



PLANTRONICS
SOUND INNOVATION™

Global Supply Chain Systems

UCSC Management of Technology Course

January 29, 2009 by Kai Hypko - Plantronics

Agenda Items

- Who Am I?
- Plantronics
- Global Supply Chain Challenges
- Plantronics Supply Chain Challenges
- SCORE Project
- Project Methodology
- The Economy

- Time permitting: Value-Driven Replenishment

My Story

- German
- Came to US in 1988
- BS Degree in MIS & BUAD
- 17 years in Supply Chain
- Hi-Tech, OEM, Retail experience
- Joined Plantronics in Fall 2006
- Senior Director Supply Chain Systems
- 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 Open World.
- Personal Motto:
 - :: “You get what you tolerate”



PLANTRONICS®
SOUND INNOVATION™



PLANTRONICS®
SOUND INNOVATION™



ALTEC LANSING®

CLARITY®
Amplifying Your Life™

VOLUME VL LOGIC

FAMILY OF BRANDS

Plantronics Profile

- **Founded by two pilots in 1961**
- **Over 40 years experience in voice**
 - Mission Critical Applications
- **A Worldwide Corporation**
 - 6,500 employees
 - Offices in 20 countries
 - FY 2008 Revenue of \$856M
 - Profit \$68M
- **Publicly traded on NYSE**
 - PLT
- **Family of brands**
 - Plantronics®
 - Altec Lansing®
 - Clarity®
 - Volume Logic®





- 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.
- Leading manufacturer and seller of high quality computer and home entertainment sound systems, docking audio products, and a line of headsets and headphones for personal digital media under our Altec Lansing 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.
- Provide audio enhancement products to consumers, audio professionals and businesses under our Volume Logic brand.

Competitive Business Environment

Customers are demanding:

- Accurate and timely commitments
- Shorter lead times
- Flexibility
- Product differentiation
- Dedicated inventory
- Visibility into the supply chain
- High quality
- Automation
- Lowest costs

Increasing business risks of :

- Too much inventory
- Inventory in the wrong place
- Ordering the wrong inventory
- Missing delivery dates
- Losing orders
- Shipping the wrong products
- Increased expediting costs
- Losing customers
- Increased obsolescence

Forcing businesses to better manage:

Inventories	Supply/Demand	Stocking policies
Ability to promise	Forecasts	VMI/SMI processes
Global suppliers	Cycle time	Replenishment

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



Global Supply Chain Observations

- Supply chain management (SCM) efforts deliver the greatest results when SCM is part of an overall business strategy –not a stand alone effort
- SCM is most likely to under deliver when there is poor connection between functions across a total business – often noted by poor supply chain visibility and lack of best practice sharing internally

Source: Computer Sciences Corporation (CSC) and Supply Chain Management Review (SCMR) 2006 Survey

Global Supply Chain Observations

- Despite potential economies from global supply chain efforts, most companies optimize locally
- In spite of the rhetoric around the importance of customers, few firms are collaborating closely with key customers
- Companies continue to install software before rethinking their underlying processes and expect root cause problems to be eliminated

Source: Computer Sciences Corporation (CSC) and Supply Chain Management Review (SCMR) 2006 Survey

World Class Supply Chain

- World Class Supply Chain Companies

- :: collaborate effectively internally to optimize processing

- :: work closely with key suppliers and customers

- :: effectively apply technology as an enabler

Source: Computer Sciences Corporation (CSC) and Supply Chain Management Review (SCMR) 2006 Survey

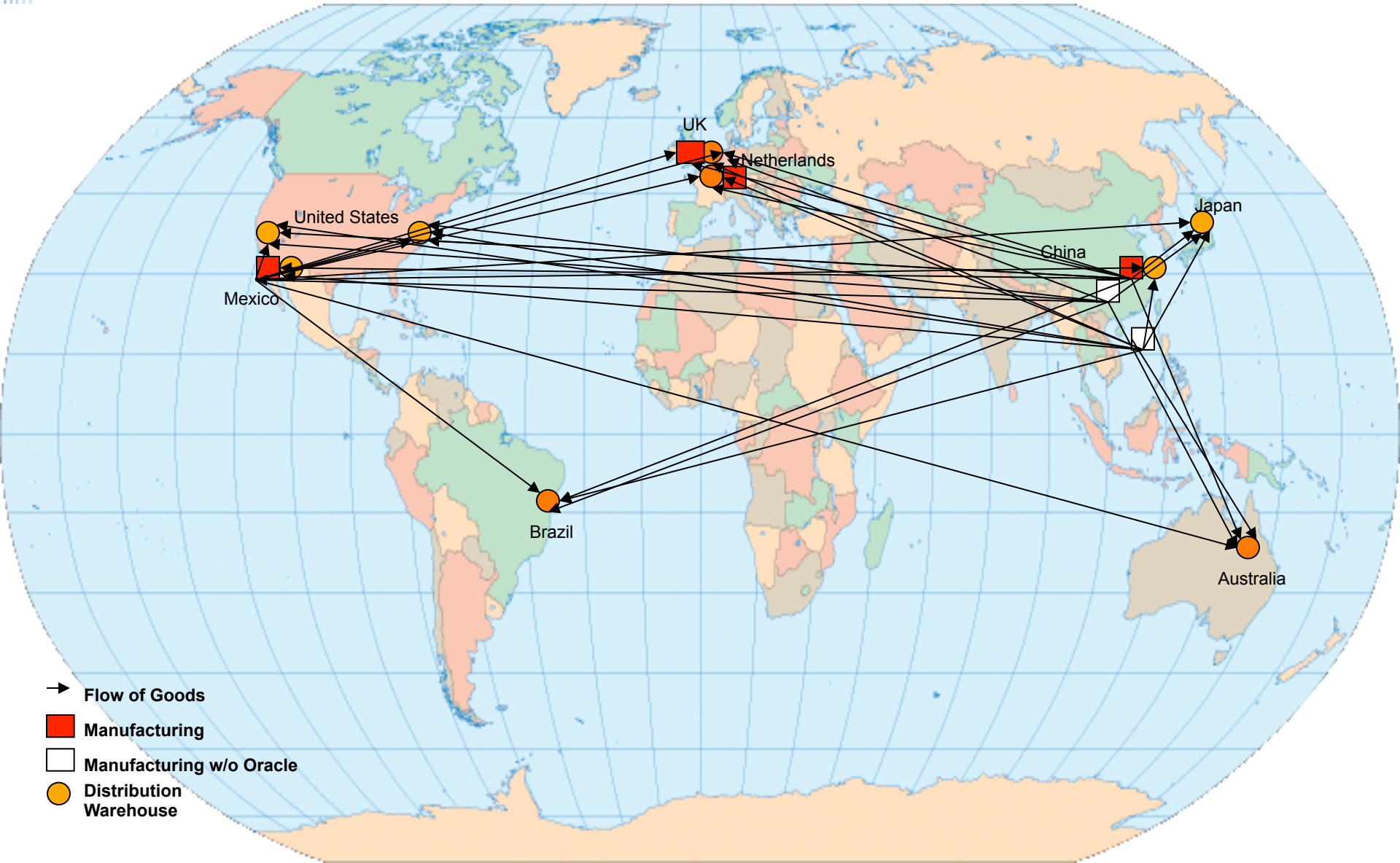
Recent Key Changes at PLT

- Acquisition of Altec Lansing
- Entering of Consumer Retail Market
- New factory in China
- 4 additional Distribution Centers

Current 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 Warehouse

PLT Supply Chain

- We manufacture 75% of our own products
- Buy raw material to forecast
- Assemble to min-max settings
- Pack to order
- Fulfill orders through our DC' s
- Decentralized purchasing & planning

PLT Supply Chain Status

- 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

SCORE Project

- Launched the SCORE Project –
 - :: Supply Chain Optimization and Re-Engineering
- Establish a world-class Supply Chain by:
 - :: Creating a global, integrated, collaborative system and processes which are scaleable, without legacy knowledge and added manpower
- Single Source of Truth

