Advanced Demand Planning and Forecasting for Supply Chain Optimization 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 complex and volatile global market, **advanced demand planning and forecasting** have evolved from a simple logistical function to a core **strategic business capability**. Organizations are increasingly recognizing that accurate demand signals are the linchpin for **supply chain optimization**, enabling them to make smarter decisions, reduce costs, and enhance customer satisfaction. Advanced Demand Planning and Forecasting for Supply Chain Optimization Training Course provides professionals with the **cutting-edge knowledge** and **practical skills** needed to navigate this dynamic landscape, leveraging **data analytics**, **machine learning**, and **integrated business processes** to drive significant business value.

This course goes beyond traditional forecasting methods, delving into advanced techniques and technologies that are shaping the future of supply chain management. By mastering concepts like **demand sensing**, **predictive analytics**, and **collaborative planning**, participants will learn how to build a resilient and responsive supply chain. They will gain the expertise to transform raw data into actionable insights, improving **forecast accuracy** and creating a clear competitive advantage. This training is essential for any organization seeking to reduce stockouts, minimize excess inventory, and ultimately, enhance profitability through a more intelligent and proactive supply chain.

Programme Curriculum

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Course Objectives

Upon completion of this course, participants will be able to:

1. Apply sophisticated statistical models like **ARIMA**, **Exponential Smoothing**, and **Regression Analysis** for enhanced forecast accuracy.
2. Utilize **Big Data** and **predictive analytics** to identify key demand drivers and market trends.
3. Understand and facilitate the **Sales and Operations Planning (S&OP)** process to achieve cross-functional alignment.
4. Integrate **machine learning (ML)** models and **Artificial Intelligence (AI)** for automated and more precise demand forecasting.
5. Develop **scenario planning** and risk mitigation strategies to manage demand uncertainty and supply disruptions.
6. Implement **inventory optimization** techniques and **safety stock** strategies based on accurate demand forecasts.
7. Drive **Collaborative Planning, Forecasting, and Replenishment (CPFR)** with key partners and suppliers.
8. Define and track key performance indicators (**KPIs**) like **Mean Absolute Percentage Error (MAPE)** and forecast bias to ensure continuous improvement.
9. Apply specialized forecasting methods for new products and product lifecycle management.
10. Effectively manage the "bullwhip effect" and other sources of demand variability to stabilize the supply chain.
11. Gain proficiency in **demand planning software** and **ERP systems** for streamlined forecasting processes.
12. Differentiate between long-term, mid-term, and short-term forecasting horizons to align with business objectives.
13. Identify opportunities to reduce costs associated with logistics, warehousing, and inventory carrying through better planning.

Organizational Benefits

- By reducing overstocks and minimizing stockouts, organizations can free up working capital and increase sales revenue.

- Accurate forecasting ensures product availability, leading to higher on-time delivery rates and a superior customer experience.
- Streamlined and automated processes reduce manual effort, allowing teams to focus on strategic activities.
- The implementation of S&OP and IBP fosters collaboration and a single source of truth across sales, marketing, finance, and operations.
- A proactive and responsive supply chain gives the organization a significant edge in a fast-paced market.
- Better visibility into future demand helps in preparing for and mitigating potential supply chain disruptions.

Target Audience

1. Demand Planners & Forecasters
2. Supply Chain Managers
3. Logistics and Inventory Managers
4. Sales & Operations Planning (S&OP) Team Members
5. Procurement & Purchasing Specialists
6. Data Analysts & Business Intelligence (BI) Professionals
7. Marketing & Sales Managers
8. Senior Management seeking to understand the strategic impact of demand planning.

Course Outline

Module 1: Fundamentals of Advanced Demand Planning

- Introduction to Demand Management.
- Demand Variability & the Bullwhip Effect.
- Data & Analytics for Forecasting.
- Forecasting Horizons.
- **Case Study: "The Bullwhip Effect in the Consumer Electronics Industry"** - a deep dive into how demand signals get distorted and the operational costs incurred.

Module 2: Advanced Quantitative Forecasting Techniques

- Time Series Analysis.
- Regression & Causal Models.
- Forecasting with Intermittent & Lumpy Demand.
- Model Selection & Validation.
- **Case Study: "Forecasting Seasonal Demand for a Global Beverage Company"** - applying different models to a real-world dataset to find the most accurate forecast.

Module 3: Leveraging AI & Machine Learning for Forecasting

- Introduction to Predictive Analytics.
- Machine Learning Models.
- Feature Engineering.
- Automation in Forecasting.
- **Case Study: "Using AI to Forecast E-commerce Sales for a Fast-Fashion Retailer"** - developing a predictive model that incorporates historical sales, website traffic, and promotional data.

Module 4: Sales and Operations Planning (S&OP) & Integrated Business Planning (IBP)

- The S&OP Process.
- Consensus Forecasting:
- IBP Framework.
- Change Management.
- **Case Study: "Transforming S&OP for a Manufacturing Giant"** - a walkthrough of how a multinational company overhauled its S&OP process to improve forecast accuracy and inventory turns.

Module 5: Inventory Optimization & Supply Chain Synchronization

- Inventory Classification.
- Safety Stock Calculation.
- Replenishment Strategies.
- Forecasting for Replenishment.
- **Case Study: "Optimizing Inventory for a Global Pharmaceutical Distributor"** - analyzing product-level demand to set dynamic safety stock levels and reduce holding costs.

Module 6: Collaborative & Demand Sensing Strategies

- Demand Sensing.
- Collaborative Planning, Forecasting, and Replenishment (CPFR).
- Managing New Product Introductions (NPIs).
- Integrating Point-of-Sale (POS) Data.
- **Case Study: "CPFR Implementation between a CPG Company and a Major Retailer"** - examining the benefits of a shared forecasting process to reduce stockouts and improve promotional effectiveness.

Module 7: Performance Measurement & Continuous Improvement

- Key Performance Indicators (KPIs).
- Forecast Error Analysis.
- Benchmarking.
- Building a Culture of Continuous Improvement.
- **Case Study: "A Global Food Manufacturer's Journey to 90% Forecast Accuracy"** - a look at how a company systematically identified and addressed forecasting issues to achieve a significant improvement in accuracy.

Module 8: Technology & Future Trends in Demand Planning

- Demand Planning Software Landscape.
- Digital Transformation.
- Ethical Considerations & Data Privacy.
- The Future of Forecasting.
- **Case Study: "Implementing a New Demand Planning Solution in a Multi-National Retailer"** - a review of the challenges and successes of a technology adoption project.

Training Methodology

This course uses a blended learning approach to ensure maximum engagement and knowledge retention. The methodology includes:

- Interactive Lectures & Presentations.

- Hands-on Workshops.
- Group Discussions & Collaborative Problem-Solving.
- Real-world Case Studies.
- Scenario-Based Role-Playing.
- Live Q&A Sessions.

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
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500

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

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com