



SOFTENGINE WHITEPAPER SERIES

Food & Beverage Companies Build a Resilient Supply Chain in Times of Disruption

Lean Supply Chains Challenged by Disruption

The cost of fragile supply chains was made apparent when this year's pandemic challenged small and midsize food and beverage companies. Supply chain disruptions can cause significant damaging losses in terms of finances (62%), logistics (54%), and reputation (54%) ⁽¹⁾. Nearly every F&B company saw the impacts and risks associated with disruption. In an April 2020 survey, 95% of companies reported operational problems due to COVID-19⁽⁴⁾. Without a contingency plan, food manufacturers and distributors are now struggling to adjust to shifting demand, limited access to or price increases for raw ingredients, delayed shipping, and more. The pandemic serves as a wake-up call that has caused businesses to make increasing resilience a priority. COVID-19 reminds us that disruption happens when you least expect it and incur significant losses if not adequately prepared for and addressed. in productivity, finances, and brand reputation if not adequately prepared for and addressed.

Supply chain professionals are no stranger to uncertainty and disruption, especially in recent years. Extreme weather, tariffs and trade wars, and demand volatility can strain the food supply chain. Beyond this, the past several years' digital transformation and a shift to greater transparency in ingredients and sourcing have increased consumer expectations and made the marketplace more competitive than ever. However, no one was prepared for the unprecedented impact of COVID-19 on supply chains across the globe.

A Path Forward: Rebalancing Efficiency with Greater Resilience

Most supply chain leaders recognize the need for an increase in supply chain resilience, and over half expect to be highly resilient within the next two to three years(2). However, this strategy conflicts with the recent focus on leaner, more cost-effective supply chains. In most cases, increased resilience begets increased costs, and F&B businesses must determine how to rebalance the two. Luckily, an affordable Enterprise Resource Planning (ERP) technology can help address these concerns and prepare midsize companies for faster recovery and future growth. Technology that allows for increased flexibility, more accurate forecasting and greater visibility is key to making operations more efficient while increasing resiliency. Food and beverage companies can leverage the power of a fully integrated system to rebalance these two priorities. ERP systems allow for full visibility into operations, production, supply chain, demand, and more. This type of collaboration will enable you to make rapid decisions for optimal planning and production, increasing your ROI and ensuring that you can deliver products to the consumers who need them when they need them.

Increasing Visibility Across the Entire Supply Chain for Faster Response Times

For food manufacturers and distributors to improve operational efficiency and manage costs while also increasing resilience and agility, visibility is imperative. Knowing all the activities that take place in your supply chain at any given moment allows you to respond quickly to any disruptors and make sure everything is running as it should. This is especially important in times of unpredictability, and it is crucial to have tools in place for when unexpected events arise. It is no wonder why supply chain visibility is among the top strategic priorities for companies worldwide. 50% of companies believe that technological advancements significantly impact the supply chain, logistics, and transportation operations, with 81% of supply chain managers citing data analytics as a crucial factor in reducing costs(1). A fully integrated ERP system gives F&B companies a complete snapshot of their supply chain, with instant



Supply chain management software improves the workflow and productivity of businesses all around the world. Many of the supply chain processes can be automated tools. Supply chain management systems help managers and team leaders improve business operations and make them as efficient as possible for a competitive advantage.

updates to demand, inventory levels, production schedules, supplier relations, shipment schedules, and more. This provides the necessary flexibility and agility for supply chains to function at their best. With real-time information and updates, companies can respond to changes in the supply chain at a moment's notice. This level of visibility and control allows you to make changes quickly and effectively. Supply chain managers can even use data to predict and identify potential problems and solutions, so they have a contingency plan in place for any disruptions or delays.

Planning for Demand Volatility

Fluctuating demand and shifting consumer trends have always been factors that food and beverage companies must consider. The increase in demand for healthy products, plant-based alternatives, sustainable production, and visibility into ingredients and sourcing has put significant pressure on food and beverage companies to have fully transparent and ethical supply chains. Consumer tastes in the food and beverage industry are changing every day, and companies need to shift production quickly to stay competitive.