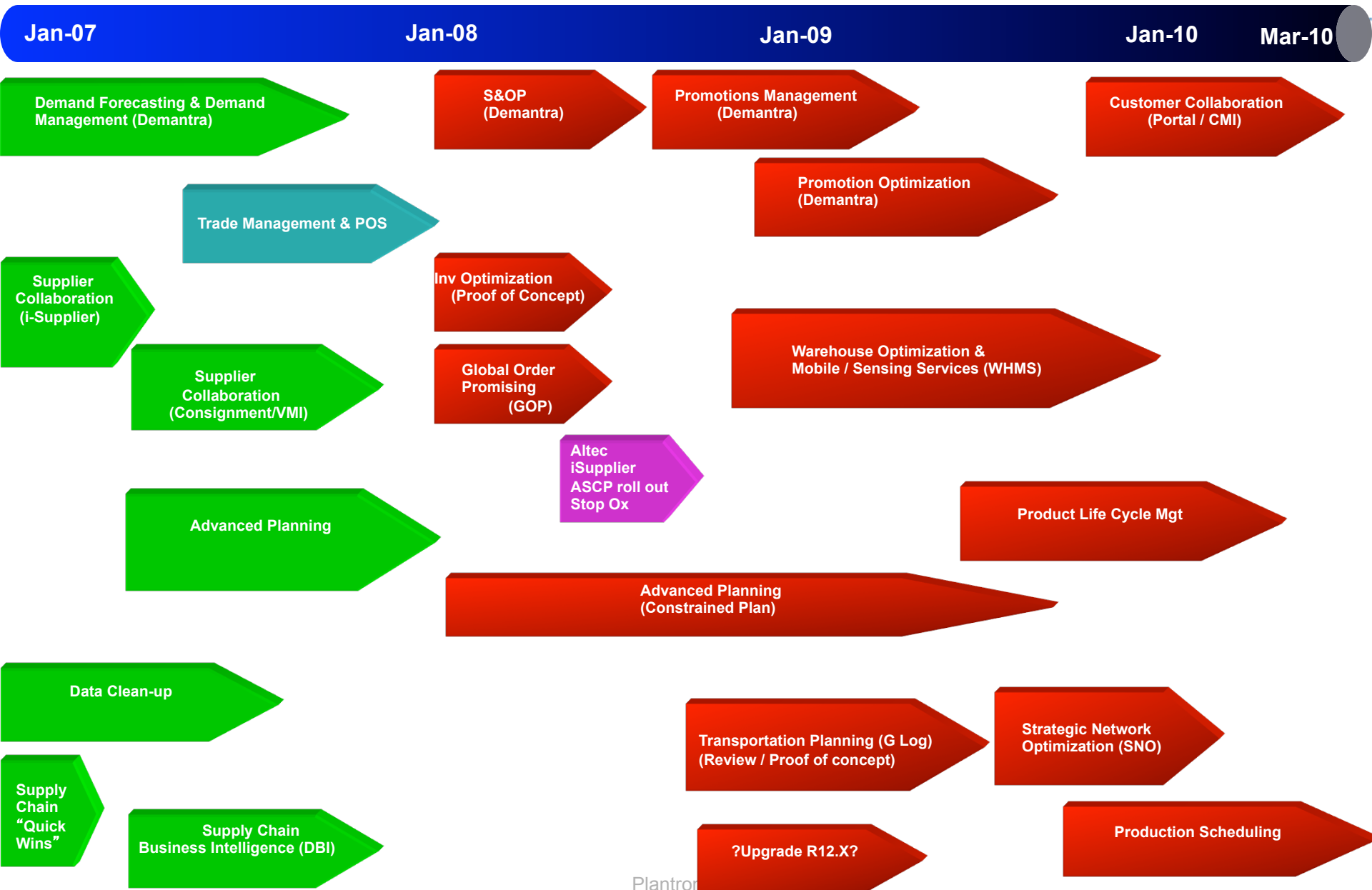
Project Objectives

- 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

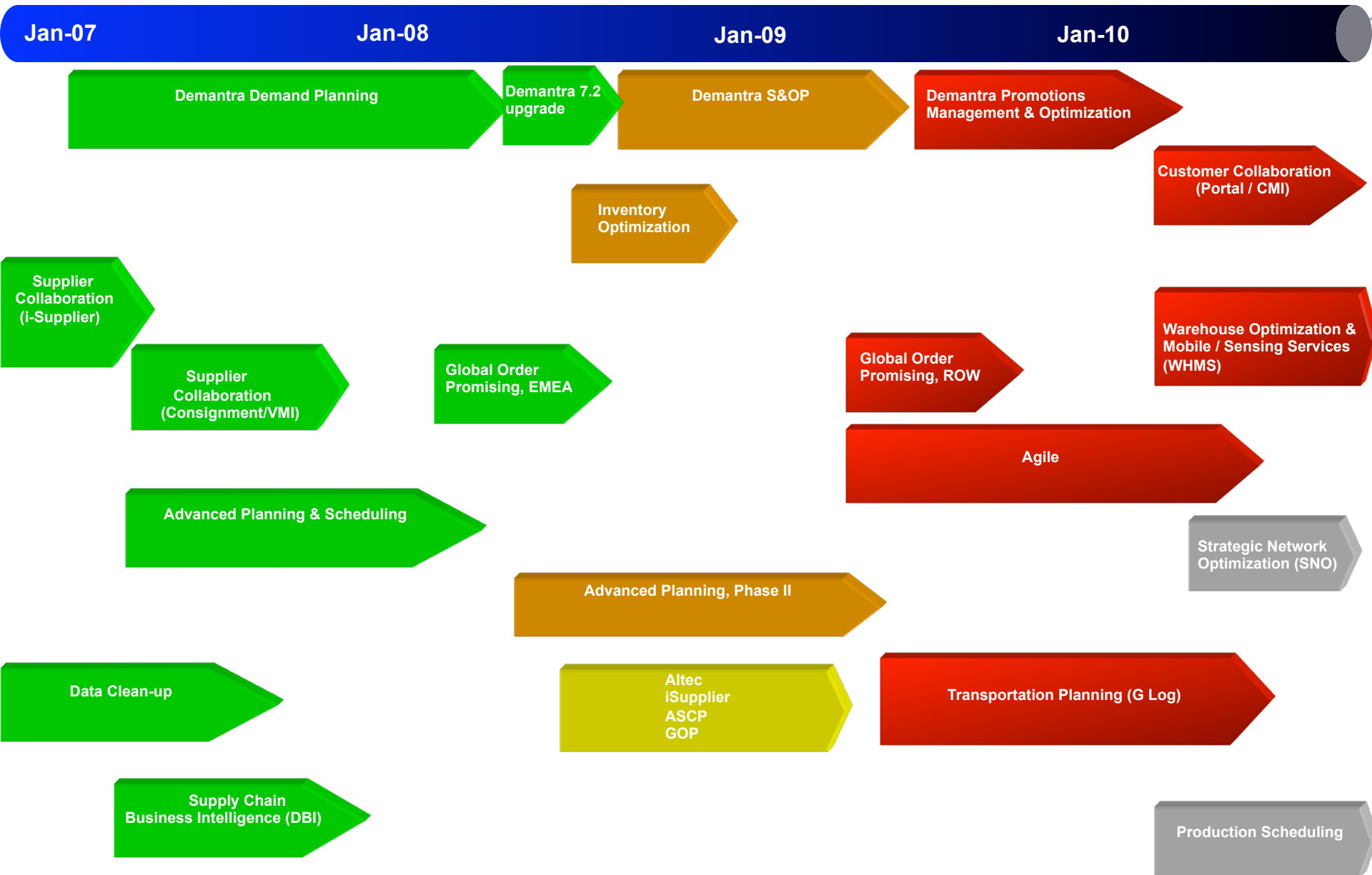
“ Supply Chain Superiority is not achieved with a single project, but is an evolution of relentless focus and continuous improvement ”

Author unknown

Overall PLT Project Plan 2007



Overall PLT Project Plan July 2008



World Class SCM

- Supply Chain transformation

Old Model: Push ***(Linear Supply Chain)***

- Supply-Centric
- Internally Focused
- Vertically Integrated
- Physical Asset Based
- Mass Momentum

