



Certified Professional in Demand Forecasting Workshops

CPDF[®] I— Smart Forecasting and Planning (Forecasting Principles and Best Practices)

Key Learning Objectives:

1. Establish a framework for demand forecasting in the supply chain
2. Introduce a four-step process for streamlining the forecasting cycle
3. Define, interpret, visualize major demand forecasting techniques.
4. Identify appropriate accuracy measures for evaluating demand forecasting methods and models.
5. Complement established approaches with non-traditional methods in forecasting model development and evaluation



Program is endorsed by
the International Institute
of Forecasters (IIF)
www.forecasters.org.

WHY STUDY WITH US?

1. International trainers
2. Trainers have long and global experience in demand management and forecasting.
3. High quality and excellent style of delivery with participative debate and discussion, case studies.
4. E-learning service through a unique Online Web Platform designed exclusively for CPDF Students.
5. 100% Student pass rate, endorsed by past and present students in the region.
6. Abilities to enhance local demand data with international experience and theories.
7. Interchange demand forecasting experience management with local culture and knowledge.

DELPHUS

Our Training Partner

Delphus Inc. (www.delphus.com) is a privately held corporation, headquartered in Morristown, New Jersey.

Established in 1987, the company has been dedicated to providing strategic market analyses, forecasting software tools and data mining solutions for sales and marketing managers, inventory and production planners in manufacturing, distribution, retail firms and hospital management operations. Delphus clients list contains names like: Kodak, Lucent Technologies, IBM, TAP Pharmaceutical, Pfizer, and more.

Program Leader

Dr. Hans Levenbach is the founder and President of Delphus Inc., which specializes in predictive-analytic solutions for demand planning in supply chain organizations. He is also an elected Fellow, former President and Treasurer of the International Institute of Forecasters (IIF). He is also a member of APICS, INFORMS, American Statistical Association and an elected member of the International Statistics Institute. Hans has been instrumental in designing and delivering the "Certified Professional iDemand Forecaster" (CPDF®) curriculum. www.cpdftraining.org/curriculum.htm. He is the author of the book: **Change & Chance Embraced: Achieving Agility with Demand Forecasting in the Supply Chain**



Who Should Attend?

Demand Forecasters
Operational Specialists
Demand planners
Supply planners
Production Managers
Operations Managers
Financial analysts
Market analysts
Researchers
Forecasters

What is The CPDF®?

This is a certification program for demand forecasters and planners working in supply chain industries. The International Institute of Forecasters (IIF), a non-profit membership organization founded in 1980, whose aim is to advance knowledge and research in forecasting, has endorsed it. The CPDF program is a 200 hours curriculum comprised of three modules, CPDF I, CPDF II and CPDF III. Certification can be earned at each of the three levels. The CPDF qualification will address multidimensional job roles in demand forecasting such as data display and validation, database management, dashboard display, understanding quantitative and qualitative projection techniques, model creation and execution, forecast accuracy measurement, model and forecaster performance analysis, organization, and collaborative planning.

Day 1

Part 0 - Pre-course Computer Workshop

Part I - The Demand Forecasting Function in the Supply Chain

- ◇ What is demand forecasting?
- ◇ Demand Forecasting and the evolution of Supply Chain
- ◇ Who will use the forecast and what are their data needs?
- ◇ Forecasting as a structured process- The PEER Model

Workshop 1: Uncovering Drivers of Demand for New Product/Services Forecasting

Part II - Framing the Demand Forecasting Function

- ◇ Data exploration- Learning from actual examples
- ◇ Judging the quality of data
- ◇ Handling unusual events and outliers
- ◇ What are forecasting models?- Quantitative vs. qualitative methods
- ◇ Evaluating forecasts and forecasting models
- ◇ Combining and reconciling the final forecast

Workshop 2: Exploring Trend and Seasonal Variation. Cases: Consumer Product (Ice Cream) and Services (Tourism)

Part III - How To Use Components of a Time Series

- ◇ Moving averages for smoothing kinks out of data
- ◇ Finding the lift in promotions with moving medians
- ◇ Identifying day-of-week effects through ANOVA methods
- ◇ Creating additive and multiplicative seasonal factors
- ◇ Seasonal adjustment of time series

Workshop 3: Creating Seasonal Adjustments and Exploratory Forecasts with the RMA Decomposition Method. Cases: Automobile and Energy Industry

Part IV - Forecasting with Exponential Smoothing Models

- ◇ Why use Naïve forecasting techniques?
- ◇ Types of smoothing weights
- ◇ Forecasting profiles for exponential smoothing
- ◇ Applying univariate time series techniques
- ◇ Handling special events with exponential smoothing models
- ◇ Scenario forecast
- ◇ Product lifecycle

Day 2

Part V - Measuring Forecast Accuracy

- ◇ Basis of accuracy measurement: Bias and Precision
- ◇ Forecasting accuracy vs. forecasting errors
- ◇ Goodness of fit versus forecast performance
- ◇ Cost of inaccurate forecasts
- ◇ Waterfall charts and accuracy measurement

Workshop 5: Root Cause Analysis and Exception Reporting. Case: Motorcycle Industry

Part VI - Graphical Tools for Forecast Process Improvement

- ◇ Ladder chart for monitoring forecast model results
- ◇ Prediction-Realization Diagram and the business cycle
- ◇ Prediction intervals for time series forecasts
- ◇ Cumulative tracking signals- Trigg's tracking signal

Workshop 6: How to Visually Track and Monitor Forecasting Performance

Curriculum Overview

Each Level of the CPDF program consists of both instructor-led workshop training hours, and independent hours to be accomplished through self-paced e-learning environment. The successful completion of each level

Level I : CPDF Principles and Best Practices - Certificate in Demand Forecasting Practice

90 Training Hours	15 hours hands-on workshop
	75 hours, 6 work sheets E-learning

Level II : CPDF Master - Certificate in Demand Forecasting Proficiency

60 Training Hours	15 hours hands-on workshop
	45 hours, 6 work sheets E-learning

Level III : CPDF Pro - Certificate in Demand Forecasting Professionalism

50 Training Hours	20 hours hands-on workshop
	30 hours, 6 work sheets E-learning

Program Requirements:

- College degree or Job experience
- Reasonable experience in MS Excel
- Acceptable level of English language

Program Assessment:

- Full attendance of hands-on workshops is required
- Successful submission of required worksheets through e-learning system
- CPDF is not a test-based program.

It's a hand-on workshop. Please bring your own laptops to run the computer exercises!!



Part VII - Practical Uses of Forecast Modeling

- ◇ Marketing - Promotion planning
- ◇ Sales- Pricing: Elasticities
- ◇ Operations - Safety stock and inventory forecasting
- ◇ Finance - Rolling forecasts

Workshop 07: Simulating the Demand Forecasting Work Cycle. Case - Consumer Electronics Industry

Part VIII - Implementing a Demand Forecasting Process with an Integrated Business Planning Process

- ◇ Successful Implementation Strategies
- ◇ Integration with Supply Chain
- ◇ Sales and Operations Planning (S&OP)
- ◇ Best-in-breed demand management

Review and Open Questions