Professional Certificate in Risk Management in Supply Chains

Monitoring and Measuring Supply Chain Risk

A – Alert Threshold
Related terms: risk indicator, trigger level, escalation protocol.
A predefined value for a risk metric that, when exceeded, signals that immediate attention or corrective action is required. For example, a 15 % increase in lead-time variability may trigger an alert. Challenges include setting thresholds that are neither too sensitive (causing false alarms) nor too lax (missing emerging risks).

ABR – Average Business Risk
Related terms: risk scoring, composite index, benchmark.
The mean score derived from a set of weighted risk indicators across a supply chain network, providing a single figure to compare performance over time or against peers. Practitioners must ensure consistent weighting and data quality to avoid misleading trends.

Accident Frequency Rate (AFR)
Related terms: safety performance, incident reporting, reliability.
Number of accidents per million operating hours, used to monitor safety-related supply chain disruptions. A high AFR may indicate inadequate training or poor equipment maintenance, prompting targeted interventions. Data collection can be inconsistent across suppliers, limiting comparability.

Advanced Analytics
Related terms: predictive modeling, machine learning, data mining.
Techniques that apply statistical and algorithmic methods to forecast supply chain risk events, such as demand spikes or supplier insolvency. Practical application includes using regression models to predict lead-time deviations. Challenges involve data silos, model interpretability, and the need for skilled analysts.

Aggregation
Related terms: risk consolidation, hierarchical reporting, roll-up.
The process of combining individual risk measurements from multiple nodes (e.g., factories, ports) into a higher-level metric for executive review. Effective aggregation preserves critical detail while delivering a manageable overview. Over-aggregation can mask localized vulnerabilities.

Alignment Index
Related terms: strategic fit, performance linkage, KPI alignment.
A metric that assesses how well risk monitoring activities support broader supply chain objectives, such as cost reduction or resilience. For instance, a 0-to-100 score reflects the proportion of risk KPIs directly tied to strategic goals. Difficulty lies in quantifying qualitative alignment.

Alternative Sourcing Ratio
Related terms: dual sourcing, supply diversification, contingency planning.

The proportion of total procurement volume sourced from non-primary suppliers. A higher ratio indicates greater flexibility in the face of disruptions. Monitoring this ratio helps balance cost efficiency against resilience. Maintaining multiple sources can increase management complexity and inventory costs.

Annualized Loss Expectancy (ALE)
Related terms: exposure, probability, impact analysis.
Calculated as the product of the annual probability of a risk event and its expected monetary loss, providing a single-value estimate of yearly exposure. Example: a 5 % chance of a port strike causing $2 million in delays yields an ALE of $100 000. Accurate probability estimates are often difficult to obtain.

Assessment Frequency
Related terms: review cycle, monitoring cadence, audit schedule.
The interval at which risk assessments are performed, ranging from real-time dashboards to quarterly reviews. Higher frequency enables quicker detection of emerging threats but demands more resources and data integration. Organizations must balance timeliness with practicality.

Asset Criticality
Related terms: key resources, dependency mapping, impact weighting.
A rating that reflects how essential a physical or intangible asset is to supply chain continuity. Critical assets, such as a sole-source component, receive higher scrutiny in monitoring programs. Determining criticality often requires cross-functional workshops and historical loss analysis.

Audit Trail
Related terms: data provenance, traceability, compliance log.
A record of all actions taken on risk data, including who entered, modified, or approved information. Enables verification of data integrity and supports regulatory requirements. Maintaining comprehensive audit trails can increase storage costs and require robust governance.

Baseline Performance
Related terms: reference point, historical data, variance analysis.
The established level of risk-related metrics (e.g., on-time delivery rate) against which future measurements are compared. Deviations from the baseline trigger investigation. Selecting an appropriate baseline demands sufficient historical data and adjustments for seasonality.

Benchmarking
Related terms: best-practice comparison, industry standards, gap analysis.
The practice of comparing an organization’s risk metrics with those of peers or industry averages to identify performance gaps. For instance, comparing supplier disruption rates with sector averages highlights relative exposure. Benchmark data may be scarce or not directly comparable.

