Global Supply Chain Systems & Strategy at Plantronics

UCSC Management of Technology Course
February 3, 2010 by Kai Hypko
Agenda

Who Am I?
Plantronics
Global Supply Chain Challenges
Plantronics Supply Chain Challenges
SCORE Project
Project Methodology
The Economy and its impact
Now what?
Value-Driven Replenishment (Time permitting)
My Story

German, came to US in 1988

BS Degree in MIS & BUAD

18 years in Supply Chain

Hi-Tech, OEM, Retail experience

Professional Associations

• APICS, the Association for Operations Management
• Board of Directors of NorCal OAUG
• Aberdeen Research Advisory Council member
• Speak frequently at Supply Chain events such as CES, ESCA and Oracle Open World.

Personal Motto:

• “You get what you tolerate”

Joined Plantronics in Fall 2006
What do I do?

Act as enterprise wide process improvement evangelist and change agent.

Ensure that all business transformation programs align with the strategic direction of the company’s initiatives.

Interface and communicate broadly across the company to lead change management and implementation efforts. Inform and influence key stakeholders to gain buy in.

Collaborate with internal organizations to establish priorities, make business trade-offs, and sequence initiatives necessary to achieve long term process goals.

Work closely with internal business process owners and support functions to scope program deliverables. Develop and implement a plan (roadmap) to achieve objectives for each of these processes.

Partner with functions owners, third party system integration partners and consultants to plan and implement process & system improvements.
Plantronics, The Company
Plantronics

Founded in 1961
Consumer Products & Communications
Headsets & Unified Communication solutions
Revenue ~ $700 Million
3500 employees worldwide
Publically traded NYSE: PLT
Medium Vol – High Mix
Long RM LT – short customer LT
Manufacture & Distribute Global
Using Photography: Content + One-third Photo

Leading worldwide designer, manufacturer, marketer and seller of lightweight communications headsets, telephone headset systems, and accessories for the business and consumer markets under the Plantronics brand.

Manufacture and sell, under our Clarity brand, specialty telephone products, such as telephones for the hearing impaired, and other related products for people with special communication needs.
Global Supply Chain Challenges
## Competitive Business Environment

<table>
<thead>
<tr>
<th>Customers are demanding:</th>
<th>Increasing business risks of:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accurate and timely commitments</td>
<td>Too much inventory</td>
</tr>
<tr>
<td>Shorter lead times</td>
<td>Inventory in the wrong place</td>
</tr>
<tr>
<td>Flexibility</td>
<td>Ordering the wrong inventory</td>
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<tr>
<td>Product differentiation</td>
<td>Missing delivery dates</td>
</tr>
<tr>
<td>Dedicated inventory</td>
<td>Losing orders</td>
</tr>
<tr>
<td>Visibility into the supply chain</td>
<td>Shipping the wrong products</td>
</tr>
<tr>
<td>High quality</td>
<td>Increased expediting costs</td>
</tr>
<tr>
<td>Automation</td>
<td>Increased obsolescence</td>
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<tr>
<td>Lowest costs</td>
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</table>

<table>
<thead>
<tr>
<th>Forcing businesses to better manage:</th>
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<tbody>
<tr>
<td>Inventories</td>
</tr>
<tr>
<td>Ability to promise</td>
</tr>
<tr>
<td>Global suppliers</td>
</tr>
<tr>
<td>Stocking policies</td>
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<td></td>
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</table>
Today’s Market Reality

- Orders: 20% filled imperfectly
- Forecasts: only 65% accurate
- Markdowns: on 30% of merchandise sold
- Inventory: $1.2 trillion stockpiled in the supply chain
- New Products: 75% fail to meet forecast expectations
Excellence in Supply Chain

IBM’s Survey of 398 Supply Chain executives worldwide found top-line focus is back and it’s a global phenomenon

