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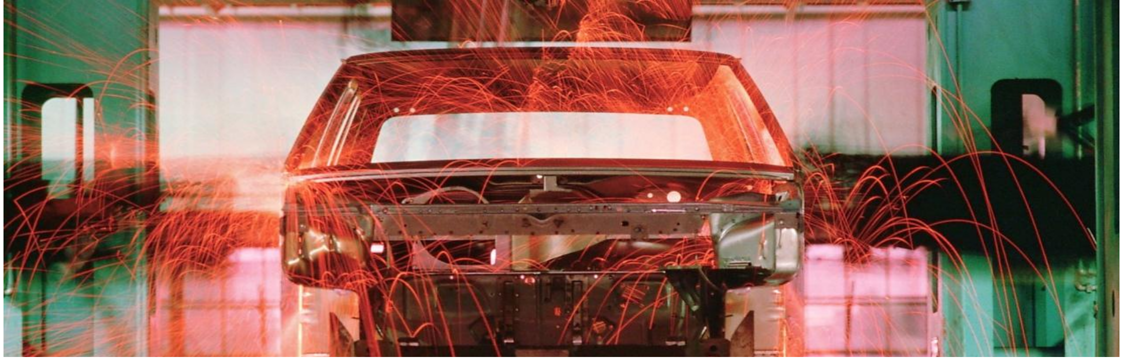
You are only as strong as your weakest link

Why manufacturers should monitor their suppliers' health

A practical approach and guide to help manufacturers prevent disruptions to their supply chains



It is the second shift on Monday night. The operations manager's phone rings — a supplier can no longer provide parts. A quick check of the safety stock indicates there are enough parts to continue the production and delivery of products through Thursday first shift.

Now the questions and concerns:

Vice President (VP) Operations: "Why can't the supplier provide the parts? Is the problem just with the supplier, or is it pervasive across their supply chain and/or bank? How can we avoid the supply disruption? Are there substitute parts anywhere in the supply chain? Can we move the tools and production capabilities? How long will it take to get approvals and restore production? Will a cash infusion delay the disruption while we look for alternative suppliers? Is there a customer group representative or other supplier that can take over the plant?"

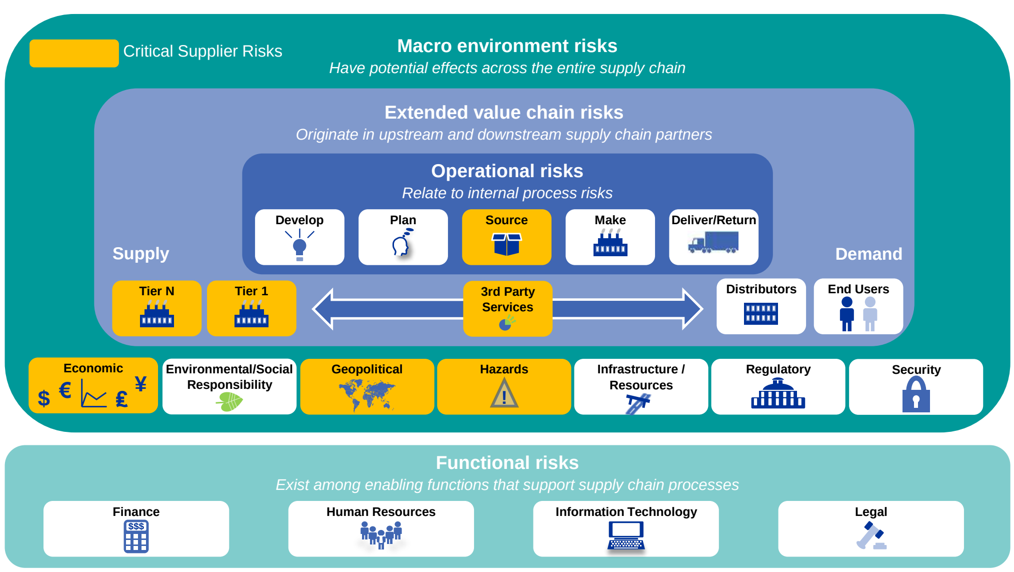
VP Purchasing: "This supplier was a corporate partner and we don't have another supplier for this part. The supplier is using unique tooling that we own, and the tools were built specifically for their processes. What do they need to avoid production and delivery disruption? Why didn't they come to us earlier? What's the problem?"

