# SUPPLY CHAIN
ASPIRATIONAL

You are at the beginning of your digital transformation. You have taken an important step by completing this assessment, which can help you gauge where you stand and what you could do to progress to the next phase.

- You realise the importance of an agile, lower-cost supply chain, though you currently need heavy planning up front to make changes to your logistics strategy

- You use supplier advance shipping notices and your receipt of goods to track product quality but don't yet have access to quality assurance information before you receive goods

- You use your own internal data sets in your supply chain ecosystem. Additionally, you are constantly trying to catch up on order fulfillment to improve efficiencies and mitigate the costs from out-of-stocks, overstocks and returned items.
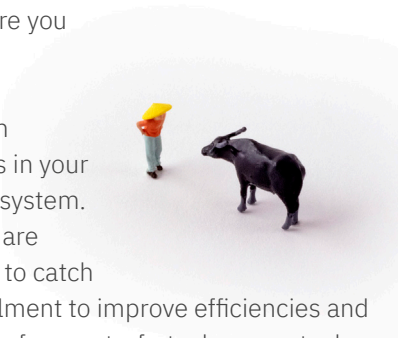
What's Next?
At present you are reacting instead of proactively planning. You're not yet nimble enough to make changes in real time, incorporate external data or fulfill requests efficiently. Change can take days or even weeks of manual effort.

Your Action Plan

- **Increase transparency and automation:** Move toward near-real-time inventory visibility in your warehouses by starting to incorporate Internet of Things (IoT) technologies, such as sensors, to track every unit of your inventory and automate logistics. Greater automation will enable you to make changes more quickly to your logistics plan

- **Double down on demand forecasting:** Start gathering external data, both structured and unstructured, from IoT systems, social media, news feeds, weather tracking sources and emerging blockchain-enabled networks. When correlated with your internal data, this kind of supplemental information provides essential context for better operational decision-making. When you can more accurately forecast demand and logistics, you can improve efficiencies in your order fulfillment. You can also mitigate the costs from out-of-stocks, overstocks and returned items

- **Recognise 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 authorised users immediate access to the complete history and current location of any food item, as well as its accompanying information (e.g., certifications, test data and temperature)

- **Think big, start small:** Build the overall roadmap for your supply chain transformation, but then focus on a 'get started,' proof-of-concept (PoC) project. Pick one area - transparency, demand forecasting or product-quality tracking - where you can demonstrate early results. This will help build trust 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 competitors are also grappling with digital transformation. They have started to follow trends at the customer or even store level to identify potential areas for change in their supply chain. They are using sensors to collect data on the movement of goods across parties to better track product quality for each unit of inventory across the supply chain. They can forecast demand at a store level in real time as they work toward building a more efficient fulfillment process.

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 verticalised 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 optimising the customer experience

- **Increasing focus on sustainability:** Leading companies have prioritised 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 jeopardise 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.
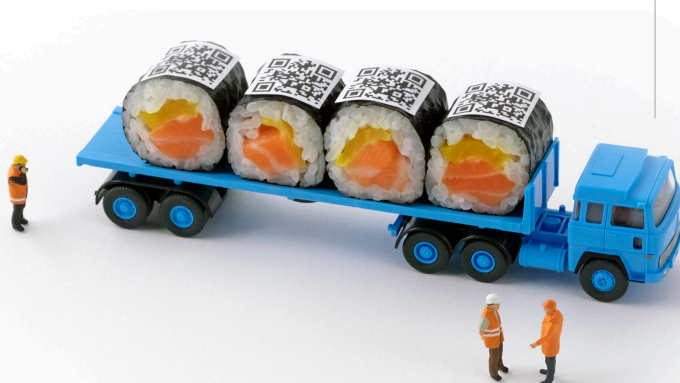
Changing the Perspective

Using Artificial Intellgence to decrease supply chain cost, complexity and risk.

Problem: Acme Computers, a global PC maker, realised 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 analysing 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 artificial intelligence (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: Lockt, 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 electronic data interchange (EDI) 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 percent more data available to them than five years ago**

- **Less than a quarter of the data available to supply chains is being analysed in real or near-real time (NRT)**

- **Only eight percent 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.'