

4 Ways to Drive Supply Chain Resilience with Data

Qlik Supply Chain Active Intelligence®



By bringing together your business network with supply chain analytics and a new approach to data, you can reduce the friction that prevents fast, accurate decision making. You can also start to automate processes that let you see every connection much more clearly.



A Digital Awakening

Supply chains are moving operations, functioning in real time. They're intricate, interconnected, and dynamic. They evolve and change — from day to day, even hour to hour.

For decades, complex supply chains have been largely analog systems of people, processes, and products moving through the physical realm from one end of the globe to another. But it's becoming impossible to be both rigid and responsive at the same time. That's why, like so many other enterprise business processes, supply chains are undergoing digital transformation. Once digitalized, supply chains are ripe for innovation, driven by data.

Consider, for example, how consumers and government regulators alike are pushing for more sustainable, responsible supply chains. In Germany, legislators recently passed the Initiative Lieferkettengesetz, or the Supply Chain Due Diligence Act, which will require companies to identify risks of human rights violations and environmental impacts in their supply chains. This comes on the heels, a decade earlier, of California's Transparency in Supply Chains Act.

But you and your business can't identify what you can't "see." You can't assess your supply chain's sustainability, compliance, efficiency, profitability, uptime, etc. without real-time data. Nor can you effectively forecast and plan or mitigate supply chain disruptions without access to data, plus the tools for deriving intelligence from that data.

"Companies today find themselves with supply chains designed for a world that no longer exists... [They] need greater visibility, agility, and flexibility to address today's crises and prepare for tomorrow's," according to a recent Ernst & Young report.

How then do your teams more tightly coordinate supply chain intelligence with your enterprise networks to enable data-driven decision making? How do you remove silos and optimally synchronize your business network with supply chain analytics for supply chain transformation that's effective? The solution is Active Intelligence.

How Supply Chains Are Evolving

Global competition, growing customer expectations, and mounting regulatory action coupled with the pandemic have accelerated the need for supply chain modernization and digital transformation. Even today, you face a host of business challenges from the way traditional supply chains work:

- Supply chain complexity adds cost and hinders agility and responsiveness.
- Unforeseen disruption, such as COVID-19, hampers production and fulfillment.
- Disconnected planning and collaboration create silos, waste time, and lead to inaccuracies, introducing risk and inconsistency.
- A lack of data – both historical and external – inhibits your ability to analyze supply chain performance and identify trends.
- Use of multiple supply chain tools and data sources creates even more inefficiency.

Because the goal now is to modernize supply chains everywhere by reimagining them digitally, organizations across industries have been tasked with rethinking the linear model — The Supply Chain Operations Reference model: Plan, Source, Make, Deliver, Return, and Enable. That's while acknowledging no single company controls every step in the chain, so visibility throughout is limited.



Efforts to move quickly have brought to light more modern, adaptive supply chain views. One of these is from the Association for Supply Chain Management (ASCM) in collaboration with Deloitte – the Digital Capabilities Model (DCM). It represents a network mesh of interconnected data flow. Supply chains following the DCM model comprise six key capabilities: Connected Customers, Product Development, Synchronized Planning, Intelligent Supply, Smart Operations, and Dynamic Fulfillment (Figure 1).

DCM’s tightly coupled capabilities feed a digital core—a holistic view of the digital supply network where technology enablement happens at every stage. The DCM framework is meant to help supply chain leaders and organizations like you with digital transformation while realigning traditional silos of information to unlock business intelligence.

EVOLVING THE SUPPLY CHAIN TO A DIGITAL SUPPLY NETWORK

Linear traditional supply chain has evolved into a digital supply network mesh for an interconnected flow of information