Business Objectives for 2010 - 2011

- Revenue protection and growth: 71%
- Competitive differentiation such as innovation and deeper insight: 41%
- Cost takeout and efficiency: 33%
- Improved risk management and regulatory compliance: 12%
- Operating enablement such as continuous improvement: 10%

Supply Chain Transformation

Leading Practice Consumer Electronics Channel Transformation requires a migration from ‘visibility’ to ‘insight’

<table>
<thead>
<tr>
<th></th>
<th>Visibility</th>
<th>Insight</th>
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<tbody>
<tr>
<td>Processes</td>
<td>Automation</td>
<td>Prioritized Decision Inventories</td>
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<td>Decision Focus</td>
<td>Reactive</td>
<td>Predictive and Prescriptive</td>
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<td>Data / Information</td>
<td>Supportive</td>
<td>Competitive Advantage</td>
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<tr>
<td>Granularity</td>
<td>Summary</td>
<td>Specific and Targeted</td>
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<tr>
<td>Customer/Supplier View</td>
<td>Operational</td>
<td>External / Extended</td>
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<tr>
<td>Demand Signal Management</td>
<td>Shipment based Ad-hoc and Reactive</td>
<td>Consumption, SN Data, Centralized and Proactive</td>
</tr>
</tbody>
</table>

*Social Network Data
Supply Chain Decisions

**Competitive Advantage Insight**
requires information access and speed

4 in 5 business leaders see information as a source of competitive advantage

1 in 2 don’t have access to information across their organizations needed to do their jobs

1 in 3 business leaders frequently make critical decisions without information they need

Evolving Supply Chains

Value of Insight Rests on Predictive Answers

- Reactive, to Predictive, to Prescriptive

- Predict / Prescribe - Best that can happen?
- Insight - What will happen next?
- What if these trends continue?
- Why is this happening?
- What actions are needed?
- Exact root cause and ID of the problem?
- How many, how often, who, & where?
- What just happened and why?

- Optimization
- Predictive Modelling
- Forecasting
- Statistical Analysis
- Alerts
- Drilldown Query
- Ad Hoc Reports
- Std Reports

Information Technology Requirement

Access & Reporting

Analytics and Optimization

Competitive Advantage
Substance vs. Structure
• The next generation of data is not neat and pretty and easily formatted
• It might not need to be retained
• It’s possibly not numeric

Connecting vs. Collecting
• It’s not about getting the most data
• It’s not about getting it into the sources and targets
• It’s about helping people connect the facts in a meaningful fashion

Prescribing vs. Describing
• Reporting is a basic competency
• Prescribing is a business differentiator
Testing vs. Trying
• The organization will become disciplined in comparing
• The science of math is embedded in the business
• The words, “we’ve tried it” won’t count

Effectiveness vs. Efficiency
• Speeding up mediocrity got us into this mess
• Precision is point in time, point of impact
### Best in Class

Making the operational changes necessary to create value from new insights pays off for top performers in business results.

<table>
<thead>
<tr>
<th>2.5X</th>
<th>Top performers nearly triple their odds of success through their keen focus on driving change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2X</td>
<td>Focusing on driving change is more than twice as important to success as having a well run project</td>
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#### Beating the odds for success

<table>
<thead>
<tr>
<th><strong>Best</strong></th>
<th>Driving change</th>
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<tbody>
<tr>
<td></td>
<td>• Culture and people change</td>
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<tr>
<td></td>
<td>• Data governance</td>
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<td></td>
<td>• Business process change</td>
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<td></td>
<td>• Organizational alignment</td>
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<table>
<thead>
<tr>
<th><strong>Better</strong></th>
<th>Well run project</th>
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<tbody>
<tr>
<td></td>
<td>• Program governance</td>
</tr>
<tr>
<td></td>
<td>• Project objectives</td>
</tr>
<tr>
<td></td>
<td>• Multi-phased roadmap</td>
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<table>
<thead>
<tr>
<th><strong>Good</strong></th>
<th>Sound justifications</th>
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<tr>
<td></td>
<td>• Sponsorship</td>
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<td></td>
<td>• Capability assessments</td>
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<td></td>
<td>• Funding process management</td>
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Plantronics Supply Chain Challenges
“Recent” Key Changes at PLT