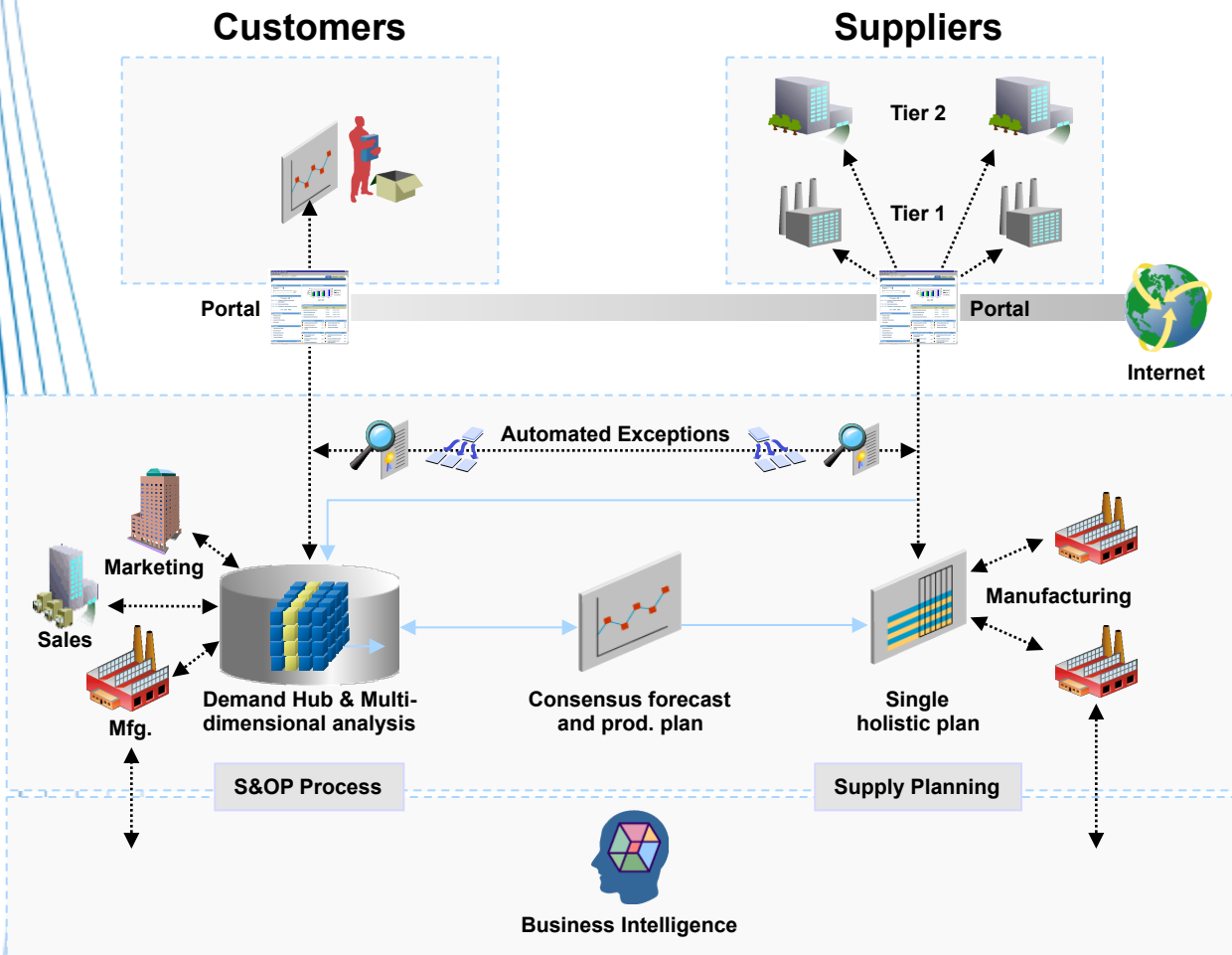
**Automation
Information**

New Model: Pull ***(Integrated Networks)***

- ✓ Demand-Driven
- ✓ Global
- ✓ Virtual Supply Chains
- ✓ Decision Based
- ✓ Lean Practices

Oracle Advanced Planning Model

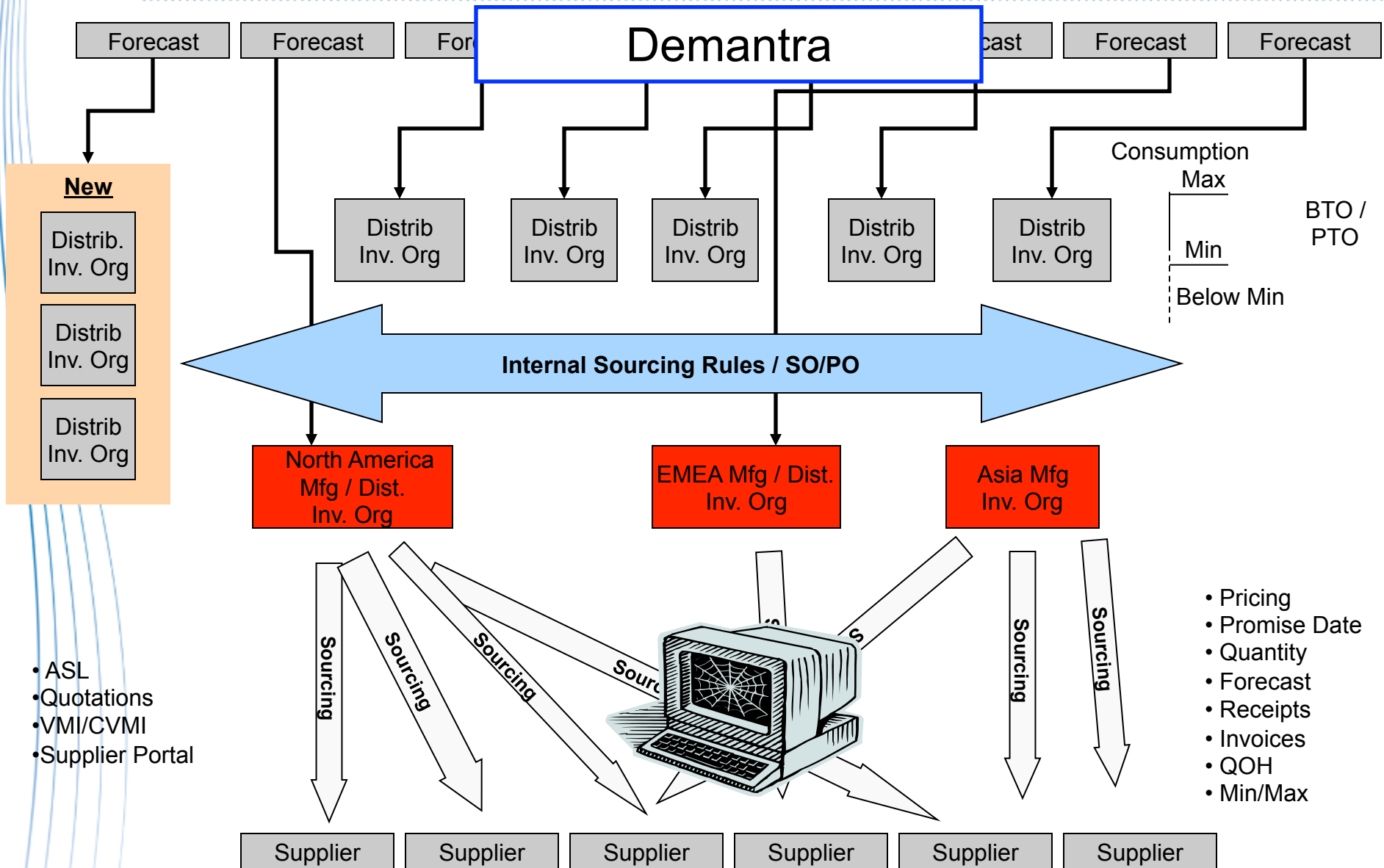
- E-Business planning solution: zero latency, real-time collaboration



- Enable closed loop collaborative planning processes across your value chain
- Have complete supply chain visibility
- Make better decisions
- React immediately to disruptions in supply chain

