

THE SUPPLY CHAIN RISK MANAGEMENT PLAYBOOK:

NAVIGATING THROUGH
AN UNCERTAIN
SUPPLY CHAIN FUTURE





SUPPLY CHAIN RISK MANAGEMENT

In many industries, globalization has resulted in the consolidation of suppliers and increasingly interdependent Supply Chains. Globalization has increased efficiencies and economies of scale, but it has led to decreased diversity of sourcing and supply options. Furthermore, Just-in-Time (JIT) inventory systems place continual pressure on inventory management. During times of certain supply, JIT methodologies optimize use of capital resources, however during times of supply chain uncertainty, excessively lean inventories can result in operational disruptions.

Increasing geopolitical tensions, pandemic related lockdowns, and ideological polarizations have increased supply chain disruptions for many products and materials. Consequently, Supply Chain management teams are seeking ways to identify, assess, mitigate and reduce risk. The worst types of risk are those we don't see coming, we have no plan for, and place the company in jeopardy.

An active Supply Chain Risk Management System cannot ensure continuity of supply, however it can provide a playbook with options when sources of supply are threatened.

USC Consulting Group has been developing successful management operating systems to drive operational improvements with our clients for over 50 years. Our Supply Chain experts have broad industry experience with the latest risk management practices to help you identify and respond to the unique risks that affect your business. The following concepts will help business leaders develop a successful supply chain risk management system to navigate an uncertain supply chain future.

PLAN THE ASSESSMENT

Define the Project Charter

The Charter gives the risk management team a mandate and resources for change. Include an Objective Statement that provides the over-arching purpose and should reflect corporate risk management objectives. To the extent practicable, the Deliverables and Benefits should be:

- **Measurable either qualitatively or quantitatively**
- **Achievable within the constraints imposed by the timeline**
- **Relevant to the larger goals or context of the organization**

Assess the Organization's Risk Tolerance

Risk Bearing Capacity (RBC - also called risk capacity) is usually defined in terms of **risk capital** available to the company for absorbing adverse effects from risks. For a commercial business, risk capacity might be considered in terms of how many days the firm can sustain production disruption before losing money for the year (negative EBITDA). The estimated RBC is different between industries.

Risk Tolerance (or risk appetite) assesses the management team's **willingness** to utilize its risk capital. Leaders of different functions will often have different tolerances for risk. Legal and Engineering often have the lowest risk tolerances whereas Sales often has higher risk tolerances. Understanding both the risk capital and risk tolerance of your company sets a foundation for appropriate Delegations of Authority (DOAs) and how much governance will be required with ventures that involve risk.





Determine Criteria for Decisions

The criteria for decision making must be set by the firm's executive team. These criteria act as boundaries and rules when assessing probabilities, impacts, mitigation costs or trade-offs between risks. During this stage the following criteria should be determined:

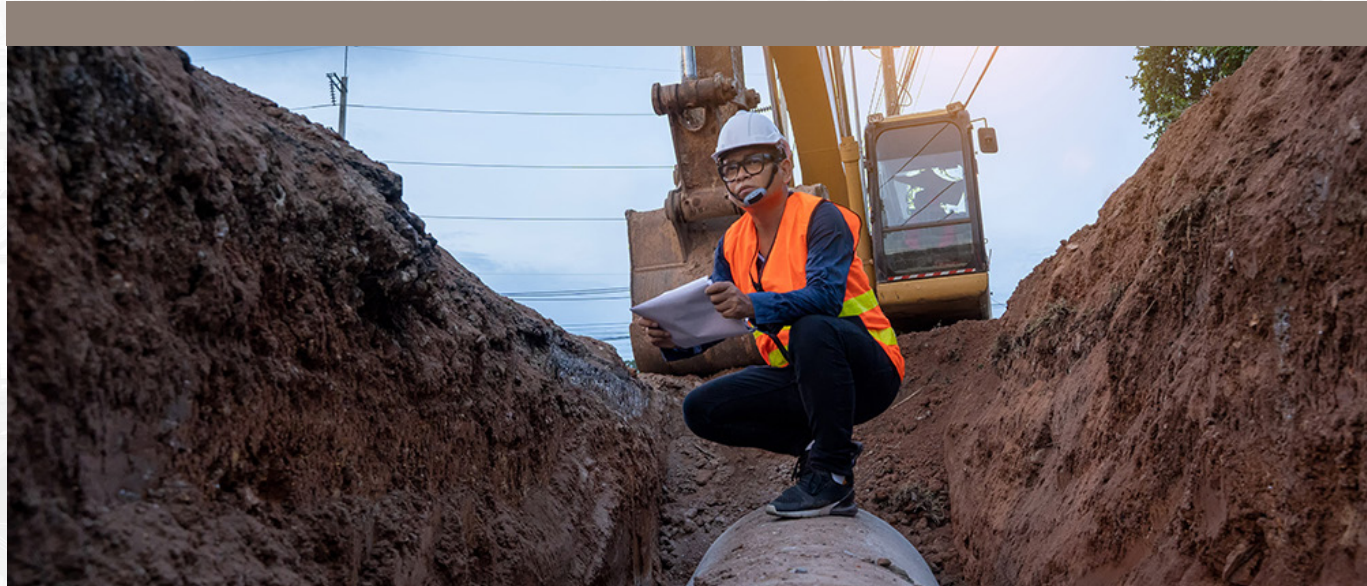
- **At what point does financial Impact become material? \$1m? \$10m? \$100m?**
- **What probability of risk is the firm willing to accept? (See RBC work above. Risk averse companies in risk averse industries will set lower thresholds).**
- **The combination of Impact and Probability determine the class of risk (for example class I, II, III, IV risks). What risk class must be addressed by the risk team through mitigating actions? What are acceptable risks and unacceptable risks?**
- **How will options associated with multiple risks that might have positive or negative consequences be determined?**
- **How will disagreements between assessment participants be decided? Majority vote? Leader decision?**
- **How will mitigation options that adversely affect other members of the business be decided?**