Acquisition of Altec Lansing

Entering of Consumer Retail Market

New factory in China

4 additional Distribution Centers
Plantronics Challenges

- Customer service issues
- Constant reschedules
- Too much of the wrong inventory
- Manual disconnected planning processes (Excel)
- Too much obsolete inventory
- No formal S&OP Process
- Disparate Planning Systems

- Multiple source systems
- Competitive issues
- Inflexible planning tools
- Fragmented planning data
- Poor forecasting capability
- Global supply chain requirements
- Changing business conditions
PLT Supply Chain

Flow of Goods
- Manufacturing
- Manufacturing w/o Oracle
- Distribution w/o Oracle
- Warehouse

Manufacturing Flow of Goods:
- Brazil
- United States
- Mexico
- Netherlands
- UK
- Japan
- China
- Australia
PLT Supply Chain 2006

We manufacture 75% of our own products
2 factories (Mexico, China)
8 global distribution centers
Buy raw material to forecast
Pack to order
Assemble to min-max settings
Fulfill orders through our DC’s
Decentralized purchasing & planning
~3000 Finished Goods items
PLT Supply Chain Status 2006

Inventories have increased dramatically
Customer OTD has dropped
Supplier OTD is unknown
Ability to make accurate commits has dropped
Lead time has increased
Forecast accuracy is low
Lack of ability to analyze potential opportunities quickly
Global environment; localized system utilization
Supply Chain Optimization & Reengineering
SCORE Project

Launched the SCORE Project in 2007
• Supply Chain Optimization and Re-Engineering

Establish a world-class Supply Chain by:
• Creating a global, integrated, collaborative system and processes which are scalable, without legacy knowledge and added manpower

Single Source of Truth
Project Objectives

- Improve Forecasting Process & Accuracy
- Increase Inventory Turns
- Reduce Excess & Obsolete (E&O) Inventory
- Provide More Accurate Ship Dates to Customers at point of Order Entry
- Enable a faster, more effective Sales & Operations Planning process
- Accurate, Global Inventory Visibility
- Issue correct PO prices and receive acknowledgements and commits from suppliers
- Automate Manual Transactions
SCORE Project

“Supply Chain Superiority is not achieved with a single project, but is an evolution of relentless focus and continuous improvement”

Author unknown
Overall PLT Project Plan Jan 2009

Jan-07
- Demantra Demand Planning
- Supplier Collaboration (i-Supplier)
- Data Clean-up
- Supply Chain Business Intelligence (DBI)

Jan-08
- Demantra 7.2 upgrade
- Supplier Collaboration (Consignment/VMI)
- Advanced Planning & Scheduling

Jan-09
- Demantra S&OP
- Global Order Promising, EMEA
- Inventory Optimization
- Advanced Planning, Phase II
- Altec iSupplier ASCP GOP

Jan-10
- Global Order Promising, ROW
- APS & Demantra enhancements

Jan-11
- Demantra Promotions Management & Optimization
- Customer Collaboration (Portal / CMI)
- Warehouse Optimization & Mobile / Sensing Services (WHMS)
- Agile
- Strategic Network
- Transportation Planning (G Log)
- Production Scheduling

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Oracle High Technology Industry Solutions Map

Zero latency, real-time collaboration

1. R&D – Product Lifecycle Mgmt
   - Concept to Market
   - Campaign to Cash

2. Marketing
   - Demand sensing/shaping/POS
   - Demand information
   - Delivery information

3. Sales & Channel, Operations and Management
   - Order status

4. Supply Chain Planning, Order Management, and Execution
   - Demand to Delivery

5. Warehouse, Transportation and Logistics Management
   - Campaign to Cash

6. Manufacturing and Planning Management
   - Build a responsive Supply Chain on INFORMATION
   - not inventory

7. Aftermarket & Customer Support, Services, & Sales
   - Aftermarket Sales, Service and Support
   - Corporate Services, Governance

