Big Data Use in SCM Training Course

Professional Development Training Course Outline

Category	Logistics and Supply Chain Management	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In today’s rapidly evolving business environment, organizations face increasing complexity in managing their supply chains. Leveraging big data in supply chain management (SCM) has become a pivotal strategy for companies aiming to enhance operational efficiency, reduce costs, and optimize resource allocation. Big Data Use in Supply Chain Management Training Course provides participants with a comprehensive understanding of big data technologies, predictive analytics, and data-driven decision-making strategies tailored to supply chain operations. Participants will learn how to integrate real-time data streams, improve demand forecasting, and gain insights into supplier performance, inventory management, and logistics optimization.

The course also emphasizes the practical application of big data in SCM through real-world case studies and interactive exercises. Participants will explore advanced analytics techniques such as machine learning, AI-driven predictive models, and data visualization to make actionable decisions across procurement, production, and distribution channels. By combining theory, tools, and hands-on practice, this training equips professionals with the skills needed to transform supply chain data into strategic insights, driving organizational competitiveness and resilience in a dynamic global market.

Programme Curriculum

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Course Objectives

1. Understand the fundamentals of big data analytics in supply chain management.
2. Analyze real-time data streams for efficient inventory management.
3. Apply predictive analytics to improve demand forecasting accuracy.
4. Leverage AI and machine learning models for supply chain optimization.
5. Integrate big data solutions with enterprise resource planning (ERP) systems.
6. Evaluate supplier performance using data-driven KPIs.
7. Utilize data visualization tools to communicate supply chain insights.
8. Assess the impact of big data on logistics and transportation efficiency.
9. Implement risk management strategies using predictive modeling.
10. Explore cloud computing solutions for scalable supply chain analytics.
11. Optimize procurement processes using big data insights.
12. Understand regulatory and compliance considerations in data usage.
13. Develop a strategic roadmap for digital transformation in SCM.

Organizational Benefits

- Enhanced operational efficiency through data-driven decision-making.
- Reduced inventory holding and logistics costs.
- Improved demand forecasting accuracy.
- Increased supply chain transparency and traceability.
- Optimized supplier performance and procurement efficiency.
- Accelerated response time to market changes.
- Strengthened risk management and compliance adherence.
- Streamlined production and distribution planning.
- Greater integration between business units and IT systems.
- Increased competitive advantage and market responsiveness.

Target Audiences

- Supply chain managers and coordinators.
- Logistics and distribution professionals.
- Procurement officers and purchasing managers.
- Operations managers in manufacturing and retail.

- Data analysts and business intelligence specialists.
- IT professionals supporting SCM systems.
- Consultants and strategists in supply chain optimization.
- Executives seeking digital transformation insights in SCM.

Course Duration: 5 days

Course Modules

Module 1: Introduction to Big Data in SCM

- Overview of big data concepts in supply chains.
- Benefits of data-driven decision-making.
- Key challenges and considerations.
- Understanding structured and unstructured data sources.
- Case Study: Global retail chain implementing big data analytics.
- Interactive group exercise on identifying big data opportunities.

Module 2: Data Collection and Integration

- Sources of SCM data: IoT, ERP, POS systems.
- Techniques for data collection and storage.
- Data integration with existing SCM platforms.
- Best practices for data quality and governance.
- Case Study: Multi-national logistics company optimizing data pipelines.
- Hands-on exercise on integrating sample datasets.

Module 3: Predictive Analytics for Demand Forecasting

- Forecasting models using big data.
- Statistical and machine learning techniques.
- Identifying trends and seasonality patterns.
- Reducing forecast errors through predictive modeling.
- Case Study: E-commerce firm improving inventory turnover.
- Practical exercise on developing a predictive forecast.

Module 4: Supplier Performance and Risk Management

- Tracking supplier KPIs using big data.
- Identifying risks and bottlenecks.
- Implementing predictive risk analytics.
- Supplier scorecards and benchmarking.
- Case Study: Automotive supply chain risk mitigation.

- Group discussion on supplier performance improvement.

Module 5: Logistics and Transportation Optimization

- Big data in transportation route planning.
- Reducing fuel consumption and transit time.
- Predictive maintenance using IoT data.
- Inventory and warehouse optimization strategies.
- Case Study: Freight company enhancing delivery efficiency.
- Simulation exercise for route optimization.

Module 6: Data Visualization and Reporting

- Tools and software for supply chain visualization.
- Dashboards for monitoring KPIs.
- Effective reporting for decision-makers.
- Translating complex data into actionable insights.
- Case Study: Pharmaceutical company improving visibility across distribution channels.
- Exercise creating a sample dashboard.

Module 7: AI and Machine Learning Applications

- Machine learning models for SCM optimization.
- Applications in demand planning, inventory, and procurement.
- Case Study: Consumer goods company using AI for predictive planning.
- Hands-on session: AI-based simulation for SCM decisions.
- Ethical considerations in AI deployment.
- Interactive discussion on model interpretation.

Module 8: Big Data Strategy and Digital Transformation

- Developing a roadmap for big data adoption.
- Organizational change management for digital transformation.
- Case Study: Enterprise-level SCM digital transformation.
- Aligning IT and business objectives.
- Practical exercise: designing a digital transformation plan.
- Group presentation of strategic recommendations.

Training Methodology

- Interactive lectures and discussions.

- Hands-on exercises with real-world datasets.
- Case study analysis for practical application.
- Group projects and collaborative problem-solving.
- Simulation and scenario-based learning.
- Q&A sessions for concept clarification.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.
f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

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