

POINT OF VIEW

Removing Barriers to Supply Chain Resilience



Introduction

Prior to the Covid-19 pandemic in 2020, efficiency and lowering cost was the top priority for supply chain leaders.

However, since then, resilience has taken top spot due to the disruptions seen with slowed production and issues in the Suez Canal which resulted in an average loss of 12% of global trade as ships were redirected around Africa to avoid the blockage. Per minute, the blocked ship held up \$6.7m of trade in the waterway.¹ This disaster, paired with a general slowing of manufacturing and distribution throughout 2020-22 altered the priorities of stakeholders, and thus their demands for supply chain strategies.

Supply chain resiliency is the ability to efficiently adapt to market and industry changes and supply disruptions, using strategy and technology to respond quickly and reliably without reducing quality, best practice, or cost of goods.²

To achieve both resiliency and sustainability, retailers need access to real-time, trusted data alongside a strong network of suppliers, so they can retrieve insight into how materials and garments move through the supply chain. This is possible through visibility and traceability. Technologies supporting these capabilities can connect systems, automate reporting, standardise data, and provide insight for relevant stakeholders.

This POV explores the barriers to supply chain resilience and how they can be mitigated with visibility and traceability

The Barriers

The biggest barrier to any decision, visibility, or traceability is access to data.

Despite advancements in data sources and the adoption of IoT devices and AI making data collectable, only 15% of 131 executives feel they have the capabilities to deliver consistent supply chain traceability.³

Many organisations, having implemented them as solutions, still face barriers between supply chain processes, applications, suppliers, and customers.⁴

Data is typically scattered across siloed systems, and teams are unable to access information when and where they need it. This siloed data model disrupts the ability for retailers to see end-to-end processes, making it difficult to identify bottlenecks and issues. This can lead to costly fees, customer satisfaction issues, and risks relating to sustainability and regulation.

Research suggests that the three main barriers organisations are facing include⁵:

- Technical: Disparate and siloed systems, manual exchange with supply chain partners, and lack of end-to-end platforms.
- Data: Lack standards for data collection and exchange, no single source of truth, and unreliable data received from partners.
- Organisational: Unclear governance for data sharing and lack of trusted data sharing mechanisms.

These barriers remove the ability for retailers to establish processes and systems for the collection and analysis of data. This leaves retailers with manual processes, and untrusted, unaligned, and disconnected data sets that result in inaccurate or outdated data for insight and decision making.⁶

Retailers must connect disparate systems and use a unified platform to view relevant and accurate data. This is where traceability and visibility tools should be utilised.

Data Collection

Retailers must understand and have access to data in their supply chains.

Where data is not available digitally, it cannot be integrated, thus creating blind spots for traceability. This can be seen with lengthy supply chains that cross borders where standards vary over required documentation. Supply chain partners may only see an update that a shipment has been received with no supporting information such as what was included in the shipment, who collected it, what time, etc.

¹ <https://www.bbc.co.uk/news/business-56559073>

² [What is supply chain resiliency? - IBM Blog](#)

³ [WEF Visibility Traceability Twin Engines Sustainable 2020.pdf \(weforum.org\)](#)

⁴ [The missing link: Why visibility is essential to creating a resilient supply chain - IBM Blog](#)

⁵ [WEF Visibility Traceability Twin Engines Sustainable 2020.pdf \(weforum.org\)](#)

⁶ [Supply chain partners need a single source of truth - Isometric Technologies](#)

Issues such as this requires a collaborative change in the supply chain process to include creating digital copies of this documentation to evidence activity.

Where data is available digitally, data sources can be integrated to provide real-time updates as changes occur. Ensuring the accuracy of data sources is critical to the path to resiliency. When customers, partners, and stakeholders request information, or when organisations seek to adapt based on their data, it is important that data is accurate.

Visibility and Traceability

At the heart of sustainable and resilient supply chains is visibility and traceability.

Visibility describes the insight into what is happening within a supply chain, whilst traceability is the ability to follow the process of a product from raw inputs to retail sale, and sometimes post-consumer. Technology exists to make this operational.

To effectively manage supply chain operations, increase control, reduce risk, and improve regulatory reporting, retailers should turn to these technologies.

Process optimisation, cost reduction, risk mitigation, and customer satisfaction can all be achieved with data driven insight. Having supply chain insight allows retailers to react quickly to issues, have greater confidence in meeting regulatory requirements with clear audit trails, and have better monitoring and reporting of sustainability credentials.⁷ To do this requires the ability to identify problems and access data in the first place.

Sustainability

In order to achieve sustainable targets, organisations must be able to view their inputs and outputs. Scaling efforts to reduce emissions, reuse material, and recycle requires insight into the current effort in order to define the criteria for reasonable success and strategies.

Digital tooling is how this can be accomplished. To see the as-is to define the to-be and track progress in real-time is the only way to know how and where advancements towards sustainable goals need to be focused, and ultimately, when this can be deemed a success.

Visibility will provide oversight of the supply chain to see where issue lie. Is there a specific supplier causing delays or creating excessive emissions? Has there been anomalies in shipping or production patterns? Have consumer trends shifted to drastically change demand? Visibility will give organisations part of this story and allow them to act in accordance with the relevant data for efficient decisions and improved agility in the market.