8. Integration & Analytics
9. Human Resources
10. Finance

Campaign to Cash

Demand to Delivery

Manufacturing and Planning Management

Enterprise Planning and Performance Management
Project Methodology
Key Methodologies & Assumptions

Design Globally – Implement Locally

80/20 rule; Implement quickly, evolve quickly

No Customizations – Work within the software

Software based re-engineering

Get to decisions quickly; avoid decision paralysis

PLT Resources available per required allocation to drive and participate in project

Project participants have real ownership to make decisions

“Self Service” project information warehousing

Team environment – Win as a team, Lose as a team
Keys to Success

- Super users are critical
- Core team involvement and support is paramount
- Executive support is critical
- Change Mgt, Communication & Training are always underestimated

- Process is the glue
- A bad process is even worse with the right technology.
Example of a detailed Milestone plan
Typical Project Members

Core Team Sponsor
- Director Supply & Demand

Project Leads
- Sr Manager Supply & Demand

Site Leads
- Director Materials: Mexico Plant
- Planning Manager: AEG Division
- Sr. Supply Chain Manager: EMEA
- Director Sales: North America
- Director Materials: Clarity Division

Super Users
- Planning Manager: EMEA
- Supply/Demand Analyst: EMEA
- Sales Manager
- Sales Manager
- Forecast Analyst: Clarity

Team Members
- Finance
- Finance

IT Business Analyst
- Applications
- Data Base (Technical)

Consulting Lead:
- Supply Chain Fusion

Oracle PMO Office
Project Risks to Manage

Resistance to Change (not embracing new business processes/System)

“Jump Ship” mentality at the first sign of struggle

Competing Departmental Interests (projects, etc.)

Scope Creep

Discipline to new processes

Availability of resources
Key to Success – Knowing What's Ahead

We must “weather the storm” and make it through the adoption phase.
Implementation Lessons Learned

Selection of the right “Project Owner”

Pick the right Partner

Eight quarters are less than 2!

Change Management
  - Communicate, Educate, Communicate

Go-live IS the beginning....resolve, stabilize, EVOLVE.
  - Set expectations appropriately

Give yourself some buffer for the unexpected
Know Your Corporate Culture

“Solution Buy In”
Infusion into the culture & Education

“Analysis Paralysis”
Complete Consensus driven without trust & leadership

“When it comes to change management…if you get to the finish line first but you’re alone, you lose.”

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Driving Change

How do you drive change?

Vitamin versus Anti-dote
Where are we?

By late 2008 / early 2009 we had fully deployed

- Multi Org ASCP
- Demantra Demand Planning
- GOP
- iSupplier
- Collaborative Planning
- Inventory Optimization
- DBI

Began to see promising supply chain changes

- OTD improvements
- Less excess & obsolete
- Fewer air freight
- Inventory stabilized
The Great Recession
The RECESSION

Global economic downturn
Worldwide recession

Goal is to maintain profitability
Plantronics taking action
• 18% layoff worldwide
• Executive pay cuts
• Suspension of travel
• Hiring freeze
• Close China factory
• Sell Altec Lansing
• Project cut backs
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- Production Scheduling

Plantronics Secret
Overall PLT Project Plan Jan 2010

- Jan-07: Demantra Demand Planning
- Jan-08: Demantra 7.2
- Jan-09: Inventory Optimization
- Jan-10: Global Order Promising, ROW
- Jan-11: Demantra S&OP

- Supplier Collaboration
  - Jan-08: Supplier Collaboration (i-Supplier)
  - Jan-09: Supplier Collaboration (Consignment/VMI)
  - Jan-09: Advanced Planning & Scheduling
  - Jan-10: Altec iSupplier ASCP GOP

