



Demand Forecasting in **SAP APO**

*Presented by
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Hands-On Modeling Workshop Using APO DP



Overview

SAP APO is a popular supply chain planning tool among many Fortune 1000 companies today. APO is a powerful tool that can help you create better demand forecasts and finished goods plans, when properly implemented together with appropriate training for the planning professionals.

The APO DP training offered by DemandPlanning.Net is a comprehensive three day course that will teach your planners both the theory as well as the modeling mechanics of the tool. You will have immediate take-aways for your job as a demand planner since we will customize the course with examples from your APO DP implementation and work through a case study to demonstrate how you will use the full functionality of the tool to solve your planning problems.

On completion of the course, you can take advantage of the many automated modeling strategies available in APO resulting in a more streamlined planning process and organization. The course will also emphasize the exception management practices built into APO DP to model, forecast and manage the process by exception through...

- Forecasting exception alerts and
- User defined macro alerts.

The training program will help you answer the following questions:

1. Am I using a **Pareto process** in my demand forecasting activity?
2. Are there products and customers that are better left to APO's **automated modeling** strategy?
3. Am I using a **segmented modeling** approach?
4. How many customer/product segmentations are being reviewed by my demand planners each month?
5. Has APO helped improve our forecast accuracy?
6. How is APO helping us simplify and improve the **promotional planning** process? Is it integrated into the CRM system?
7. Have I created the correct **customer grouping** for leveraging correlations across customer forecast errors?
8. Has the system simplified and improved **forecast reporting** process?
9. Are we using the **system defined error metrics** in APO? Why are they different from the classic MAPE calculations?
10. How do you conduct **phase-in/phase-out** of products?
11. What is the correct level to forecast in APO so as to improve the overall forecast accuracy at the SKU level?
12. What modeling and planning strategy should I use for **forecasting infrequently purchased items**?



Who Should Attend?

Demand Planners & Directors, Forecast Analysts and Managers, Director of Value Chain, Analysts in the Supply Chain, Director of IT, Inventory and Operations Planners, Financial Analysts, Director of Logistics, Product Managers, IT Business Analysts, IT Manager, APO support professionals, Director of ERP applications, Director of Supply chain applications, IT Business Manager

Agenda

DAY ONE

Introduction to Forecasting: Theory & Practice

9AM-12PM

- Demand Planning and Forecasting
- Key Components of a Demand Plan
- Qualities of a good statistical forecast
- Demand Volatility
- Illustration of Demand components
- Forecast Modeling basics
- Model Settings in APO DP
- Illustration of Forecast Profiles in APO DP
- Forecasting Terminology
- Ex-post Forecasting in APO DP

Data Maintenance and Analysis

1PM-3PM

- 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
- APO DP methodology for outlier correction

Modeling Segmentation & Data Pattern Evaluation

3:15PM-5PM

- Modeling segmentation of SKUs using the Pareto analysis of Volume and volatility.
- Graphical decomposition of demand using Linear regression Models

DAY TWO

Modeling in APO DP

9AM-11:30AM

- Modeling Overview
- Internal workings of APO DP
- Forecast Profile Selection Process
- Modeling Strategies by Forecasting Need
- Simple Moving Average Models
- Weighted Moving Average Models
- First Order Exponential Smoothing Models

Assignment of Case Study and Discussion

11:30AM-12:30PM

Modeling in APO DP

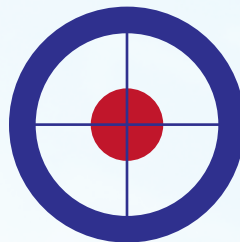
1:30PM-3:30PM

- Trend Smoothing Models
- Seasonal Models or Winters Models
- Holt Winters Models
- Automatic Modeling with Strategy 50
- Automatic Model 2
- Product Life Cycle impact on Forecasts
- Time Dampening Profiles
- Profiles for modeling increasing Trend
- Croston's Models

Proportional forecasting in APO DP

3:45PM-5PM

- Phase-in Phase out
- Forecasting levels
- Top-down, Bottom-up and Middle-out
- Logic behind proportioning algorithms
- Forecast Reconciliation and forecast routing
- Product Cannibalization
- New Product Planning



Agenda

DAY THREE

Participants work through the Case Exercise:

8:30AM-10AM

- Read the Case and Walk the participants through the content and business challenges of the case.
- Group Discussion and Q&A on the Case.
- Illustrate the answers through SAP APO examples on the screen.

Error Measurement for Model Diagnostics

10AM-11:30AM

- Definition of Demand Forecast Errors
- Errors over time
- Model Errors defined in APO DP
- Definition of MPE, MAPE and RMSE
- Model Diagnostics through Forecast Error
- Impact of Outlier adjustments on Model Errors
- Tracking Signal

Demand Planning Accuracy Analysis and Exception Management

11:30AM-12:30PM

- Forecast errors and actionability
- Sources of Forecast Error
- Definition of Demand Planning Metrics - WAPE and Bias
- Types of Bias
- SKU Mix Error
- Sample Error Analysis
- Error Analysis for continuous improvement
- Exception Management through Pareto principles
- Summary of Error Reduction approaches

Participants formulate a Solution to the Case, and make their presentations

1:30PM-3:30PM

- Group Discussion and Q&A on the Case.
- Illustrate the answers through SAP APO examples on the screen.

General Q&A

3:30PM-4:30PM

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.

"I thoroughly enjoyed the presentation and think the learnings will be of value to us. Thank you."

VP Logistics,
Cumberland Swan

"Mark is a good presenter, with high energy and audience involvement, and he appeared to be wellversed in the subject. His presentation contained a wealth of info on supply chain, lots of food for thought... more manufacturing companies should consider his ideas!"

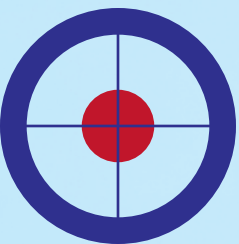
Workshop Attendee,
Chicago June 2008

"I attended the session to see if I may want to send additional demand planners to subsequent training sessions. I thought the training was well done and will recommend that several others from my team attend this workshop soon."

Server Demand Planning Manager,
HP

"This was a great workshop. There was a lot of discussion which is always nice; I would love to attend his future workshops, and would definitely recommend them for others."

Director of Operations,



Testimonials