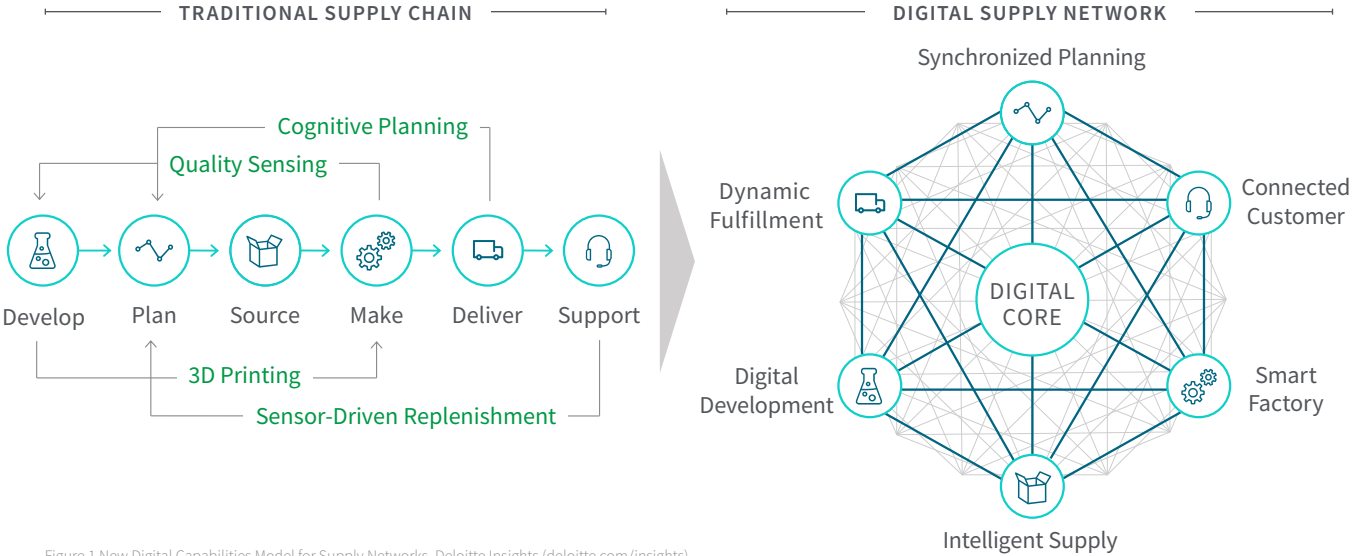


Figure 1. New Digital Capabilities Model for Supply Networks, Deloitte Insights (deloitte.com/insights), "Drowning in data, but starving for insights," by John Ferraioli and Rick Burke, ©2018, Deloitte Development LLC.

Among the benefits of digital supply networks are greater efficiency and lower risk as teams:

- Eliminate traditional data silos that hinder performance at every stage of the DCM.
- Reduce or eliminate friction points across the digital supply network, including suppliers, partners, warehouse inventory, retail outlets and ecommerce.
- Adapt to or minimize the impact of disruptive events (e.g., pandemic, weather, disasters, geopolitical disturbances, etc.)
- Increase supply chain visibility to improve control and efficiency.
- Enable data-driven decision making through modern analytics, real-time data sources, and artificial intelligence.
- More precisely balance supply and demand to create a truly agile, optimal, and profitable supply chain.

When your business modernizes and moves toward supply chain modernization with digital, you boost your competitive advantage.



Active Intelligence Holds the Key

Regardless of the source of disruption—the global pandemic, a natural disaster or other issue—supply chain executives need to think and act with greater agility. They must be willing for their organizations to invest in end-to-end visibility across the supply chain to boost resilience and create more transparency while ensuring accountability across different functions.

Considering the dynamic nature of today's supply chains, traditional business intelligence (BI) solutions no longer deliver the kind of insight you need for maximum visibility, agility, and flexibility. Traditional, passive BI solutions were never intended for real-time decision making. They primarily ingest historical data sets to help make more informed decisions.

But BI that answers known questions using pre-configured, historical data isn't good enough to meet the business challenges posed by today's supply chains. This is where Active Intelligence – the ability to create in-the-moment awareness of the business through real-time information to trigger immediate actions – comes in.

Active Intelligence is a new evolution in the context of changing data, to drive real-time action and capture the business moment. The promise of Active Intelligence is to tap into the pulse of your business before, during and after you build a dashboard, and then take action on it. Moreover, Active Intelligence works in conjunction with your enterprise network applications so that far more stakeholders can have input into – and benefit from – real-time supply chain analytics.

Active Intelligence At a Glance

Active Intelligence represents an advance in data and analytics, allowing organizations to act on their data in real time, as events happen. It's unlike traditional, passive approaches that require teams to rely on preconfigured, historical data with no ability to drive real-time decisions and action. Active Intelligence is powered by an end-to-end analytics data pipeline that transforms raw data into informed action, delivering real-time information and triggering immediate actions in the moment.



