

HOW TO “DE RISK” YOUR MANUFACTURING SUPPLY CHAIN IN A CHANGING WORLD

We are living through the largest and most sustained supply chain challenges since the Second World War. The Covid Pandemic has caused significant disruption and forced many global businesses to rethink their traditional supply chain strategies and models.

From component shortages to dramatic escalations in international shipping costs to a shift to online retail, businesses have been forced to explore new models to cope with these unforeseen changes.

The following models will become more prominent and will help to “de-risk” existing supply chains and provide a smoother material flow to your production facilities.

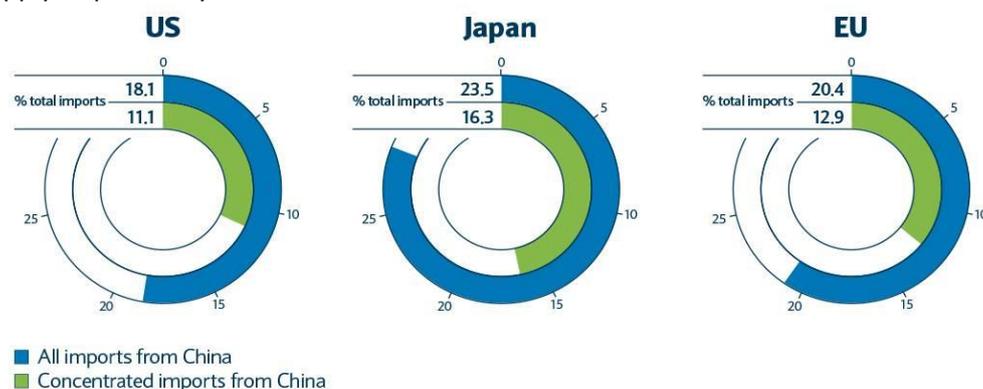
- 1. A new focus on resilience - move from “just-in-time” to “just-in-case”**
- 2. “Managing the tail” via Vendor Consolidation**
- 3. Supply chain technology and Blockchain**

1. The global Pandemic adds a new focus on resilience: from 'just-in-time' to 'just-in-case'

China has become the main or even only source for certain products, especially in information and communication technology. About one eighth of global exports flow from China, which makes it the largest source for imports in all core economic regions. More importantly, for the majority of these imports China is the dominant producer (*more than 50% of imports of a single product*).

Increasing component shortages, dramatic increases in shipping costs from Asia and the ever present threat of global trade wars and increased tariffs are causing companies to explore options and consider alternative and more “near-shore” options.

“Supply Dependency” on China



[Source Barclays Investment Banking](#)

The COVID-19 pandemic has changed the business environment for many organizations around the globe and has highlighted the importance of being able to react, adapt and set up crisis management mechanisms in order to weather situations of uncertainty. As the acute restrictions and lockdowns created many urgent situations that required immediate attention in the early days of the pandemic, many companies have now begun to move to a "recovery mode" and have started planning for the longer term. As companies seek to strengthen operations ***the importance of supply chain resilience and risk management is more apparent than ever.***

What have we seen happen?

While many businesses have been nimble and ready to adapt to change, companies that have not already done so should prioritize analysing their supply chains now, to understand where they might need to make changes or take action to mitigate against future disruptions. Considerations should include reviewing contractual obligations, assessing force majeure clauses, tax and employment implications of changes, relocation costs, exit possibilities, as well as the option of swiftly reversing changes if the situation stabilizes or if new developments require the supply chain to adapt quickly.

The option of holding more "***just-in-case***" component stock close to your manufacturing sites is becoming more attractive. Of course, it represents an increased working capital cost to finance this stock but the trade-off vs increased freight costs and part shortage / line downs, is making this option more appealing. Plus, there are experienced companies who specialise in inventory procurement and finance who can help manage this cost and complexity.

Economic Order Quantities (EOQs) can be calculated to determine the optimum level of stock holding which will take into account production lead-time, MOQs and volume discounts, freight time, storage costs, productions schedules and inventory holding costs.



COVID-19 has presented a unique situation in which to observe how these various systems and processes respond to acute severe stress and change. It has also shone a spotlight on the importance of investing in ***supply chain resilience*** to build stronger long-term operations. As we move into the future, it is vital to use what has been learned from recent events to prepare for the future.

What can we expect to see?

As recent history has demonstrated, future supply chains will need to begin ***factoring resilience and adaptability*** into their calculations. Before the COVID-19 pandemic, some companies began anticipating this next evolution, but this crisis has exposed those weaknesses in the modern supply chain, such that many are looking at what to do next. Such decisions should of course not only focus on the supply side patterns but must also consider that demand patterns may look different going forward – the key here is to have a holistic approach and ensure that many different perspectives are considered.

