

WHITEPAPER

# Preparing for future disruptions

Addressing tomorrow's supply chain  
challenges today

# Introduction

Never has the supply chain been more important to the global economy, and never has it been so vulnerable.

The modern supply chain must navigate the ever-growing demands and complexities of eCommerce to survive. It also needs to negotiate multiple—and often unexpected—operational and environmental challenges, such as transport restrictions, peaks in demand, and last mile delivery issues.

In the wake of increasing disruption from port closures, inventory issues, and labor shortages, only businesses willing to embrace agile strategies and technologies will succeed. For those still unprepared, the transition to supply chain resilience must start today.



Only 4% of today's supply chain operations are "future-ready."<sup>1</sup>

Accenture PLC





# Counting the cost of disruption

Disruptions come in many forms, both planned and unplanned, internal and external—all testing the agility and resilience of each individual operation.

Regardless of the industry sector, and however stable the operation, supply chain disruption can have a devastating effect on business. Not only does it lead to delayed revenue, but it can have lasting impact on the ability to trade, including wasted stock, bad customer experiences, and cancelled partner contracts.

A single break in the chain quickly multiplies, passing from one process or trading partner to the next, making it increasingly difficult to address.

## Transport issues

Recent events have highlighted how vulnerable the global transport system truly is. The collapse of a key bridge in Canada, and the Ever Given vessel in the Suez Canal running aground, are both examples of how easily unexpected events can have a worldwide impact. The port closures on the west coast of the United States and Ningbo-Zhoushan in China have also increased the pressure on the global transport system—which was already under strain from the fallout of the COVID-19 pandemic.

These are compounded by ever-increasing customer demand, SKU proliferation, and a lack of qualified truck drivers. In the UK, this is due primarily to Brexit, but also globally what is known as “The Great Resignation”—workers creating a hiring challenge and leaving millions of jobs unfilled, particularly in the service industry.

Even the smallest disruption can break down schedules and leave businesses without the components to supply their consumers, and the products to supply their customers. Material shortages ultimately lead to production delays, factory closures, and rising material and transport costs, impacting the bottom line.

## Downtime and human error

Planned events, such as system upgrades, can be another source of disruption. In addition to the expected downtime itself, poorly planned or executed staff training often leads to errors and further downtime.

Manual input systems add to the risk of human error. Just one incorrect press of a button could mean the mis-ordering of hundreds of costly items or the misdirection of key shipments. Adding in the extra time to fix these issues can seriously impact scheduling and costs.



## Seasonal peaks

Seasonal peaks present a constant risk of disruption. Businesses can prepare for annual holiday peaks, but it's impossible to predict all surges in demand—PPE during the pandemic, for example.

Preparing is about more than just stocking the right quantities of the products. It also requires the labor to facilitate handling the extra workload. Being both physically demanding and often poorly paid, warehouse labor is increasingly difficult to source, recruit, and retain, especially at the rates required during seasonal peaks.

It is also harder to train seasonal employees sufficiently, and therefore maintain productivity during peaks, even when fully staffed.

## Storage limitations

Seasonality also impacts the way a warehouse organizes its storage. Popular products are ideally located near the packing area to reduce travel time, but when demand changes, the material flow can become disrupted and inefficient.

Rearranging the stock to accommodate the next peak mitigates this issue, but it's a difficult and time-consuming task, requiring significant space, and manpower.

In disrupted supply chains, storage presents even more challenges for consumable or medical goods. For example, keeping medicines in unrefrigerated storage, even for a moment, can make them unviable.

## Supplier dependency

In some instances, an over-dependence on one single supplier can present a distribution risk. To be prepared for disruption, it is crucial to identify which supply lines are more important than others, and to integrate new suppliers where necessary. Ignoring more effective and efficient suppliers in favor of incumbent relationships can cost a business its resiliency in the face of disruption.

## Last mile errors

When it comes to assessing the impact of disruption, last-mile delivery—which is the movement of goods from the transport hub to the final destination—requires special attention.

The last mile is full of complexities, making it the most problematic part of the supply chain. According to recent studies, over 80 percent of customers refuse to buy again from businesses that fail to deliver items correctly.

Most last-mile issues are a result of the pressures of eCommerce and the nature of the products being delivered. But they are significantly impacted by:

- The increase in parcel deliveries, particularly during seasonal peaks.
- Traffic congestion and regulations in urban areas.
- Urgent and high-priority shipments with special characteristics—e.g., oversized items, vital parts, medicines.
- Multiple destination points, making it difficult to assign routes—e.g., offices, homes, pick-up points.