DO THE ASSESSMENT

Conduct the Risk Assessment

Once management has defined success and risk tolerances, the team has been established and trained, and the risk management tools have been developed, it is time to conduct the initial Risk Assessment. Participants consist of all Risk Management team members as well as a broad group of Subject Matter Experts (SMEs). It is called the initial assessment because additional assessments will occur periodically (often annually) that broaden the scope of the initial assessment. Additionally, new risks that were not considered during the initial assessment are added to the register as they emerge. The Risk Register becomes a living document with regular updates as risks emerge. Important aspects of a sound risk register include:

- Risk Groupings or categories of risks relevant to your supply chain
- Identifying where in the supply chain the risk will manifest
- The affected suppliers and products



- A clear impact description
- An assessment for impact – either on revenues, costs, or reputation
- A probability of occurrence
- A mitigation strategy
- A risk owner with authority to put mitigation plans into action
- Milestones for completion
- A valuation associated with the post mitigation reduced risk

Determine the Sources and Drivers of the Risk

Getting to the root cause of the risk can be challenging. You don't want to solve the wrong problem. A good “Impact Description” and “Risk Triggers” will help identify the root cause of the risk. Root causes are sources and drivers of the risk. Knowing the root cause will guide the Risk Team during the Check the Findings phase to more accurately model risk reduction results. If you are having difficulty identifying the root cause, tools that can help are 5 Whys and Fishbone Analysis.

CHECK THE FINDINGS

Build the Risk Models and Assessment Tools

This step must be tailored to the risk being assessed. Many risk models and assessment tools are created in Excel in order to assess cash flow impact with NPV, IRR, ROI, and Payback period. Often models involve sensitivity to multiple variables. This is not a one-size fits all approach. Finance teams often have project evaluation models and should be involved in the development and review of risk mitigation project financial results. For changes to physical parts, modeling is often done in design software. Some logistics software tools perform what if analysis. Perform sensitivity analysis using models to draw real-world conclusions.

The number and type of technique should be scaled to the significance of the decision, and consider constraints on time, resources, and opportunity costs. The main criteria for deciding between quantitative and qualitative are the form of output most useful to stakeholders and availability of reliable data. Considerations for assessment technique selection include:

- Purpose of the assessment
- Needs of the stakeholders
- Legal, regulatory, and contractual requirements
- Operating environment and scenario
- Importance and complexity of the decision
- Time available before a decision must be made
- Information and expertise that are available or obtainable

Validate the Assumptions with the Stakeholders

Stakeholders are identified in the Risk Register for each risk. The owner must validate assumptions and findings with stakeholders to ensure proper buy in from the organization prior to execution of any change. Be prepared for stakeholders to produce roadblocks. Many have legitimate concerns with changes you will propose to mitigate supply chain risks. There may be internal stakeholders and external stakeholders. All affected parties should have input into the proposed change



to ensure the right measure is being taken for the least cost. Validating the assumptions can include:

- Checking for appropriate scope
- Reviewing all critical assumptions for credibility
- Checking for usage of appropriate methods, models, and data
- Using multiple methods, approximations, and sensitivity analysis to test conclusions

ACT ON THE FINDINGS

Implement and Verify the Risk Mitigation Solution / Controls

Once all appropriate stakeholders have agreed to the change, put the risk mitigation strategy into action. Verification involves checking that the analysis was done correctly. Verification of results may take some time for the process to recognize the new costs and value. The best practice is to have the value of the risk reduction verified by an independent party, most often a member of finance.

Verification can include:

- Checking validity of mathematical manipulations and calculations
- Checking to ensure results are insensitive to presentation of data or results
- Comparing results to past experiences or outcomes after occurrence
- Identify input parameters that have significant effect on the results
- Explicitly obtaining feedback as time progresses

Control and Monitor the Risk

Assessments should be reviewed periodically to identify if changes occurred causing new risk conditions. A good Risk Management Operation System monitors the risk for a period of time (month, year) to ensure risk reduction improvements stick.

Monitoring can be used to:

- Compare actual outcomes with predicted results (commonly known as a post mortem or post investment review)
- Look for precursors and early indicators of potential consequences identified
- Collect data for a good understanding of risk
- To scan for new risks and unexpected changes

Conclusion

Installing a well-functioning Supply Chain Risk Management Operating System is a journey, not an event. Enhancing responsiveness to risk provides competitive advantages, especially in industries where

competition for key vendors, access to resources, and logistics constraints are prevalent.

USC Consulting Group has a proven history with hundreds of manufacturing clients in dozens of industries for over 50 years to maintain operation stability. If the enclosed materials have generated interest, please contact us to help your Supply Chain team take your company's risk management operating system to the next level.

USC CONSULTING
GROUP™

Empowering. Performance.

Contact Us:

1-800-888-8872
info@usccg.com

USC Supply Chain Risk Management Tool Box