Big Data Integration
Related terms: data lakes, ETL processes, real-time feeds.
Combining large, heterogeneous data sets (e.g., weather forecasts, social media sentiment) into risk monitoring platforms to enhance situational awareness. Benefits include richer insights; challenges involve

data quality, latency, and the need for scalable infrastructure.

Black-Swans
Related terms: low-probability high-impact events, tail risk, surprise disruptions.
Unpredictable occurrences that lie outside normal expectations, such as a sudden geopolitical embargo. Monitoring systems typically cannot predict black-swans, but scenario planning can improve preparedness. Over-focusing on black-swans may divert resources from more probable risks.

Capacity Utilization
Related terms: throughput, bottleneck analysis, production efficiency.
The ratio of actual output to maximum possible output for a manufacturing or logistics node. Low utilization may indicate excess inventory risk, while high utilization can signal vulnerability to demand spikes. Continuous monitoring helps balance efficiency and flexibility.

Chain of Custody
Related terms: provenance, traceability, compliance verification.
Documentation that tracks the movement of goods and associated data from origin to destination, ensuring integrity of risk-related information. Essential for regulated industries (e.g., pharmaceuticals). Maintaining a robust chain of custody can be administratively burdensome.

Change Management
Related terms: process adaptation, stakeholder engagement, risk transition.
The structured approach to implementing modifications in monitoring tools or metrics, ensuring that new practices are adopted without loss of data continuity. Effective change management reduces resistance and data gaps. Inadequate planning can cause metric drift.

Clearance Time
Related terms: customs delay, border processing, regulatory hold.
The duration required for goods to pass through regulatory checkpoints. Monitoring clearance time helps identify customs-related risk exposure. Variability may stem from policy changes or documentation errors, prompting pre-emptive compliance checks.

CO_2 Emissions Metric
Related terms: sustainability risk, carbon footprint, regulatory compliance.
A quantitative measure of greenhouse-gas output associated with supply chain activities, increasingly linked to reputational and regulatory risk. Example: tracking metric tons of CO_2 per shipment. Data collection may be fragmented across carriers and facilities.

Composite Risk Index (CRI)
Related terms: weighted scoring, multidimensional analysis, risk dashboard.
An aggregated score that combines multiple risk dimensions (financial, operational, geopolitical) into a single figure for executive monitoring. The CRI enables rapid comparison across regions or product lines. Weighting decisions must be transparent to avoid bias.

Concentration Risk
Related terms: supplier dependence, single-source exposure, geographic clustering.
Risk arising when a large share of procurement or production is concentrated with a limited number of suppliers or locations. Monitoring concentration ratios helps identify potential points of failure. Diversification can increase cost and complexity.

Continuous Monitoring
Related terms: real-time analytics, streaming data, automated alerts.
The ongoing collection and analysis of risk-related data to detect deviations as they occur. Technologies such as IoT sensors and AI-driven dashboards facilitate this approach. Requires robust data pipelines and clear escalation pathways.

Control Limits – UCL/LCL
Related terms: statistical process control, variance bands, quality thresholds.
Upper and lower bounds set on a risk metric (e.g., inventory turnover) to define acceptable variation. Points outside the limits trigger investigations. Determining appropriate limits demands historical variability analysis and may need periodic recalibration.

Correlation Analysis
Related terms: dependency mapping, multivariate risk, causality assessment.
Statistical technique that evaluates the relationship between two or more risk indicators, such as supplier lead time and freight cost volatility. Strong correlations can reveal underlying drivers. Spurious correlations must be filtered out through rigorous testing.

Cross-Functional Risk Committee
Related terms: governance board, stakeholder alignment, decision forum.
A group comprising representatives from procurement, logistics, finance, and compliance that oversees risk monitoring and mitigation activities. The committee reviews dashboards, approves mitigation plans, and ensures resources are allocated. Effective committees require clear charters and balanced authority.

Data Normalization
Related terms: scaling, standardization, comparability.
The process of converting disparate data sources into a common format or scale to enable accurate aggregation and analysis. For example, converting supplier lead-time data from days to weeks. Poor normalization can distort risk scores and lead to erroneous decisions.

