart, and DHL have [reported](#) double-digit improvements in inventory performance, delivery accuracy, and transit times through visibility platforms spanning logistics and inventory flows.
- Visibility initiatives have a strong correlation with **enterprise resilience**, with firms reporting less revenue and profit volatility when shocks occur.

From a bottom-line perspective, improved visibility is demonstrably tied to **reduced supply chain risk costs**, fewer expedited shipments, and better alignment between supply and customer demand.

Visibility as Competitive Advantage

Poor visibility in air freight and broader supply chains is no longer an isolated operational issue - it is a **strategic vulnerability**. Recent industry pressures, quantified as billions in additional costs for airlines and cascading scheduling effects across global trade, underscore the stakes of maintaining blind spots. Organizations that combine real-time data, predictive capabilities, and integrated visibility - such as those enabled by Sensos Sync Air Visibility - gain measurable resilience and performance advantages.

Integrated air visibility is not simply a technology upgrade. It is a **transformational capability** that improves operational responsiveness, enhances customer trust, and safeguards financial performance in an increasingly volatile global trading environment.