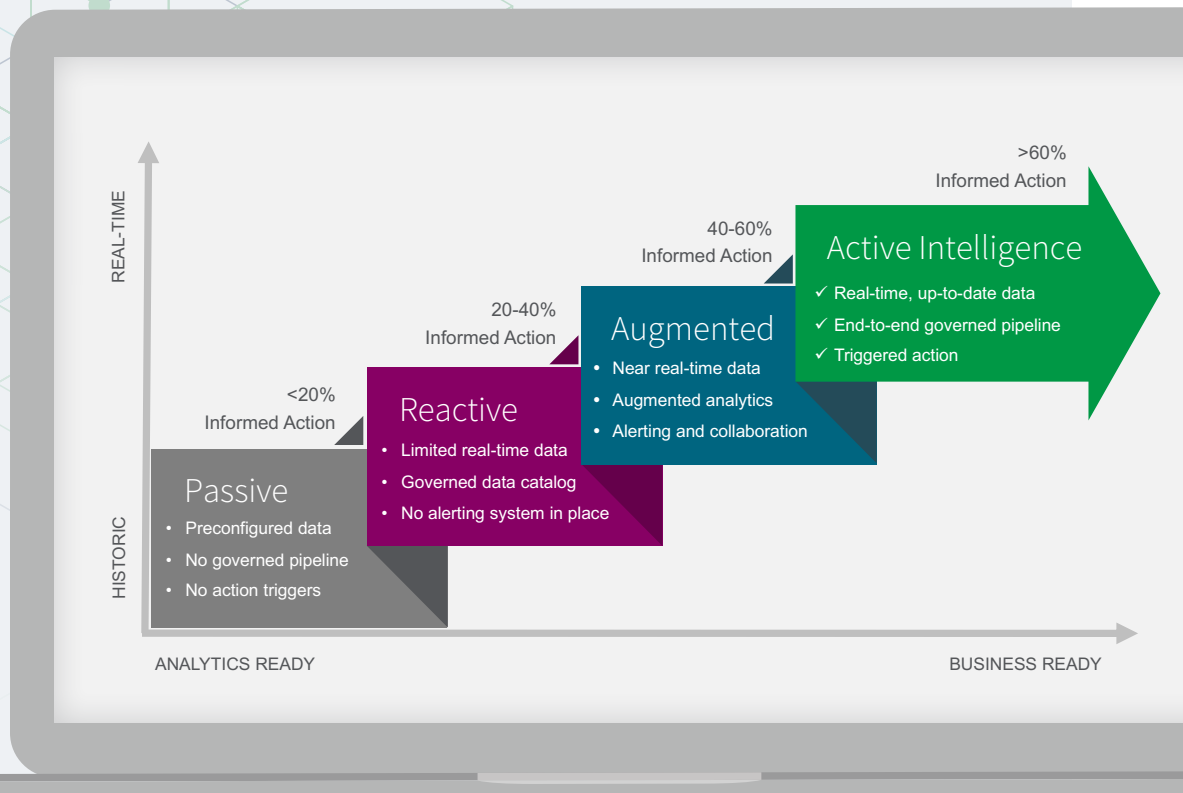


Figure 2. Evolution of a new best-practice approach to analytics that expands the breadth and depth of customer capabilities.

Previous generations of BI have spurred businesses and stakeholders to varying degrees of action (Figure 2). Both passive and reactive analytics approaches relied on historical data to find trends and patterns. More progressive BI followed with Augmented Analytics making automated insights available to more people and beginning to include artificial intelligence (AI) for deepening insight to shift stakeholders to action. Still, businesses needed more action-oriented BI.

Today, Active Intelligence builds on Augmented Analytics while taking into account data that changes in real time, so your organization can react to supply chain conditions immediately.

Active Intelligence doesn't replace previous interactions of BI; it unlocks your data to deliver up-to-date information to the right users at the right times, in a way that enables them to act. You'll still build BI dashboards to visualize the nuances of your supply chain and collaborate with stakeholders. But with Active Intelligence, they will reflect real-time data and the state of your supply chain right now, which becomes the portals through which analytics triggers action automatically.



Active Intelligence In Action

An Active Intelligence platform is ideal for organizations looking to improve supply chain intelligence and enterprise network coordination for data-driven decision making, and for teams wanting to improve the synchronization of business networks with supply chain analytics without silos and friction. For example, the Qlik Active Intelligence Platform® empowers your enterprise to create an end-to-end analytics data pipeline so you can act in the moment. Powered by the cloud, the platform provides all the real-time data integration and analytics you need to transform raw data into informed action.