VP Sales: "What am I supposed to tell our customers? I don't want them to panic. I need to contain this problem so it won't affect our other customers."

Supply interruptions can dramatically affect business operations as organizations expand their networks globally and increasingly rely on suppliers to deliver just-in-time high-quality parts. In many cases, business leaders have more questions than answers: How did this happen? Why we did not see this coming? What options exist to handle this disruption? How much is this going to cost?

Supply chains are continuously exposed to a multitude of risks, emanating from within and outside of their value chains. We have identified more than 200 current and emergent risks across four main risk categories that may impact supply chains (Fig. 1 Supply Chain Risk Framework). Manufacturers need to know the health and status of their suppliers to avoid these risk scenarios that can damage their business operations, revenues, and even brand and reputation. This means they need to develop a closer relationship with their suppliers and weigh all available options in case suppliers get in trouble.

Supply Chain Risk Framework



Note: Though not depicted above in order to maintain simplicity, risks are often highly inter-related with impacts spanning across functions internal to the company and externally within the extended value chain.

Health trends among suppliers

Since 2000, there have been numerous examples of suppliers — ranging from highly diversified global tier 1 to single product line tier 2 (or deeper) suppliers — that have sunk into deep distress or even declared bankruptcy.

The reasons are many and varied. For instance, some have experienced the impact from deteriorating macroeconomic conditions (the U.S. mortgage crisis), increasing fuel/commodity prices, unsustainable business costs (union demands), and unpredictable natural events (the 2011 Japanese earthquake and tsunami), among others. Additionally, the prevalence of global supply chains in all industries combined with customer demands for affordable products and an organization's own financial targets have pressured companies to keep prices low. This has produced razor-thin margins, assuming companies even know their real costs, and increased the vulnerability to business climate disturbances.

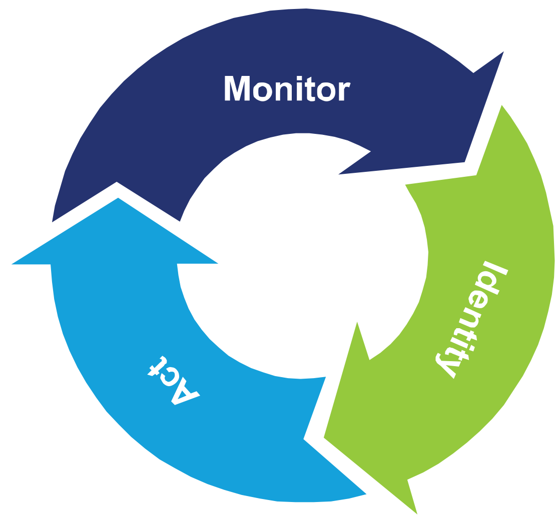
As a result of the recent global economic downturn, many companies were at risk of defaulting on bank interest payments. For example, in the automotive industry, three sizeable tier-1 suppliers with combined revenues of $26 billion filed for bankruptcy protection that was primarily due to a limited geographic diversification and customer portfolio. But their move can also be traced back to the preceding decade when their organizations cut costs and stopped innovating.

This climate has drawn attention to the critical condition that many suppliers face. It has highlighted the pressing imperative for companies to monitor the health of their suppliers in order to avoid any disruption to ongoing operations. Merely reviewing financial statements and quality and delivery scores are not enough to stay ahead of any supply chain risk. It requires a deeper examination of other key business health elements that only an active supplier risk management function can provide.

The Supplier Health Life Cycle

The supplier health life cycle is the ongoing process of monitoring suppliers, identifying those with issues, and acting decisively to mitigate any problems. It provides companies with a clear understanding and awareness of a supplier's risk profile through a dynamic monitoring system — and the ability to implement an intervention strategy as required. If your organization is not engaged in all three stages, your ability to address issues effectively and efficiently will be hampered — and at a significant cost to you and your customers.

There are three primary components of the supplier health life cycle:



Monitor

- Review external information, such as financial statements and stock performance.
- Analyze internal metrics, such as quality performance and pricing trends.
- Conduct proactive supplier segmentation — that is identifying your preferred suppliers, your long-term partners, etc.
- Require preferred suppliers to share select supplier health metrics as a prerequisite to any collaboration.
- Define other key environmental metrics (geography, political, labor, etc.) based on locations of suppliers' facilities.
- Develop a risk profile of each supplier, prioritizing those with the highest potential risk or the most unknowns.