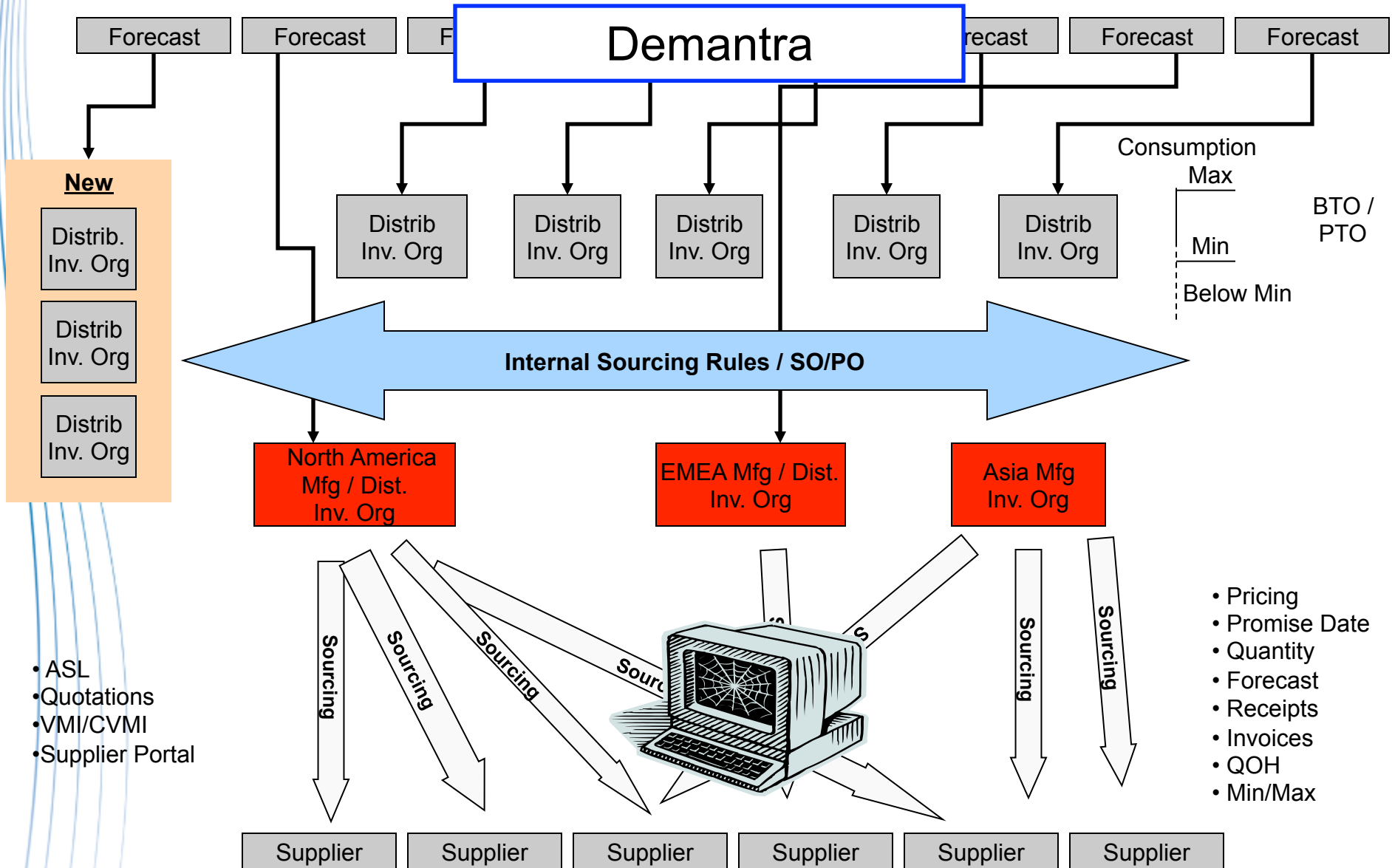
Build a responsive Supply Chain on INFORMATION not inventory

Planned APS Systems Architecture



- ASL
- Quotations
- VMI/CVMI
- Supplier Portal

Planned APS Systems Architecture



- ASL
- Quotations
- VMI/CVMI
- Supplier Portal

- Pricing
- Promise Date
- Quantity
- Forecast
- Receipts
- Invoices
- QOH
- Min/Max

2008 Projects

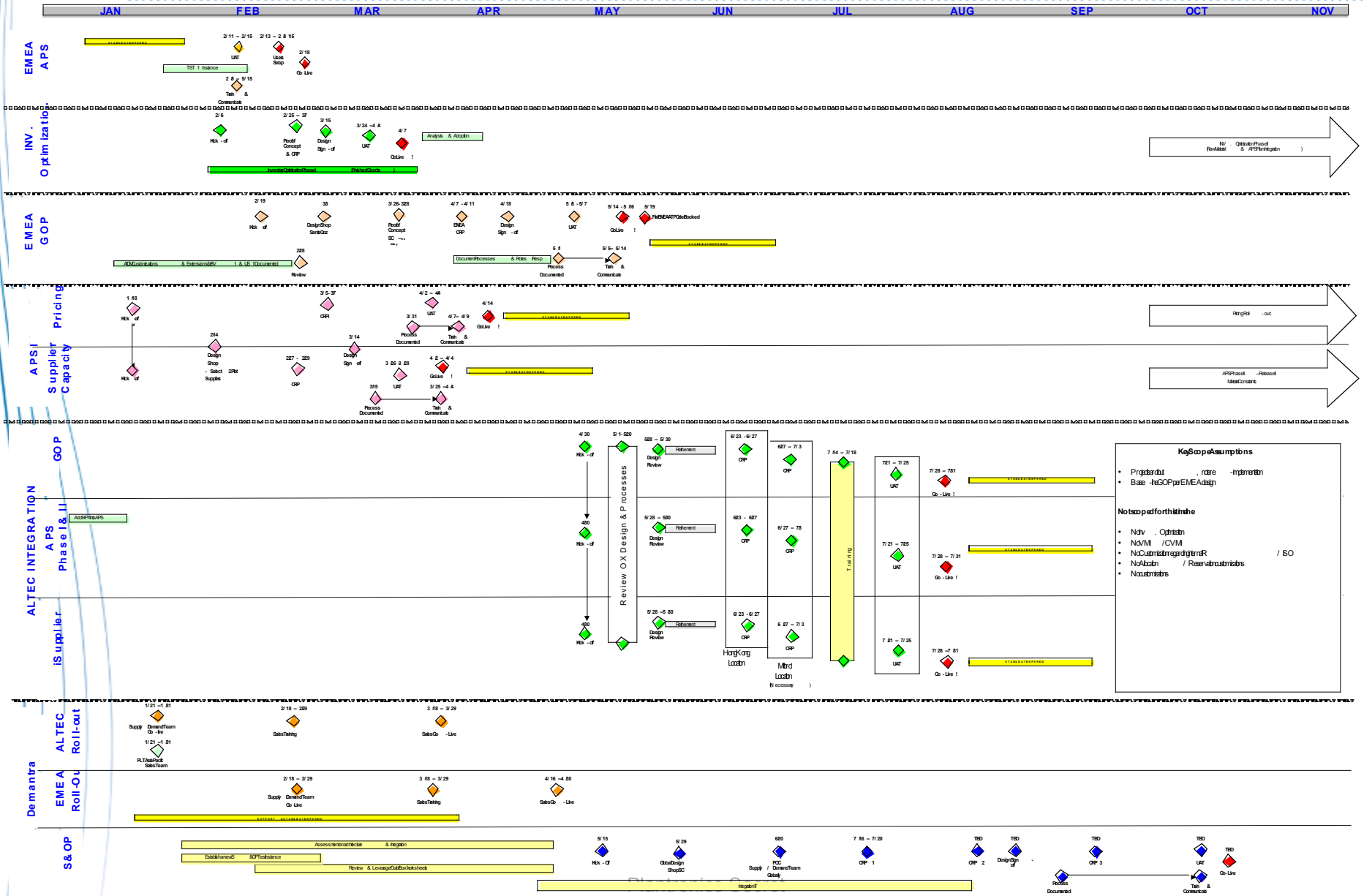
- Demantra S&OP
- Global Order Promising
- Inventory Optimization