- Global Order Promising
  - Jan-09: Global Order Promising, EMEA
  - Jan-10: Global Order Promising, ROW

- Inventory Optimization

- Advanced Planning
  - Jan-08: Advanced Planning, Phase II

- Data Clean-up

- Supply Chain Business Intelligence

- Agile
  - Jan-11: Warehouse Optimization & Mobile / Sensing Services (WHMS)

- Strategic Network
  - Transportation Planning (G Log)

- Production Scheduling
Overall PLT Project Plan Jan 2011

- Jan-07: Demantra Demand Planning
- Jan-08: Demantra 7.2 upgrade
- Jan-09: Inventory Optimization, Supplier Collaboration (i-Supplier), Advanced Planning & Scheduling, Data Clean-up, Supply Chain Business Intelligence (DBI)
- Jan-10: Global Order Promising, EMEA, GOP ROW, Altec; iSupplier ASCP, GOP
- Jan-11: Demantra 7.3 upgrade, iSupplier ASN, APS & Demantra enhancements
- Jan-13: Customer Collaboration (Portal / CMI), Strategic Network Optimization (SNO), Warehouse Optimization & Mobile / Sensing Services (WHMS), Demantra Promotions Management & Optimization, R12 Upgrade

**Highlights:**
- **Demantra Demand Planning**
- **Demantra 7.2 & 7.3 upgrades**
- **Inventory Optimization**
- **Supplier Collaboration (i-Supplier)**
- **Advanced Planning & Scheduling**
- **Data Clean-up**
- **Supply Chain Business Intelligence (DBI)**
- **Global Order Promising, EMEA**
- **GOP ROW**
- **Altec; iSupplier ASCP, GOP**
- **Demantra S&OP**
- **Agile R12 & R12.2**
- **APS 2 Plans & R12.2**
- **Customer Collaboration (Portal / CMI)**
- **Strategic Network Optimization (SNO)**
- **Warehouse Optimization & Mobile / Sensing Services (WHMS)**
- **Demantra Promotions Management & Optimization**
- **R12 Upgrade**
Supply Chain Actions

Recession impacted the positive results we were expecting at this time of the project

The installed Oracle applications allowed us to react to the changes quicker and better

Better information – better decisions – better results

What did we do?
Utilizing Oracle to Forge Actions

Orders dropped 40%

Orders got cancelled

Some suppliers went bankrupt

Inventories of certain items increased

Some regions more troubled than others

Fewer people to do the work
Demand Planning (Demantra)

Ability to review globally forecast vs. actual
Ability to drill down into problem products
Ability to drill down into problem regions

Quickly re-forecast and push back into Oracle
Single global view for all to see and understand
Single source of Truth
High Level S&OP
Demantra

Forecast Entry

Demand Management

Date: 04/15/07

Item | Time | Booked units by Req | Booked req by Req | Shipped + backing req by zone | Shipped + backing req by zone | Stat. units | Stat. rate | Sales units | Sales rate | % addition for demand units | Demand units | Demand units foat | ASP | ASP final | ASP override | Demand rate Feed