The need for a flexible supply chain was even more apparent when COVID-19 resulted in unprecedented demand volatility. The largest change for the food and beverage industry was the type of consumer, now shifting from bulk orders in the foodservice industry towards individuals looking to buy ingredients for home cooking. Over the past five years, spending on food between retail outlets (i.e. grocery stores) and foodservice (i.e. restaurants and schools) were about equal. When COVID hit in March 2020, retail spending increased by 29%, while foodservice spending decreased by 27% compared to 2019(5). Companies needed to quickly shift their distribution models to move into the retail space or sell directly to consumers through e-commerce. E-commerce now accounts for 10-15% of total grocery spend, increasing five-fold in a matter of weeks (5). ERP technology that integrates with common e-commerce platforms like Shopify automatically updates inventory levels, financials, and production orders. Furthermore, this type of technology gives you full visibility into each order to see who is placing your largest orders, who has decreased spending, where your customers are located, and more, allowing you to better predict and plan for changes in the marketplace.

Not only did the type of consumer and method of purchasing change significantly, but the kind of products in high demand shifted. Demand for packaged foods with long shelf-lives skyrocketed, as did immune-boosting ingredients. Ginger and turmeric, herbs touted for their immune-boosting benefits, saw a whopping 300% increase in demand in April 2020(6). While demand surged, border closures in India and China cut off both these spices' largest supply. Food and beverage companies need flexible and rapid planning cycles to match supply and demand better and quickly address shortages as cost-effectively as possible.

Leveraging cloud-based solutions allows you to view demand in real-time. You have a better idea of what customers need, where to find those customers, how a shortfall of products may impact demand, customer trends, and more. This allows you to quickly match supply to the market, which is especially important when demand is volatile, and the capacity to develop a new product is constrained or uncertain. With proper inventory management and instant updates, you can pinpoint exactly where inventory is located within the supply chain, which customers need it most, and how to get it there swiftly and cost-effectively. End-to-end visibility across the extended supply chain allows you to manage exceptions with immediate alerts and updates and run simulations of different supply and demand situations so that you can plan as effectively as possible.

Multi-Sourcing and Identifying Alternative Suppliers

In addition to recent tariffs and trade wars, border closures and the elimination of international shipments used to help mitigate the risk of COVID-19 have cut off the supply of raw ingredients for countless food and beverage businesses. Midsize F&B companies with no additional suppliers, or easy way to identify alternatives, have been unable to keep up with production. This is especially challenging for those who produce essential goods, like canned or frozen foods, as demand has skyrocketed. Companies must find a way to efficiently identify new suppliers and create new

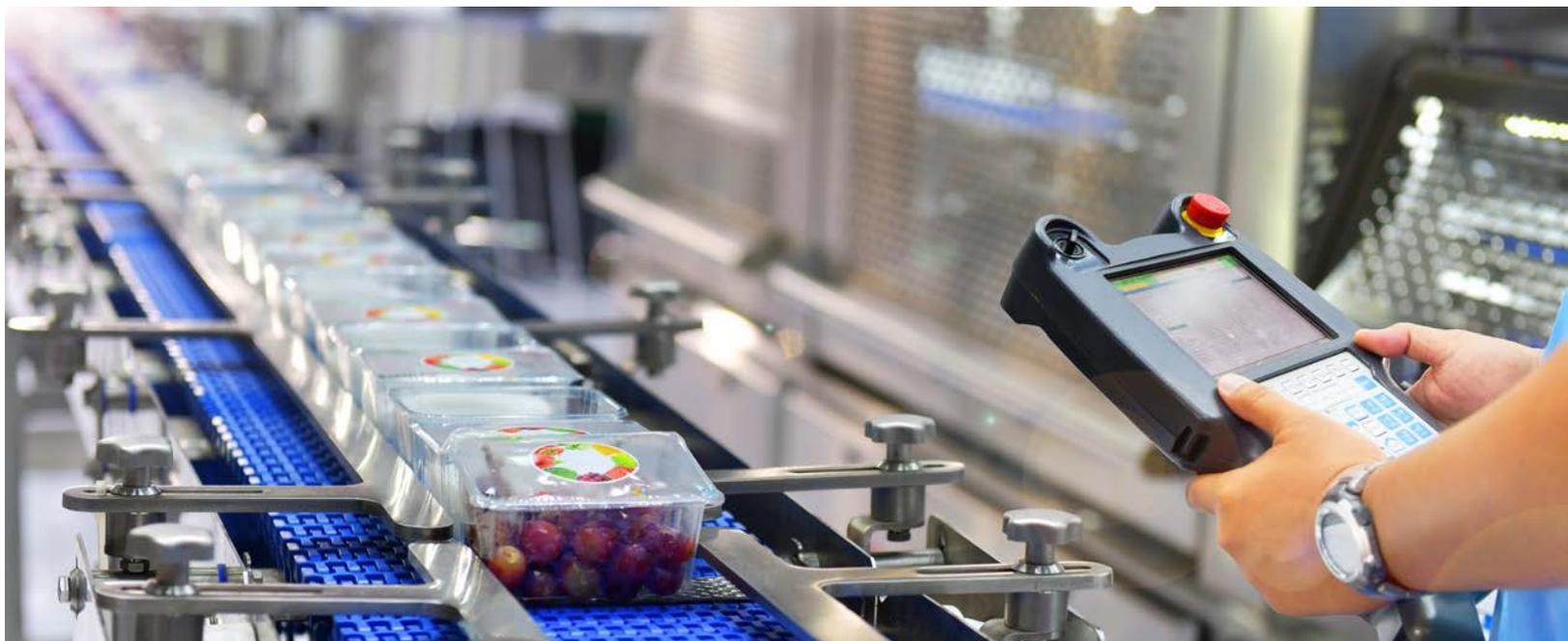
relationships to get products to consumers who need them.

