

## *Seeing is Relieving:* Precision Supply Chain Planning with Integrated Real-Time E2E Visibility Data.

*By Ben Barras, Advisory Business Development and Partner Management Lead - Retail/Consumer Goods/Global Supply Chain Line of Business at SAS Institute, Inc.*

A supply chain twist on an age-old truism, couldn't be truer, especially as we approach the peak of the Holiday season. Most manufacturing and retail companies deliberate and plan their whole year, with especially intense scrutiny and focus on the fourth quarter, where many companies will do upwards of 50% or more of their entire year's sales. The plans are set in motion, an estimated \$1.5 trillion in Holiday inventory begins to move, all over the world, from where it's made to where it will be sold. This, during unprecedented, relentless, global supply chain disruption...and most companies are left wondering if, and hoping that, their product will arrive on time...and they won't know until it either does or doesn't arrive as scheduled.

That is why ***Seeing is Relieving!*** End to end visibility in your Holiday supply chain precision planning eco-system ***relieves*** companies of the stress of network inventory uncertainty. It ***relieves*** companies of the costly penalties either issued or incurred due to late shipments. It ***relieves*** companies of the costly, and wasteful hours of time spent researching and reacting to disruption and expediting expensive remedies. It ***relieves*** companies of the irreparable damage done to brand perception and customer retention when Holiday goods don't arrive as planned and promoted.

SAS and project44 have formed a partnership to provide unparalleled precision and end to end visibility in global supply chain planning.

### **The Issue**

Retailers and CPGs are focusing on modernizing and optimizing their digital supply chain – and with good reason. Higher costs, disruptions, shortages, and geopolitical events are forcing organizations to rethink how they're managing the supply chain roller coaster. Now more than ever, organizations must anticipate and mitigate risks to their supply chains.

Historical data, past assumptions and processes provide valuable input, but they're not reliable enough to plan confidently for the future. In uncertain times, retailers and CPGs look to their data to drive revenues, reduce costs and improve the accuracy of demand planning and forecasting. Having the right data, internal and external data sources, helps organizations plan and respond with precision, speed and agility.

It's imperative to make precise, data-driven decisions when it comes to pricing, demand planning and transportation. Surviving and thriving in this environment requires a comprehensive demand-planning solution combined with real-time, relevant supply chain data and end to end network visibility.

### **The Challenges**

**Low visibility into overall inventory levels.** Without the real-time data and visual analytics needed to view the entire end to end supply chain, it is impossible to know the full picture of at-rest and in-motion inventory, from raw materials to end-of-life disposition inventory.

**Inaccurate inventory allocation.** Not having a precise way to plan and optimize inventory leads to insufficient inventory allocation. The inability to visualize inventory at-rest and in-motion throughout the supply chain prohibits optimal deployment flexibility.

**Higher inventory and transportation costs.** Without precision planning based on accurate data and advanced analytics, organizations often incur higher transportation costs and don't have a real handle on what's in their inventory. Reactive, expedited inventory management will cause increased product costs and transportation expense.

**Inefficient resource planning.** A lack of real-time visibility, modern analytics capabilities and automation makes it more difficult to properly allocate employees and equipment where needed most. Reliable labor is increasingly difficult and expensive to procure, and quickly becoming the most critical supply chain investment, so it must be managed with optimal efficiency.

**Lower levels of customer service and satisfaction.** Both customer service and satisfaction suffer when retailers and CPGs don't have insight into their inventory. Without proper inventory levels, customers may not get what they need when they need it. In today's hyper-competitive marketplace, customer retention is critical, and customer flight is inevitable without high levels of customer satisfaction.

### A Modern Technology Solution

project44's global supply chain carrier network (the most comprehensive in the industry) and real-time data platforms are integrated with the SAS® Intelligent Planning platform (best in class supply chain planning platform per Forrester). Using SAS and project44's integrated supply chain planning platform, retailers and CPGs gain a competitive advantage by boosting supply chain agility, cost efficiency and scalability.

**Access to real-time, high-fidelity transportation data** - project44 collects real-time global supply chain data from the world's largest network of carriers – for every mode and geography, at the order, line and SKU level.

**Data collection and cleansing** - the project44 Movement platform normalizes and prepares real-time global supply chain data for easy ingestion into the SAS Intelligent Planning platform to inform and increase the intelligence and precision of forward-looking supply chain planning and execution.

**Fully integrated API network** - customer-centric data sets are transmitted in real time through a fully integrated API network refreshed at the customer desired frequency (e.g., hourly, daily, weekly).

**Intelligent decisioning platform** - global supply chain data from project44 is loaded into the open, unified data layer of the SAS Intelligent Planning platform. That data is then combined with customer planning data for a highly accurate, real-time intelligent decisioning, enabling supply chain planning that's agile, precise, resilient, and reliable.

