SUPPLY CHAIN
RESILIENCE
CERTIFICATE

Table of
Contents

December 2023

ASCM | ASSOCIATION FOR
SUPPLY CHAIN
MANAGEMENT

Resilience Certificate – TOC Overview

In recent years, the world has witnessed how disruptions like natural disasters, political instability, or even a public health crisis can put a strain on the best of supply chains. These events have emphasized the need for supply chain professionals to educate themselves on the latest trends in supply chain risk management and how to build and maintain a supply chain resilient enough to withstand any disruption.

ASCM's Supply Chain Resilience Certificate addresses this need, covering risk monitoring and management, strategic planning, and data-driven decision-making, giving you the knowledge to help your organization achieve end-to-end visibility. The self-paced online program includes 20 hours of education and a comprehensive final exam. After passing the exam, you'll earn a certificate and a digital badge.

Table of Contents

Quick Links to Jump to Specific Modules:

Module 1: Foundations of Supply Chain Resilience

Module 1 Objectives
1. Define supply chain resilience and its key components.
2. Recognize the importance of supply chain resilience.
3. Identify the critical resources and stakeholders needed to create a resilient supply chain, using business impact analysis methodologies.
4. Explain the benefits of achieving end-to-end visibility in supply chain operations.
5. Summarize strategies for integrating resilience in supply chain management.

Module 1 Topics

What Is Supply Chain Resilience?
- Defining Supply Chain Resilience
- Understanding Risks
- Internal Risks
- External Risks
- Known and Unknown Risks
- Designing and Building Resilience
- Managing Resilience

The Importance of Supply Chain Resilience
- Evolution of Supply Chain Methods
- Reasons Supply Chain Resilience Is Important
- Case Study: Pandemic Causes Suite Retailer to File Bankruptcy
- Case Study: Athletic Wear Company Thrives during the Pandemic

Maintaining a Resilient Supply Chain
- Business Impact Analysis
- Case Study: Suez Canal Blockage
- Case Study: The Impacts of the Financial Crisis of 2008

End-to-End Visibility
- What Is End-to-End Visibility?
- What Can End-to-End Visibility Provide?
- Difficulties in End-to-End Visibility
- Why Is End-to-End Visibility Important?

Integrating Resilience into the Supply Chain
- Organizational Development
- Strategic, Tactical or Operational Decisions
- Customer Focus
- Diversification
- Using Technology for Integration
- Executing Supply Chain Resilience

Module 2: Risk Management in Supply Chains

Module 2 Objectives
1. Define different types of risk that affect supply chains and the impact of such risks on supply chain operations.
2. Identify key principles of effective risk management in supply chains.
3. Describe the risk planning process in the context of supply chains.
4. Differentiate between various tools used for risk monitoring in supply chains.
5. Explain the role of risk training in supply chain management.
6. Categorize different risk mitigation strategies for supply chains.

Module 2 Topics

Understanding Risk in Supply Chains
- Defining Risk in the Context of Supply Chain
- Sources of Risk in Supply Chain
- Types of Supply Chain Risks and Their Impacts
- Industry-Specific Risks and Impacts

Principles of Effective Risk Management
- Basics of Risk Management
- Techniques for Identifying Risks
- Analyzing Scope and Impact—Examples
- Risk Assessment—Quantitative and Qualitative Methods
- Quantitative Methods
- Qualitative Methods
- Application of Risk Management in Supply Chains

Risk Planning
- Risk Planning in Context
- Steps for Developing a Supply Chain Risk Management Plan
- A Well-Structured Risk Plan

Module 2: Risk Management in Supply Chains

Risk Mitigation
- Risk Mitigation Strategies
- Role of Technology in Risk Mitigation
- Types of Technology Used in Risk Management
- Examples of Successful Risk Mitigation

Organizational Supply Chain Risk Training
- Role of Risk Management Training in an Organization
- Role of Risk Management Training in Supply Chains
- Steps for Effective Risk Training

Risk Monitoring
- Importance of Risk Monitoring and Reporting
- Types of Risk Monitoring
- Risk Monitoring Process
- Tools Used for Risk Monitoring

Module 3: Strategic Planning, Data-Driven Decisions, and Collaboration

Module 3 Objectives
1. Describe strategic sourcing concepts that are considered when creating a resilient supply chain.
2. Discuss the role of data analytics in informing sourcing decisions that reinforce supply chain resilience.
3. Explain why information flows play an important role in building a resilient supply chain.
4. Analyze how business collaboration strategies contribute to strengthening supply chain resilience.

