

Demand Planning & Forecasting 2-Day Workshop

May 23-24, 2012 | Four Points by Sheraton, Boston/Norwood

*Improve your forecasts
with better Models and Diagnostics!*



We will show you how to...

- ◆ Set up a Demand Planning Process for your business
- ◆ Clean your data and adjust for data anomalies
- ◆ Use Statistical modeling to create baseline forecasts
- ◆ Use exponential smoothing and linear regression models
- ◆ Leverage the Regression capabilities in Excel
- ◆ Incorporate promotional events into your forecast modeling
- ◆ Use Forecast Error as a diagnostic to improve model quality
- ◆ Reconcile the top-down category forecast and the bottom-up SKU level Demand Plan.

To register for this tutorial, visit DemandPlanning.Net.
Contact us today at (781)-995-0685, or via Email at info@DemandPlanning.net

Demand Planning & Forecasting Workshop Outline

Demand Planning is the science of accurately forecasting the demand for your supply chain. An accurate demand plan helps you reduce inventory costs and increase customer service levels. When properly implemented and used in the Value Chain Process, the demand plan helps create a lean and customer centric supply chain.

In this workshop, you will learn how to develop a baseline statistical forecast and leverage a collaborative process to add customer intelligence. The result is a more accurate plan that includes promotional activity, customer intelligence, and display activity.

This two-day intensive workshop will take you through an overview of demand planning process, organization, and structure within the supply chain and comprehensively cover statistical modeling to create accurate forecasts. We will also talk about model diagnostics to improve the quality of the forecast models with specific references to popular applications such as SAP APO, Forecastpro etc.

About The Presenter

Mark Chockalingam, Ph.D.



Mark Chockalingam is Managing Principal, Demand Planning LLC, a Business Process and Strategy Consultancy based in Woburn, MA. Mark has spent most of his career in business forecasting and supply chain analytics. He has specialized in the CPG and the healthcare space and implemented best practices to help supply chains be more customer focused.

His client experience includes projects with companies such as Miller SAB, Eastman Kodak, Colgate Palmolive, Procter and Gamble, Abbott Labs, Wyeth, Teva Pharmaceuticals, etc. Before starting his consulting career, he has held corporate positions of increasing responsibility with Fedex, Schering-Plough and the Gillette company, now a unit of Procter and Gamble.

Insightful information on...

- ☑ Demand Planning Overview
- ☑ Mechanics of Forecast Modeling
- ☑ Forecast Performance Metrics
- ☑ Model Diagnostics
- ☑ Measure and use forecast accuracy
- ☑ Promotional Planning
- ☑ Consensus Demand Planning
- ☑ S&OP Planning Process

Who Should Attend?

1. Demand Planners
2. Forecast Analysts
3. Forecasting Managers
4. Director of Forecasting and Demand Planning
5. Director of Value Chain
6. Analysts in the Supply Chain
7. Inventory Planners
8. Operations Planners
9. Financial Analysts
10. Director of Logistics
11. Director of Customer Service

Price: \$995 | Early-bird price \$895 until Date March 1st, 2012
10% discount for groups of 3 or more from the same company using 1 payment method

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Demand Planning & Forecasting Workshop Agenda

DAY ONE

8:00am **Registration**

8:30am – 9am **Welcome**

9am – 10:30am **Demand Planning Overview**

- » Definition of Demand
- » Introduction to Demand Planning- What, Why and How?
- » The Service – Cost – Balance Model
- » Distinction between Business Forecasting and Demand Planning
- » What to forecast – shipments vs. orders
- » Key Terminology – Forecast Horizon, Buckets & Periodicity
- » Constrained vs. Unconstrained forecasts
- » Demand Management
- » Organization Structure and Culture
- » Role of the Demand Forecaster
- » Consensus and communication

10:30am – 10:45am **Morning Break**

10:45am – 12:30pm **Data Analysis for Demand Forecasting**

- » Forecast Problem and Data collection
- » Data cleaning challenges
- » Data filtering
- » Adjusting for historical shifts in demand
- » What is the approach to data analysis?
- » Impact of Data volatility on Forecasting
- » Measuring volatility
- » Event Impact - product life cycle, promotions and pricing.
- » Process to Identify Outliers
- » methodology for outlier correction