Identify

- Distinguish the troubled suppliers from the healthy ones.
- Understand the supplier health issues and their root causes.
- Use data from the monitoring system to determine the most likely areas of distress.

Act

- Based on the degree of supplier distress and availability of options, determine the most effective response — whether it is to resource parts, invest in the supplier, or acquire it outright.
- Empower a team to develop strategies and to be proactive rather than reactive in mitigating any supplier distress issues.
- Encourage development and collaboration efforts with the supplier to improve communication and material process flows, reduce lead time, increase flexibility, improve responsiveness, and to reduce cash-strapping inventory needs between suppliers and customers.
- Consider new approaches for resolution versus defaulting to historical responses and measures.

Do not wait before it is too late

Most organizations monitor their suppliers to some extent, but it is usually in a reactive and situational manner. A recent survey indicated that 92.5% of organizations monitor the past performance and current financial stability of their suppliers. However, this scrutiny generally occurs during supplier certification (73.8%) or contract award (76.5%). Only 57% of suppliers are monitored for reasons other than certification or contract award.

When assessing their supplier's health, organizations also tend to focus on their suppliers' historical financial statements and credit scores and overlook other strategic health indicators, such as operational performance. Trends in quality, delivery performance, inventory turns, payable and receivable payment term balance, etc., are valuable early indicators of the future financial performance and health of a supplier. Similarly, cash management techniques used, policies in place, and cash culture maturity are indicators of a company's ability to face effectively economic downturns and other business disruptive events.

Organizations should have dedicated resources to monitor supplier health, starting with the most critical metrics as defined and prioritized by your company. But defining such metrics is not easy because "critical" means different things to different organizations. For example, it could mean annual dollar spend with a supplier, number of products consuming the supplier's parts, difficulty in resourcing to another supplier, availability of raw material, geographic location, or something else entirely.

However, when an organization does prioritize its metrics, it can then establish business rules that help evaluate and identify indicators of an at-risk supplier.

Recognize the symptoms

Indicators can be segmented into three categories — underperforming, troubled, and distressed — by order of increasing intensity of a supplier's health issues.

Underperforming

- Lower stock performance relative to peers
- Market share loss
- Slow sales growth
- Margin deterioration
- Workforce reduction
- Delivery and quality issues
- High customer concentration

Troubled

- Tighter working capital
- Lower capital spending
- Debt restructuring or debt covenant default
- Continued workforce reductions
- Operational reorganization
- Periodic or continued operating losses
- Lack of innovation in product and/or process technologies

Distressed

- Technically insolvent
- Limited access to new debt
- Requests for price increases or accelerated payment terms
- Inability to gain new business from customers
- Stock devaluation
- Debt downgrade
- Financial restatements
- Parts of the business liquidated

Organizations that spot these indicators earlier can take quicker action to protect their parts supplies. Most information needed to identify an at-risk supplier is often readily available for analysis.

- Publicly available information can indicate negative trends in data, such as working capital, operating margin, free cash flow, and key ratios (Note: Companies can even point out to privately held companies that sharing information can foster a healthy and long-term collaboration.).
- Internal scorecards for quality and delivery can indicate certain trends.
- There are risks associated with the supplier's customer concentration and operations footprint.
- Price history and changes to price/terms can shed light on a supplier's health.

Reviewing suppliers' business plans can also provide a sense of their health. Here are some questions that organizations should ask:

- Does the supplier have a diverse customer base? Does it have several (or more) customers across different industries and multiple geographies?
- Does the supplier have a detailed strategic business plan for growth and profitability for the next five years? What is the supplier's track record on achieving past strategic plans?
- Does the supplier invest strategically in its business to support growth? How does it create profit-producing assets, hire and grow talent, innovate and develop competitive advantages?

Four treatments to consider

Despite your actions to maintain effective and efficient collaborations with all your suppliers, there is one that is in distress. It is slipping towards bankruptcy and is not able to self-correct. The supplier's failure could severely disrupt ongoing supply of parts to your business.

