

Shadow planning: Anticipate disruption with a supply chain digital twin



Due to the growing size and complexity of modern global supply chains, **traditional planning methods are no longer sufficient** to help brands manage disruption. By leveraging data-driven insights and a digital supply chain twin, shadow planning helps brands anticipate disruption and provides the right insights to take action and keep business operations moving forward.

Read the use cases below to see how shadow planning was able to help companies maintain business continuity throughout three distinct challenges.

USE CASE 1

Global pandemic and supplier disruptions

► The problem

During the COVID-19 pandemic, many brand owners faced unprecedented supply chain disruptions. Many businesses struggled to adapt, leading to extended lead times, production delays, and customer dissatisfaction.

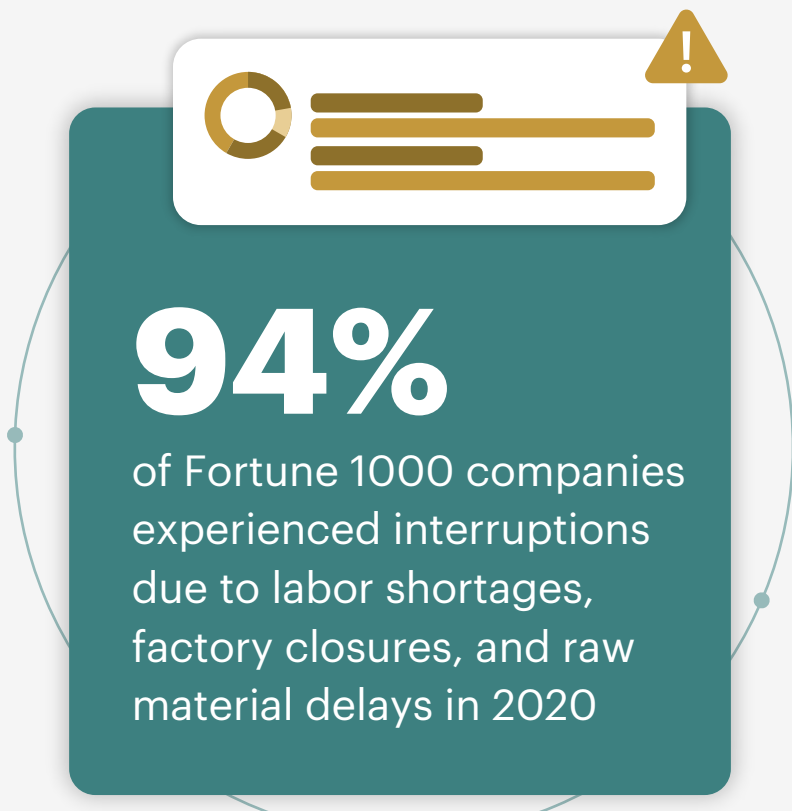
► The solution with shadow planning

Shadow planning enabled brand owners to simulate supplier shutdowns and identify alternative suppliers well before disruptions occurred. For instance, companies relying on suppliers in high-risk regions could shift production to alternative suppliers or increase inventory buffers using pre-modeled scenarios. With the **digital twin of their supply chain**, companies could visualize supply chain weaknesses and proactively reroute production to keep operations running.

► Resolution

Business continuity: Companies with shadow plans in place could activate backup suppliers quickly, minimizing production delays.

Minimized financial losses: With foresight into alternative sourcing options, brand owners avoided revenue losses and kept customers satisfied.



USE CASE 2

Natural disaster impacting logistics

► The problem

Natural disasters like hurricanes and floods frequently disrupt supply chains. In fact, **20% of all global supply chain disruptions** are caused by natural disasters, leading to significant losses in revenue and damaged infrastructure. In one case, a brand owner's distribution center was severely affected by a hurricane, halting all outbound shipments.