With Qlik, your supply chain operations can:

- Identify and resolve supply chain disruptions farther upstream.
- Monitor supplier performance on delivery, price, and service.
- Strengthen negotiations and partnerships to create competitive edge.
- Better manage inventory cost, inventory turns, cycle counts, inventory on hold, stockouts and reorders.
- Create new value by generating adjacent revenue streams through products, services and business models.

In this era of distributed global supply chains, your stakeholders must be tightly coordinated to ensure flexibility, resiliency, and rapid time to market. Creating end-to-end visibility is key to effective collaboration across multi-enterprise business networks.





4 Ways Active Intelligence Transforms Supply Chains

The Qlik Active Intelligence Platform is uniquely powerful. It easily combines disparate data sources in real time for in-depth, multisource analysis and AI-powered automation, reducing friction in the supply chain, allowing your stakeholders to:

1. Democratize forecasting and planning for better results

Today's fast-changing supply chain, sales forecasting, and operational planning (S&OP) processes require close collaboration among stakeholders within and outside of your organization. This includes synchronizing financial, supply, and operational planning with precise demand forecasting. Active Intelligence brings together data from enterprise resource planning (ERP), supply chain management (SCM), forecasting, manufacturing execution system (MES), and other internal systems, as well as external data sources such as third-party logistics and consumer demand solutions so everyone affected by or contributing to supply chains (e.g., marketing, sales, finance, etc.) can work together in real time.

Supply chain analytics empowers you and your business to boost the accuracy of your demand forecasting, better match supply to demand, and optimize production planning. Active Intelligence allows you to collaborate across your lines of business, bringing together a complex mix of data from the different systems that underpin your supply chain to create real-time visibility into the planning and forecasting process.

ACTIVE INTELLIGENCE SUCCESS STORY

Multipack LJM

To manage daily changes to its plans and forecasts during pandemic lockdowns, Multipack LJM, an Australian packaging services provider, leveraged a planning app built on the Qlik Active Intelligence platform to synchronize CRM, production, supply, distribution and R&D processes and respond to demand changes in real time. Today, Multipack uses Active Intelligence to simulate the impact of those changes and see instantly how it affects production. By adjusting and optimizing production to meet evolving needs, the company has positioned itself for demand-driven manufacturing. It's also reduced decision-making time from days to minutes.

"At first, I thought it was a reporting tool, now I realize it's a strategic decision tool. It gives us actionable insights and has transformed our business."

Adam Rawson, CEO, Multipack LJMt.



2. Optimize inventory management to better match supply and demand, reduce costs

Getting inventory levels right means continually balancing tradeoffs among sourcing, costs, customer satisfaction, shifting customer demand, and more. With greater visibility up and down your supply chain, including near real-time demand sensing and ongoing insight into supplier production across regions, you can minimize the uncertainties between supply and demand. Think of it in terms of reduced stockouts, optimal safety-stock levels, lower carrying costs, and (ultimately) more satisfied customers.

Supply chain data and analytics lets you manage inventory based on demand, as well as maximize production efficiency, better manager product quality, and ensure regulatory compliance. With Active Intelligence, you can also anticipate inventory trends and needs through predictive analytics. This is critical considering the day-to-day variability of modern supply chains. Real-time monitoring of supply chain conditions and automated alerts help you quickly identify unexpected disruptions that impact inventories and act quickly, or even automatically.

ACTIVE INTELLIGENCE SUCCESS STORY

Ocean & Earth

Australian surf retailer, Ocean & Earth, uses Active Intelligence to connect data from across its different channels and provide a complete picture of its operations. The company pulls together live data to compare sales, product and location performance against KPIs and to forecast and monitor stock levels. With Active Intelligence, Ocean & Earth has been able to boost customer satisfaction and improve service by ensuring it always has sufficient stock in store.

“Qlik Sense® enables us to connect data across different parts of the business for a full view that supports the best decisions.”

Phil Macdonald, CEO, Ocean & Earth



ACTIVE INTELLIGENCE SUCCESS STORY

Urban Outfitters

Clothing and accessory retailer Urban Outfitters needed a way to get actionable data from three business units in several different time zones using various systems and technologies. By consolidating three previously separate reporting locations into one central cloud hub using Active Intelligence, the company created an end-to-end pipeline of near-real-time data accessible to more in-store employees—not just managers. Streamlined data allowed Urban Outfitters to develop a series of apps for providing insights into not only store performance, but also e-commerce sales, distribution centers, and supply chain logistics. Active Intelligence has improved global store performance, with every employee aligned on in-store metrics and new purchasing patterns.