Data Quality Index (DQI)
Related terms: accuracy, completeness, timeliness, reliability.
A score that assesses the overall health of risk data, typically based on dimensions such as error rate, missing values, and update frequency. A high DQI supports confident monitoring, while low scores signal the need for data cleansing initiatives.

Demand Variability
Related terms: forecast error, sales volatility, order-to-delivery lag.

The degree to which actual demand deviates from forecasted demand, influencing inventory and production risk. Monitoring demand variability helps adjust safety stock levels. High variability may require flexible manufacturing or strategic buffering.

Disruption Index
Related terms: event frequency, impact severity, resilience score.
A composite metric that quantifies the occurrence and seriousness of supply chain disruptions over a defined period. It often combines the number of incidents with weighted impact scores. The index aids trend analysis but depends on consistent incident classification.

Distribution Network Mapping
Related terms: topology, route analysis, hub-spoke model.
Visualization of all nodes and links in a supply chain, used to identify critical pathways and potential choke points. Mapping supports risk monitoring by highlighting where sensor data should be collected. Complex networks may require GIS tools for accurate representation.

Dynamic Risk Assessment
Related terms: real-time evaluation, adaptive modeling, scenario updating.
An approach that continuously recalculates risk exposure as new data arrives, rather than relying on static, periodic assessments. For example, updating supplier financial risk scores after each quarterly report. Requires automated data feeds and agile analytics.

Economic Indicator Monitoring – PMI, CPI
Related terms: macro-risk, leading indicators, market sentiment.
Tracking of macro-economic metrics such as Purchasing Managers' Index (PMI) or Consumer Price Index (CPI) to anticipate supply chain cost and demand shifts. Integrating these indicators into risk dashboards can improve foresight. Interpretation demands expertise to avoid over-reaction to short-term fluctuations.

Emergency Response Time (ERT)
Related terms: incident management, recovery speed, contingency activation.
The elapsed time from the detection of a supply chain disruption to the initiation of a predefined response plan. Shorter ERTs generally reduce overall impact. Monitoring ERT helps evaluate the effectiveness of emergency protocols and identify bottlenecks in communication.

Environmental Scanning
Related terms: horizon scanning, trend analysis, external intelligence.
Systematic observation of external factors (political, regulatory, technological) that could affect supply chain risk. Tools include news aggregators, regulatory databases, and expert networks. Translating raw information into actionable risk signals is a key challenge.

Event Severity Rating
Related terms: impact scoring, loss classification, priority level.
A numerical or categorical value assigned to a disruption event based on its financial, operational, and reputational consequences. For example, a "high" severity rating may be reserved for events causing >5 %

revenue loss. Consistency across departments is essential for reliable aggregation.

External Benchmarking
Related terms: industry standards, peer comparison, performance gap.
The practice of comparing an organization's risk metrics against publicly available data from competitors or industry consortia. It provides context for internal performance but may be limited by data availability and differing reporting methodologies.

Feed-Forward Control
Related terms: proactive monitoring, early warning, preventive action.
A control mechanism that anticipates potential risk events based on leading indicators and initiates corrective actions before the event materializes. Example: increasing safety stock when supplier capacity utilization exceeds 90 %. Requires reliable predictors and swift decision pathways.

Financial Exposure
Related terms: credit risk, cost overruns, liability.
The monetary value at risk due to supply chain disruptions, encompassing direct costs (e.g., expedited shipping) and indirect costs (e.g., lost sales). Quantifying financial exposure supports budgeting for risk mitigation funds. Accurate estimation often hinges on historical loss data.

Forecast Accuracy
Related terms: demand planning, bias, mean absolute percentage error (MAPE).
A measure of how closely predicted demand aligns with actual demand, influencing inventory and production risk. Improving forecast accuracy reduces safety stock needs and enhances service levels. Continuous monitoring reveals systematic forecasting errors that can be corrected.

Geopolitical Risk Index (GRI)
Related terms: country risk, political stability, trade policy.
A composite score that reflects the likelihood of political or regulatory events disrupting supply chain activities in a specific region. The index often incorporates factors such as election cycles, sanctions, and civil unrest. Monitoring GRI helps inform sourcing diversification decisions.

