SMARTAGE

Certified Professional in Demand Forecasting Workshop

CPDF_II : Smart Forecasting
(Master Level — Demand Forecasting Methodologies and Performance Measurement)

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

IIF

Program is endorsed by the **I**nternational **I**nstitute of **F**orecasters (IIF)
Www.forecasters.org

CPDF_II Master Level Program

Day 1

Part I – **The Demand Forecasting and Planning Cycle in The Supply Chain**
What is demand forecasting, Planning and Management
Why is demand forecasting so important?
Role of demand forecasting in the supply chain
Establishing A Forecasting Cycle– PEER Model
Factors affecting demand forecasting (good factors)
Computer Workshop 14– Targeting the Environment: Creating Drivers of Demand for Product/Service Forecasting. Cases: Automobile and Energy Industry

Part II – **Data Framework for Creating Forecast Decision Support Systems**
Ways to characterize demand activity
Time horizons, lead-times and dimensions of a forecast
Units of measures used to quantify demand
A framework for secure data and information management
Determining customer forecasting needs by organization
Internal factors likely to influence forecast
Designing a demand forecasting framework for data
Computer Workshop 15– Large-Volume, Data-driven Baseline Forecasting With Exponential Smoothing. Cases: Ice Cream and Tourism Industry

Part III – **Big Data: Mining, Exploration and Quality**
Predictive analytics– something is new?
Methodologies for large-scale data exploration
Decision Trees – progressive class distinction
Basic statistical tools for summarizing data
Traditional and nonconventional measures of variability
Intelligent dashboards
Data framework for on demand planning (SaaS)
Identifying criteria for assessing data quality
Handling exceptions in datasets
Demand Forecaster as Data Scientist
Data Process Framework and Checklist

Computer Workshop 16 –Data Exploration, Outlier Correction, and Predictive Visualization. Case: Healthcare Industry

Part IV – Forecasting with ARIMA Time Series Models

Creating a flexible model building strategy for ARIMA Models
Recognizing forms of stationarity (level) and non-stationarity (trending and seasonal) in time series
Detecting autocorrelation in time series
Identifying non-seasonal ARIMA Models
Comparison of forecasts with prediction limits
Implementing non seasonal ARIMA Models
Creating an ARIMA modeling checklist

Computer Workshop 17– How to Create Short-term Trend Models:. Case: Residential Construction Industry

Part V – How to Create Seasonal Forecasts and Seasonal Adjustments
Decomposition programs for seasonal adjustment
Identifying and implementing seasonal ARIMA Models
Creating Waterfall charts for forecast model evaluation
Forecast test measures for multiple ARIMA models
Best practices for ARIMA modeling

Computer Workshop 18 – Forecasting with Seasonal ARIMA Models. Case: Telecommunications Industry

Day 2

Part VI – **Designing Regression Models for Forecasting**

Finding a linear association between two variables
Checking ordinary correlation with a nonconventional alternative
What are regression model assumptions?
What is a "best" fit?
The least square assumption demystified
The ANOVA table output for regression analysis
Paring the output for use in forecasting
Creating forecasts and prediction limits

Computer Workshop 19– Using Causal Models for Advertising and Promotion Analysis

Part VII– **Working with Residuals and Forecast Errors to Improve Forecasting Performance**
Dealing with lack of normality in time series regression modeling
Looking out for "Black Swans"
How good was the fit and what does it say about forecasting ?
Dealing with nonrandom patterns in residuals
Impact of error term assumptions on prediction interval determination
Creating prediction intervals for forecast monitoring
Using prediction limits for quantifying uncertainty in forecasts
A checklist for multiple linear regression

Computer Workshop 20 - Taming Volatility— Root Cause Analysis and Exception Reporting. Cases: Ice Cream and Tourism Industry

Part VIII - Improving Forecasts with Subjective Judgment
What is structured judgment?
When to make judgmental adjustments to forecasts
Judgmental traps in forecasting
The Delphi Method
The forecasting audit
A framework for setting forecasting standards
Functional integration
Performance measurement
Planning for process improvement
Overcoming barriers and closing gaps
Forecast horizon
Melding quantitative and qualitative approaches for forecast development and process improvement
Creating the final forecast with Change and Chance numbers

Computer Workshop 21– GLOBL Case: Simulating The Forecasting Cycle.

Global Electronics Manufacturer (a fictitious company) provides consumer electronic technology products to a broad range of customers worldwide
Participants can use their own data and prepare forecasts and prediction limits using univariate exponential smoothing and multiple linear regression models.

Workshop Take-Aways and Closing Remarks

CPDF® Certification 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 will qualify participants to earn a certificate, CPDF levels & certificates are described below:

Basic Level : *Certificate in Demand Forecasting*

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

Master Level : *Certificate in Demand Forecasting*

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

Professional Level: *Certificate in Demand Forecasting*

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!!

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 date with international experience and theories.

7. Interchange demand forecasting experience management with local culture and knowledge.

Who Should Attend?

Demand Forecasters
Supply Chain Managers
Demand planners
Supply planners
Production Managers
Operations Managers
Financial analysts
Market analysts
Researchers
Forecasters
Economists
Strategists
Marketing & Sales managers

CPDF_II Master Level Program

DELPHUS

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 has been a member of the editorial board of Foresight Journal, the practitioner journal published by the 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 the
"Certified Professional Demand Forecaster"
(CPDF®) curriculum

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 thirty-four year-old non-profit membership organization whose purpose is to advance knowledge and research in forecasting, has endorsed it. The CPDF program is a 200 hours curriculum comprised of three modules, I_Basic, II_Master and III_Pro. 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.

CPDF_II Master Level Program

How to Register?

E-mail: smartage@smartage.com.tr

Web : www.smartage.com.tr

Phone: +90 312 2650615

Fax : **+90 312 2408263**

Group and Early Birds Discounts Available

Program Fees: CPDF Master Level II -

Certificate in Demand Forecasting Practice

2 Days Hands-on Workshop	USD $995
E-Learning Exercises	USD $495

Program Fees cover workshop manual, FREE excel Add inns, 50% book discount : *Forecasting: Practice and Process in Demand Management,* Discount on a one-year subscription to IIF Practitioner Journal (*Foresight*), and coffee/tea breaks with lunch.

Registrations are made on first-come first-served basis

Participants Information

1. Name:...
   Company:...
   Job Title:.. Email:...
   Tel:.. Fax:................................ Mobile:...

2. Name:...
   Company:...
   Job Title:.. Email:...
   Tel:.. Fax:................................ Mobile:...

Registration and Payment Terms

The registration form has to be sent registration. The registration process is not complete until the registry fee are paid in the bank account most lately 7 days to complete the registration. The registration is completed when sent with both "Registration Form and Bank Receipt". (If the registration form is sent for pre-registration and there is not discussed any change, only bank receipt can be sent.)

Cancellation Policy

Attendants can cancel their registrations 15 days before the beginning of training. If the attendants cancel their registrations less than 15 days before the beginning of training, 50% of the registry fee is refunded. However, there will not refund if the attendants cancel their registrations less than 10 days before the beginning of training.
The training program can be bring forward or cancel the training for justifiable reasons by SmartAge Inc. If the training is cancelled, then the registry payments will refund to attendance.

Interested to run this Program in-house?

Just Contact Us

SmartAge Management Tech. & Cons. Co. Ankara TURKEY
smartage@smartage.com.tr
www.smartage.com.tr