



Demand Planning LLC Presents:

# Demand Metrics in SAP APO

ELEARNING MODULES ONE AND TWO

Presented by Mark Chockalingam Ph.D.

**T**o mature and improve performance, organizations must measure themselves. To increase performance, incentives must be aligned with metrics.

The objective of this workshop is to review a holistic metrics process to create a balanced Value Chain. We will examine the inter-relationship between the various supply chain metrics – customer service metrics, inventory metrics, schedule adherence, and forecast accuracy. The workshop will also look at the mechanics behind the various metrics and how designing holistic metrics will help you to align incentives and address different behavioral biases. We will discuss the metrics pyramid and the hierarchy of metrics used across different functions in the supply chain.

## WHO SHOULD ATTEND?

- Demand Planners & Planning Managers
- Supply Planners
- Supply Chain Managers
- Inventory Planners
- Operations Planners
- Director of Forecasting & Demand Planning
- Director of Value Chain
- Director of Logistics
- Director of Customer Service
- Controller
- Chief Financial Officer
- VP of Planning
- VP of Supply Chain
- Director of S&OP

## YOU WILL LEARN TO...

- **Appreciate** the importance of a balanced Value Chain
- **Create** a performance measurement process
- **Calculate** customer service, inventory and execution metrics:
  - first time fill rates
  - order complete
  - inventory turns
  - Manufacturing Schedule Adherence
  - Supplier quality
- **Measure and use** forecast metrics in improving the organizational performance
- **Leverage** the Metrics pyramid to enhance decision making
- **Discover and address** the organizational bias
- **Set up** a balanced metrics system and align incentives

# Overview

# Agenda

## Module 1

### MEASURE AND IMPROVE CUSTOMER SATISFACTION

- Why Does Customer Service Matter?
- The Road to 99.5% satisfaction
- Measuring customer service
- First Time Fill Rate
- Order Complete, or Perfect Order
- Decomposing Service Failure

### INVENTORY METRICS

- Inventory Metrics
- Inventory turns
- Inventory Coverage
- Do we need inventory coverage?
- SLOBS and returns

### DEMAND METRICS

- Demand Forecast Error
- Forecast Accuracy
- Demand Measurements –MAPE, Bias and SKU Mix Error
- Example of MAPEVs Bias

### INCENTIVE ALIGNMENT USING METRICS

- Incenting the Demand Side
- Incenting the Supply Side
- Value Chain Imbalance Cases
- Value Chain Alignment

## Module 2

### Introduction to Forecast Modeling

- Qualities of a good Statistical Forecast
- Balancing between Model Fit vs. Model Robustness

### Demand Forecast Errors

- Definition
- Errors over time vs cross-sectional metrics

### Model Errors in APO DP

- Definition of MPE, MAPE and RMSE
- Model Diagnostics through Forecast Error
- Impact of Outlier adjustments on Model Errors
- Tracking Signal

### Diagnostics and Monitoring

- Forecast Alerts
- Forecast comparison reports



# Credentials & Testimonials

## ABOUT THE WORKSHOP LEADER

Dr. Mark Chockalingam is Founder and Managing Principal, 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 Sun care, Foot care 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 DEMAND PLANNING LLC

Demand Planning LLC is a consulting boutique comprised of seasoned experts with real-world 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 & 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 clients include...

- NStar • Abbott Labs
- Au Bon Pain • Teva
- F. Schumaker • Wyeth
- Celanese • Nomacor
- Vistakon J&J, Malaysia
- Miller Brewing co.
- White Wave foods
- Fox entertainment
- Texas Instruments

- World Kitchen • FMC Lithium • Lifetime Products
- McCain Foods • Ross Products • Lnoppen, Shanghai
- Limited Brands • Pacific Cycle • Smead
- Campbell's Soups • Hewlett Packard

### Contact Us:

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### Boston, October 2008

*"Dr. Chockalingam's presentation was simple, well organized, easy to follow, and contained plenty of interaction with the class. He knew the material well, and presented it in an interesting manner! Furthermore, the information was highly relevant and practical, and would be very useful in my work."*

### Mid-West, February 2006

Demand Planning Manager, CPG Company:

*"It was a good week of training. It was fun and also at the same time an insightful learning experience. Hope you had a good time too with our team. We would really appreciate your feedback, thoughts and suggestions on our processes."*

### IBF Conference, May 2006

*"Good information, some new insights learned to bring back to company. Great examples, good discussion on best practices and ideas."*

Bill Smith, VP Logistics, Cumberland Swan

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