Heat Map
Related terms: visual risk representation, risk matrix, color coding.
A graphical tool that uses color gradients to display risk intensity across suppliers, regions, or product lines. Heat maps enable quick identification of hotspots and support prioritization of mitigation efforts. Over-reliance on visual cues may obscure underlying data nuances.

Historical Incident Database
Related terms: loss history, root-cause repository, knowledge base.
A structured collection of past disruption events, including cause, impact, and remediation actions. This database supports trend analysis and predictive modeling. Maintaining data integrity and ensuring consistent classification are ongoing challenges.

Impact Assessment
Related terms: loss estimation, business continuity, scenario analysis.
The process of evaluating the consequences of a risk event on key performance indicators such as revenue, customer service, and brand reputation. A thorough impact assessment informs prioritization of mitigation investments. Requires cross-functional input and realistic assumptions.

Incident Frequency
Related terms: event count, occurrence rate, reliability metric.
The number of disruption events recorded over a specified period, often expressed per month or per 1,000 transactions. Tracking frequency highlights trends and can trigger preventive actions when rates rise. Data must be captured consistently to avoid under-reporting.

Inventory Turnover Ratio
Related terms: stock efficiency, holding cost, demand risk.
A metric that measures how many times inventory is sold and replaced over a period, indicating the balance between supply availability and excess stock. Low turnover may signal over-stocking risk, while high turnover could indicate stock-out vulnerability. Monitoring helps align inventory policies with risk appetite.

Key Performance Indicator (KPI) Dashboard
Related terms: visual analytics, executive reporting, scorecard.
An integrated display of selected risk-related KPIs, providing real-time visibility to decision makers. Dashboards often include trend lines, alerts, and drill-down capabilities. Designing an effective dashboard requires selecting metrics that are both actionable and aligned with strategic objectives.

Lagging Indicator
Related terms: post-event metric, outcome measure, historical data.
A metric that reflects outcomes after a risk event has occurred, such as total downtime after a supplier outage. Lagging indicators are useful for performance evaluation but do not provide early warning. Complementary leading indicators are needed for proactive monitoring.

Lead Time Variability
Related terms: supply volatility, delivery consistency, buffer stock.
The degree to which the time between order placement and receipt fluctuates. High variability increases safety stock requirements and complicates production scheduling. Continuous monitoring enables dynamic adjustment of buffers and identification of problematic logistics links.

Logistics Performance Index (LPI) – World Bank
Related terms: transport efficiency, customs, infrastructure quality.
A global benchmark that evaluates logistics competence based on customs, infrastructure, international shipments, logistics competence, tracking, and timeliness. Companies may use the LPI to assess regional risk levels. Interpretation must consider industry-specific nuances.

Loss Event Frequency (LEF)
Related terms: incident rate, exposure count, reliability.

The average number of loss-causing events per unit of time, used in actuarial calculations of supply chain risk. A higher LEF indicates greater exposure and may justify increased insurance coverage. Accurate tracking depends on comprehensive incident reporting.

Loss Severity Distribution
Related terms: impact modeling, risk quantification, tail analysis.
Statistical representation of the range and probability of loss amounts associated with supply chain disruptions. Commonly modeled using log-normal or Pareto distributions. Understanding the distribution aids in setting appropriate risk capital reserves.

Machine Learning-Based Risk Scoring
Related terms: predictive analytics, algorithmic weighting, AI model.
Use of supervised or unsupervised learning techniques to assign risk scores to suppliers or routes based on historical data patterns. Benefits include handling large variable sets and uncovering hidden risk drivers. Model bias, data drift, and explainability are major concerns.

Market Share Exposure
Related terms: competitive risk, demand concentration, brand dependence.
Risk arising from a company's reliance on a limited set of customers or markets for revenue. Monitoring market share trends helps anticipate demand shocks. Diversification strategies may reduce exposure but could dilute focus.

Mitigation Effectiveness Ratio (MER)
Related terms: control efficacy, risk reduction, ROI of mitigation.
The ratio of risk reduction achieved to the cost invested in mitigation actions. A higher MER indicates efficient use of resources. Calculating MER requires reliable baseline risk quantification and tracking of post-mitigation outcomes.

