

Introduction to Supply Chain Risk Management

Introduction to Supply Chain Risk Management (SCRM)

Key concepts, why it matters, and how to implement an effective program.

1. What Is Supply Chain Risk Management?

Aspect	Definition
Supply Chain	Network of organizations, people, activities, information, and resources that move a product or service from supplier to end customer.
Risk	Potential event or condition that can cause a deviation from the expected performance of the supply chain (e.g., cost increase, delay, quality loss).
SCRM	Systematic process of identifying, assessing, mitigating, and monitoring risks that could disrupt the flow of goods, services, information, or finances across the supply chain.

2. Why SCRM Is Critical

Reason	Impact on Business
Customer satisfaction	Disruptions ? late deliveries ? lost sales & brand damage.
Cost control	Unplanned events raise inventory, expediting, or redesign costs.
Regulatory compliance	Certain industries (pharma, food, aerospace) must demonstrate risk controls.
Resilience & continuity	Ability to recover quickly preserves market share and reputation.
Strategic advantage	Proactive risk handling can be a differentiator in competitive markets.

3. Types of Supply Chain Risks

Category	Typical Examples
Operational	Equipment breakdown, labor strikes, quality defects.
Financial	Currency fluctuations, supplier insolvency, credit limits.

Introduction to Supply Chain Risk Management

Category	Typical Examples
Geopolitical	Trade tariffs, political instability, Brexit-type changes.
Environmental	Natural disasters, extreme weather, pandemics, climate-related regulations.
Cyber/Information	Data breaches, ransomware, system outages, IoT device hacking.
Demand/Side	Forecast errors, sudden demand spikes or drops, market trends.
Compliance & Legal	Changes in regulations, intellectual property disputes, customs issues.

4. Core SCRM Process (Step-by-Step)

1. Risk Identification

- Tools: supplier questionnaires, audits, news monitoring, scenario workshops.
- Output: risk register (list of potential threats with basic description).

2. Risk Assessment

- **Likelihood** – probability the risk occurs (e.g., Low/Medium/High or 0-1 scale).
- **Impact** – consequence on cost, time, quality, reputation.
- **Risk Score** – often Likelihood × Impact (heatmap visualization).

3. Risk Prioritization

- Focus on high-score items.
- Use Pareto principle (20% of risks cause 80% of impact).

4. Risk Mitigation / Treatment

- **Avoidance** – drop or redesign the risky activity.
- **Reduction** – add controls (dual sourcing, safety stock, quality checks).
- **Transfer** – insurance, contracts, third-party guarantees.
- **Acceptance** – monitor low-impact risks without immediate action.

5. Implementation of Controls

Introduction to Supply Chain Risk

- Assign owners, set timelines, allocate budget, embed in SOPs.

Management

6. Monitoring & Review

- Real-time dashboards, KPI tracking (e.g., OTIF – On-Time-In-Full, supplier risk rating).
- Periodic re-assessment (quarterly, after major events).

7. Continuous Improvement

- Capture lessons learned, update risk register, refine mitigation tactics.
-