- Create a Single Source of Truth

- Our Implementation Partner is Supply Chain Fusion



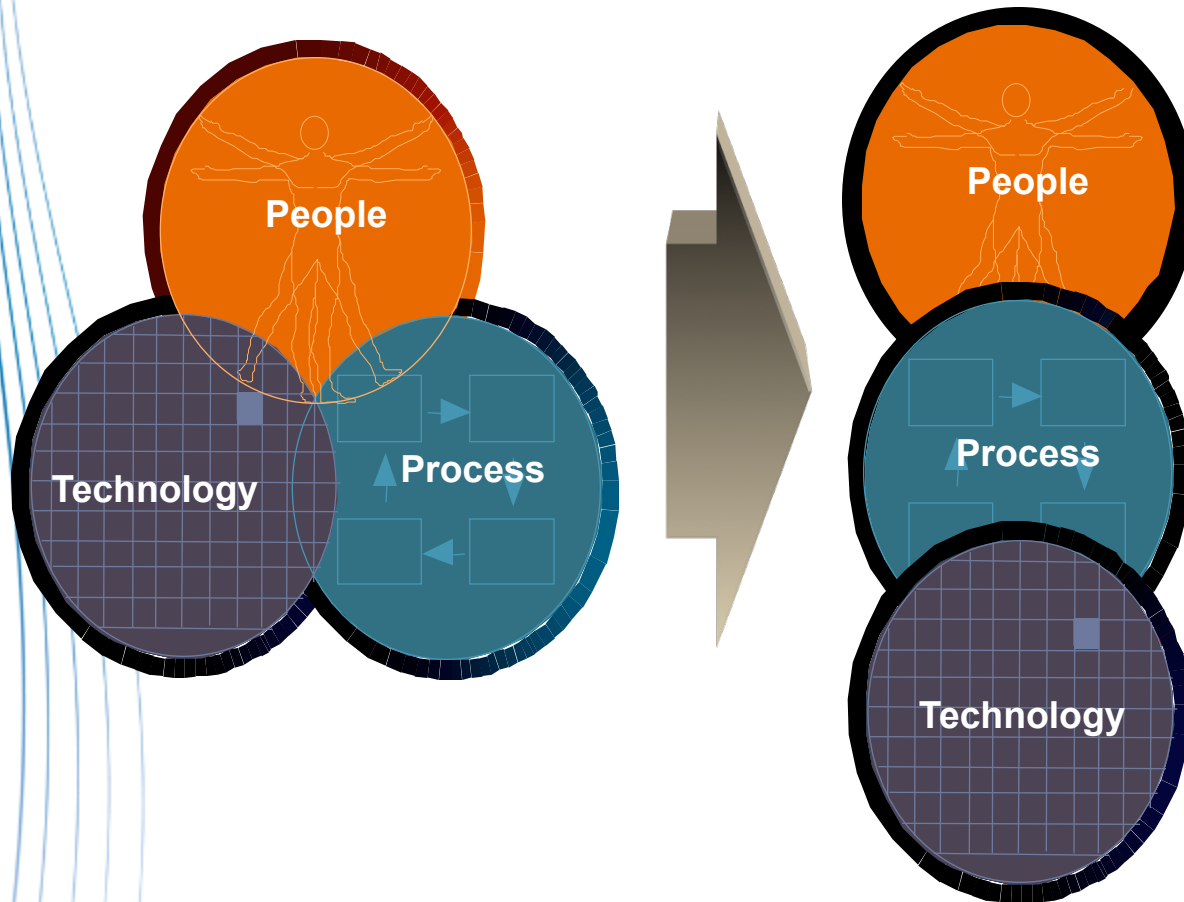
Example of a detailed Milestone plan



Key Methodologies & Assumptions

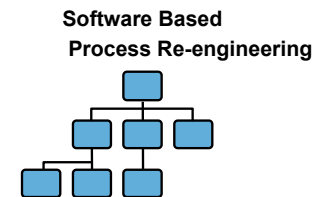
- Design Globally – Implement Locally
- 80/20 rule; Implement quickly, evolve quickly
- No Customizations – Work within the software
- Software based re-engineering
- Get to decisions quickly; avoid decision paralysis
- PLT Resources available per required allocation to drive and participate in project
- 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.



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**

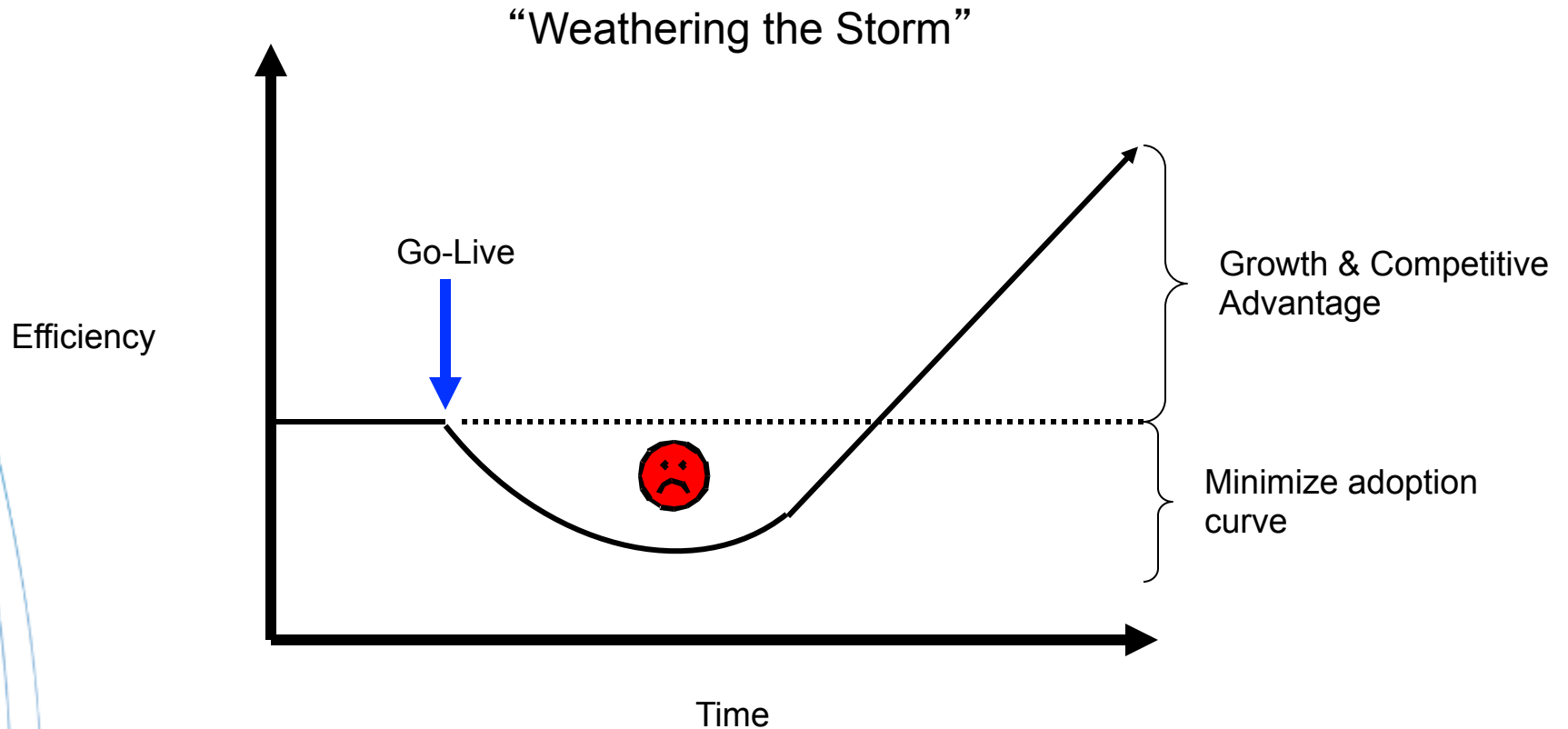
Keys:

- Executive sponsorship
- Cross functional inputs
- Cross Geo participation
- Super Users are key drivers to success (advocates)
- Oracle PMO for ongoing support

