snowflake®

BUILD RESILIENCE IN YOUR RETAIL SUPPLY CHAIN WITH DATA

EBOOK

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INTRODUCTION

The COVID-19 pandemic put supply chains in the spotlight. The worldwide restriction of people and businesses drastically affected all areas of the production and distribution of commodities. Retailers discovered the importance of a resilient supply chain in running a successful business that meets customer demand. At the same time, consumers who encountered unavailable or delayed products realized the importance of a functional supply chain. In a recent Accenture report, 45% of retail executives cited an agile and flexible supply chain as the top business value proposition to enhance operational resilience.[1]

Today, retailers are finding challenges in every link of the supply chain: making the right planning and sourcing decisions, managing inventory, handling logistics, fulfilling orders in a timely manner, dealing with pricing fluctuations, and hiring and retaining workers. According to Accenture, 81% of supply chain leaders said that the pandemic has been their organization's greatest stress test.[2]

While some disruptions are out of their hands (such as container ships getting stuck in the Suez Canal), retail leaders are looking for ways to gain more control of their supply chains.

A recent McKinsey survey of executives showed that 93%of respondents want to increase flexibility, agility, and resilience in their supply chains.[3]

Data is an important element in creating that resilience. Data can reveal what's happening at every step of the chain, from product development to sales, and the location of issues or bottlenecks. Third-party data can tell you what outside factors may affect production, warehousing, and order fulfillment.

There are three ways data can increase resilience in your supply chain:

1. **Full visibility into the supply chain**
2. **Accurate analysis and forecasting for future planning**
3. **Better collaboration with supply chain partners**

In this paper, you'll learn more about how each of these data capabilities can help you recover quickly from problems and gain more control over your supply chain.

FULL VISIBILITY INTO THE SUPPLY CHAIN

WHAT'S THE DATA CAPABILITY?

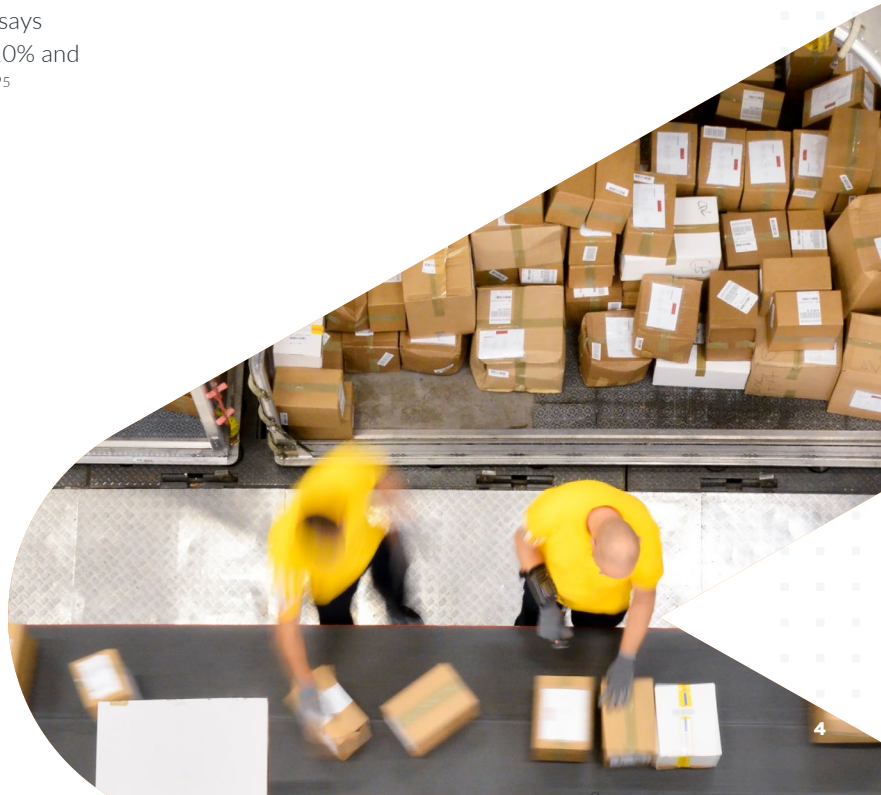
The most important data capability for creating supply chain resilience is data transparency. "The COVID-19 pandemic highlighted the need for more transparent supply chains across industries," the McKinsey survey says. "The few players that had the skills, capabilities, and technology to precisely track SKUs across the supply chain have not only weathered the crisis but have also gained an edge on less-advanced competitors."

HOW DOES IT CREATE RESILIENCE?

Real-time data and performance transparency along the entire supply chain enables you to pinpoint risks and errors and develop solutions earlier—sometimes even before they have an impact on customers or finances. Data transparency also helps you understand the financial implications of actions or events. According to McKinsey, "companies with real-time visibility have been able to react to the [COVID-19 pandemic] disruption much more quickly, make fact-based decisions, and minimize the negative impact on their supply chains—or even gain a competitive advantage."[4]

WHAT'S THE OBSTACLE?

