

CPG FORECASTING WORKSHOP

Understand the unique characteristics of Demand Planning for CPG

Work the Mechanics of Forecast Modeling

Leverage Time Series Models and Exponential smoothing

Formulate accurate baseline models

Calculate Demand Metrics and perform Model Diagnostics

Utilize retail data to increase the accuracy of your forecasts

Appreciate the Dynamics of Retail and channel inventory

Derive the total supply chain forecast using Account Based Forecasting

Set up a consensus demand planning process

Improve your forecasts with better Models and Diagnostics!

Presented by Dr. Mark Chockalingam

With industry-specific sessions from
two senior managers from fortune 500 companies.

The logo for Demand Planning .Net, featuring the word "Demand" in black, "Planning" in black, and ".Net" in black below it. The background of the entire page shows hands holding puzzle pieces, with the logo centered over them.

**Demand
Planning
.Net**

CPG FORECASTING TUTORIAL OUTLINE

Consumer Packaged Goods companies are faced with a changing retail landscape dominated by a few large retailers and higher uncertainty from consumer preferences and retail promotional policies. Just a few of your customers can exert a great influence on your planning, logistics and execution processes. However, the large retail customers have also created the infrastructure and the technology that provides consumer and retail shelf take-away data, as well as enhanced visibility into the inventory positions at both store and warehouse. The key is for the CPG companies to leverage both consumption data and inventory data to create accurate demand plans.

We will illustrate the methodology to address challenges specific to CPG Demand Planning:

How can customer inventory and POS data be leveraged into creating accurate customer demand plans?

How are the principles of Account Based Forecasting (ABF) used to create the total supply chain forecast for manufacturing?

Why is event modeling important for CPG companies, and how should the impact of promotional events be captured in your forecast models?

This workshop will also explain the process to create a demand-driven pull forecast that incorporates the effects of changes in market, consumption patterns, and inventory cycles to model a supply chain forecast.

We take on the challenges and work through the mechanics of obtaining and using retailer data and syndicated POS data from sources like Nielsen's and IRI. If you are using Wal-Mart Retail Link or Target Partners Online data, this will be a productive workshop that helps you build the analytics to create the correct forecasts.



Who Should Attend?

Demand Planners & Directors
Forecast Analysts and Managers
Director of Value Chain
Analysts in the Supply Chain
Inventory and Operations Planners
Financial Analysts
Director of Logistics
Marketing Managers
Product Managers
Sales Managers
Customer Business Managers

CPG FORECASTING TUTORIAL AGENDA

Day 1

7:30am – 8:30am **Breakfast and 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**

- Data Requirements for POS based forecasting
- Graphical review of the POS and CHannel Inventory Data
- Outliers and Missing Data
- Use of Syndicated Data – Coverage Ratios
- Structural Changes and Data Shifts – In and Out Packs
- Forecast Model
- Introduction to Demand Components
- Ex-Ante versus Ex-Post Forecasting
- Hold out Sample Methodology
- Optimal Model Selection

12:30pm – 1:30pm **Lunch Break**

1:30pm – 2:30pm **Demand Driven Forecasting**

- Push versus Pull Methodology
- Modeling Customer Demand
- Retail Customer Segmentation – Analysis of your customer Pareto
- Modeling the retail shelf take-away – The use of POS data

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

3pm - 4:30pm **Demand Driven Forecasting Continuation**

- Understanding your Distribution Channel Network
- Demand Volatility created by Channel inventory
- Changes in Retail Inventory Policies
- Calculation of the total supply chain forecast
- Challenges in setting up the Process – Data Mapping, Calendar Conversions

4:30pm **Assignment of Forecasting Exercises to Participants**

Day 2

7:30am – 8:30am **Breakfast**

8:30am- 10:30am **Forecast Modeling for POS DATA**

- Smooth patterns in the POS data
- Effect of Marketing and Sales Promotions
- Data Anomalies – Shifts, Outliers & POS Coverage
- Statistical Modeling
- Model Diagnostics using Demand Metrics
- MAPE versus Root Mean Squared Error
- Ex-post Forecasting
- Modeling Level, Trend and Seasonality
- Exponential Smoothing Models
- Promotional Planning using Intervention Models
- Baseline Forecast and Lift for Promotional events
- Change in the Promotional Calendar
- Phase-in and Phase-out Modeling

10:30am – 10:45am **Morning Break**

10:45am - 12:00pm **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

12:00 pm - 1:00 pm **Lunch Break**

1:00pm - 2:45pm **POS to Order Forecast**

- Challenges in converting the POS forecast to Shipment forecast
- Special situations that affect the conversion
- Numerical examples to illustrate
 - Bulky shipments as displays
 - Channel Load-ins
 - Increased Distribution at Retail
 - Retail Promotions

2:45pm-3pm **Coffee Break**

3pm - 4:15pm **Measuring Forecast Performance**

- 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?
- Importance of measuring forecast performance
- Management Reporting and Continuous Improvement
- Measurement Methodology
- 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

4:15pm **Discussion and answers to assigned exercises**

DEMAND PLANNING & FORECASTING ABOUT DEMAND PLANNING, LLC.

ABOUT THE INSTRUCTOR

Dr. Mark Chockalingam is Founder and President of Demand Planning LLC, a Business Process and Strategy Consultancy firm.

He has conducted numerous training and strategy facilitation workshops in the US and abroad, and has worked with a variety of clients from Fortune 500 companies such as Wyeth, Miller SAB, FMC, Teva to small and medium size companies such as Au Bon pain, Multy Industries, Ticona- a division of Celanese AG.

Prior to establishing his consulting practice, Mark has held important supply chain positions with several manufacturing companies. He was Director of Market Analysis and Demand Planning for the Gillette Company (now part of P&G), and prior to that he led the Suncare, Footcare and OTC forecasting processes for Schering-Plough Consumer HealthCare.

Mark has a Ph. D. in Finance from Arizona State University, an MBA from the University of Toledo and is a member of the Institute of Chartered Accountants of India.



ABOUT US

Demand Planning LLC, based in Boston MA, 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 DemandPlanning.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. DemandPlanning.Net also offers a variety of informational articles and downloadable calculation templates, and a unique Demand Planning discussion forum.

OUR TRAINING CLIENTS INCLUDE:

Texas Instruments	Sunny Delight Beverage Co,
Hewlett Packard	3 Rivers Pharmaceuticals
World Kitchen	Fox entertainment
FMC Lithium	F. Schumaker
McCain Foods	J & B Group
Lnoppen, Shanghai	Honeywell
Vistakon J&J, Malaysia	Medtronic
Pacific Cycles	Smead Manufacturin
Avon	Heinz North America
Depuy Spine	Nomacorc
BIC	Lifetime Products
Human Numbers	White wave foods
Gilead Sciences	Limited Brands
Roche Diagnostics	Bush Brothers
BD Biosciences	Whirlpool
Daiichi Sankyo	Gorton's
Abbott	Kraft Foods
Candela	Ross Products

and many more