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

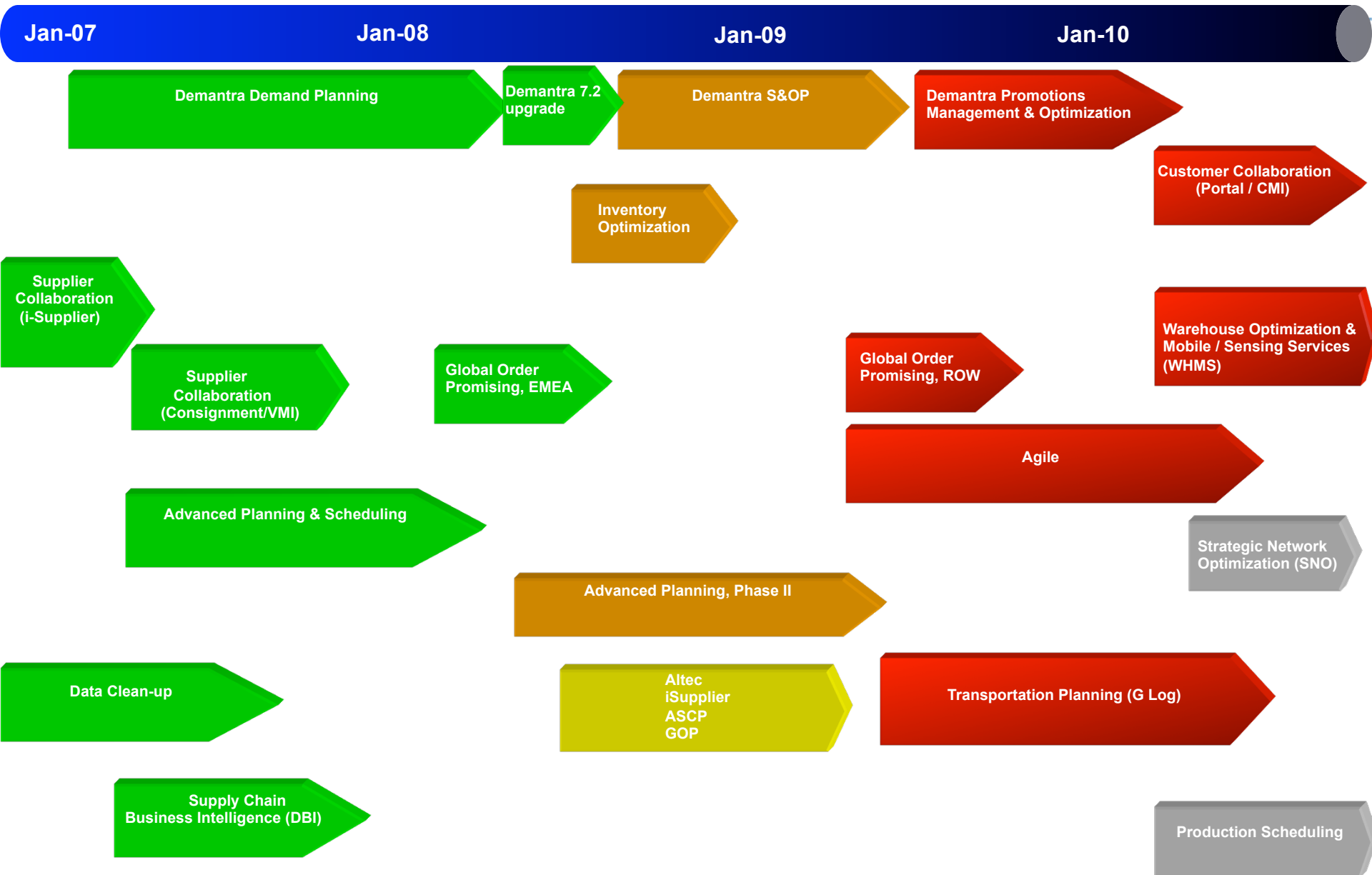


We must “weather the storm” and make it through the adoption phase.

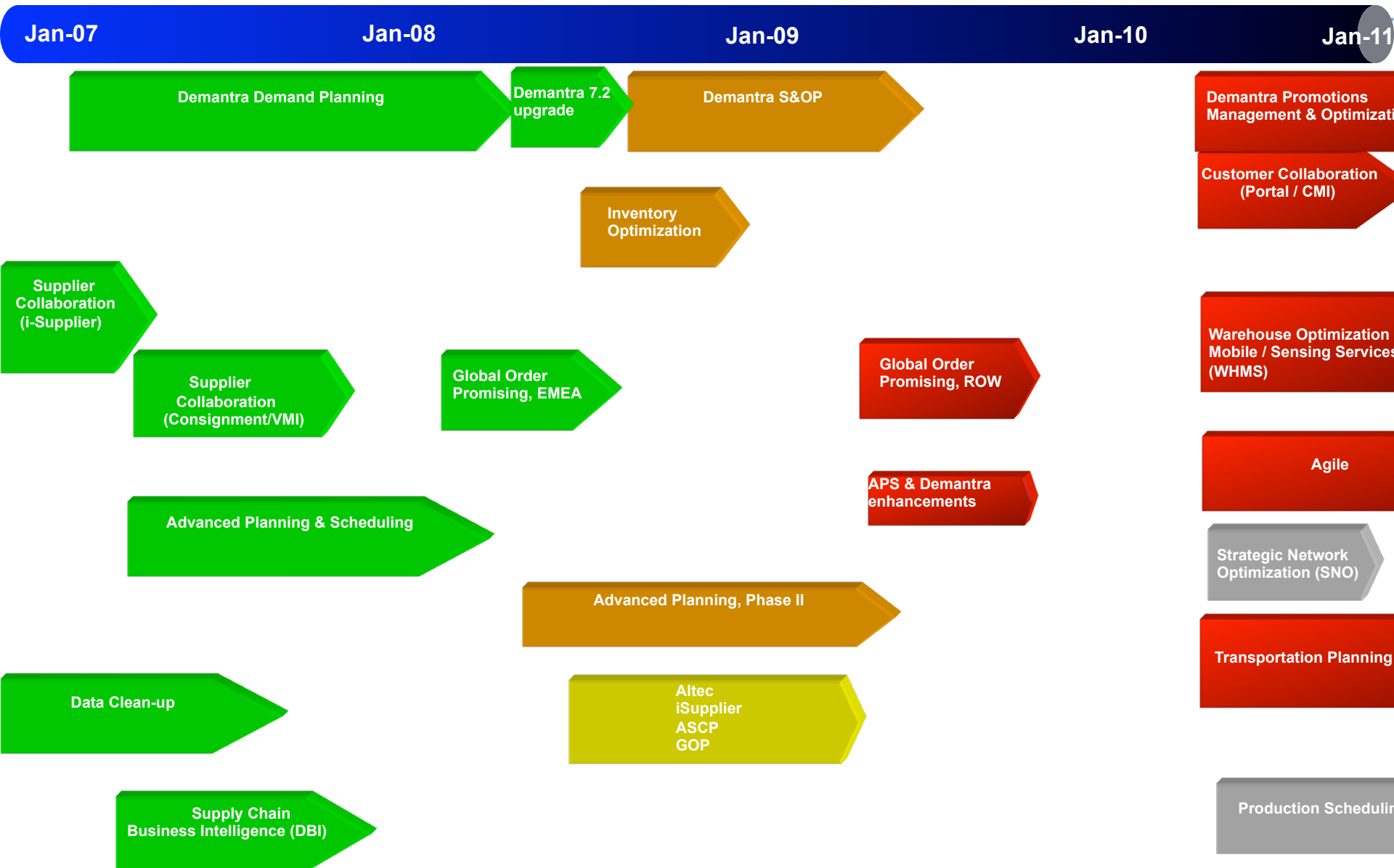
Lessons Learned

- Selection of the right “Project Owner”
- Pick the right Partner
- Eight quarters are less than 2!
- Change Management
 - :: Communicate, Communicate, Communicate
- Give yourself some buffer for the unexpected
- Make sure you have commitment, not just engagement

Overall PLT Project Plan July 2008



Overall PLT Project Plan Jan 2009



2009 SCORE Objectives

- Sharpen the saw
 - :: Retraining
 - :: Update documentation
 - :: Continue roll outs
 - :: Improve use training
 - :: Enhancements

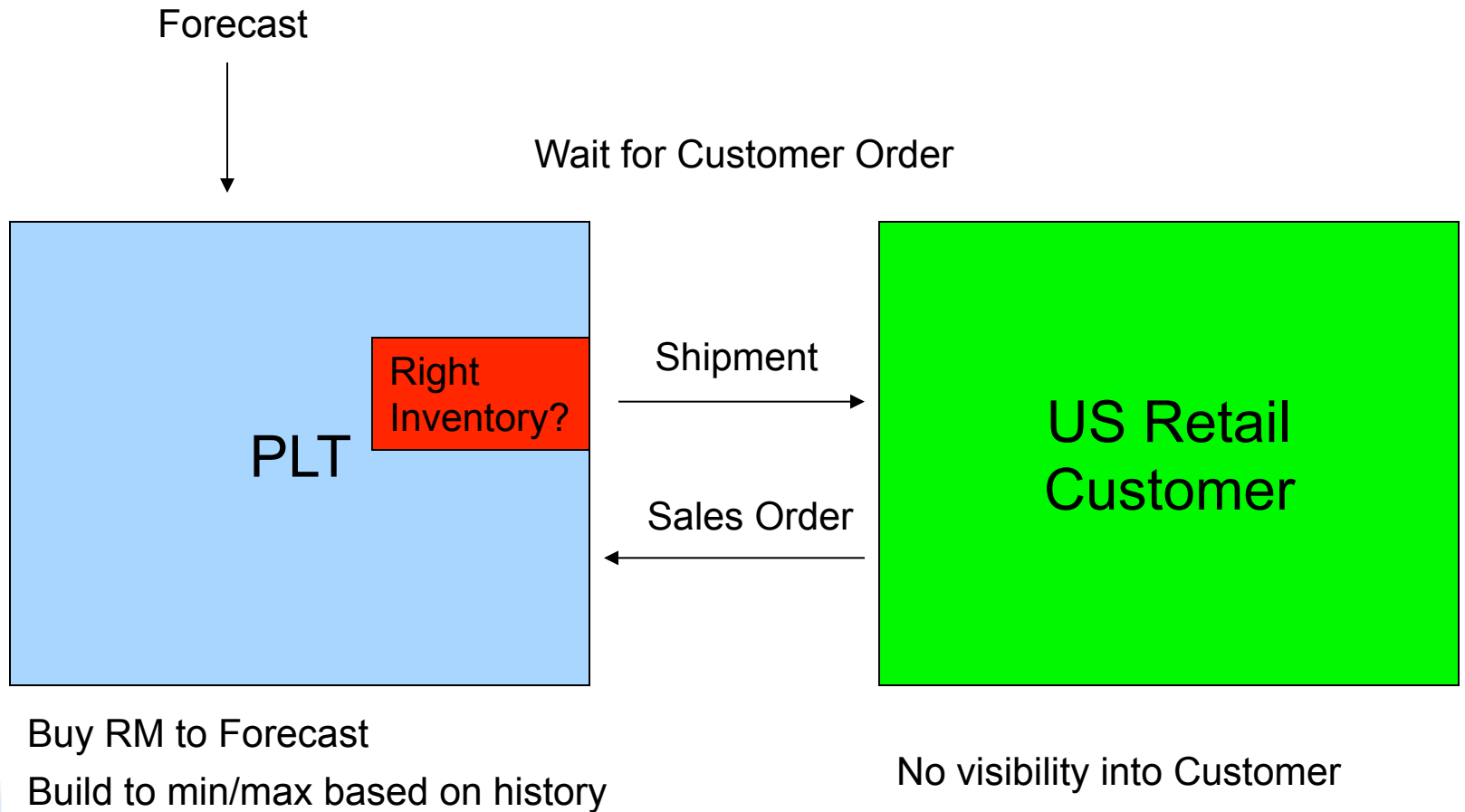
What's Next?

