



FUSION
WORLDWIDE

BUILD A RESILIENT SUPPLY CHAIN

INTRODUCTION

All supply chains face risks caused by unpredictable events, such as trade wars, natural disasters and data breaches, that often lead to multiple disruptions. Most recently, the COVID-19 pandemic has had a large scale impact on both demand and supply, exemplifying the need for stronger, more resilient supply chains.

AVOID MANUFACTURER SINGLE SOURCING

Those who rely on single sources, be it a manufacturing source or a single source component, will face massive disruption when those sources experience issues, slowdowns or shutdowns.

By using a single source, you are at risk if:

- There is a shortage of any material used in the manufacture of your component.
- There is a disruption at any of the facilities where your product or the component is being built.

Having multiple sources is not always possible but should be the goal. Some strategies for achieving this goal include:

- Start with the design by creating collaboration between the design and procurement functions.
- When forced to use a single source component:
 - Buffer stock so disruptions are minimized.
 - Spec in components that have multiple manufacturing locations.
- When working with manufacturers who are building your finished product:
 - Set up two separate locations where product can be produced, if possible.
 - Regionalize so that the manufacturing is close to large customers or consumers of the product.
 - Split apart the manufacturing process where different parts of the build are completed in different locations.

GE HEALTHCARE REDUCES SUPPLY CHAIN RISK

GE Healthcare, a Chicago-based company that produces a range of medical equipment, including ventilators, ultrasound, MRI and CT equipment, has greatly minimized risk to their supply chain through multi-sourcing.

Not only does the company utilize two suppliers for each component, but it also chooses suppliers that have multiple manufacturing locations. This allows flexibility in the supply chain by being able to adapt to issues that arise in any region. Additionally, GE Healthcare has invested in monitoring to be able to closely assess each link in the supply chain and the impacts that any disruption may have on it.

As a result, these risk mitigation strategies have allowed the company to minimize the impact of the COVID-19 pandemic on their production and allowed them to maintain continuity of supply to customers.

SOURCE: ELECTRONICS SOURCING

EXPAND YOUR APPROVED SUPPLIERS

Companies normally look to introduce secondary suppliers when their supply chains are disrupted. By proactively having a large, multi-tiered approved vendor list (AVL), companies will have the ability to easily solve component shortage issues and are more able to leverage these suppliers to maintain supply.

There are many different types of suppliers, and it's a good idea to have a healthy mix of each:

- Authorized Distributors
- Component Manufacturers
- Open-Market Distributors

While many companies rely heavily on the first two, open-market distributors tend to be used as a last resort. However, by having these types of distributors on your AVL, and by regularly tapping into them as a resource, one can gain a better understanding of what's happening in the market. This also ensures you have more trust and confidence in these vendors when the need arises.

When adding open-market distributors, consider the following:

- Quality systems and certifications
- Financial strength
- Length of time in business
- Global footprint
- Supplier vetting process

“While many companies approach the open-market as a ‘last resort’, they are also the ones most severely impacted when supply chains are disrupted. Just like any financial planner likes to point out, if you wait until it starts to rain to start thinking about your rainy-day fund, then it's too late. You're going to get wet.”

– Tobey Gonnerman, Fusion Worldwide

PRIORITIZE QUALITY PROCESSES

Fusion Worldwide controls every step of a component's journey, from sourcing to procurement to testing and services. The addition of Prosemi, Singapore's largest test house, to Fusion Worldwide's quality process benefits customers by providing complete end-to-end services. After components have concluded the 5-phase, 100-point [inspection process](#), Prosemi provides:

- Chemical decapsulation
 - Cross-Sectioning
 - X-ray
 - XRF
 - FT-IR (*Fourier Transform Infrared Spectroscopy*)
- IC Programming
 - Laser marking
- Solderability
- Taping and Reeling
- Baking
 - Sorting
 - Co-Planarity
- Functional testing
- Electrical testing

The combination of Prosemi's people and processes, in partnership with Fusion Worldwide, helps clients address current and future supply chain shocks by creating customized solutions. To learn more about our quality procedures, watch the video below:



Fusion Worldwide's unmatched capabilities ensure that clients receive the highest quality components with the shortest lead times possible.

