

E-BOOK

SUPPLY CHAIN

RISK

MANAGEMENT

SUPPLY CHAIN RISK MANAGEMENT

INTRODUCTION

There are numerous potential risks within a supply chain, each of which can make serious impacts that resonate all the way down the chain. A manufacturer must manage these risk to ensure that production deadlines are met, product quality is high, and the company's reputation remains strong. Supply chain risk is also one of the factors examined in an AS9100 audit, which certifies Aerospace & Defense (A&D) manufacturers as being compliant with the highest process standards.

In this guide, we'll provide a comprehensive overview of supply chain risk management. We'll start with discussing the many risks that can impact supply chains, then examine how to best manage those risks.

POSSIBLE SUPPLY CHAIN RISK

Many factors play into supply chain risk. While some can be monitored through internal controls and corporate action, there are many external factors over which companies have little control.

Which factors are most important for supply chain risk management? Let's examine them one by one.

INTERNAL INDUSTRY FACTORS

Compliance

While there are international standards in industries like A&D, companies need to understand that each nation and region may have its own regulations regarding accounting, quality assurance, and worker's rights. If companies are found to be non-compliant with the regulations in their region, they could face serious financial and legal consequences.

Reputation

Of course, companies can't enforce laws on others within their supply chain. They should, however, be able to recognize when a supply chain party isn't playing by the rules. Otherwise, companies risk damaging their reputation by being seen as one who does business with a party that disregards laws. Companies are particularly susceptible to PR damage if the violations involve human rights or the environment.

Shipment and Delivery Accuracy

Companies need to know how reliable others in their supply chain are. Ensuring that a supplier can deliver consistently and on time is

Physical Security

Supplier location can be an important factor when assessing the physical risk of goods. Terrorism and extreme political instability can lead to lost or stolen inventory, or even physical damage to a facility.

Internal Processes

The reliability and reputation of parties in the supply chain can often come down to the quality of their internal processes. Lack of inventory checks, quality assurance processes, and other controls can impact the ability to deliver orders and goods on time.

Environmental Factors

Given that environmental concerns have risen to the global stage, companies need to be aware of how those in their supply chain are handling these issues. Supplier plants, particularly in second- and third-world locations, may not have regulations or the resources to enforce them. Governing bodies like the European Union have strict laws on carbon emissions. Ignoring laws or acting irresponsibly can result in reputational damage that may be hard or impossible to repair.

Social Factors

Workers' rights is another concern that can open companies up to fierce public scrutiny. Factors include working conditions, exposure to harmful materials, and child labor.

EXTERNAL INDUSTRY FACTORS

Weather

Natural disasters can trigger significant disruptions in your supply chain. It's important to understand the location of every plant in your supply chain (including second- and third-tier suppliers), and their associated weather risks. Southeast Asia, for example, is prone to major flooding during monsoon season, while the U.S. Pacific Coast is prone to earthquakes.

Country of Origin

Given the tiered system of the A&D industry, it's possible that companies may not always be aware of the true origins of purchased components. Depending on their location, these origin plants may be susceptible to security threats that can cause order delays or compromised components.

Politics

Companies that work with international suppliers need to understand how political events can disrupt operations. Over the past decade, events like the Arab Spring have shown that uprisings can bring about total governmental change. Recent crises in seemingly stable regions like Europe have shown that no area is without political threat.

Economics

Economic events like recessions and inflation can significantly impact business operations, with massive layoffs and work strikes being just a few potential outcomes. For companies, this risk becomes greater if an affected supplier produces unique components or offers another unique competitive advantage.

MANAGING SUPPLY CHAIN RISK

Visibility

Companies need to achieve a level of visibility and alignment within the chain that works toward the goal of serving the end customer. This first requires a complete understanding of how materials flow through the chain from procurement to assembly and delivery. Second, parties within the chain must be aligned on key metrics (KPIs) that signal the health of the entire supply chain. From here, parties can identify bottlenecks and other inefficiencies and develop strategies to resolve them.

Ownership Beyond Silos

The supply chain is only as strong as its weakest link. But how can you tell where the strengths and weaknesses lie if each party uses its own internal controls, technology, and communication tools? Parties need to develop processes that allow for seamless communication. This means more than a party reporting on metrics solely related to their own responsibilities.

In other words, leaders from every party need to help ensure that decisions are made at their level aren't tweaked by lower-level management during execution. For example, reducing the time between order placement and delivery requires the work from local suppliers on up. Plant-wide productivity, on the other hand, means something different for each location, and is open to manipulation at each one.

SCRM

One effective way to bring together all supply chain parties is by creating a Supply Chain Risk Management program (SCRM). According to the Supply Chain Risk Leadership Council, every SCRM program must address the following four principles:

- Leadership
- Governance
- Change Management
- Business Case Development

Addressing these principles requires the input of leaders across the supply chain involved in areas including finance, governance, engineering, and manufacturing. Agreed-upon risk management processes need to be embedded into business-function processes. Meetings among leadership should be held regularly (e.g. monthly, quarterly) to ensure proper implementation of practices and to discuss the status of goals.

Order Options

One common way to balance supply chain risk is to maintain reliable secondary suppliers with the option of upping the order. This gives companies the flexibility needed in the event that other suppliers can't deliver, such as during a natural disaster or extreme political event.

Execution Skills and Capabilities

Every party in the supply chain must have the skills and capabilities needed to execute a chain-wide strategy. Managers need the functional know-how to implement relevant changes at their location. They must also have the capabilities and resources to make implementation a reality, including a skilled workforce,

Re-Evaluate With Every Added Party

It's important to remember that with every added supplier, you're essentially changing your entire supplier network. New second- and third-tier suppliers work with their own networks of suppliers beneath them, which in-turn carry their own sets of internal and external risk factors.

ERP

An enterprise resource planning (ERP) system can streamline and document the supply acquisition process. ERP encourages collaboration between parties across the supply chain for documentation, communication, and even social networking. ERP can also aid A&D companies in securing an AS9100 certification, as many of the audit's requirements rely on a company's QA, product management, and accountability procedures.

Onboarding

Every company should have an onboarding process when starting a new supplier relationship. This allows companies to lay out their needs and expectations regarding order fulfillment, delivery, and other protocols. By understanding these needs, a supplier can make adjustments, as well as explain their procurement and production processes.

Without proper onboarding, companies set themselves to have a negative experience from the start. Communication channels may not be properly defined, leaving both parties frustrated when needing to ask questions or communicate order status.

SUPPLY CHAIN RISK MANAGEMENT TODAY

Despite the many risks that modern manufacturers face, risk management is in a shockingly fragile state. According to a recent Global Supply Chain Institute survey, 90% of firms don't quantify risk when outsourcing production to another party. While 66% of firms have risk legal or risk managers, most of these employees were not responsible for supply chain risk.

Ignoring supply chain risk can leave companies in an extremely vulnerable position. External and internal factors can affect different suppliers at different times, or even several at once, compounding the damage. Relying on good faith should never be enough for any party. Collaboration, visibility, and an alignment of goals are the best way forward for A&D, and other industries as well.

Risk is a part of doing business. How much is withstandable is in every company's hands.

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