

Supply Chain Data Management — From Visibility to Value



Imagine what the skies would be like if no control tower existed to monitor and direct flights. What would emergency services be without dispatch control to coordinate the most appropriate response? The ensuing disruptions are apt analogies to describe what happened to supply chains during the pandemic.

Across nearly all industries, supply chain experts scrambled to adjust their core systems and purchase expensive point solutions for real-time visibility to respond to the rapidly changing operational field and to help prevent future large-scale disruptions. Despite these efforts, stakeholders are still constrained by rigid, unresponsive systems that lack transparency into important supplier data.

As recovery continues, more companies are seeing supply chain visibility as an urgent requirement. But visibility is only the first step — intelligent visibility is the real goal.

What Is Intelligent Visibility?

Intelligent visibility combines two vital areas of visibility:

- The structure of the supply chain itself, including routes, suppliers, critical components, transition points, risks, and weaknesses
- The real-time operations like activities currently happening in the supply chain, product location, and where disruptions are occurring.

Structural visibility provides important metrics into targeted aspects of a supply chain. Companies might point traditional risk assessment towards a new venture, for example, or assess potential demand for certain products during a “high season” such as holiday shopping. But structural visibility can’t account for real-time data inputs.

Dynamic, real-time visibility aligns with structural visibility to enable value. Companies move beyond simply “seeing” their supply chain’s structure and into understanding the whole operation. With intelligent visibility, they can move from reactive to proactive approaches, increasing resilience.

What’s Preventing Companies From Expanding to Intelligent Visibility?

Many supply chains already have a high level of structural visibility. [According to Accenture](#), 90% regularly perform classic risk management and nearly as many also perform network mapping. Still, this didn’t prevent massive disruption from occurring during the pandemic. Why can’t companies pivot with this level of visibility?



We know that visibility improves company resiliency. Companies are investing big in technology that can help them monitor and pivot, yet 80% of respondents in a recent [PwC survey](#) said technology investments haven't fully delivered the results they were expecting. The Modern Data Company believes this disconnect results from four critical factors.

Structural visibility rarely considers the scope of an entire supply chain.

Using traditional risk assessment and focusing on specific components of the supply chain prevents companies from seeing the entire picture of their operations. This has worked in the past to explain why bottlenecks might occur but does little to prepare companies to respond proactively to trends in the field. Against major disruptions for which there is no larger precedent, this information cannot help with restructuring.

Companies have no infrastructure to manage real-time data processing.

Dynamic operational visibility requires companies to unlock and process the big data available to them. However, they lack the data infrastructure to manage first, third, and even [fourth-party data](#). They can't integrate legacy systems with their newest tools. And more often than not, manual processes prevent full documentation and repeatability. Shifting to intelligent visibility requires a data operating system that's designed to incorporate all these aspects into a single source of truth made available to both technical and non-technical users. It's no small ask.

Implementing AI/ML tools to automate visibility is still in its infancy.

Artificial intelligence and machine learning have significant potential to aid in the dynamic operational visibility side of the equation. For example, AI/ML enables smarter process automation, in which machines make data-driven decisions about inventory and order management. In another example, enabling digital twin technology allows companies to simulate how different scenarios might affect the supply chain in the short and long term. It can also engage in operational

decision-making by analyzing real-time data and making actionable suggestions. Unfortunately, most supply chains aren't able to take advantage of these new technologies yet because they don't have a way to manage the data needed.

Visibility requires new governance tools that remove silos and "walled gardens."

Both silos and walled gardens can prevent the necessary flow of data for intelligent visibility. Companies typically nurture their data in silos and make decisions based on components, not the whole. They lock themselves into vendors and then can't maneuver their own data as they want to. To remove these silos, companies need a comprehensive governance policy encompassing all data formats, making data access available to everyone who needs it and providing visibility into who is using data and where. At the moment, most suppliers rely on traditional methods of governance that make it challenging to receive data and nearly impossible to get it in real time.

Building intelligent visibility into a supply chain requires unassailable data infrastructure.

If the supply chain team wants to unite structural with dynamic visibility, it will need a new type of data infrastructure. This data infrastructure should:

- Offer granular, attribute-based access controls so that [data is free-flowing](#) for everyone who needs it, and yet is still secure.
- Enable all users from business to IT to query or build the pipelines they need for data insights.
- Integrate all levels of tools and applications, from legacy systems to third-party data to brand new AI deployments.
- Automate documentation and provide the metadata necessary to understand where data comes from, who uses it, and its quality.
- Ensure operations-wide usage through a customizable dashboard



An infrastructure exists that checks all these boxes — a data operating system. The Modern Data Company's DataOS is the world's first data operating system designed to unlock unprecedented data usage so that supply chain companies can see not only traditional structural metrics but also dynamic operational statuses.

Companies can leverage new, real-time data for their predictive capabilities and to understand what's happening in the supply chain today, not just historically. It will enable companies to discover the real value of their data and finally achieve intelligent visibility that makes them resilient to even global disruptions.

To find out more about how DataOS can enable supply chain intelligent visibility, schedule a chat or demo with one of our experts.

[Schedule a demo →](#)

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