Traceability can ensure that regulatory requirements are followed. Tracking and storing documents and suppliers throughout the supply chain will make data available to evidence sustainability, human rights, and quality assurance. Organisations can make strategic decisions about their supply chain with the information they have available to them. For example, if a supplier lacks evidence of quality inputs despite this being advertised, the retailer may switch in favour of one who can provide this assurance.

A chain is only as strong as its weakest link – but which one is it?

Digital traceability provides the arsenal of data necessary for supply chain audits without the hassle of manually trawling for the information. For ESG reporting, traceability can provide insight and, where possible, access to data regarding energy and water waste for scope 2 and 3 emissions.

Control Towers

Retailers need to ensure that the platforms used to provide visibility and traceability are not siloed. This is where digital control towers come into play.

Digital control towers are usually hosted on a scalable cloud platform to provide a centralised view of real time data across a supply chain to provide in depth analysis and visibility. The technology correlates data across siloed systems to provide personalised dashboards and present actionable insights.⁸ They create a single source of truth and with the integration of real-time data, retailers can make informed decisions.

Most supply chain control towers include features for⁹

⁷ [How supply chain visibility can help to minimize your supply chain risk | Diligent Corporation](#)

⁸ [What is a Supply Chain Control Tower? | IBM](#)

⁹ [What is a Supply Chain Control Tower? \(2023 Updated Guide\) \(scmdojo.com\)](#)

- Data management: collecting and storing data from various siloed sources
- Analytics: analysis and visualisation of data to gain insight
- Performance management: measuring and monitoring key performance indicators (KPIs) that review effectiveness, efficiency, and customer satisfaction

With the right data, a supply chain control tower can provide retailers with the information needed to have a clear view of what is happening in near real-time to understand, prioritise, and resolve issues as they arise.¹⁰ Control towers also ensure that operations are running efficiently, improve risk mitigation, accelerate decision making, and optimise asset utilisation.¹¹

The same tooling can be used to manage sustainability efforts and certifications as control towers can integrate sustainability metrics into their dashboards. For example, carbon emissions or energy consumption. Furthermore, they can enable retailers to quantitatively reduce Green House Gas (GHG) footprints by helping to reduce emergency orders and boost top selling product availability by analysing supply chain and demand trends.¹²

Challenges

Whilst this all sounds great, there are still challenges that need to be considered when implementing supply chain traceability solutions. This includes managing sensitive data and trade secrets, both direct and inferred, and ensuring the reliability of data.

Data Reliability

Assuming the data is available to begin with, to be reliable it needs to be timely, complete, and accurate. The main way you can ensure this is by monitoring the author of the data and any changes that are made to the original record.

Solutions such as blockchain can maintain records of changes to provide a tamperproof and auditable ledger of data.

Data Protection and Reporting

Organisations should be able to define what data they want to make available to who and in what form. When the organisation is in control of their data, they can ensure they are maintaining their data protection compliance and minimising the privileged users for consistency and oversight.

Regulators and auditors vary in how they request data. Reports containing the same information may be requested by three different auditors in different formats. This needs to be understood so data can be efficiently compiled in the correct format.

Secure data sharing is important to consider in any supply chain traceability and visibility solution, as this may be the barrier for partner collaboration.

Conclusion

With the right data, traceability and visibility can provide the information retailers need to have a clear understanding of sustainability efforts and the state of resilience within their supply chains.

The availability of data continues to increase as more and more organisations turn to digital solutions to improve their productivity and reduce costs. Ensuring this data is secured and accurate is the next step before it can be integrated and relied on to remove barriers to supply chain resilience.

Supply chain control towers are changing the way that supply chains are managed. They improve visibility and help to drive strategic business outcomes with the data collected. Utilising control towers and other tools will allow retailers to also follow regulation and increase customer satisfaction with the centralised platform and access to data.

How Can Responsiv Help?

Responsiv provide solutions that suit your supply chain needs and requirements. As integration specialists, our skilled team can provide a platform that securely collects, manages, and shares data to relevant stakeholders. This is done depending on the business requirements for data sharing, to ensure only the necessary data is made available and in the form you desire.

Responsiv deal with the project complexity to make connecting systems, automating processes, and sharing data simple for our customers. We can connect to systems that are already in place or custom build the solution you need.

¹⁰ [What is a Supply Chain Control Tower? | IBM](#)

¹¹ [Benefits of Supply Chain Control Tower Solutions | Accenture](#)

¹² [Benefits of Supply Chain Control Tower Solutions | Accenture](#)

Responsiv and Circular Textiles Supply Chains

Responsiv is developing a platform to gather and provide supply chain insights for the management of discarded textiles in the UK. Around 1.05-1.75 million tonnes of textiles is thrown away in the UK annually, 360,000 tonnes of this is clothing that ends up in landfill. Responsiv will be using its expertise in integration and automation to map out this previously undefined supply chain alongside consortium and industry partners.¹³

[Get in touch](#) for more information about supply chain traceability

¹³ <https://responsiv.co.uk/responsiv-is-investing-in-sustainability/>