



SUPPLY CHAIN DATA ANALYTICS FOR STRATEGIC OPTIMIZATION TRAINING COURSE

19 - 23 OCT 2026

KUALA LUMPUR

5200 € (PER PERSON)

REF: #DM9172_91921



COURSE INTRODUCTION / OVERVIEW:

In today's volatile global market, the ability to harness data is the definitive competitive advantage in supply chain management. This intensive training course is meticulously designed to transform supply chain professionals into strategic, data-driven decision-makers. Moving beyond basic reporting, the curriculum delves into the full spectrum of analytics—descriptive, diagnostic, predictive, and prescriptive—to unlock hidden efficiencies and foster innovation. As discussed by renowned academic David Simchi-Levi in his seminal work "Designing and Managing the Supply Chain," a truly optimized supply chain is one that is not only efficient but also resilient and responsive. This course, offered by BIG BEN Training Center, provides the practical tools and conceptual frameworks to achieve this. Participants will learn to build robust forecasting models, optimize inventory and logistics networks, mitigate risks through predictive insights, and measure performance with meaningful KPIs. We bridge the gap between raw data and actionable intelligence, empowering you to reduce costs, enhance service levels, and build a supply chain that is prepared for the challenges of tomorrow.

TARGET AUDIENCE / THIS TRAINING COURSE IS SUITABLE FOR:

- Supply Chain Managers and Directors.
- Logistics and Distribution Managers.
- Data Analysts and Business Intelligence Professionals.
- Operations Managers and Planners.
- Procurement and Sourcing Specialists.
- Inventory Control Planners and Analysts.
- Demand Planners and Forecasters.
- IT Professionals supporting supply chain functions.
- Consultants specializing in supply chain and operations.
- Finance professionals involved in supply chain costing.

TARGET SECTORS AND INDUSTRIES:

- Manufacturing and Industrial Production.
- Retail and Consumer Packaged Goods (CPG).
- E-commerce and Direct-to-Consumer (DTC) businesses.
- Third-Party Logistics (3PL) and Freight Forwarding.
- Pharmaceuticals and Healthcare.

- Automotive and Aerospace.
- Technology and Electronics.
- Food and Beverage Distribution.
- Governmental agencies and public sector logistics.
- Energy and Utilities.



TARGET ORGANIZATIONS DEPARTMENTS:

- Supply Chain Management.
- Logistics and Transportation.
- Procurement and Purchasing.
- Operations Management.
- Inventory Management and Warehousing.
- Planning and Forecasting.
- Data Analytics and Business Intelligence.
- Finance and Cost Accounting.
- Information Technology (IT).
- Customer Service and Order Fulfillment.

COURSE OFFERINGS:

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

- Develop a comprehensive framework for data-driven supply chain management.
- Apply descriptive analytics to create insightful performance dashboards and KPIs.
- Utilize diagnostic analytics to perform root cause analysis of supply chain disruptions.
- Implement advanced statistical and machine learning models for demand forecasting.
- Apply prescriptive analytics to optimize inventory levels, transportation routes, and network design.
- Leverage data to enhance supply chain visibility and traceability.
- Conduct cost-to-serve analysis to improve profitability and customer segmentation.
- Develop strategies for mitigating supply chain risks using predictive modeling.
- Evaluate the impact of emerging technologies like IoT and blockchain on supply chain data.
- Formulate and present a business case for analytics-driven supply chain initiatives.

COURSE METHODOLOGY:

The training methodology at BIG BEN Training Center is designed to be immersive, practical, and highly interactive, ensuring that participants can immediately apply their learning in a professional context. We believe in an experiential learning approach that goes beyond theoretical lectures. The course combines expert-led instruction with hands-on workshops, computer-based exercises, and collaborative problem-solving sessions. Participants will engage with real-world case studies drawn from various industries, allowing them to analyze complex scenarios and develop robust analytical solutions. Group discussions and team-based activities are central to the learning process, fostering an

environment of shared knowledge and diverse perspectives. Our trainers facilitate these sessions, providing continuous feedback and guiding participants through the practical application of analytical tools and techniques. This blended learning model ensures a deep understanding of both the strategic "why" and the practical "how" of supply chain data analytics, equipping attendees with the confidence and skills to drive meaningful change within their organizations.