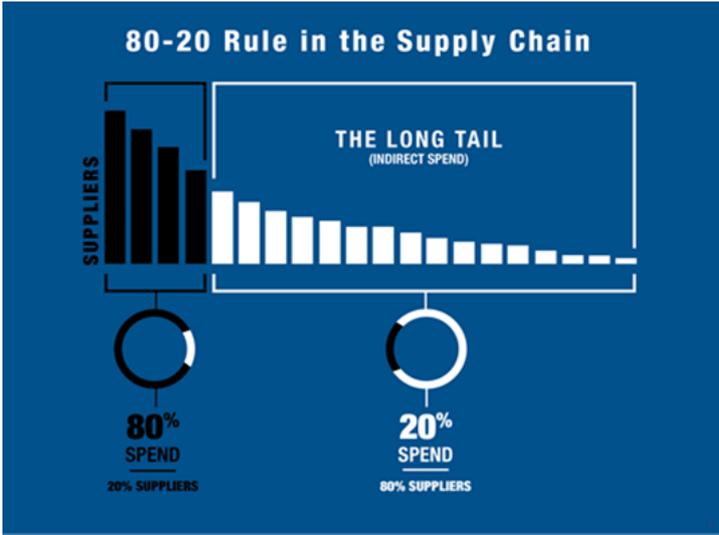
Trade wars, global politics and national policies will influence the future of supply chain structures

The global supply chain had begun responding to US-China tensions and we can expect the disruption caused by COVID-19 to accelerate the pace of this response. Trade analytics show China lost global export market share at an accelerated pace in 2019, as companies moved to other countries. We have seen low-cost production moving mainly to Mexico and Vietnam. Together, the two countries have grown their market across the consumer goods and technology, media, and telecoms (TMT) ***sectors to 12% and 9% by 2019***, largely at the expense of China. Vietnam's clothing and smartphone exports, as well as Mexico's automobile parts and computer exports, all gained as well.

There is no simple substitute for China. The country accounts ***for 60% of global consumer goods exports and 41% of global TMT (Tech, Media and Telecom) exports***. However, we expect companies will be increasingly considering China +1 strategies. Where other countries will benefit from supply chain investments will depend largely on their own investments to boost manufacturing capability as well as provide attractive offerings for land, labour, and logistics. At the same time, continued efforts to conclude free trade agreements (FTAs) could further impact where and how businesses seek to restructure their supply chains.

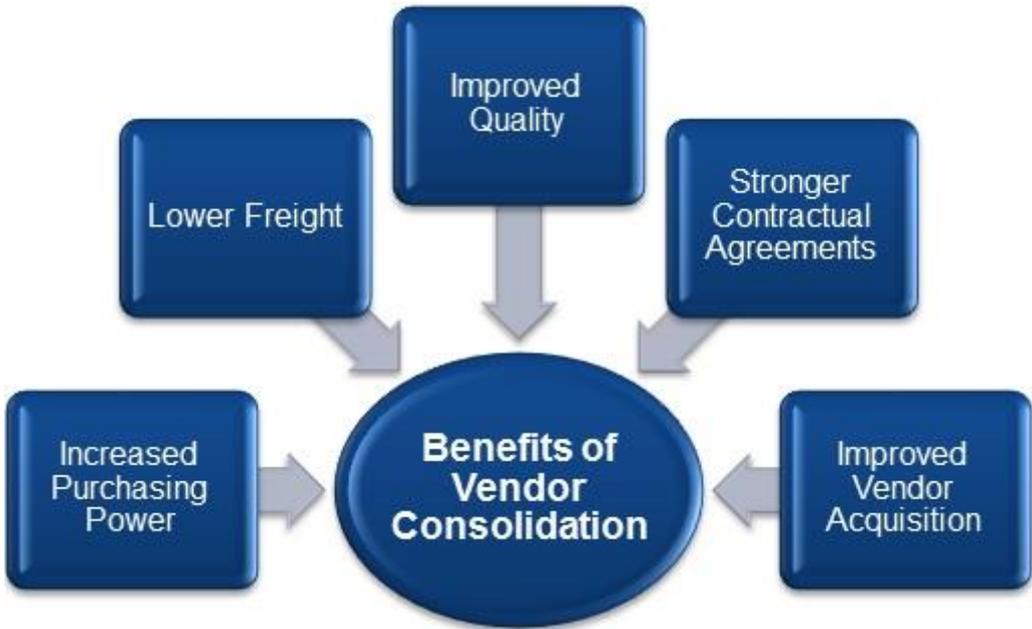
2. “Managing the tail” via vendor consolidation

In an ideal world suppliers would always provide materials locally and only charge customers once materials are consumed. Many manufacturers have developed vendor managed inventory (VMI) programs to create an optimised supply chain, however some vendors may be unwilling or unable to participate in a VMI type program or companies may be forced to accept large MOQs, long lead-times and ultimately end up with higher levels of safety stock



Typically, most companies spend 80% of their time managing 20% of the spend value!

