



presents:

INVENTORY MANAGEMENT AND OPTIMIZATION

Two Day Workshop

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Aug 8 - 9 , 2019 | Mumbai, India

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INVENTORY MANAGEMENT and OPTIMIZATION Workshop Outline

Demand Planning & Inventory Optimization

This program has been developed to communicate industry best practices in the area of inventory management to Supply Chain professionals. This workshop aims to provide the necessary technical background to enable attendees to develop & implement best practices & procedures in materials management into their own business units.

This workshop will holistically present the best practices and explain the concepts and calculations for optimizing your inventory parameters. We preach true inventory optimization - help you to establish the right parameters your process and systems may need to run a lean machine with just optimal inventories to deliver the service and fill rates.

This is a hands-on, practical workshop with many exercises and case studies and excel based work out problems. Every planner and material manager will leave the training hall with a diverse skill set to do their day to day jobs.

Who Should Attend?

1. Production Planners
2. Supply Chain Analysts
3. Director of Supply Chain
4. Director of Value Chain
5. Analysts in the Supply Chain
6. Inventory Planners
7. Operations Planners
8. Financial Analysts
9. Director of Logistics
9. Director of Customer Service



Insightful information on...

- ▮ Purpose of Inventory – Introduction to Inventory Management Principles
- ▮ Toolkit for Materials Management
- ▮ Principles of Inventory Management
- ▮ Inventory Optimization
- ▮ Manage by Exception
- ▮ ABC Classification for Inventory
- ▮ Work-site Inventory Management
- ▮ Techniques Including Kanban
- ▮ Multi-echelon distribution
- ▮ Measurement and KPIs for Inventory Management
- ▮ Forecast Accuracy
- ▮ Min-Max Models

Agenda

DAY ONE

11:15am Registration

11:30am Inventory Management and Demand-driven planning –Strategic Uses of Inventory

- Inventory Management Strategy
 - Buffering
 - Hedging
 - Decoupling
 - Production Smoothing
 - Pricing
- Inventory Categories
 - Direct materials
 - Indirect Materials
 - MRO
 - Spares
- Inventory Management Strategies
 - Engineer to Order
 - Make to Order
 - Make to Stock
 - Postponement
 - Mass customization

1:00pm Lunch Break

2:00pm Product Portfolio Management

- Impact of Data Volatility on SCM
- Measuring Volatility
- Impact of multiple Extreme Observations on Volatility
- SKU Segmentation for forecast modeling & inventory strategies
- Modeling by exception
- ABC analysis - Classification philosophy
- Pareto analysis of SKUs based on dollar usage
- Item criticality
- Excess, obsolete and Slow-moving Alignment with product lifecycle
- Discontinuance and end of life (EOL)
- Process flow for Segmenting SKUs
- Example using a three-dimensional matrix; ABC / Volume / Critical / Status; excess, obsolete impact of Segmentation on Cycle Counting and Inventory Accuracy.

3:30pm Coffee break

3:45pm Demand Planning Analytics toolkit

- Definition of Demand Forecast Errors
 - Forecast Accuracy
 - Forecast Bias vs. Forecast Error
 - Error and Volatility Reduction
 - Errors across SKUs vs. Errors across time
 - Model Diagnostics - Measuring Errors over time
 - MAD
 - MAPE vs. MPE
 - WAPE
 - Root Mean Squared Error
- Measuring forecast performance
 - Forecast Performance Metric
 - Forecast errors and actionability
 - Sources of Forecast Error
 - Definition of Demand Planning Metrics
 - WAPE & Bias
 - Types of Bias
 - SKU Mix Error
 - Error Analysis for Continuous Improvement
 - Forecast Accuracy Reporting



Mark Chockalingam Ph. D.
Founder & President

Dr. Mark Chockalingam is Founder and President, 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, Ticono- 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.

DAY TWO

9:00am Economic Order Quantity and Purchase Quantity Discounts

- Economic Order Quantity
- Derivation of the EOQ
- Determinants of EOQ
- Ordering costs vs. Carrying costs
- Components of Inventory Carrying / Holding costs - capital, storage, obsolescence, handling (breakdown) and their impact
- Estimating Inventory Carrying costs for various industries
- Placing an Order for different quantities
- Purchase Quantity Discount

10:00am Inventory Optimization and Management

Safety Stock & Min-Max Models

- Safety Stock
 - Safety Stock Calculations
 - Determinants of Safety Stock
 - Service Level Agreement
 - Demand Volatility and Lead Time
- Effect of Demand Uncertainty in Safety Stock
 - Different Scenarios
- The perils of variability in Supplier lead time
 - Supplier Lead Time Variance
 - Effect of Supplier Uncertainty on Safety Stock Calculations

11:00 am Coffee break

Min-Max Models

- Re-Order Point
- Demand During Lead Time
- Definition of Min level in the Min-Max Model
- Definition of Max level in the Min-Max Model
- Inventory Cycle and Cycle Time
- Time Phased Order Point (TPOP)
- Lifetime Buys and Minimum Buys
- Case Study

1:00pm Lunch Break

2:00pm Measurement and KPIs Forecast Error, Customer Service and Inventories

- Service Level measurements
 - Fill-Rate and on time Delivery
 - Order complete
 - Service Metrics exercise
- Inventory Performance Measures
 - Inventory Accuracy
 - Inventory Turns
 - Days on Hand
- Supplier Performance Measures
 - Schedule Adherence
 - Lead Time Adherence
- Relationship between Schedule Adherence, Customer Service and Inventory Availability

3:30pm Coffee break

3:45pm Work-site Inventory Management Techniques

- Challenges and Benefits of improving & maintaining inventory Accuracy
- Periodic review process vs. Perpetual Inventory
- Cycle counting vs. physical Inventory
- Kanban Methodology
- Determining Container Size and Quantity
- Safety stock, Min-Max and DDLT in Kanbans.
- **Exercise:** Kanban Calculation exercise

4.45 pm Exercise Solutions Discussion



List of Clients

Abbott Labs
AVON
Ahold USA
Avery Dennison
BAE Systems
BASF
Cabot Creamery
Campbell Soup
Cargill
Cayman Islands

Celanese AG
Cintas, Corp.
Clorox
Eastman Kodak
F. Schumaker
FMC Corporation
Fortune 500 Oil Co
Glatfelter paper
Grace Foods
Harley Davidson

Hershey's
Hewlett Packard
Honeywell
Hypertherm, Inc.
IMP Aerospace
John Deere
Johnson & Johnson
Keter Plastics
KNEX
Kraft Foods

Labatt Foods
Labatt USA
Lifetime Products
Limited Brands
McCain Foods
Merck-Millipore
New Balance
Newell Rubbermaid
Nomacorc
Novozymes

NSTAR Electric
NTN USA
Optos Inc.
OSRAM Sylvania
Pacific Cycles
Pizza Hut
Pfizer
SAB Miller
Sappi Fine Paper
Skyworks Solutions

Sunovion
Teva Pharmaceuticals
Texas Instruments
US Navy
Volvo



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.



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