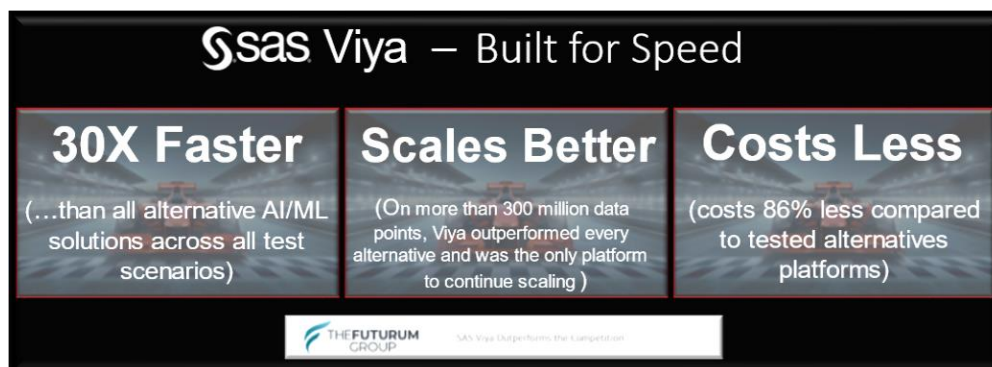
*“The project44 and SAS collaboration brings together the world's largest global real-time transportation data repository, with industry-leading intelligent supply chain planning capabilities, to enable real-time precision and visibility in E2E global supply chains. The partnership promises greater agility, resiliency and cost optimization in supply chain planning.”*

Brian Kilcourse, Managing Partner at Retail Systems Research

## The Benefits

Organizations using the SAS Intelligent Planning can be confident that they'll operate more efficiently and effectively at all levels of decision making due to our automation, scalability, statistical precision and end-to-end connectivity and visibility.

- **Complex optimization problem solving.** Run powerful, automated end-to-end supply chain and network optimization solvers in parallel, in the cloud to solve routing, planning and resource allocation challenges.
- **Integrated data management.** The ability to easily ingest data from the world's largest real-time data repository, and other sources, allows the SAS Intelligent Planning platform to perform better than competitive supply chain planning platforms.
- **High-performance consumer demand forecasting.** Maximize the productivity of demand and supply planning resources, automating decisions where possible. Deploy critical talent where needed for optimal upstream and executional planning.
- **Drive executional precision.** When integrated with downstream executional planning systems, SAS Intelligent Planning can drive precision, efficiency and cost savings through the entire value chain.
- **Single administration and reporting interface.** An intuitive visual interface lets users view the condition of the entire supply chain in real time with integrated, drillable and easy-to-understand visualizations.
- **Simulation, what-if analysis and scenario planning.** Find the best possible outcome by optimizing for profit and supply chain resiliency, while considering business and operational constraints, using integrated digital-twin simulation capabilities.
- **Flexibility and scalability.** SAS Intelligent Planning on SAS Viya is flexible to meet the needs of a growing business, seamlessly scaling as needed.
- **Powered by SAS® Viya®.** SAS Intelligent Planning is on a completely redesigned architecture so it's compact, cloud native, intelligent, precise and fast.



Customers using a modern demand planning, supply chain management platform, with integrated real-time supply chain data ingestion, can see significant fiscal benefits, and ROI on tech investment.

- 10%-25% increase in forecast accuracy
- 5%-10% increase in on shelf inventory accuracy and availability
- 5%-15% cost savings on network inventory
- 10%-15% reduction in network inventory waste and shrinkage
- 1%-3% increase in enterprise gross margin

**For more information about modern, connected supply chain planning and execution innovations,** SAS and leading industry Retail and Manufacturing companies will be presenting at the 2023 RVCF Annual Fall Conference, from 11/05/2023 - 11/08/2023. Please join us at the RVCF Annual Fall Conference and at the sessions listed below to learn more about modern, connected supply chain planning and execution.

- **Monday, November 6th at 4:25PM**
  - Session Title: What does Technical Modernization in the Supply Chain look like?
  - Session Description: What does Technological Modernization mean to your company? What should it mean? Hear how Retailers, Brands, and Transportation Providers are utilizing technology to unlock the supply chain. The panel SAS will explore these questions and provide insight on how your company can take prudent steps to advance your technological ecosystem to increase profitability and improve efficiency.
- **Wednesday, November 8th at 9:25AM**
  - Session Title: Connecting the Supply Chain: A Roundtable Discussion
  - Session Description: This roundtable will focus on Connected Supply Chain Analytics and the related strategies necessary to effectively operate in today's market defined by an endless stream of disruptions and ever-changing consumer demand.



If you won't be attending the 2023 RVCF Annual Conference in November, please feel free to reach out to me on Linked In for more information.



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