This is time consuming and distracts the Procurement team from focusing on the high value items. Specialist supply chain service providers can provide global inventory procurement expertise to purchase and manage the inventory into production locations and store product near-site to the client’s manufacturing facility. The client need not carry inventory and is only charged on consumption of material. This service typically involves a consolidation of hundreds of suppliers and thousands of SKUs into one “alpha supplier”. Thus, removing a lot of the cost and complexity typically associated with managing such a high volume of suppliers and locations



Source; Driveyoursuccess.com

Why do companies use this model??

- (i) Maximise cash-flow and hold minimum inventories. Pay on consumption.
- (ii) De-risk erratic supply timelines from Asia.
- (iii) Ship in bulk and reduce high volume, high-cost deliveries from global suppliers.
- (iv) Manage in bound shipments via sea, road. More environmentally friendly.
- (v) Requirement to consolidate long-tail supply chains. Guarantee supply through lumpy supply chains and seasonal demands.
- (vi) Outsource management of non-core C/D type materials. Free up existing staff to focus on high value A&B items.
- (vii) Access to more economical procurement structures.
- (viii) Outsource all non-core activities to professional organizations with industry standard ERP systems.

3. Blockchain

While primarily associated with cryptocurrencies, blockchain, the distributed ledger technology, also ranks high on the list of technologies poised to bring improved visibility and transparency to supply chain processes.

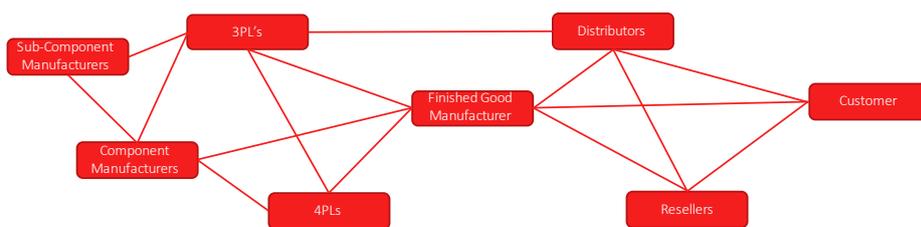
Because blockchain creates an immutable record of transactions, the technology is well situated to track the provenance of goods and establish trust in shared supplier information, especially when the parties have competing agendas and don't particularly engender trust.

Benefits to the users are Traceability, Authenticity and Visibility

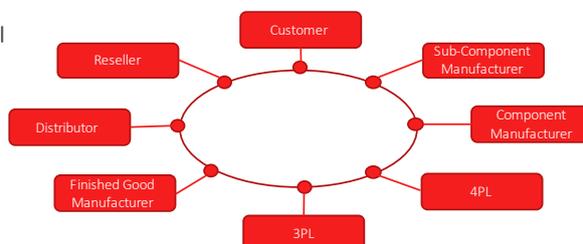
What will the transformation look like...

exertis
Supply Chain Services

Legacy Integration Model



Blockchain Model



- Reuse existing EDI and webservice connections
- Connect the blockchain to your ERP system and to partners' ERP systems

a **DCC** business

Supply Traceability

Ensure Authenticity

Product Lifecycle Analytics

Shared Visibility

Blockchain can establish an audit trail that is far more effective than traditional methods like email or simple electronic record keeping, proponents say.

As a result, blockchain's biggest potential is for facilitating track-and-trace applications that help companies document the chain of custody of goods. Doing so can prevent leakage, help identify counterfeit items and fraud, pinpoint at-risk suppliers, demonstrate that regulatory requirements are being met, and create transparency around sourcing.

It is predicted that a quarter of OEMs will leverage blockchain to source for example spare parts by 2023 — a move it predicts will improve accuracy of usable parts **by 60% and lower costs by 45%**.

A lot of early blockchain supply chain use cases are food related. For example, Walmart has run a pilot project with IBM's Food Trust Solution to track lettuce from its suppliers to Walmart shelves on the heels of previous E. coli outbreaks.

One of the biggest hurdles to leveraging blockchain is that it takes a village*. In most cases, it's not one company implementing blockchain to garner traceability for its singular supply chain. Rather, to succeed, efforts will require an industry consortia-backed initiative that benefits a variety of competing partners.

*Source MIT Management

Conclusion

Making significant changes to an existing supply chain is not an easy task, as creating a robust and secure supply chain will still need to balance the demands for cost efficiency vs consistent supply. It is expected that companies will begin seeking out a more diversified supplier base and may look to engage with specialist supply chain partners, while looking to develop a flexible, but more resilient and cost efficient, supply chain.

For the longer term, however, companies will need to undertake a more holistic approach and be open to considering one or more alternative solutions, which may lead to more drastic changes, such as moving supply chains nearby, holding more stock locally, or to different countries, as well as increasing the digitalizing of supply chains, with a view to increasing accuracy, flexibility and traceability.

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