



How the F&B sector can achieve and improve supply chain resilience

Part of article series: Empowering growth through operational resilience in the F&B sector

dss⁺

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About the article series: **Empowering growth through operational resilience**

The food and beverage (F&B) industry is a significant and dynamic sector of the European economy. However, it now faces increasing challenges relating to an evolving regulatory and compliance landscape, digital transformation requirements, complex supply chain risks, and rapid innovation deployment needs.

dss+ provide pragmatic guidance outlining and explaining these challenges, their impacts on production, and the opportunities they create. Aimed at the C-suite, each article in this **six-part series** will take a deep dive into the latest issues, exploring solutions and practical steps that businesses can take, while assessing trends that can unlock market access.

Our goal is to explore proven strategies and operational resilience that enable F&B companies to not only survive but thrive in volatile markets and gain a competitive advantage.

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Articles in this series explore:

1. **Empowering growth through operational resilience:** How to grow and thrive in a complex regulatory landscape;
2. **Supply chain resilience:** Mitigating risks and ensuring uninterrupted and cost-efficient production;
3. **Embracing data-driven digital transformation:** Harnessing data and technology to optimise efficiency;
4. **Agile and lean manufacturing in action:** Case studies of successful implementations in food manufacturing;
5. **Performance transformation:** The power of people engagement;
6. **Continuous improvement mindset:** Fostering a culture of constant improvement.

How the F&B sector can achieve and improve supply chain resilience

Disruption to the supply chain presents a significant challenge for the food and beverage (F&B) sector. Whether it's climate related or unforeseen events such as Covid, natural disasters, or geopolitical events, a resilient supply chain is what separates companies that thrive from those that struggle.

If we define supply chain resilience as the ability to continue operating and delivering products and services despite disruptions, we can identify certain qualities that some companies in the sector possess more than others. Namely, the capacity to withstand challenges, adapt to change, and bounce back from such difficulties is the difference between companies that successfully achieve and improve supply chain resilience, and those with fewer products on supermarket shelves.

For many companies, however, the complexity of the F&B supply chain presents a significant challenge in their ability to achieve the required level of resilience needed for long-term success. Comprised of a highly interconnected network of primary producers, manufacturers, wholesalers, retailers and consumers, risks and disruptions to any one part of the network are amplified across the system. It's a challenge F&B companies faced during the Covid pandemic and, more recently, in disruptions to wheat supplies due to the Russia-Ukraine war.

Navigating such complexities begins with developing foundational and supporting pillars upon which to build the right level of resilience. While risk mitigation plus cost-efficient and uninterrupted production are considered foundational pillars, agility, flexibility, visibility, collaboration, sustainability, and innovation should be used to support and enhance efforts to improve supply chain resilience.



Evaluate and measure your ability to mitigate risks

A company's ability to deal with risks is based primarily on knowledge and visibility of the situation.

However, according to the World Economic Forum¹ only 45% of supply chain leaders have visibility on their first-tier suppliers or no visibility at all, with only 7% achieving multi-tier transparency. This lack of visibility hampers supply chain resilience, making it difficult for retailers to anticipate disruptions.

It's, therefore, important to initially evaluate and measure the maturity of risk mitigation efforts in place. In particular, how much visibility you achieve across the supply chain now depends on investing in advanced technologies such as blockchain and the Internet of Things (IoT) to track and monitor products throughout their life cycle. The use of such tools greatly enhances visibility and helps benchmark progress.

Collaboration and communication are further important visibility and flexibility boosters. Fostering strong relationships with suppliers, customers, and other stakeholders can also improve your ability to mitigate risks by sharing information and data across the supply chain to identify potential disruptions such as natural disasters, geopolitical events, supply chain disruptions, and regulatory changes. Putting in place a strategy that ensures there are consistent efforts to maintain healthy relationships and that regular communications are clear and helpful is equally important.

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1. <https://www.weforum.org/stories/2024/08/blockchain-food-supply-chain/>



Anticipate and diversify to strengthen resilience

Once risks are identified, the ability to anticipate and assess the likelihood and impact of each risk on the supply chain helps to encourage a more proactive response. It allows companies to develop and implement contingency plans for various scenarios, including disruptions to raw material sourcing, transportation, or manufacturing.

For example, the Russia-Ukraine conflict disrupted grain exports, impacting global food prices and revealing the need to diversify suppliers and distribution channels to help reduce reliance on any single supply or production source. Production facilities should also be regularly reviewed, particularly if a company is running close to 100% capacity with no other production facilities available. Investing in redundant facilities or backup systems helps ensure that unforeseen events that could halt or delay manufacturing processes do not disrupt business continuity. Also, investing in robust quality control measures and safety procedures reduces the likelihood of product recalls and accidents, which can severely impact business continuity and reputation.

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Lean and Six Sigma manufacturing principles can support a more effective approach to cost-efficient and uninterrupted production.

Plan ahead for cost-efficient and continuous production

While anticipating risks and diversifying suppliers and distribution channels is critical, long-term resilience also depends on carefully planning for uninterrupted and cost-efficient production cycles. Planning uninterrupted and cost-efficient production cycles requires a multifaceted approach, particularly during periods of heightened economic and political disruption. Maintaining optimal inventory levels can balance supply and demand while minimising costs. Plus, implementing demand forecasting and inventory optimisation tools can help guide inventory policies.

Factoring in lead times, storage costs, and potential disruptions when setting inventory policies offers a more effective approach. In particular, lean and Six Sigma manufacturing principles can support a more effective approach to cost-efficient and uninterrupted production. Lean manufacturing practices can help eliminate waste and improve efficiency. Implementing Six Sigma principles can add further strength to capacity planning strategies.