COURSE AGENDA (COURSE UNITS)

UNIT ONE: FOUNDATIONS OF DATA-DRIVEN SUPPLY CHAIN MANAGEMENT

- Introduction to supply chain analytics and its strategic importance.
- The four types of analytics: descriptive, diagnostic, predictive, and prescriptive.
- Identifying key data sources across the supply chain ecosystem.
- Establishing meaningful Key Performance Indicators (KPIs) and metrics.
- Data quality management and cleansing techniques for reliable analysis.
- The role of data visualization in communicating supply chain insights.
- Frameworks for building an analytics-driven culture in the organization.

UNIT TWO: DESCRIPTIVE AND DIAGNOSTIC ANALYTICS IN PRACTICE

- Building effective supply chain performance dashboards.
- Techniques for inventory analysis and classification (e.g., ABC analysis).
- Analyzing transportation and logistics performance metrics.
- Warehouse operations analytics for efficiency improvement.
- Supplier performance measurement and score-carding.
- Root cause analysis techniques for identifying process failures.
- Mapping the end-to-end supply chain to identify data-driven improvement opportunities.

UNIT THREE: PREDICTIVE ANALYTICS FOR FORECASTING AND PLANNING

- Fundamentals of time-series analysis for demand forecasting.
- Statistical forecasting models (Moving Averages, Exponential Smoothing).
- Understanding seasonality, trends, and cyclical patterns in demand.
- Introduction to machine learning algorithms for predictive forecasting.
- Evaluating forecast accuracy and reducing forecast error.
- Collaborative Planning, Forecasting, and Replenishment (CPFR) principles.
- Predictive modeling for supply chain risk identification and assessment.

UNIT FOUR: PRESCRIPTIVE ANALYTICS AND SUPPLY CHAIN OPTIMIZATION

- Introduction to optimization concepts and mathematical modeling.
- Inventory optimization models (e.g., Economic Order Quantity, Safety Stock).
- Network design and facility location analysis.
- Transportation and logistics optimization for route planning.
- Production planning and scheduling optimization techniques.

- Using simulation modeling to test supply chain strategies.
- Cost-to-serve analysis for customer and product profitability optimization.



UNIT FIVE: ADVANCED ANALYTICS AND FUTURE TRENDS

- Leveraging Big Data, IoT, and sensor technology for supply chain optimization.
- The role of Artificial Intelligence (AI) and Machine Learning in supply chain automation.
- Blockchain technology for enhanced transparency and traceability.
- Analytics for sustainable and green supply chain initiatives.
- Developing a strategic roadmap for analytics implementation.
- Change management for embedding analytics into business processes.
- Final project: Developing a business case for a supply chain analytics initiative.

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:

Beyond cost reduction and efficiency, how can supply chain data analytics be leveraged to create new value propositions and competitive advantages in a rapidly changing global market?

WHAT UNIQUE QUALITIES DOES THIS COURSE OFFER COMPARED TO OTHER COURSES?

This course distinguishes itself by adopting a holistic, strategic perspective on supply chain analytics, moving beyond a narrow focus on software tools or isolated techniques. While many programs teach the "how" of running models, we emphasize the "why" and "so what," ensuring participants can translate complex data outputs into compelling business strategies. Our curriculum is uniquely structured to mirror the analytical maturity journey of an organization, starting from foundational descriptive analytics and logically progressing to advanced prescriptive optimization and future-forward concepts like AI and sustainability. The course content is deeply rooted in established academic principles while being intensely practical, utilizing case studies that reflect current global challenges such as supply chain disruptions and the push for greater resilience. We focus on building critical thinking and problem-solving skills, enabling participants not just to analyze data, but to ask the right questions, challenge existing assumptions, and drive innovation. The emphasis on developing a business case in the final unit ensures that learning is directly tied to delivering measurable organizational value.