Advanced Collaborative Demand Planning and Sensing

What would happen if we sell Milk?

- Things you can't do:
 - :: Stockpile
 - :: Build ahead
 - :: Min-Max
 - :: Wait for the order
 - :: “Milk” to forecast
- Force a paradigm shift in supply & demand

Current approach



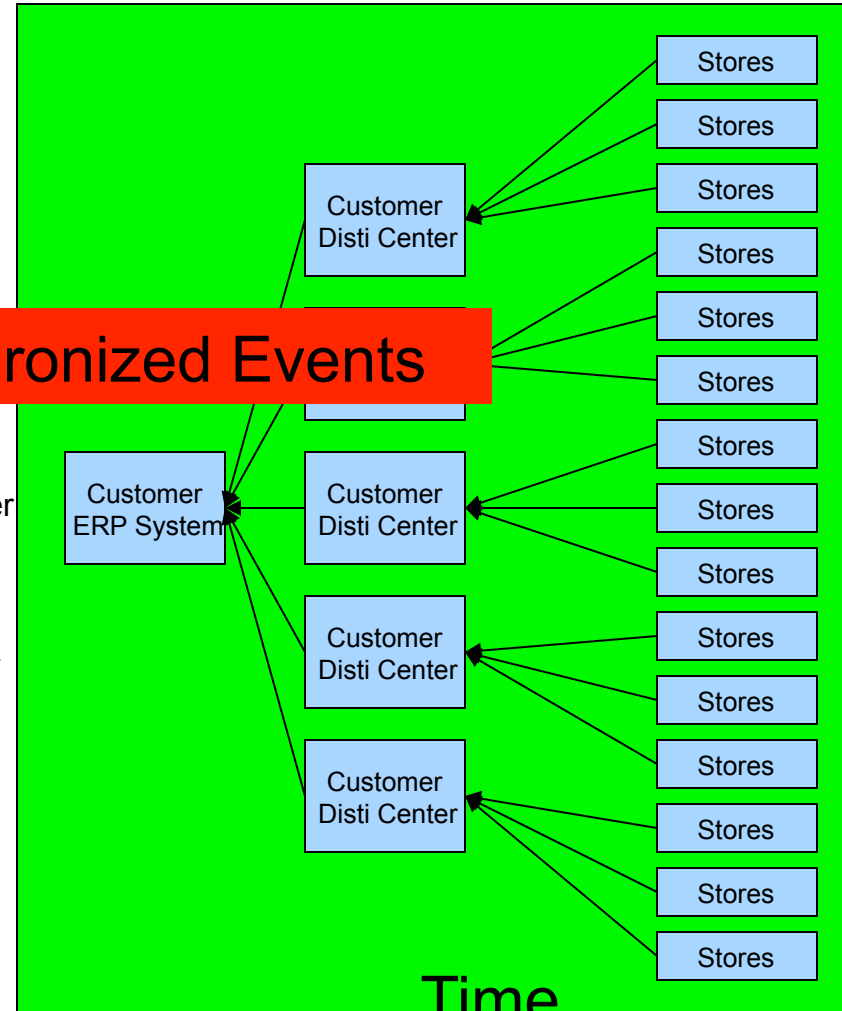
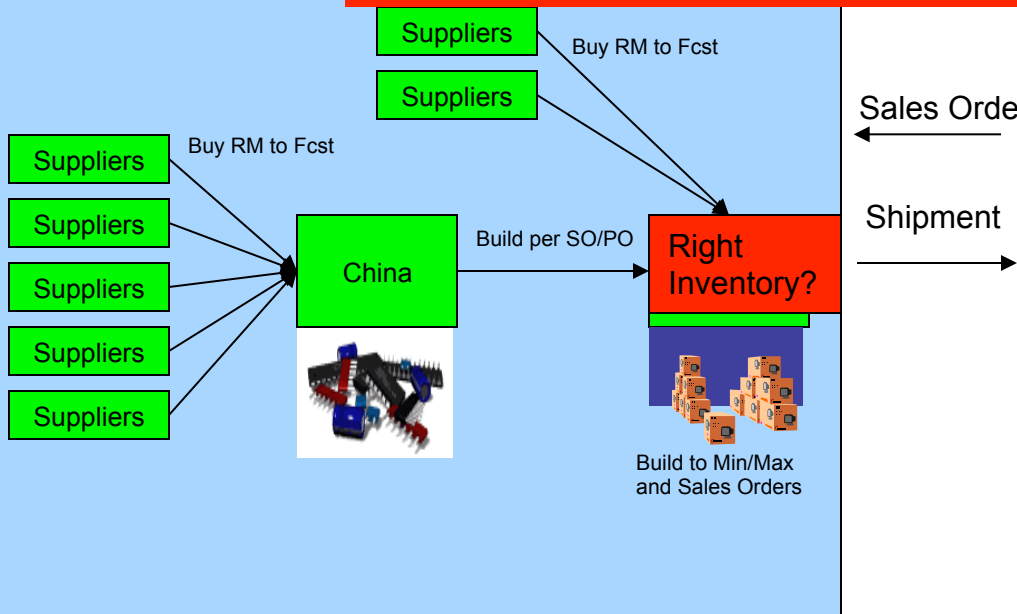
Current approach - detail

PLT

Forecast based on bookings
Buy RM to Forecast
Build FG to min/max based on history