Using native electronic documents allows a company to send electronic requests for quotations (RFQ's) to potential new suppliers. The web links embedded in these documents give potential suppliers the ability to provide their price and availability of goods in a matter of seconds, triggering instant notifications back to the purchasing agent using ERP technology. This makes increasing potential sources of raw ingredients and materials easy, fast, and straightforward. Identifying and implementing agreements with new suppliers on the fly gives midsize businesses the flexibility they need to respond to disruption without losing business or revenue!

Managing Constrained Capacity

When the virus first struck, global supply chains lost approximately 70% of resources and products(3). Beyond a drastic reduction in raw materials, food and beverage companies faced even more constraints, including plant closures to abide by social distancing and logistical limitations like delayed shipping times. The production strain paired with soaring, panic-induced demand for essential goods, puts incredible pressure on F&B businesses to quickly get their products to consumers.

With collaboration tools that increase visibility across the entire supply chain, you can optimize operations and production to manage this constrained capacity. Visibility and transparency across your entire supply chain allow you to see precisely where the stress points and vulnerabilities are, so you can predict and respond to challenges as efficiently as possible. Managers and supervisors know strictly which ingredients are being used, which ones they may need more of, how much is in reserve, and where they are located. This allows you to plan so production can begin on schedule, and you can avoid out-of-stock situations, spoilage, and late deliveries. You can even use automation to order raw ingredients and ensure on-time delivery for your next scheduled shipment.



Maintaining Employee Health and Safety

Adding to the problem of producing food and beverage products quickly enough to meet demand, the pandemic has caused significant challenges for food distribution networks, who must now also implement new health and safety measures, including additional cleaning, social distancing, and shift separation requirements. Unlike many businesses where remote work is possible, food manufacturing and distribution typically require employees to be physically present.

For example, the meat-packing industry was particularly hard-hit, as close quarters and interactions between employees resulted in various outbreaks. The outbreaks affected the supply of meat products, affecting the supply chains of other products that required meat (such as frozen meals), making them more expensive to produce. As of May 2020, American beef plants were only operating at 81% capacity than the year prior, and wholesale pork prices increased 90% in less than two months(7). Supply chain leaders struggled to find a way to keep employees safe while still producing enough product to meet demand. Midsize F&B businesses must balance labor shortages with employees' health and safety. Operations leaders must now optimize shift changes and shop floor processes, minimizing contact, and allowing enhanced cleaning procedures.

An ERP system can help mitigate human risk. Greater visibility into production and quality control systems allow for more modular production. You can

standardize components across multiple products, simplifying sourcing and helping workers maintain greater social distancing. You can see exactly who is in each of your plant locations at any given time and what projects are being worked on, so you streamline complex workflows and define shifts to avoid overlap. ERP also allows you to add additional shifts and adjust schedules instantly and remotely. This will enable you to use the same number of employees, meaning you can keep costs down and maintain safety protocols by spreading out the times and areas employees are working.

Cloud-based solutions enable remote working for those that do not need to be in the plant. Real-time updates and alerts across your system mean your whole team can collaborate without having to be in the same building. Operations leaders can manage their team and ensure everything is running as it should without being present physically. This allows for greater flexibility and minimizes unnecessary contact.

A Path for Growth

While no one expected a crisis like that of 2020, the challenges presented by the current pandemic act as a catalyst for small and midsize F&B businesses to streamline their supply chain processes for tremendous success now and in the future. This type of change requires time, effort, and investing in the right tools, but provides an opportunity for companies to develop a more robust, resilient, and cost-effective supply chain that promotes faster recovery and future growth.

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