12:30pm – 1:30pm **Lunch Break**

1:30pm – 2:30pm **Demand Components:**

- » Simple Model of Demand
- » Demand Volatility
- » Predictable and unpredictable volatility
- » Illustration of Demand components
- » Key Components of a Demand Plan
- » Understanding the components
 - Trend, Seasonality, Cyclical

2:30pm – 3pm **Coffee Break & Networking Exercise**

3pm – 4:30pm **Modeling & Graphical Decomposition**

- » Decomposition of the Demand Profile
- » Understanding the components - Trend, Seasonality, Cyclical
- » Predictable and unpredictable volatility
- » Stationarity and Stability
- » Diagnostics review to improve model quality
- » Modeling by Exception

4:30pm **Assignment of Forecasting exercises to participants**

DAY TWO

8:30am- 10:30am **Modeling**

- » Introduction to Forecast Modeling
- » Qualities of a good Statistical Forecast
- » Balancing between Model Fit vs. Model Robustness
- » Time Series versus Multi-Variate Methods
- » First Order Exponential Smoothing or Constant Models
- » Holt Models to accommodate Trend
- » Holt Winters Models
- » How to set up a simple forecast model in Excel
- » Exponential Trend and Dampening
- » Additive vs. Multiplicative Seasonality in Models

10:30am – 10:45am **Morning Break**

10:45am – 11:30am **Modeling (cont'd)**

- » Baseline vs. event forecasting
- » Introduction to Box-Jenkins Models
- » Multiple Linear Regression Models
- » Time and Seasonal Index in an Excel based model

11:30am – 12:30pm **Forecast Errors & Model Diagnostics**

- » Definition of Demand Forecast Errors
- » Errors over time vs. Errors Across Products
- » Calculation Methodology for Model Diagnostics
- » Mechanics behind MAD, MPE, MAPE and RMSE
- » How to identify a biased Forecast?

12:30pm – 1:30pm **Lunch Break**

1:30 PM – 2:30pm **Discussion and answers to assigned exercises**

2:30pm – 3pm **Coffee Break**

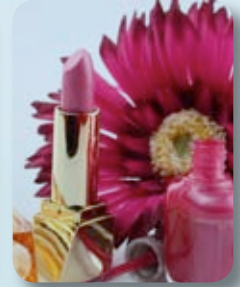
3pm – 4:30pm **Measuring Forecast Performance**

- » Importance of measuring forecast performance
- » Management Reporting and Continuous Improvement
- » Measurement Methodology
- » Mean Absolute Deviation (MAD)
- » Mean Percentage Error (MPE)
- » Mean Absolute Percentage Error (MAPE or PMAD)
- » Weighted Mean Percentage Error (WMAPE)
- » Forecast Bias and Sku Mix Error (SME)
- » Relationship between Bias and Error

About Demand Planning, LLC

List of Clients

| | | | | | |
|----------------|------------------|-------------------|-------------------|-------------------|----------------------|
| Abbott Labs | Celanese AG | Hershey's | KNEX | Newell Rubbermaid | SAB Miller |
| AVON | Clorox | Hewlett Packard | Kraft Foods | Nomacorc | Sappi Fine Paper |
| Ahold USA | Eastman Kodak | Honeywell | Labatt Foods | NSTAR Electric | Skyworks Solutions |
| Avery Dennison | F. Schumaker | Hypertherm, Inc. | Labatt USA | NTN USA | Sunovion |
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About Us

Demand Planning, LLC is a consulting boutique comprised of seasoned experts with real-world supply chain experience and subject-matter expertise in demand forecasting, S&OP, Customer planning, and supply chain strategy.

We provide process and strategy consulting services to customers across a variety of industries: pharmaceuticals, CPG, High-Tech, Foods and Beverage, Quick Service Restaurants and Utilities.

Through our knowledge portal Demand Planning.Net, we offer a full menu of training programs through in-person and online courses in Demand Forecast Modeling, S&OP, Industry Forecasting, collaborative Forecasting using POS data.

Demand Planning.Net, also offers a variety of informational articles and downloadable calculation templates, and a unique Demand Planning discussion forum.

Demand Planning LLC
10G Roessler Rd. Suite 508
Woburn, MA 01801
Phone: (781) 995 0685
Fax: (651) 305 5163

Email: info@demandplanning.net
Web: <http://www.demandplanning.net>