“Every employee in each store can now get up-to-the-minute data on all aspects of the individual store’s KPIs and act on those insights immediately.”

Paul Reigel, Technology Director, Urban Outfitters

3. Streamline fulfillment and warehousing to support a customer-centric demand chain

There are those who say the traditional supply chain has evolved into a demand chain. Rather than companies pushing products through the chain, consumers pull them based on demand and how they prefer to consume. But this takes new thinking. It’s one thing to design and build a product then sell it to consumers; it’s another thing to know what consumers want, then dynamically implement the supply chain that will deliver it, whether to a store or directly to their front door.

Customer experience – delivering to consumers what they want, where, and when they want it – is the competitive differentiator in demand-chain thinking. Your ability to impact price and convenience at the end of a complex supply chain is critical. Creating an efficient, customer-centric supply (demand) chain requires analyzing customer preferences, channel availability, safety-stock levels, inventory carrying costs, delivery times, and much more. With Active Intelligence, you can seamlessly support an omnichannel customer experience, creating the lean warehousing and distribution model that omnichannel requires while controlling transportation and logistics costs, which can pose a challenge when consumers shop from wherever.



4. Mitigate supply chain disruptions by anticipating their impact

Even with your own house in order – forecasts accurate, inventories aligned with demand, and fulfillment optimized for customer experience – disruptions elsewhere along the supply chain can have ripple effects. Without goods and materials arriving at the right place and time, your inventory management and order fulfillment successes can stall. That can translate into problems from lost sales to long-term customer dissatisfaction.

With Active Intelligence, you can generate predictive insights into known and unknown disruptions, understand better the “whys” behind the disruptions, visualize the ripple effect throughout your business, and model automated responses so that the supply chain adapts before you can even act. In this way, your supply chain “learns” from disruptions and applies AI to avoid or mitigate them.

Adapting to ever-changing supply chain conditions with Active Intelligence is how you put your business on a path to higher sales revenues, lower costs, greater customer loyalty, better margins, and more. By proactively solving for the impact of supply chain disruptions, you can change outcomes for the better.

ACTIVE INTELLIGENCE SUCCESS STORY

Greene Tweed

Greene Tweed develops materials and solutions for applications in the automotive, aerospace, energy, semiconductor, oil and gas, life sciences, defense and other industries. Having collected decades-worth of data in a powerful enterprise software solution, it began synchronizing its existing system through Active Intelligence tools to support fresh capabilities, such as AI-enabled operations and predictive analytics. With advanced data integration tools, Greene Tweed can make available analytics-ready data from a range of sources by replicating it in the cloud, where it's easier and faster to use. This has allowed the company to support rapid action on KPIs. It can analyze the data 70% faster than it did before, including predictive analytics with a 90-day accuracy of more than 95%.

“Extracting SAP data with Qlik Data Integration analyzing it with Qlik Sense enables us to tell the whole story through data which is a huge benefit.”

David Hufnagle, Manager of Enterprise Data and Analytics, Greene Tweed





Empower Your Business to Act in the Moment



Supply chains are under duress. Complex and far-reaching, they've become less transparent over time, not more. When they struggle as they have in navigating the pandemic because cargo ships must wait to dock to unload freight causing material shortages such as microchips, their interruptions negatively impact a range of industries. Such unpredictability makes it difficult to know where to start making improvements. But transformational change is needed – the kind of change Active Intelligence jumpstarts.

Active Intelligence empowers you and your teams with responsibility for supply chain operations to act in the moment with the kind of visibility, agility and flexibility you need to deliver business value and stay resilient in uncertain times.

Learn more at [Qlik.com](https://www.qlik.com)



About Qlik

Qlik's vision is a data-literate world, where everyone can use data and analytics to improve decision-making and solve their most challenging problems. Our cloud based Qlik Active Intelligence Platform delivers end-to-end, real-time data integration and analytics cloud solutions to close the gaps between data, insights and action. By transforming data into Active Intelligence, businesses can drive better decisions, improve revenue and profitability, and optimize customer relationships. Qlik does business in more than 100 countries and serves over 38,000 active customers around the world.

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