

Practitioner

You are already in the midst of a digital transformation, experiencing many of its benefits and grappling with its complexity. This assessment will help you identify the steps you can take to progress to the next stage.

- You already realize the importance of an agile supply chain and have started to follow trends at the regional and national levels to identify potential areas for change.
- You are collecting data on the movement of goods as they change hands, on a daily basis, in order to better track product quality for each unit of inventory across the supply chain.
- You can forecast demand at the customer level as you work toward building a more efficient fulfillment process.

What's Next?

Moving forward, you should have the ability to collect and process a greater volume of structured and unstructured data. This will help you predict and fulfill demand in real time and then act immediately. As you progress, you will develop the capacity to harness deeper insights from this data, in near-real time, to build a more efficient supply chain.

Your Action Plan

- **Increase transparency and automation:** Comprehensive supply chain management systems (known as control towers) with predictive and prescriptive analytics will help you move toward near-real-time inventory visibility in your warehouses. For example, IBM Watson Supply Chain Insights uses AI technology to provide comprehensive search, visibility and insights across the entire supply chain.
- **Double down on demand forecasting:** Increase the amount of internal and external data you collect and analyze, including both structured and unstructured data from Internet of Things (IoT) systems, social media, news feeds, weather-tracking-and emerging blockchain-enabled networks. When you actively collaborate across supply chain partners to share data and integrate back-end and front-end data silos, you build a more efficient supply chain. When you can better forecast demand, you can improve efficiencies in your order fulfillment and mitigate the costs from out-of-stocks, overstocks and returned items.
- **Recognize that real-time data transparency is king:** Consider technologies that incorporate blockchain, which creates a security layer and helps you better ensure a product's origin and quality. For instance, IBM Food Trust allows authorized users immediate access to the complete history and current location of any food item being transported as well as its accompanying information (e.g., certifications, test data and temperature). For tracking global shipments, IBM's TradeLens provides an electronic ledger so that during transport, all of the parties involved in the supply chain can view tracking information in near-real time. That information includes shipment arrival times and documents such as customs releases, commercial invoices and bills of lading.
- **Embrace omnichannel distribution and fulfillment:** To orchestrate the coordination of customer orders, fulfillment and return processes, explore AI-enabled tools that help optimize inventory usage and provide comprehensive search visibility and insights across the entire supply chain. Move toward a single, central management hub to manage online, retail and wholesale businesses.
- **Think big, start small:** Build the overall roadmap for your supply chain transformation. Pick one or two areas for short-term projects that will yield early results. These will help build trust and provide insights as you tackle larger projects.

Find out more: ibm.com/retail-supply-chain

The Landscape

Yesterday's supply chains were focused on availability, monthly forecasts and the cost of physical assets. Now, companies are trying to better match supply with demand and turn vast amounts of available data into insights they can use to transform their supply chains in real time.

Most of your competition is in the same stage of digital transformation as you are. Everyone is actively exploring ways to adapt your supply chain logistics based on local insights, traffic, weather, neighborhood sentiment and local store inventory. You want to collect reliable data points from each node in the supply chain—across every party—including variables that may affect quality assurance, such as temperature. The key to optimizing order fulfillment will be to combine social listening, multichannel demand data and inventory availability to predict and meet product demand at a local level.

The terrain is slightly different if you are a consumer packaged goods (CPG) company, as opposed to a retailer. Leading CPGs are already quite mature in their supply chain operations, but not as far along in their ability to plan and forecast on a daily and even hourly basis. Retailers, however, are more advanced in planning and are still catching up on operations.

Challenges

- **Channel fragmentation:** Not only are consumers connected to retailers through an expanding number of channels, but behind each channel is an increasingly complex fulfillment infrastructure. The fact that consumers can shop, ship or pick up their purchases in myriad ways is creating new buyer journeys for retailers and verticalized CPG companies. That puts pressure on suppliers to forecast, plan, fulfill and replenish more quickly and more efficiently than ever. Traditional data patterns that help predict demand are now being turned upside down.

- **The rise of direct-to-consumer:** Many companies are adopting a direct-to-consumer model, selling and delivering their own products. This can be particularly challenging for CPGs, who are used to shipping pallets in batches overnight and shipping to a fixed number of retailer warehouses. Given this new dynamic, companies must accommodate millions of delivery touchpoints in hours rather than days, while optimizing the customer experience.

Increasing focus on sustainability: Leading companies have prioritized sustainability in terms of the social, environmental and health impacts of their supply chains. This requires a new level of transparency and making trusted information available about sourcing conditions, production processes and environmental impacts (e.g., carbon footprint and waste) across the supply chain.

- **The growing impact of unexpected weather events:** These unusual events can be far-reaching, as with earthquakes, tsunamis or hurricanes, or they can be local, as with big weather events, power outages and road closures that jeopardize critical shipments. Supply chains are improving in their ability to anticipate such events. And companies are learning to react more quickly to mitigate the cost of events they can't predict.

Changing the Perspective

Using AI to decrease supply chain cost, complexity and risk.

Problem: Acme Computers, a global PC maker, realized that its extensive supply chain generated vast amounts of actionable data that could inform efforts to make it more efficient. But gathering that data and analyzing it effectively are two different things, and employees were unable to manually process the information productively.

Solution: Using IBM Watson Supply Chain Insights, Acme was better able to predict, assess and mitigate disruptions to its supply chain. With this AI-powered approach to risk management, the company shrunk its average response time to supply chain disruptions from days to minutes, making it up to 90 percent faster than before.

Transforming the supply chain for global expansion.

Problem: Lockett, a leading manufacturer of padlocks and personal safes, was expanding rapidly globally. It needed to onboard at least 40 new global trading partners a year and manage the accompanying EDI (electronic data interchange) integration, a process that was no longer cost-efficient to complete manually.

Solution: The manufacturer opted to use IBM's cloud-based secure solution, known as IBM Supply Chain Business Network, to integrate its new trading partners and automate the process of EDI migration. With this tool, the company was able to onboard 200 partner maps from a new company it acquired—in half the time it would have taken before. A process that usually took 12 months could now be completed in six.

- In 2018, supply chains had over 50% more data available to them than five years ago.
- Less than a quarter of the data available to supply chains is being analyzed in real or near-real time.
- Only 8% of supply chains say they're at the most advanced stage of digital maturity.

Source: IDC Technology Spotlight, "The Path to a Thinking Supply Chain."