GEOGRAPHICALLY DIVERSIFY

With manufacturers of certain components concentrated in one region, a product can be easily affected by political events and/or natural disasters occurring in that area. Because one regionalized event can have a great impact on a large share of one product, global supply chains are left struggling with no other options to depend on.

For example a [Censuswide survey](#) of over 1,000 companies showed that 23% of companies had suffered from supply chain disruptions due to a cyber-attack, 27% from a natural disaster, 22% from political strife and 22% from international trade wars.



While this is a longer-term mitigation strategy, by diversifying factory and supplier locations, companies will be more protected against condensed shocks. Considerations for diversification include:

- Investigate production in emerging markets, like [India](#), Vietnam and Mexico.
- Look [locally](#) or regionalize, which is when companies locate manufacturing in regions near large customers or large consumption centers.
- Invest in monitoring technology, which can reduce reliance on inventory, manual processes and people.

DEVELOP CONTINGENCY PLANS

It is important that companies have complete awareness of what will be affected in their supply chain, the gravity of the impact and how prepared they are to deal with it. The previous three examples are ways to mitigate risk, but beyond these there are other areas where companies can be vulnerable.

To get started with developing risk mitigation plans:

- Begin with a map of the entire supply chain, including not only direct suppliers but locations and inputs to the suppliers that supply those direct suppliers.
- Work through each link and consider what actions would need to be taken should that link be broken.
For example:
 - If an assembly facility was taken offline for any period, is there a backup? Can assembly be broken into multiple locations?
 - If transportation was compromised from or to a main site, can items be put at other locations? Should an inventory management program be implemented so inventory is buffered on hand and available at multiple locations?
- Keep the customer in mind. If there are critical delivery dates, look at key gating events and/or components and work to ensure those are properly covered.

Additionally, [McKinsey & Company](#) recommends the following as you assess each link of your supply chain:

- Build a scoring framework that includes:
 - Impact to the organization
 - Likelihood of risk materializing
 - Preparedness to deal with the risk
- Persistently monitor risk
- Institute governance and regular review

DIVE INTO MARKET INTELLIGENCE

By closely monitoring market events and the status of their supply chains in relation to it, companies are equipped to take preemptive actions and immediately react.

In addition to keeping up to date with market happenings of your specific product portfolio, events related to commodities outside of your direct usage can have knock-on effects on upstream raw material supply, fabrication capacity and logistics. Thus, keeping a pulse on the global supply chain at a macro level is important.

Spending time diving into the latest market analyses is often one of those anticipatory measures that falls off the to-do list as other priorities arise. To help better gather the ideal information into one spot, consider:

- Setting up a daily [RSS feed](#).
- Creating saved searches within your internet browser news section.
- Gather information regularly from your suppliers, as well as sign up for market reports. For example, Fusion Worldwide publishes its monthly report called The Greensheet, which provides a holistic view of the global supply chain for electronic components and finished products.

THE GREENSHEET

Fusion Worldwide produces a monthly market intelligence report containing comprehensive insight into CPUs, ICs, storage, memory and other finished products, called The Greensheet.



Sign Up for The Greensheet

// ABOUT FUSION WORLDWIDE

WORLDWIDE SERVICE

Since its founding in 2001, Fusion Worldwide has helped companies overcome supply chain inefficiencies. In doing so, we've created long-standing relationships with our customers, and have developed an unparalleled supplier network so we can find the hardest-to-find electronic components and products.

With a team of individuals who are dedicated to providing the best customer service in the industry, we fulfill our mission of solving supply chain shocks with strategic sourcing solutions.

For more information, visit fusionww.com or follow us on LinkedIn, Facebook and Twitter.

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