Customer

Sequential, Non-Synchronized Events



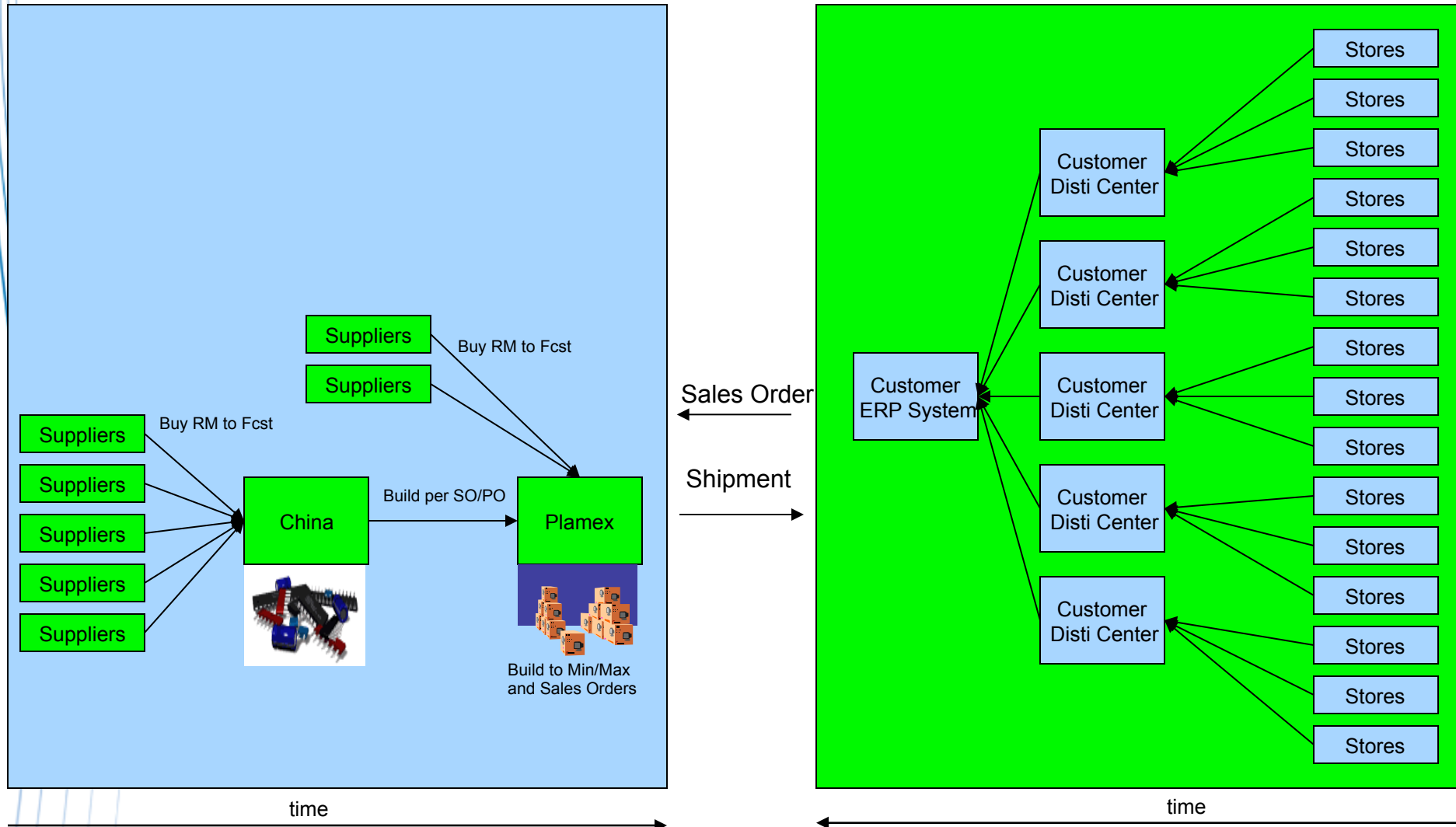
time

time

Real Time Consumption Driven Model

Collaborate & synchronize activities with our customer

Customer



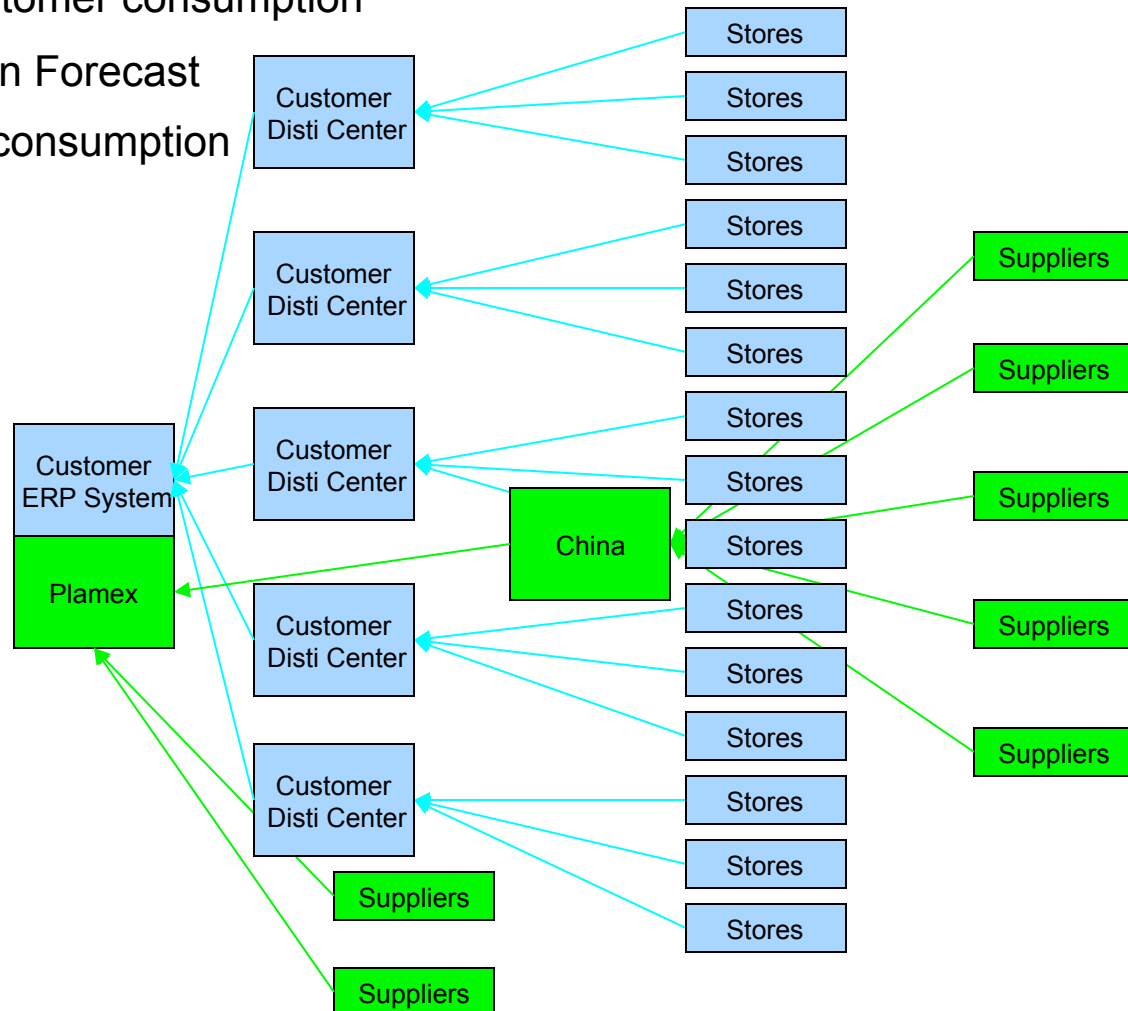
Real Time Consumption Driven Model

Collaborate & synchronize activities with our customer using Point of Sale (POS)

Forecast based on customer consumption

Buy RM to consumption Forecast

Build based on actual consumption



Replenishment Progression: A Journey

- “Rule of Thumb” Pull:
 - :: Channel “pulls” as needed.
 - :: Weeks of supply or simple statistics used to choose stock levels.
 - :: Demand is an “order”
- CPFR:
 - :: Collaborative forecast & replenishment.
 - :: Channel continues to pull
 - :: But retailer shares POS data to help vendor improve forecast
- VMI
 - :: Vendor places reverse PO on behalf of channel
 - :: Vendor owns inventory risk in return for share of efficiency gain.
- Value-Driven Replenishment
 - :: Like VMI, but inventory risk depends on network profitability, leverage
 - :: Vendor conducts demand sensing, shaping
 - :: Network re-design to optimize inbound supply chain for flexibility

More advanced

Winning at the Store Shelf: Distinct Projects At Each Stage

Stage	I Reactionary	II Stabilize the Core	III Demand-Driven	IV Value-Driven
Partner relationship				
Metrics	Compliance	Improve replenishment.	Synchronize supply	Redesign network for joint
Organization				
Inventory Plan	Target WOS Based On EDI History + Orders	Tune Buffer Stock Based on Monthly Statistical Forecast + Svc. Level Goal	Track DC-level Sell- through + Co-Plan Promos	POS sensing + attribute forecast + Demand Shaping + Network Flex
Order Trigger				
Culture				
	<ul style="list-style-type: none"> • "Push" sell-in deals 		<ul style="list-style-type: none"> • Sell-through sales 	
	Pull	CPFR	VMI	VDR

Major Changes

- Collect POS regularly (daily/weekly) at the store level
- Collect OH information from customer distribution centers daily
- Build FG based on consumption
- Use POS information to drive builds
- Either anticipate replenishment or auto replenish

Benefits

- Build to consumption, not history based min/max
- Carry little to no FG
- Higher fill rate
- Higher on-time delivery
- React to consumption changes in real time
- Less E&O

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

Q&A