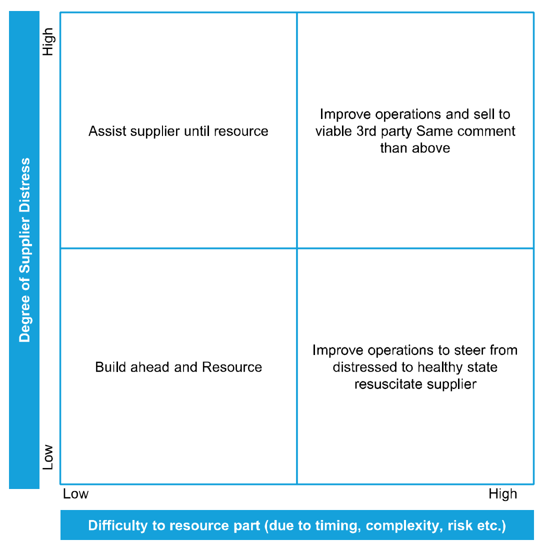
There are multiple ways to address troubled or distressed suppliers. Before discussing options, there are certain factors that should be considered before deciding on the best route:

- Root cause of the disruption
- Inventory level of parts now and weeks before depletion
- Flexibility and capacity to build ahead or stockpile parts
- Ownership of tools and assets used to produce parts
- Level of intellectual property controlled by the supplier
- Severity and extent of the supplier's health
- Supplier's history of managing operations (to assess if it can recover through operational restructuring) and its awareness of subtier supplier health
- Macro trends favorable or unfavorable to industry and supplier
- Availability and capacity of alternative suppliers
- Ease of resourcing parts to alternative supplier (time, complexity, risk etc.)
- Responsiveness and relationships with alternative suppliers

Depending on the degree of supplier distress and the flexibility to re-source, organizations have four major response options to mitigate adverse supply situations (Fig. 2):

- Control the re-source of production to a new supplier
- Support, invest, and restore supplier health and operating performance
- Support, invest, and prepare supplier for sale
- Acquire the troubled supplier (vertical integration)

Fig. 2: Distressed Supplier Response Options



Re-source production to a new supplier

If alternative suppliers are available and the complexity of the part is such that it can be transitioned quickly to a new healthy supplier, then re-sourcing parts to a new supplier should be considered. Before making the choice to re-source, organizations need to conduct a comprehensive assessment of their existing relationship and the capability and responsiveness of the potential new supplier.

For example, tools and gauges are normally owned by the part buyer, which allows it to move such tools to a new location. But its relationship with the supplier, as well as its spend, relative to other customers, may complicate the issue.

However, sometimes a critical asset (such as a subcomponent part tools) may be owned by the troubled supplier, who may hold this asset hostage. When the part is resourced, the troubled supplier may either increase the price on the subcomponent or may indicate that it will discontinue production. Therefore, when parts are resourced, an organization should have a systemic view, including a tool and process audit, to manage the systemwide risks.

Support, invest, and restore supplier health

If an analysis of the supplier's business indicates that operations can be improved through efficiency and additional investments, then this option should be considered. A company may need to invest more capital, such as new equipment or tools, provide subject matter specialists, or hire a third party to help improve a supplier's operational efficiency and reduce costs. This option needs to be evaluated like any business case. It will likely lead to a cash infusion driving minimal disruption to the ongoing operations. The company should invest in this option only if it clearly understands the associated risks and likelihood of achievement. If the investment is only a temporary fix and the supplier issues are recidivistic in nature, then this option may not be appropriate.

Support, invest, and sell to new ownership

Despite investments and specialized oversight, a supplier may not be able to sustain operations in some cases. This may be due to a lack of customer diversification (e.g., excessive dependence on a single customer). In these instances, the company should seek to sufficiently improve a supplier's operations and business viability, so it can be sold to an interested third party, which should be able to provide evidence of sustainable operations (such as multiple customers and a global footprint).

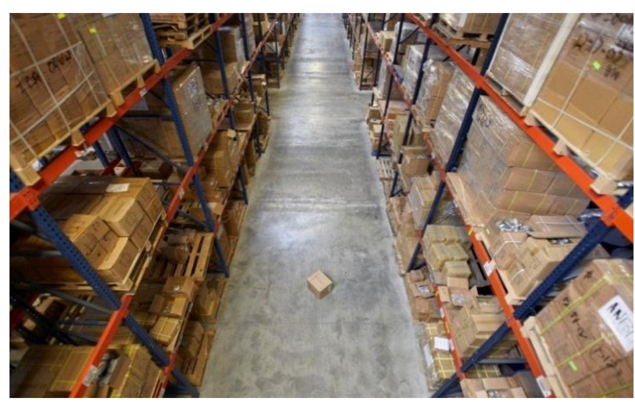
The key initial step in this process is to identify a viable suitor. Any investment in operational improvements will likely lead to cash outflows, but mitigate operational disruptions. The third-party buyer may request certain incentives (for example, a long-term sales agreement and other investments) to complete the sale. This option is time-consuming and suited for highly critical parts in a terminally distressed supplier.