The problem is that most retail supply chains are tracked and governed through multiple, often disconnected data systems managed by different teams. These siloes make end-to-end visibility and collaboration across functions difficult, creating stale data that forces retailers and suppliers to deal with overstocks or out-of-stocks and inefficiencies across the supply chain. A centralized system that connects data systems and enables insights across the entire supply chain can create data transparency and enable faster problem resolution. In fact, McKinsey says this approach "typically improves fill rate by 10% and reduces excess inventory by more than 30%."[5]



ACCURATE ANALYSIS AND FORECASTING FOR FUTURE PLANNING

WHAT'S THE DATA CAPABILITY?

Once you have end-to-end data transparency across your supply chain, the next step is to use third-party data and advanced analytics to reach deeper insights and make better decisions. First-party internal data is not sufficient to build the resilience against unforeseen events, such as the COVID-19 pandemic or the Suez Canal blockage. In today's ever-changing market, organizations need third-party signals that help them quickly identify when sudden macroeconomic shifts are about to occur and get in front of these spikes in demand. Concurrently, advanced analytics can provide granular and timely insights that will help them predict demand to optimize inventory levels, supply chain management, and order fulfillment.

HOW DOES IT CREATE RESILIENCE?

Advanced analytics such as machine learning forecasting algorithms can use historic demand patterns as well as internal and external data sources to improve demand forecasts. These algorithms can predict the expected result of potential actions or events, such as changing a manufacturing or warehouse location, and help you make smarter decisions. With third-party data, they can also take unforeseen disruptions such as a decreased labor force or a weather event into account and help provide a way forward. According to the McKinsey survey, "Compared with organizations that reported problems, successful companies were 2.5 times more likely to report they had pre-existing advanced analytics capabilities." Analytics can also create new business models and strategies. One trend that is being fueled by data analytics, for example, is local omnichannel fulfillment, in which retailers are building flexibility and scale at the local level to meet customers' needs.

WHAT'S THE OBSTACLE?

The key to making these algorithms helpful is feeding them with data—not only seamless data streams from your internal systems but also data from second and third parties. Second parties include suppliers, fulfillment partners, and data service partners. Third parties include virtually everyone outside of this network. Information such as supplier inventories, point-of-sale transactions, and weather patterns can improve the analytics so you can make better supply chain decisions. But incorporating external data for advanced analytics traditionally involves cumbersome ETL procedures that are costly and timely. Retailers must choose a better way to access and incorporate external data for deeper insights.

BETTER COLLABORATION WITH SUPPLY CHAIN PARTNERS

WHAT'S THE DATA CAPABILITY?

Operational leaders are well aware that the supply chain lifecycle of an item requires both data and operational collaboration. There is constant back-and-forth on product data models between retailers, suppliers, and shipping partners. Retailers and suppliers must collaborate on purchase orders, making adjustments on each end. Inventory is sent back and forth with carriers as it goes out and gets returned. The data-sharing opportunities in the supply chain are endless.

According to Deloitte, "A single global shipment through the network of cargo ships, ports, airlines, rail lines, and trucking companies can involve as many as 30 businesses and up to 200 unique interactions, from its manufacturer to its final destination."[6]

HOW DOES IT CREATE RESILIENCE?

When changes or disruptions occur with supply chain partners, timely data collaboration becomes vital. Retailers need as much time as possible to respond to raw material shortages or changing consumer trends. Visibility into each other's channels enables the optimization of resource allocation, better forecasting of purchasing trends, and the likelihood of returns, to name just a few benefits.

WHAT'S THE OBSTACLE?

Traditional methods of data sharing, which involve copying or moving data among the multiple entities and systems in a supply chain network, become complex and time-consuming and present security risks. According to Deloitte, "Fragmentation is among the biggest hurdles across the global movement of goods today. A lack of horizontal connectivity across providers, cargo owners, and end customers makes coordination difficult, contributing to systemic industry inefficiency." Companies need a way to exchange and collaborate on data in a simple, timely, and secure manner.

CONCLUSION

The retail supply chain has become more than a cost center—it's now a revenue driver. According to Accenture, 48% of surveyed executives say that the chief supply chain officer is an enabler of top-line growth.[7]

It's clear that retail success rides on the supply chain, and it's more important than ever to create resilience in your supply chain to continue driving revenue, mitigating risks, and increasing efficiency.

To create resilience, focus on leveraging first-party proprietary data from all internal teams, second-party data from partners, and third-party data from external sources. Together, these layers are your competitive advantage.

Snowflake can help you leverage data to increase resilience in your retail supply chain. To learn more, visit Snowflake for Retail & CPG.

ABOUT SNOWFLAKE

Snowflake delivers the Data Cloud—a global network where thousands of organizations mobilize data with near-unlimited scale, concurrency, and performance. Inside the Data Cloud, organizations unite their siloed data, easily discover and securely share governed data, and execute diverse analytic workloads. Wherever data or users live, Snowflake delivers a single and seamless experience across multiple public clouds. Snowflake's platform is the engine that powers and provides access to the Data Cloud, creating a solution for data warehousing, data lakes, data engineering, data science, data application development, and data sharing. Join Snowflake customers, partners, and data providers already taking their businesses to new frontiers in the Data Cloud. **snowflake.com**

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