Also, value-stream mapping and just-in-time inventory should be considered, taking into account fluctuations in demand based on seasonal variations and new product pipeline plans.

Use culture and technology to promote supply chain resilience and optimise costs

With effective planning setting the foundations, leveraging technology and fostering a collaborative culture takes supply chain resilience to the next level. When choosing suppliers, a company culture that recognises suppliers as trusted partners offers definable benefits over a low-cost-driven culture. Evaluating and selecting suppliers based on reliability, efficiency, quality, sustainability, as well as cost, promotes trust and mutual respect that encourages best-price loyalty and relationship longevity. When a culture of trust and respect is in place, establishing clear performance expectations and regular assessments with suppliers becomes less hostile and opens the door to resolving issues quickly. Leveraging automation and technology can help by improving and speeding up the flow of information across the supply chain.

Smart technology can also be used to support cost optimisation efforts. Investing in tools to monitor and control costs throughout the supply chain, including raw materials, labour, energy, and transportation, will drive cost-efficiency plans and improve traceability more accurately. For example, a 2023 report by the Food Standards Agency (FSA)² on the impact of labour shortages on the sector pointed out that digitising food checks and introducing more technology to inspect fruit and vegetables could significantly reduce the risks associated with food safety in the medium to long term. In addition, a focus on data quality can improve productivity by reducing errors and enhancing flexibility, underscoring the importance of leveraging technology and fostering a collaborative culture to enhance supply chain resilience and optimise costs.



2. <https://www.food.gov.uk/research/food-insecurity/the-impact-of-labour-shortages-on-uk-food-availability-and-safety?print=1>

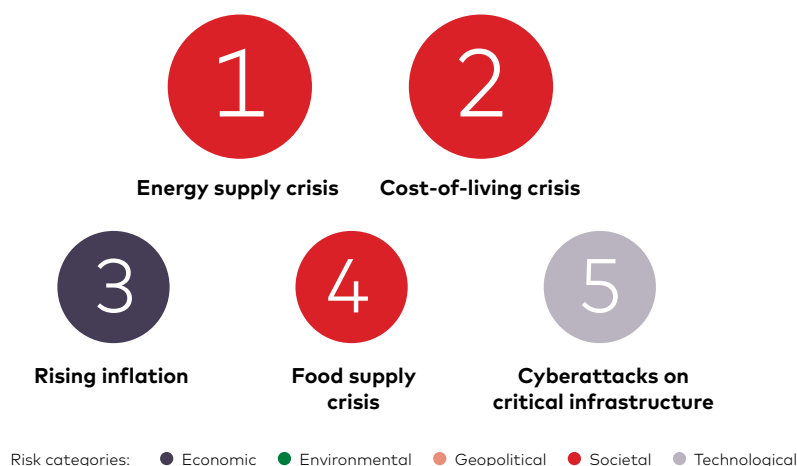
Remain competitive by learning from recent challenges and new trends

Building resilience is not just about responding to challenges but also learning from them, as well as adapting to emerging trends to stay competitive in an evolving landscape. The Covid pandemic and ongoing geopolitical events have led to significant increases in shipping costs, raw material prices, and labour costs, all of which impact the overall cost of food production. Indeed, a recent study by the World Economic Forum³ identified supply chain disruptions as one of the top global risks, with geopolitical tensions, climate change, and technological disruptions also being major contributors to risk levels. In particular, the study identified the food supply crisis as a major global risk concern.

There are also ongoing regional variations to contend with. Different regions have faced unique food production challenges. The Russia-Ukraine war has disrupted grain exports and affected global food prices, while extreme weather events, such as droughts and floods, have also impacted agricultural production in various regions. The UK, for example, has experienced unusually wet seasons over the last 18 to 24 months. European-wide labour shortages have also impacted food processing and distribution, leading to delays and increased costs.

At the same time, the global cost-of-living crisis⁴ means consumers are focusing on lower-priced food products, making it more difficult for F&B companies to offset increases elsewhere. Consumers also increasingly demand healthier, sustainable and ethical food products, putting pressure on supply chains to comply with stricter standards and certifications.

Top 5 ranked currently manifesting risks in order of predicted severity of impact in 2023⁵



3. <https://www.weforum.org/publications/global-risks-report-2023/>

4. <https://www.food.gov.uk/research/food-insecurity/the-impact-of-labour-shortages-on-uk-food-availability-and-safety?print=1>

5. <https://www.weforum.org/publications/global-risks-report-2023/>



Listening to consumers and being proactive is vital as it helps build a brand that resonates with consumer values and expectations.

The complexity of the F&B supply chain means learning from past events and anticipating future trends are vital to achieving and improving supply chain resilience. Building the right foundations and supporting pillars offers a clear and proactive pathway to overcoming disruptions and mitigating risks. As we move forward, F&B companies must continue to adapt to a rapidly changing landscape. Emerging technologies such as artificial intelligence, machine learning, and blockchain offer exciting opportunities to further enhance supply chain resilience. By leveraging these technologies, companies can improve forecasting, optimise inventory levels, and reduce waste.

Additionally, a growing emphasis on sustainability and ethical sourcing will require F&B companies to adopt innovative practices and collaborate with suppliers to minimise their environmental impact. By staying informed about these trends and proactively implementing strategies to address them, F&B companies can build resilient supply chains.

However, to be capable of weathering future storms and achieving high levels of resilience, companies must act now. By investing in smarter technologies, aligning with trusted partners, and embracing sustainable practices, F&B companies can secure a competitive edge and achieve long-term success in an uncertain future.

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