Acquire the troubled supplier

If a part is critical and alternative suppliers or suitable third-party buyers are not available, then the acquisition of the supplier should be an option. While vertical integration should typically be avoided in the current business climate, selective vertical integration should be an option for critical (and rare) assets.

In this scenario, the analysis is between continued operations with vertical integration (sometimes temporary) versus disrupted operations while waiting for a supplier distress solution.

Companies should analyze a host of factors before proceeding along this path. Some factors include the supplier's flexibility in overhauling operations, presence of labor unions, and the ability to spin off the unit after a few years of ownership. The company should assess the impact of the acquisition on the supplier's business. For example, the supplier may have multiple customers, who are the company's competitors. These customers may try to shift their business elsewhere, which may further affect the business model (Of course, the lack of alternative suppliers will also be a factor in the customers' decisions.). Even if this option is pursued, the company may likely try to divest its acquisition at a later time to focus on its core operations.



The following case example highlights Deloitte's experience in handling troubled suppliers. The situation can be outlined as follows:

During the recent economic downturn, an automotive supplier became financially distressed and approached its primary customer, "the Company," for an immediate cash infusion to stay viable.

Lacking immediate resourcing alternatives, the Company made attempts to sell the business, but discussions deteriorated at the eleventh hour due to a lack of trustworthy financial statements.

All operational and administrative processes lacked controls and efficiency.

Deloitte took the following actions in three distinct areas:

	Actions	Results
Improve the business	• Deployed a supply chain and manufacturing operations improvement task force team to the distressed supplier. • Assessed the supplier's operations and supply chain and determined root causes of disruption and operational process gaps. • Developed short-term gap-closing solutions and longer-term operational improvement steps and plans. • Drove implementation of operational solutions, complemented supplier's teams with skilled practitioners and resources, and improved supplier's health. • Implemented stringent cash forecasting and management processes.	• Improved operations driving significant annualized earnings before interest, taxes, depreciation and amortization (EBITDA) gains.
Prepare business for sale	• Developed complete seller due diligence packages with verifiable financial data. • Created marketing books for assets to be sold. • Performed market research to identify potential buyers across the globe.	• Identified and executed pricing actions for service parts further increasing EBITDA.
Transition the business	• Defined and implemented transition service agreements and processes. • Led the carve-out of core functions from the supplier. • Developed operational tracking analysis (e.g., finished goods inventory, raw material inventory, and part containers) to support timely resourcing of parts.	• Mitigated production interruptions for the Company

Conclusion

With unpredictability resulting from the economic downturn's effect on a global supply chain combined with geopolitical issues, it has become quite clear that monitoring the health of your supplier's health is an important initiative. You may not able to precisely predict the level of distress in the supply base, but manufacturers can implement several strategies to prepare for and react to events:

- Design a process or monitoring system to gather supplier data and evaluate health, continually — not just during contract award
- Understand "trigger points" based on trends and business rules when intervention with a supplier is appropriate, that is before any distress is apparent and impacts your operations.
- Designate teams empowered to expedite qualification of alternate sources of supply.
- Assign teams to use data from the sourcing model and the monitoring system to engage in rigorous scenario simulations, which establish business case criteria for implementation of improved processes and systems.
- Develop a playbook for higher likelihood or higher-risk scenarios.
- Confirm that data is readily available to facilitate an appropriate rapid response. This should include:
  - A broad bill of material through the tiers
  - An inventory of tooling within the supply chain, with detailed information on location, identification, and condition
  - Data on characteristics of specific machinery and equipment

How can Deloitte help?

Deloitte has the in-depth experience, knowledge, tools, and resources to assist organizations that seek to build any stage of the supplier health life cycle, including the integration of all three stages.

Deloitte can bring supply chain experience and analytics tools to define a company's process that can monitor and identify unhealthy suppliers. Analytics advancements can provide reports on past and present operations and also help forecast the future. This gives progressive manufacturers with complex global supply chains a competitive edge. Deloitte Analytics is the practice of using data to drive business strategy and performance. It includes a range of capabilities from looking backward to evaluate what happened in the past, to forward-looking approaches like scenario planning and predictive modeling. It also includes such capabilities as data management, business intelligence, performance management, and advanced analytics.

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