From damaging customer reputations, to destroying the very infrastructure of the business, supply chain disruption can have a far-reaching effect. Planning and processes can only go so far towards countering such disruption. It is only with the right strategies and technologies that businesses can build the resilience and agility they need to mitigate, or reduce, future disruptions.





# How to mitigate disruption

Supply chain businesses are becoming aware that preparation is key to reducing the impact of disruptions. Respondents in a recent Accenture survey who reported they were “future-ready,” were twice as efficient as—and three times more profitable than—their underprepared peers.

For many, being future-ready means transforming their strategy, their technology, and their level of collaboration with the supply chain ecosystem.

## Cohesive strategy

To drive resilience, a business needs to be integrated. When all areas are connected and invested in one future-driven goal, it improves an organization’s ability to meet customer expectations, while reacting to internal and external challenges.

## Advanced technology

Technology plays a huge role in building supply chain resilience. By reducing manual tasks, planning and sales servicing, technology helps businesses adapt faster and more effectively. It most notably helps them react more rapidly to changes in demand, overcoming industry labor shortages and training issues.

### Voice-directed work

Voice directed work (VDW) is a highly flexible system that works by directing staff to the location of a product through a headset. After the item is picked, the employee speaks into the mouthpiece to pass the necessary information back into the system. Since the user has their hands and eyes free, they can complete the task more productively and more accurately. VDW also reduces the training burden, since most of it is provided through the headset in real time.

### Warehouse management system

The warehouse management system (WMS) is the hub of the operation, connecting all technology and processes inside and outside the warehouse. The WMS allows more detailed planning to be undertaken, meaning that many last-mile issues can be measured and resolved. For example, you can use it to monitor and control resources and goods dispatch speeds, sort picking lists, and assign priority items to different shipments. You can even factor in adverse weather conditions.

With enough data—ideally including data from the wider supply chain as well as the internal operation—businesses can bring powerful analytics capabilities into play. Adding AI to the system allows businesses to analyze historical data and make predictions, improving agility and resilience. The same computer intelligence can also be used to optimize the sourcing and onboarding of new suppliers.



Only 10% say cross-supply chain collaboration is happening at scale today.<sup>1</sup>

Accenture PLC



# Transport management system

Linked to the WMS, the transport management system (TMS) coordinates transportation with the rest of the operation. This makes it easier to measure KPIs like percentage of on-time deliveries, fuel consumption ratios, and delivery cost per parcel.

Through GPS tracking, businesses can maintain complete visibility over their fleet. This includes:

- **Transport planning:** manage owned and third-party vehicles and assign routes based on optimal drop sequences for full or partial loads.
- **Automatic load updates:** provide seamless two-way communication between dispatchers and drivers.
- **Order management:** create orders and shipping agreements either automatically or manually, calculating delivery dates and determining the next available vehicle.
- **Process confirmations:** automatic processing of driver arrival, departure, and other communications updates.

- **Financial functions:** freight billing and payroll data means the business can manage its costs alongside fuel tax, fleet maintenance, etc.
- **Invoicing and logistics control:** enables invoice per trip, stop or transportation order, using fixed prices, price scales or other forms of pricing.
- **Route finding:** re-routes vehicles to avoid traffic and other issues, while minimizing stops and optimizing vehicle capacity.

## Ecosystem partnerships

Building resilience into the supply chain must include an element of collaboration with the wider supply chain ecosystem. Breaking down barriers between different businesses is essential to establishing trust, transparency, and accountability. It also unlocks a wider pool of data and technology, to drive more efficient, agile, and robust business models.

### CONCLUSION

As supply chain complexities increase, so do opportunities for disruption. In this challenging environment, only businesses with the capacity to scale and adapt will prosper.

Through the introduction of new processes, technology, and partnerships, business can build the resilient systems necessary to overcome any crisis. These will be the productive and profitable supply chain business models of the future.

By preparing for future disruptions now, no business will fall behind.

Infios offer a range of end-to-end supply chain solutions to help secure your operation against disruption:

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## Reference

1. Accenture PLC; [https://www.accenture.com/\\_acnmedia/PDF-157/Accenture-Supply-Chain-Operations-POV-June-2020.pdf](https://www.accenture.com/_acnmedia/PDF-157/Accenture-Supply-Chain-Operations-POV-June-2020.pdf)