Strategic Supply Chain in Energy and Manufacturing Training Course

26 - 30 Oct 2026

Cape town

4600 € (Per Person)

Ref: #PSC9249_284578

Course Introduction / Overview:

This comprehensive course offers a deep dive into the complex and dynamic world of supply chain management, specifically tailored for the unique challenges and opportunities within the energy and manufacturing sectors. In an era of global volatility and technological disruption, achieving operational excellence and supply chain resilience is paramount. This program moves beyond foundational theories to provide actionable strategies for optimizing logistics, procurement, and inventory management in high-stakes environments. Drawing upon principles articulated by leading thinkers like Martin Christopher in his seminal work "Logistics & Supply Chain Management", we explore how to build agile and responsive supply chains. Participants will learn to navigate regulatory complexities, leverage digital transformation, and implement sustainable practices. BIG BEN Training Center has designed this course to empower professionals with the advanced skills needed for strategic sourcing, risk mitigation, and driving cost reduction while enhancing service levels. It is an essential program for anyone aiming to lead supply chain functions in these critical industries.

Target Audience / This training course is suitable for:

- Supply Chain Managers and Directors.
- Procurement and Sourcing Specialists.
- Logistics and Distribution Coordinators.
- Operations and Production Managers.
- Inventory Planners and Analysts.
- Project Managers in energy and manufacturing.
- Compliance and Regulatory Officers.
- Business Analysts focused on operational improvement.

Target Sectors and Industries:

- Oil and Gas (Upstream, Midstream, and Downstream).
- Renewable Energy (Solar, Wind, and Hydro).
- Power Generation and Utilities.
- Automotive Manufacturing and Assembly.
- Aerospace and Defense Manufacturing.
- Electronics and High-Tech Manufacturing.
- Heavy Machinery and Industrial Equipment.
- Pharmaceutical and Chemical Manufacturing.
- Governmental bodies and public sector agencies involved in industrial regulation and procurement.

Target Organizations Departments:

- Supply Chain Management.
- Procurement and Purchasing.
- Logistics and Transportation.
- Operations Management.
- Warehouse and Inventory Control.
- Strategic Planning and Development.
- Manufacturing and Production.
- Quality Assurance and Control.
- Compliance and Risk Management.

Course Offerings:

By the end of this course, the participants will have able to:

- Develop integrated supply chain strategies tailored to the energy and manufacturing sectors.
- Master advanced procurement and strategic sourcing techniques for critical materials and services.
- Optimize logistics, transportation, and warehouse management for efficiency and cost reduction.
- Implement robust inventory control models like Just-in-Time (JIT) and Vendor Managed Inventory (VMI).
- Analyze and mitigate supply chain risks, including geopolitical, operational, and financial disruptions.
- Utilize data analytics and key performance indicators (KPIs) to drive continuous improvement.
- Evaluate and apply emerging technologies such as AI, IoT, and blockchain in supply chain operations.
- Champion sustainability and circular economy principles within their organization's supply chain.
- Enhance supplier relationship management (SRM) to build resilient and collaborative partnerships.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive, engaging, and practical, ensuring that participants can immediately apply their learning in the workplace. We employ a blended learning approach that combines expert-led presentations with hands-on activities. The course heavily features real-world case studies from leading energy and manufacturing companies, allowing participants to analyze complex problems and develop viable solutions. Collaborative group discussions and team-based exercises encourage peer-to-peer learning and the sharing of diverse industry perspectives. Interactive workshops will focus on practical skills such as supply chain mapping, risk assessment, and performance metric development. Participants will receive continuous feedback from the instructor and peers throughout the program. This immersive learning environment moves beyond theory, equipping professionals with the confidence and competence to tackle real-world supply chain challenges and drive tangible business results.

Course Agenda (Course Units):

Unit One: Foundations of Energy and Manufacturing Supply Chains

- Introduction to Supply Chain Management Principles.
- Unique Characteristics of the Energy Sector Supply Chain.
- Distinctive Challenges in the Manufacturing Supply Chain.
- Comparative Analysis of Supply Chain Models in Both Sectors.
- The Role of Regulation and Compliance in a Global Context.
- Key Performance Indicators (KPIs) for Sector-Specific Success.
- Mapping the End-to-End Value Chain.

Unit Two: Strategic Procurement and Supplier Management

- Advanced Strategic Sourcing and Category Management.
- Supplier Selection, Evaluation, and Development.
- Contract Negotiation and Management in High-Value Procurement.
- Managing Supplier Relationships (SRM) for Long-Term Partnership.
- Global Sourcing and Managing International Suppliers.
- Cost Reduction Strategies and Total Cost of Ownership (TCO) Analysis.
- Ethical Sourcing and Corporate Social Responsibility.

Unit Three: Advanced Logistics and Inventory Optimization

- Integrated Logistics and Transportation Management.
- Warehouse Design, Layout, and Operations Management.
- Advanced Inventory Control Techniques (JIT, VMI, Safety Stock).
- Demand Forecasting and Planning in Volatile Markets.
- Managing Logistics for Hazardous Materials and Specialized Equipment.
- Reverse Logistics and Product Lifecycle Management.
- Network Design and Optimization for Global Operations.

Unit Four: Technology and Digital Transformation in the Supply Chain

- The Role of ERP Systems in Supply Chain Integration.
- Leveraging Big Data and Predictive Analytics for Decision-Making.
- Internet of Things (IoT) for Real-Time Visibility and Asset Tracking.
- Artificial Intelligence (AI) and Machine Learning in Logistics.
- Blockchain Technology for Transparency and Traceability.
- Implementing Warehouse Management Systems (WMS) and Transportation Management Systems (TMS).
- The Rise of the Smart Factory and Industry 4.0.

Unit Five: Risk, Resilience, and Future-Proofing the Supply Chain

- Identifying and Assessing Supply Chain Risks.
- Developing a Robust Supply Chain Risk Mitigation Framework.
- Building Resilience and Agility to Overcome Disruptions.
- Navigating Geopolitical Instability and Trade Compliance.
- Implementing Green and Sustainable Supply Chain Practices.
- The Circular Economy in Manufacturing and Energy.
- Future Trends and Innovations Shaping the Industry.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

How can a circular economy model be fully integrated into the traditionally linear supply chains of heavy manufacturing and energy sectors without compromising profitability?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself through its specialized dual-sector focus on both energy and manufacturing, two industries with highly distinct yet interconnected supply chain challenges. Unlike generic supply chain programs, every module is designed to address the specific complexities of these fields, from managing volatile commodity prices in energy to implementing lean principles in manufacturing. The curriculum provides a unique synthesis of strategic theory and practical, hands-on application, moving beyond textbook concepts to explore real-world case studies and industry best practices. It places a strong emphasis on contemporary issues, dedicating significant time to digital transformation, sustainability, and supply chain resilience in the face of geopolitical risks. This forward-looking approach ensures participants are not just learning established methods but are also prepared for the future of supply chain management. The course fosters a deep, strategic understanding, empowering participants to design, implement, and lead high-performing supply chains that provide a genuine competitive advantage in their respective industries.