

Big Data Analytics for Supply Chain Optimization

Manchester (UK) -

07-12-2026

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Course code: BI23 From: 07-12-2026 Venue: Manchester (UK) - Course Fees: 5150 £

Introduction

As Industry 4.0 evolves, the Supply Chain and Logistics will remain its lifeblood, and clogs and obstructions in the movement can suffocate the life out of Industry 4.0 and reduce profits from the industry's developments, as these developments will not be able to reach customers on time. As a result, Supply Chain and Logistics 4.0 is required to transport all of the industry's goods and information and allow the final product to reach customers.

Even if we consider 3D printing technology to be a new way of manufacturing, entities and businesses will still need to relocate the same 3D printers to the printing location.

As data availability grows, so does the possibility of shifting away from traditional forecasting techniques and into the realms of Big Data and Artificial Intelligence. Data analysis, planning, and real-time response to differences in supply chain become "must-haves," and we can now see into the future and make decisions based on the dynamic simulation of agency and process behavior using Big Data analysis and dynamic simulation tools.

This training course is designed to help institutions, businesses, and individuals transform their existing supply chain to a Supply Chain 4.0 and compete in the fourth industrial revolution.

This training course on Big Data Analytics for Supply Chain Optimization will highlight:

- What are the Big Data sources in Supply Chain and Logistics?
- Techniques for Big Data analysis and its method for forecasting
- Adopting Big Data analysis issues for a dynamic simulation basis
- Focusing on both increasing of market division and advantage as well as cost decrease
- Developing judgment making in real-time, by prophesying the events based on complex function

Course Objectives of Big Data Analytics for Supply Chain Optimization

At the end of this training course, delegates will acquire to:

- Utilize Big Data analysis vehicles and techniques to recognize patterns in Supply Chain behavior
- Design virtual representations of Supply Chains and decide between alternatives with the highest advantages
- Recognize the sources of Big Data in their Supply Chain and Logistics and streamline their management
- Design client behavior patterns and identify possible changes in these patterns
- Design for the development in their Supply Chain with surviving facilities and workforce
- Arrange for the incoming Supply Chain 4.0 as a necessary part of Industry 4.0

Course Methodology of Big Data Analytics for Supply Chain Optimization

This optimization training course uses a supervised training method in which participants are guided through real-life cases of Big Data application in Supply Chain optimization.
Participants will be given a Personal Learning Edition of the AnyLogic and anyLogistix software, which they will use to improve their own designs.
Through functional exercises, participants will learn how to identify the sources of Big Data within their Supply

Chain and how to connect the data from these authorizations with simulation designs to get the outputs from a Supply Chain and how to acquire valuable penetrations from these crops and use them in real-time decision making.

Possibilities for removing human decision-making from specific details of supply chain planning and execution will also be performed.

Organizational Impact of Big Data Analytics for Supply Chain Optimization

As Big Data converts part of our everyday life the arrangements within the Supply Chain convert more frequent and time-constrained, the teams that manage to convey decisions that can be created by the artificial intelligence away from their workers and allow their people to make the arrangements based on the accurate predictions will be the ones that will not only survive in the competitive world but also thrive and build large returns on investment to their stakeholders.

This training allows organizations and entities to profit from:

- Big Data sources within their own Supply Chain
- Interoperability with other Supply Chains
- Dynamic simulation based on Big Data analytics issues and real-time charge/profit analysis
- Easy and quick short-term forecasting for urgent decision making
- Submitting the cumbersome determination obtaining to the artificial intelligence area
- Allowing people to create long terms decisions while leaving short-duration judgments to technology

Personal Impact of Big Data Analytics for Supply Chain Optimization

Participants will achieve the potential of Supply Chain 4.0, get Big Data Analysis, and gain knowledge on the software and solutions that can help them produce their regular jobs easily and efficiently, specifically, representatives will receive:

- Experience with Big Data sources within the Supply Chain and Logistics
- Penetration into the Big Data analysis methods
- Accessible software for Big Data analysis and dynamic simulation
- The custom how to judge which decisions should be made and which issued to the machines and systems
- Know-how on utilizing AnyLogic and anyLogistix software
- Whence to include simulation software with their existing ERP software?

Target Audience of Big Data Analytics for Supply Chain Optimization

This training course is outlined for any professionals within industries and entities which are heavily dependent on Supply Chain and Logistics as well as composition, mass services, etc.

This training course is fit for a wide range of professionals within many industries but will considerably serve:

- Business Improvement Specialists
- Industry 4.0 Pioneers and Practitioners
- Supply Chain Managers
- Operation Managers
- Project Managers
- Finance Managers

- IT Managers
- Consultants

Course Outline of Big Data Analytics for Supply Chain Optimization

DAY 1

Industry 4.0 and Its Impact on Supply Chain

- Industry 4.0 Introduction
- Industry 4.0 Drivers and Impacts
- Supply Chain and Logistics within the Industry 4.0
- The vision of the Supply Chain 4.0 and the Future of Logistics

DAY 2

Big Data in Supply Chain and Logistics

- Big Data 5V□s in Supply Chain and Logistics
    - Volume
    - Velocity
    - Variety
    - Value
    - Variability
    - Veracity
- Sources of Big Data within the Supply Chain and Logistics
- Data-Driven Supply Chain Optimization (k-means, Apriori, Aykin and Babu algorithms)

DAY 3

Supply Chain Optimization

- Framework Oriented on Customer Requirements
- Optimizing the Sell Operations
- Optimization of Distribution
- Optimization of Inventory Management

DAY 4

Optimization of Manufacturing Process

- Optimizing Product Design and Innovation
- Optimizing the Production Process
- Big Data Analysis of Logistics Activities
- Using Created Models as Agents for Future Models Creation

DAY 5

Integration of Modern Software with Existing ERP Software

- The AnyLogic Cloud
- Interoperability of AnyLogic and any logistics with ERP Software Platforms

- RFID and Vehicle Tracking Systems Connectivity
- Data Extrapolation for Faster Analysis and Computation