Module 3 Topics

Understanding Strategic Sourcing
- Defining Strategic Sourcing in the Context of Supply Chain Resilience
- Decision Metrics: Beyond Cost and Quality
- The Role of Strategic Sourcing in Supply Chain Resilience
- Supply Chain Mapping of Strategic Suppliers
- International Diversification
- Case Study: World's Largest Smartphone Producer Diversifies Production Locations

Data Analytics in Supply Chain
- Defining Data Analytics
- Key Performance Indicators (KPIs)
- Freight Bill Accuracy
- Using Data Analytics to Achieve Organizational Objectives
- How Data Analytics Are Used in Supply Chain Resilience
- Stress Testing Methodologies
- Disruption Scenario Planning
- Case Study: One Company's Use of Data Analytics to Optimize Its Supply Chain
- Barriers to Improving the Use of Data Analytics

Module 3: Strategic Planning, Data-Driven Decisions, and Collaboration

The Importance of Information Flow in Supply Chains
- The Relationship between Information Systems and Supply Chain Management
- Enterprise Resource Planning (ERP) Software and Systems
- The Role of IT in Building Supply Chain Resilience
- Case Study: Supply Chain Cyberattack
- Challenges in Getting Access to Information from Suppliers

Business Collaboration Strategies
- Strategic Alignment between Suppliers and Customers
- Barriers to Collaboration
- Joint Business Planning
- The Role of Communication and Trust
- Exploring Real-World Examples of Collaborative Success
- Cross-Functional Engagement
- Value Creation and Sharing
- Incentivizing Supplier Performance
- Cleansheet Cost Modeling
- Supplier Advisory Boards
- Service Strategy
- Market Segmentation
- Designing a Customer Experience
- Continuous Improvement
- Case Study: Leading Online Marketplace Enhancing Customer Experience through Innovative Supply Chain

Module 4: Secure and Flexible Systems

Module 4 Objectives
1. Explain the dynamics of flexibility and security within various supply chain systems and strategies.
2. Explain how prevention, contracts, insurance, and data contribute to a secure supply chain.
3. Describe how multisourcing and employee training contribute to a flexible supply chain.
4. Explain how to build various manufacturing components for resilience.
5. Detail how to build different distribution components for resilience.
6. Explain how to build various order management components for resilience.
7. Describe how to build various material management system components for resilience.

Module 4 Topics

The Four Supply Chain Systems
- Defining Strong Supply Chain Systems
- How Strategy Contributes to a Flexible and Secure Supply Chain

Building a Secure Supply Chain
- Foundations of Building a Secure Supply Chain
- Using Prevention to Create a Secure Supply Chain
- Writing Contracts for Security, Reliability, and Accountability
- Buying Insurance
- Protecting Data

Building a Flexible Supply Chain
- Optimizing Flexibility with Multisourcing and Employee Education
- Using Multisourcing to Create a Flexible Supply Chain
- Educating Employees on Operation and Values

Module 4: Secure and Flexible Systems

Building the Manufacturing System for Resilience
- Key Components of Resilient Manufacturing
- Product Identification
- Material Identification
- Multisourcing, Employee Shifts, and Automation
- Inventory Buffer and Storage Space

Building the Distribution System for Resilience
- Key Components for a Resilient Distribution System
- Flexible and Secure Transportation Logistics
- Multisourcing, Employee Shifts, and Transfer Stock
- Using Automation to Streamline Distribution