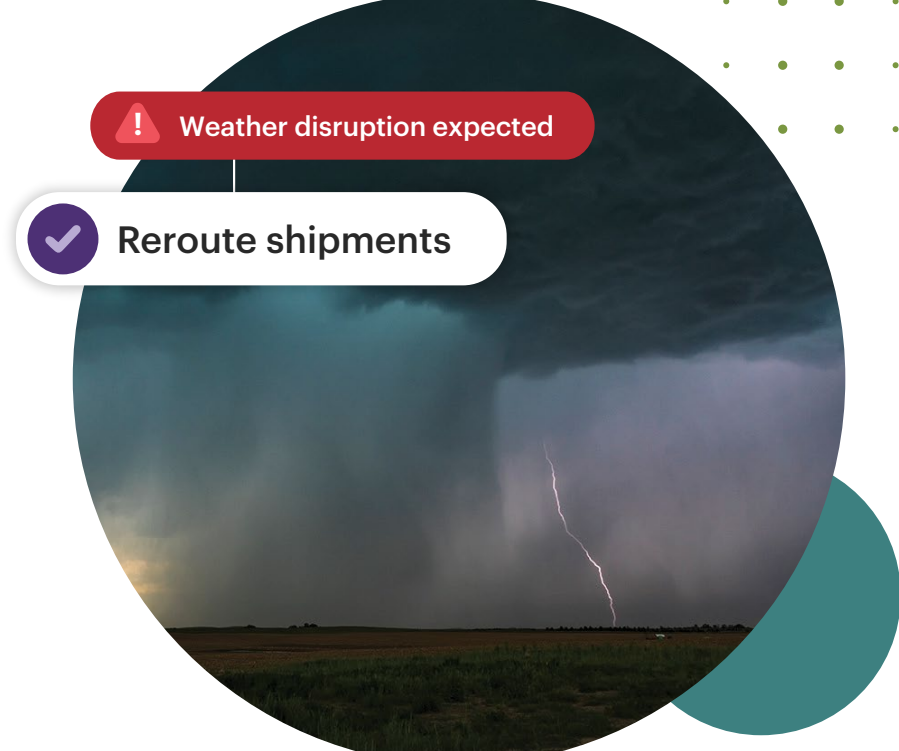
► The solution with shadow planning

By implementing shadow planning, the brand owner had already modeled scenarios for natural disasters and logistics disruptions. The digital twin of their supply chain showed how different regions would be impacted, allowing them to pre-position inventory at alternative distribution centers. As soon as the disaster struck, they rerouted shipments, using backup logistics hubs and alternative transportation routes.

► Resolution

Minimized delivery delays: Alternative distribution hubs were activated, ensuring customer orders were fulfilled on time despite the disaster.

Customer satisfaction: By maintaining timely deliveries, the brand owner upheld service-level agreements (SLAs) and strengthened customer loyalty.



USE CASE 3

Sudden demand fluctuation for new product launch



► The problem

Unexpected surges in demand can overwhelm brand owners who are unprepared. In one instance, a product launch went viral on social media, driving demand beyond forecasted levels. With limited production capacity and raw material availability, the brand owner risked missing sales opportunities.

► The solution with shadow planning

Shadow planning helped the brand owner simulate such demand surges and prepare backup production plans with contract manufacturers. By leveraging a **digital twin of their supply chain**, they could evaluate production scalability and identify secondary suppliers for raw materials.

► Resolution

Service reliability: Production ramped up at alternative sites and material orders were expedited from secondary suppliers.

Capitalizing on opportunity: By meeting the demand surge, the brand owner was able to tap into new market share while also maintaining service levels.

Shadow planning from e2open

In a world filled with disruption, it helps to always have a contingency

Shadow planning has emerged as a critical strategy for mitigating supply chain risks across a variety of scenarios, from global pandemics and natural disasters to sudden demand fluctuations. By leveraging digital twins and pre-modeled scenarios, companies can proactively address alternative suppliers, maintain business continuity, and uphold customer satisfaction. Whether it's sourcing alternative suppliers, rerouting logistics, or scaling production, shadow planning empowers brand owners to adapt swiftly and minimize financial losses. In an unpredictable world, investing in shadow planning is no longer optional—it's a strategic imperative for resilient and agile supply chains.



Want to learn more about how shadow planning can help your business maintain operational resilience?

[Read our blog post](#)