04/15/07 | 0 | 0 | 83 | $3,645 | 0 | 6 | 0 | 0 | $0
04/16/07 | 0 | 0 | 83 | $3,645 | 0 | 6 | 0 | 0 | $0
04/17/07 | 0 | 0 | 83 | $3,645 | 0 | 6 | 0 | 0 | $0
04/18/07 | 0 | 0 | 83 | $3,645 | 0 | 6 | 0 | 0 | $0
04/19/07 | 0 | 0 | 83 | $3,645 | 0 | 6 | 0 | 0 | $0
04/20/07 | 0 | 0 | 83 | $3,645 | 0 | 6 | 0 | 0 | $0
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04/22/07 | 0 | 0 | 83 | $3,645 | 0 | 6 | 0 | 0 | $0
04/23/07 | 0 | 0 | 83 | $3,645 | 0 | 6 | 0 | 0 | $0
04/24/07 | 0 | 0 | 83 | $3,645 | 0 | 6 | 0 | 0 | $0
04/25/07 | 0 | 0 | 83 | $3,645 | 0 | 6 | 0 | 0 | $0
04/26/07 | 0 | 0 | 83 | $3,645 | 0 | 6 | 0 | 0 | $0
04/27/07 | 0 | 0 | 83 | $3,645 | 0 | 6 | 0 | 0 | $0
04/28/07 | 0 | 0 | 83 | $3,645 | 0 | 6 | 0 | 0 | $0
04/29/07 | 0 | 0 | 83 | $3,645 | 0 | 6 | 0 | 0 | $0
04/30/07 | 0 | 0 | 83 | $3,645 | 0 | 6 | 0 | 0 | $0

Plantronics

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# Demantra

## Sales Analysis

<table>
<thead>
<tr>
<th>Customer</th>
<th>Item</th>
<th>Time</th>
<th>Delta of current vs prior sales units freq</th>
<th>Delta of current vs prior sales freq</th>
<th>Sales override units</th>
<th>Sales units freq</th>
<th>Sales rev freq</th>
<th>Sales units freq prior month</th>
<th>Sales rev freq prior month</th>
<th>Con units freq prior month</th>
<th>Con rev freq prior month</th>
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<tbody>
<tr>
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<td>$202</td>
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<td></td>
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<td>19</td>
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# Demantra

## Drill Down into Exceptions

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<th>Model</th>
<th>Time</th>
<th>Con units sold</th>
<th>Approved con units sold</th>
<th>Delta of current vs approved con units sold</th>
<th>Con rev sold</th>
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Plantronics

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Global Supply Planning (ASCP)

- Ability to understand global supply/demand picture
- Ability to predict potential quarter ending inventory
- Ability to monitor inventory daily
- Ability to quickly shift from make vs. buy

Take action on oversupply situations
Identify future shortages and prepare
  - Understand factory utilization make vs. buy
### Planning Messages

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#### Notes
- *PLANNING MESSAGES*
- *Plantronics Secret*
Portals (iSupplier/Collaborative Planning)

Ability to communicate with suppliers in near real time
Ability to re-forecast new requirements
Ability to make changes quickly on existing PO’s

Pushed VMI to reduce buyer work load
Expanded CVMI to reduce our inventory
Collaborative Planning

Order Forecast

Supplier can view the published order forecast details in the Vertical or Horizontal View

VMI Replenishment
Collaborative Planning

Supply Commit

Is the response given by the CM against the order forecast

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Order Management (GOP)

Ability to quote actual deliveries based on near real time planned supply information

Ability to view global finished goods supply for maximum utilization at time of order

More efficiency in our commit process
In spite of revenues dropping 40%, we are on track to remain profitable by reducing our cost structure 30%

In spite of an 18% lay off we are able to maintain customer service levels AND reduce inventories because we have the right tools

In spite of supplier turmoil we are able to ensure supply by quickly identifying trouble spots in our system
Now What?
What to Do In Tough Economic Times?

Focus on what you can influence

- Demand sensing
- Inventory levels
- Material cost

Build speed & flexibility into your Supply Chain

- Near real time planning; scenario planning
- Sourcing adjustments Make vs Buy
- Send the right signals quickly

Utilize the information and make decisions.... Quickly

- Plan, execute, measure, adapt
- Prepare NOW for the future
- You get what you tolerate
Conclusion

Supply Chain Management is a very exciting profession

Ever changing

Essential to a companies success

Everybody needs it

Innovation & Leadership

Those that do it best are among the most successful and profitable companies in the world

- Apple, Nokia, Wal-Mart, Procter & Gamble, Toyota, Cisco, Samsung, Best Buy, Coca Cola, Nike, HP, IBM
Thank You