Monte Carlo Simulation
Related terms: stochastic modeling, scenario analysis, probabilistic forecasting.
A computational technique that runs thousands of random iterations of a risk model to estimate probability distributions of outcomes, such as total supply chain cost under varying disruption scenarios. Provides insight into tail risks but demands quality input distributions.

Network Centrality – Betweenness, Degree
Related terms: node importance, bottleneck identification, graph theory.
Metrics that assess the influence of a node within a supply chain network. High betweenness centrality indicates a node that many paths traverse, representing a potential single point of failure. Monitoring centrality helps prioritize risk-mitigation investments.

Normalization Threshold
Related terms: data scaling, outlier handling, standardization rule.
A cut-off value applied during data normalization to cap extreme values, preventing them from disproportionately influencing aggregated risk scores. Selecting appropriate thresholds balances sensitivity

with robustness.

Operational Risk Metric (ORM)
Related terms: process failure, internal control, KPI.
A measurement that captures the likelihood and impact of failures within internal processes, such as order processing errors or warehouse accidents. ORM complements external supplier risk metrics for a holistic view. Integration across functional silos can be difficult.

Outlier Detection
Related terms: anomaly identification, statistical test, data cleansing.
Techniques used to identify data points that deviate markedly from the norm, such as an unusually long lead time from a normally reliable carrier. Flagged outliers prompt investigation and possible data correction. Over-sensitivity may generate false alerts.

Performance Variance
Related terms: deviation analysis, KPI drift, control chart.
The difference between actual risk-related performance and the target or baseline. Monitoring variance helps detect early signs of degradation. Persistent variance may indicate systemic issues requiring corrective action.

Predictive Lead-Time Model
Related terms: regression analysis, time series, forecasting.
Statistical model that forecasts future supplier lead times based on historical data, order size, and external factors like weather. Enables proactive buffer adjustments. Model accuracy depends on data granularity and the stability of underlying relationships.

Probability of Default (PD) – Credit Risk
Related terms: financial health, supplier insolvency, credit scoring.
The likelihood that a supplier will fail to meet its financial obligations within a given time horizon. PD is incorporated into composite risk scores and can trigger pre-emptive sourcing changes. Estimation often relies on external credit ratings and financial statements.

Process Capability Index (Cpk)
Related terms: quality control, Six Sigma, variability.
A statistical measure of a process's ability to produce output within specification limits. In supply chain risk monitoring, a low Cpk may signal production instability, increasing disruption risk. Requires sufficient sample size for reliable calculation.

Procurement Spend Analysis
Related terms: cost breakdown, supplier concentration, strategic sourcing.
Examination of purchasing data to identify spending patterns, concentration risks, and opportunities for cost savings. Monitoring spend trends helps detect emerging reliance on a single supplier or region. Data consolidation across ERP systems is often a barrier.

Proxy Indicator
Related terms: surrogate metric, leading signal, indirect measure.
A metric used to infer risk when direct measurement is unavailable, such as using freight cost volatility as a proxy for port congestion risk. Proxy indicators must be validated to ensure they reflect the intended risk accurately.

Qualitative Risk Assessment
Related terms: expert judgment, scoring matrix, narrative analysis.
A non-numerical approach that categorizes risks (e.g., low, medium, high) based on stakeholder input and descriptive criteria. Useful when data is scarce or for emerging risks. Translating qualitative ratings into quantitative scores for dashboards can be challenging.

Real-Time Data Feed
Related terms: streaming analytics, API integration, sensor network.
Continuous flow of risk-relevant information (e.g., GPS location, weather alerts) into monitoring platforms. Enables immediate detection of anomalies. Requires robust connectivity, data governance, and bandwidth management.

Recovery Time Objective (RTO)
Related terms: business continuity, downtime tolerance, restoration target.
The maximum acceptable duration between a disruption event and the restoration of critical supply chain functions. Monitoring RTO adherence helps evaluate the effectiveness of contingency plans. Setting realistic RTOs involves balancing cost with resilience.