Building the Order Management System for Resilience
- Flexibility and Security in Order Management
- Forecast Numbers

Building Materials Management Systems of Resilience
- Flexible and Secure Components in Materials Management

Module 5: Leadership and Resilient Organizational Culture

Module 5 Objectives

1. Describe how supply chain leaders have to balance resilience and efficiency to secure their networks in the wake of many disruptions.
2. Define how different types of leadership can affect the resilience of a supply chain and the current impact of those achievements.
3. Discuss how environmental, social, and governance (ESG) factors have emerged as significant indicators of a company's long-term resilience and sustainability.

Module 5 Topics

Leadership Strategies for Building Resilient Supply Chains

- Introduction to the Role of Leadership in Supply Chain Resilience
- Strategies for a More Resilient Supply Chain
- Balancing Efficiency and Resiliency
- Supply Chain Flexibility
- Lean and Agile Supply Chains
- Competitive Edge through Leadership in Supply Chain Resilience
- Critical Thinking and Quick Decisions in Supply Chain Leadership
- Organizational Structure Is Essential to a Company's Success

The Role of Leadership in Supply Chain Resilience

- How to Cultivate Leadership Skills and Competencies
- The CHAIN Leadership Model
- The Supply Chain Leader Mindset
- Leadership Skills and Competencies
- Leadership Development Framework and Tailored Development Programs
- Leadership Philosophies
- Successful Supply Chain Leaders

Workforce Development in Supply Chain Resilience

- The Importance of Supply Chain Imperative Leadership
- The Role of Leadership and Workforce Development
- The Importance of Adopting ESG Principles
- The Importance of Climate Change Awareness
- ESG Investing and Social Responsibility Investing (SRI)
- Talent Management in Supply Chian Workforces
- Diversity, Equity, and Inclusion (DEI)

Module 6: Sustainability, Innovation, and Technology in Supply Chain

Module 6 Objectives

1. Describe the roles of sustainability and circularity in the supply chain.
2. Explain the importance of implementing sustainability practices to improve the resilience of a supply chain.
3. Explain how to evaluate the level of resilience and sustainability within a supply chain.
4. Identify how technology can be used to enhance resilience.

Module 6 Topics

The Role of Sustainability and Circularity in Modern Business

- Defining Sustainability
- Outside In versus Inside Out
- Case Study: Logging Industry
- What Is a Circular Economy?
- Core Principles of a Circular Economy
- Eliminating Waste and Pollution
- Circulating Products and Materials
- The Technical Cycle
- The 10Rs Framework
- The Biological Cycle
- Regenerating Nature
- Other Regenerative Practices

Connections between Sustainability and Resilience

- Benefits of Sustainable Practices
- Implementing Sustainable Practices in Supply Chain
- Case Study: How a Beverage Company Is Creating a More Sustainable Supply Chain

Metrics and Evaluation of Sustainable and Resilient Supply Chains

- Double Materiality and Public Reporting
- Sustainability and SCOR
- Attributes and Metrics
- Measuring Resilience
- Measuring Economic Performance
- Measuring Sustainability

The Role of Technology and Innovation in Enhancing Resilience and Sustainability

- The Interconnection of Performance with Processes, Practices, Skills, and Technology
- Examples of How Technology Enhances Resilience and Supports Sustainability
- Technology Drives Demand for Sustainability

About ASCM

The Association for Supply Chain Management (ASCM) is the global pacesetter of organizational transformation, talent development and supply chain innovation. As the largest association for supply chain, ASCM members and worldwide alliances fuel innovation and inspire accountability for resilient, dynamic and sustainable operations. ASCM is built on a foundation of world-class APICS education, certification and career resources, which encompass award winning workforce development, relevant content, groundbreaking industry standards and a diverse community of professionals who are driven to create a better world through supply chain.

To learn more, visit **ascm.org**.

ASCM

ASSOCIATION FOR
SUPPLY CHAIN
MANAGEMENT