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FourKites launches Inventory Twin to enhance Control Tower offerings

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The Bottom Line

In September 2025, FourKites introduced its Inventory Twin, marking the next stage in its transformation from a real-time visibility provider to a control tower provider. Building on its shipment and yard visibility foundation, it now combines live transaction data, a graph-based network model, and IoT inputs from its Chorus partnership to give organizations real-time insight and control over their inventory. By unifying inventory, transportation, and warehouse data, customers can identify and resolve issues such as stock imbalances, capacity limits, or order disruptions directly within the platform. Nucleus found that organizations adopting the Inventory Twin can expect a five to 15 percent reduction in inventory carrying costs and a three to eight percent improvement in service-level performance through better visibility, faster response times, and more accurate fulfillment. As FourKites continues to expand its suite of AI agents to automate tracking, compliance, and appointment management, these developments make the company's Intelligent Control Tower increasingly attractive for enterprises seeking measurable ROI, stronger customer performance, and tighter operational control across their supply chains.

Overview

Supply chain software vendor, FourKites, has undergone a notable transformation over the past 12-18 months, evolving from a real-time visibility provider into a broader supply chain orchestration platform, through its Intelligent Control Tower platform offerings. As visibility has become a standard capability across the market, the vendor has shifted its focus toward enabling customers to act on the insights generated from their data. This shift reflects a broader industry trend in which organizations seek not only to see disruptions but to predict their operational impact and execute corrective actions within the same environment.

A key component of this transition is FourKites' graph-based network model. Instead of relying on large volumes of master data, the system builds relationships between suppliers, facilities, and carriers directly from live transactions. This allows FourKites to create a connected network view faster and use it to identify where and how material, inventory, and orders move across the supply chain.

The new Inventory Twin extends this capability into inventory management. It combines predictive analytics, IoT data, and warehouse-level visibility to give organizations an accurate, current picture of available stock. Through its partnership with supply chain and asset management software provider Chorus, FourKites customers can utilize smart labels and pallet-level sensors to collect location and condition data from within warehouses, giving teams visibility into where items are stored, their current status, and any environmental concerns such as temperature changes. This information supports industries like pharmaceuticals and food and beverage, where product integrity and location accuracy are essential. The system then uses that data to run actionable workflows. It can identify stock imbalances, propose or execute transfers, reroute shipments, and forecast when warehouse space or loading capacity will be exceeded. By linking inventory with transportation and yard data, the Inventory Twin reduces manual coordination between teams and shortens response times when inventory issues arise.

FourKites has expanded beyond visibility to give organizations real-time control over how inventory moves through their supply chain.

By combining live transaction data with pallet-level sensing, FourKites enables companies to act on accurate, real-time inventory information and reduce carrying costs by as much as 15 percent.

Expected Benefits

Nucleus expects FourKites Intelligent Control Tower customers to realize the following benefits: improved inventory management and enhanced customer satisfaction, and service level performance.

Improved Inventory Management

Many organizations can see where their inventory sits but struggle to maintain accurate, actionable control when conditions change. FourKites' Inventory Twin addresses this by combining real-time transaction data from its graph network with IoT signals and warehouse inputs from its Chorus partnership. Smart labels and pallet-level sensors provide continuous updates on location and condition, allowing planners to work from live on-hand quantities instead of static ERP data. This unified view links inventory, transportation, and yard activity so users can identify when stock levels will exceed capacity, fall short, or sit idle, and then take corrective actions such as stock transfers, alternate sourcing, or order reprioritization. The ability to base these decisions on actual network conditions eliminates manual coordination and reduces reliance on emergency freight. Nucleus expects organizations deploying the Inventory Twin to reduce inventory carrying costs by five to 15 percent through better visibility, fewer stranded assets, and faster turnover, resulting in measurable improvements in working capital efficiency and overall profitability.

Real-time orchestration allows organizations to rebalance stock, reprioritize orders, and maintain on-time, in-full performance, improving service levels by up to 8 percent.

Enhanced Customer Satisfaction and Service Level Performance

By connecting inventory, transportation, and yard data in real time, FourKites' Inventory Twin allows organizations to respond immediately when disruptions occur, such as a delayed inbound shipment or an unexpected stock shortage. Previously, when disruptions occurred, whether a stockout at a distribution center or a delayed inbound shipment, organizations often relied on manual coordination across planning, logistics, and customer service teams to determine corrective actions. This reactive process introduced communication lags, inconsistent prioritization, and, in many cases, late or incomplete fulfillment. With the Inventory Twin, the Intelligent Control Tower's ability to rebalance stock, optimize order prioritization, and identify alternate sourcing options allows organizations to address disruptions in real time, before they affect the end customer. By reducing lead-time variability and emergency fulfillment activities, analysts believe organizations can realize a three to eight percent improvement in OTIF delivery performance. This consistency not only lowers the cost of service but also strengthens customer trust, an outcome that influences retention, renewal, and future sales opportunities.

Looking Ahead

The launch of the Inventory Twin reflects the broader direction of FourKites as it evolves from a visibility provider into a control tower

platform. Most of its customers began with shipment or order visibility, but as these capabilities have become standard, the company has focused on enabling direct action on that information. The Inventory Twin extends this shift by connecting inventory, transportation, and warehouse data into one operational layer where risks can be detected and resolved in real time.

FourKites' suite of AI agents, including those for tracking and trace, supplier operations, document compliance, appointment management, and detention management, complements this development by adding automated decision support around the same workflows. Together, the Inventory Twin and these agents move the FourKites platform toward true orchestration, where insights are linked with the ability to execute.

For customers, this direction means that investments in visibility now yield higher operational and financial returns. As data quality and integration improve, organizations can use the FourKites platform to automate responses, reduce inefficiencies, and maintain consistent service performance without adding headcount. Over time, Nucleus expects this transition from visibility to control to deliver measurable ROI through lower logistics and inventory costs, higher service levels, and improved asset utilization.

FourKites' Inventory Twin and expanding AI agent portfolio mark a shift from visibility to execution, giving customers measurable ROI through reduced costs, higher service reliability, and improved decision speed.