Resilience Scorecard
Related terms: adaptive capacity, robustness, recovery metrics.
A collection of indicators that collectively assess an organization’s ability to anticipate, absorb, and recover from supply chain shocks. Includes metrics such as buffer stock levels, supplier redundancy, and response time. Developing a balanced scorecard requires aligning metrics with strategic resilience goals.

Risk Appetite Statement
Related terms: tolerance level, governance, policy framework.
A formal declaration of the amount of risk an organization is willing to accept in pursuit of its objectives. Guides the selection of monitoring thresholds and mitigation investments. Must be communicated clearly to avoid misinterpretation at operational levels.

Risk Heat Map Matrix
Related terms: likelihood-impact grid, prioritization tool, visual risk register.
A two-dimensional representation that plots risk events by probability (horizontal axis) and impact (vertical axis), with color shading to denote severity. Helps stakeholders prioritize actions. Over-simplification can obscure multi-dimensional risk nuances.

Risk Index
Related terms: composite score, weighted aggregation, benchmark.

A single numeric value derived from multiple risk indicators, used for tracking and comparison. The index can be customized for specific supply chain segments (e.g., raw material sourcing). Regular recalibration is essential to reflect changing conditions.

Risk Ledger
Related terms: risk register, historical log, audit trail.
A structured record of identified risks, their assessments, mitigation actions, and status updates. The ledger supports transparency and accountability. Keeping the ledger up-to-date requires disciplined governance and clear ownership.

Risk Maturity Model
Related terms: capability assessment, process evolution, benchmarking.
A framework that evaluates the sophistication of an organization's risk monitoring and measurement practices across stages (e.g., ad-hoc, defined, integrated, optimized). Guides improvement roadmaps. Implementation may be resource-intensive.

Risk Register
Related terms: risk inventory, tracking sheet, mitigation plan.
A comprehensive list of all identified supply chain risks, each with attributes such as likelihood, impact, owner, and mitigation status. Forms the backbone of monitoring programs. Maintaining accuracy demands regular reviews and stakeholder engagement.

Risk Tolerance Threshold
Related terms: appetite, limit, escalation trigger.
The maximum level of risk an organization is prepared to bear before taking corrective action. For example, a 10 % increase in on-time delivery deviation may be set as the tolerance limit. Determining thresholds involves trade-offs between cost and service.

Supply Chain Visibility Index (SCVI)
Related terms: transparency, data sharing, end-to-end monitoring.
A metric that quantifies the extent to which an organization can track goods, information, and financial flows across its entire network. Higher SCVI values correlate with improved risk detection and faster response. Achieving high visibility often requires collaborative data platforms and trust among partners.

Supply Disruption Probability (SDP)
Related terms: event likelihood, exposure modeling, scenario analysis.
The estimated chance that a specific supply pathway will experience a disruption within a defined timeframe. SDP can be derived from historical incident rates, geopolitical risk scores, and environmental forecasts. Accuracy improves with granular data but may be limited by rare-event bias.

Supplier Financial Health Score
Related terms: credit rating, solvency ratio, liquidity assessment.
A composite rating that reflects a supplier's ability to meet its financial obligations, often based on balance-sheet ratios, cash-flow analysis, and external credit reports. Monitoring changes in this score helps

anticipate potential supply interruptions due to insolvency.

Supplier Performance Index (SPI)
Related terms: on-time delivery, quality compliance, cost adherence.
An aggregated score that evaluates suppliers across key performance dimensions, facilitating comparative risk monitoring. A declining SPI may indicate emerging reliability issues. Weighting must reflect the strategic importance of each dimension.

Supply Chain Event Management (SCEM)
Related terms: exception handling, workflow automation, alerting.
A systematic approach to detecting, analyzing, and responding to supply chain events that deviate from plan. SCEM platforms integrate data sources, trigger alerts, and route tasks to responsible parties. Implementation challenges include integration with legacy ERP systems and change management.

Supply Chain Risk Dashboard
Related terms: visual analytics, KPI aggregation, executive view.
A real-time interface that consolidates risk metrics, alerts, and trend charts for rapid assessment by senior leadership. Effective dashboards balance detail with clarity, enabling drill-down when needed. Over-crowding with too many indicators can dilute focus.

Supply Chain Resilience Index (SCRI)
Related terms: robustness, adaptability, recovery capability.
A quantitative measure that combines preparedness, redundancy, and response metrics to gauge overall resilience. SCRI scores are often benchmarked against industry averages. Maintaining and updating the index requires continuous data collection and model refinement.

Supply Chain Stress Test
Related terms: scenario simulation, capacity shock, disruption drill.
A deliberate exercise that subjects the supply chain model to extreme conditions (e.g., 30 % demand surge, major port closure) to evaluate performance limits. Results identify critical weaknesses and inform mitigation planning. Conducting realistic stress tests demands accurate baseline data and cross-functional collaboration.

Supply Network Complexity Metric
Related terms: node count, interconnectivity, diversification index.
A numerical representation of how intricate a supply network is, factoring in the number of suppliers, tiers, and inter-relationships. Higher complexity can increase monitoring burden and hidden risk exposure. Simplifying the network may improve controllability but could reduce flexibility.

Supplier Lead-Time Forecast Error
Related terms: prediction accuracy, variance, demand planning.
The difference between forecasted and actual supplier lead times, expressed as a percentage or absolute value. Tracking this error helps calibrate safety stock and improve forecasting models. Persistent high errors may signal unreliable supplier communication.

Supply-Side Risk Indicator (SSRI)
Related terms: upstream exposure, raw material availability, capacity risk.
A metric that captures risks originating from suppliers, such as capacity constraints or raw material scarcity. SSRI is often integrated with demand-side indicators to provide a balanced view of total supply chain risk.

Time-to-Detect (TTD)
Related terms: detection latency, monitoring speed, alert generation.
The interval between the occurrence of a risk event and its identification by monitoring systems. Shorter TTD enhances the ability to mitigate impacts. Achieving low TTD may require automated sensors and real-time analytics.

Transport Capacity Utilization
Related terms: freight load factor, carrier availability, bottleneck risk.
The proportion of available transport capacity (e.g., truck space, container slots) that is actively used. High utilization may indicate limited flexibility to absorb demand spikes, increasing the risk of delays. Monitoring helps inform strategic carrier contracts.

Value at Risk (VaR) – Supply Chain Context
Related terms: probabilistic loss, confidence interval, tail risk.
A statistical measure that estimates the maximum expected loss over a specific period at a given confidence level (e.g., 95 %). In supply chains, VaR can quantify potential financial impact from disruptions. Requires robust loss distribution modeling.

Vendor Risk Management (VRM)
Related terms: third-party assessment, compliance, due diligence.
A structured program for identifying, assessing, and mitigating risks associated with external vendors. VRM includes continuous monitoring of vendor performance, security posture, and financial health. Integration with broader supply chain risk monitoring ensures consistency.

Visibility Gap Analysis
Related terms: data blind spot, information asymmetry, traceability shortfall.
The process of identifying areas where supply chain information is missing or delayed, such as lack of real-time inventory data from a remote supplier. Closing visibility gaps reduces uncertainty and improves risk decision-making. Requires collaborative data sharing agreements.

Weighted Risk Score (WRS)
Related terms: scoring methodology, factor weighting, composite index.
A calculated value that combines multiple risk factors, each multiplied by a predetermined weight reflecting its relative importance. WRS facilitates ranking of suppliers or routes. Periodic review of weights is essential to reflect changing strategic priorities.

Yield Variance
Related terms: production quality, scrap rate, process stability.
The deviation between expected and actual production output, often expressed as a percentage of planned

yield. High yield variance can lead to supply shortages and increased rework costs. Monitoring supports early detection of process drift.

Zero-Based Risk Assessment
Related terms: fresh start evaluation, baseline reset, comprehensive review.
An approach that treats each risk assessment period as a new exercise, ignoring prior assumptions and scores. This method can uncover previously overlooked risks but demands substantial effort and stakeholder involvement.

Zero-Lag Correlation
Related terms: synchronous relationship, real-time dependency, immediate impact.
A statistical relationship where two variables move together without observable delay, such as simultaneous spikes in freight cost and carrier capacity constraints. Detecting zero-lag correlation helps identify tightly coupled risk drivers for rapid response.