PROMAT 2015

McCormick Place South | Chicago
March 23-26, 2015
promatshow.com

Inventory Flow: The Key to Network Strategy Design Success!

Sponsored by:

Presented by:

JIM BARNES

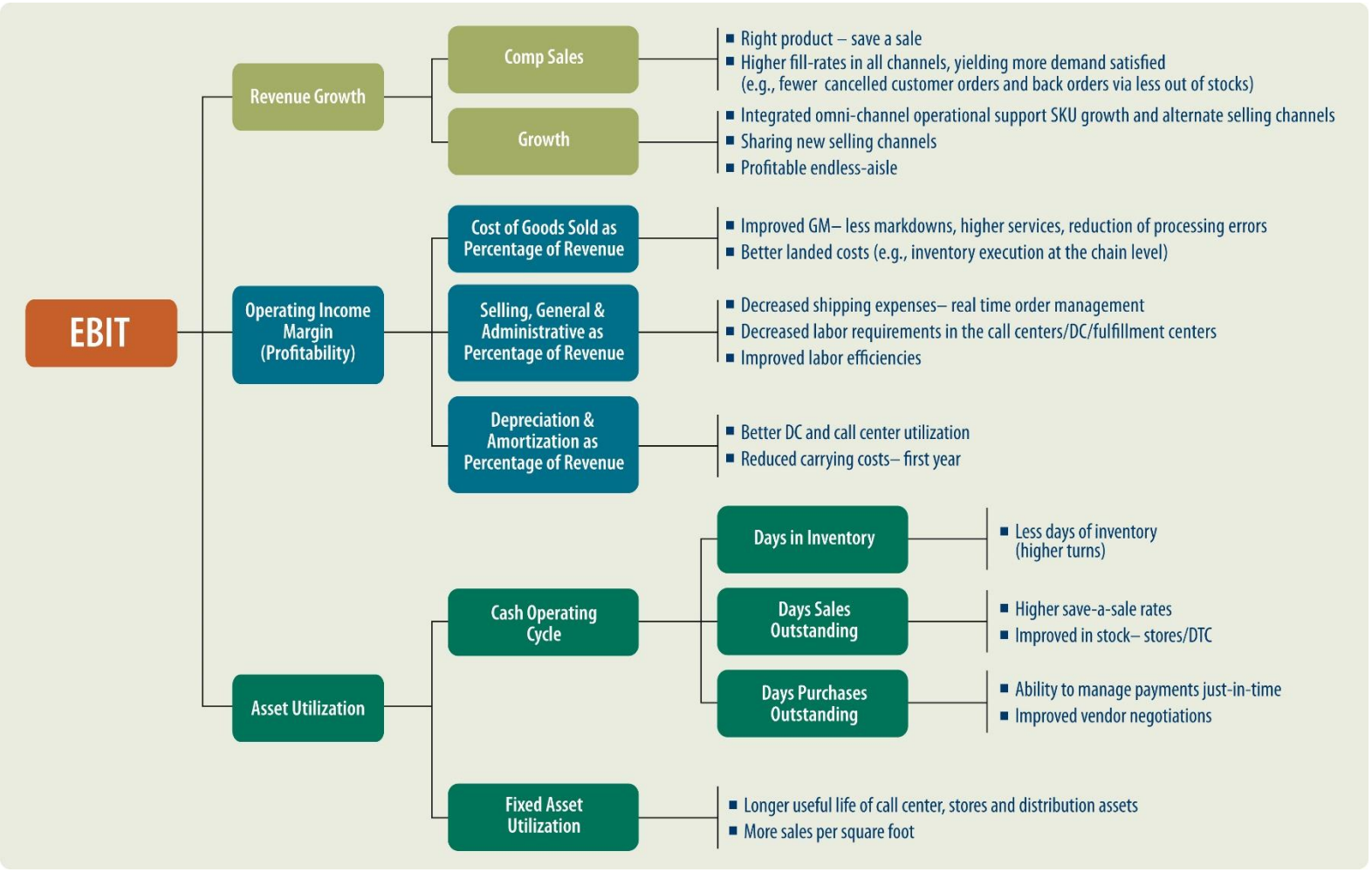
SR. MANAGING PARTNER

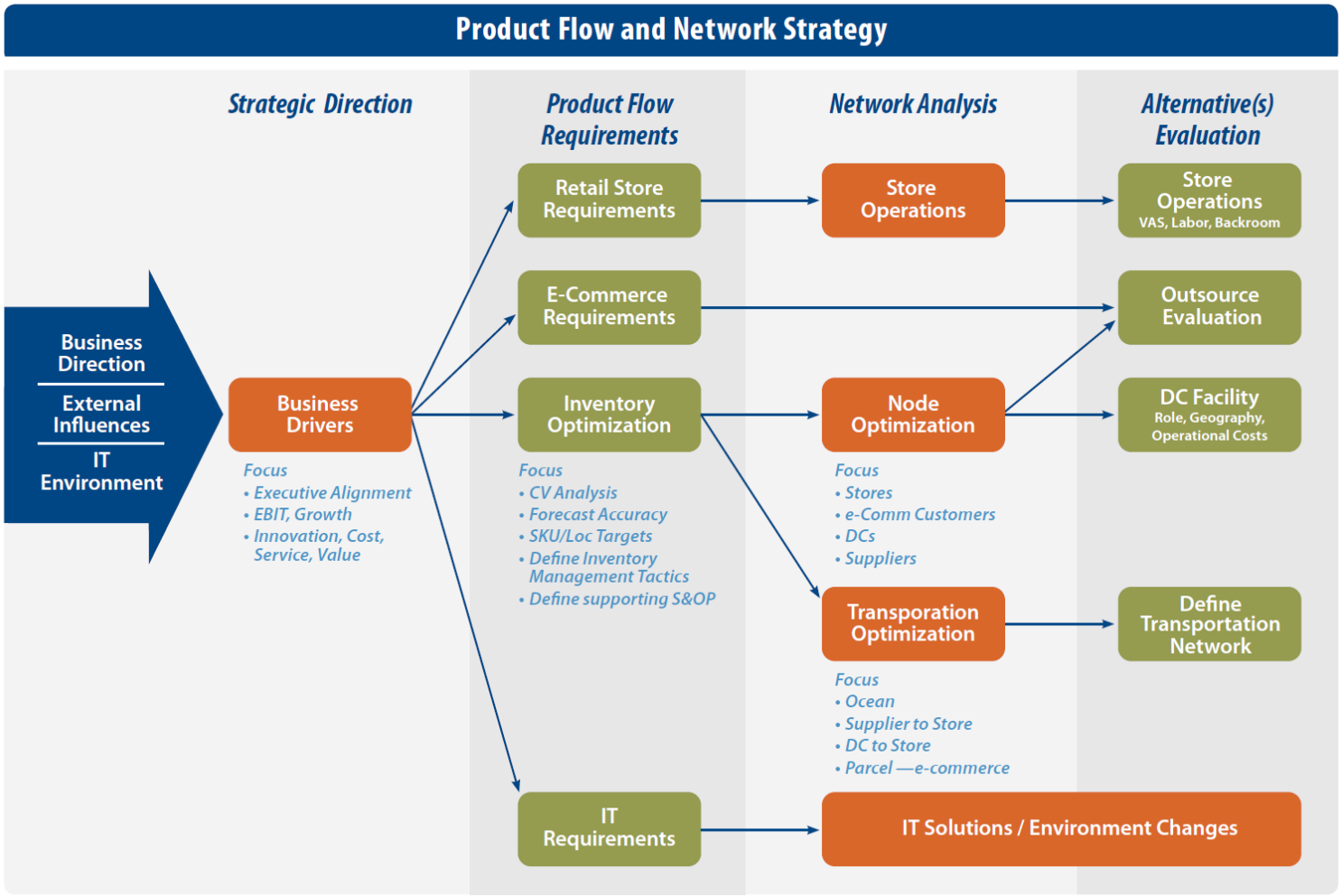
powered by MHI

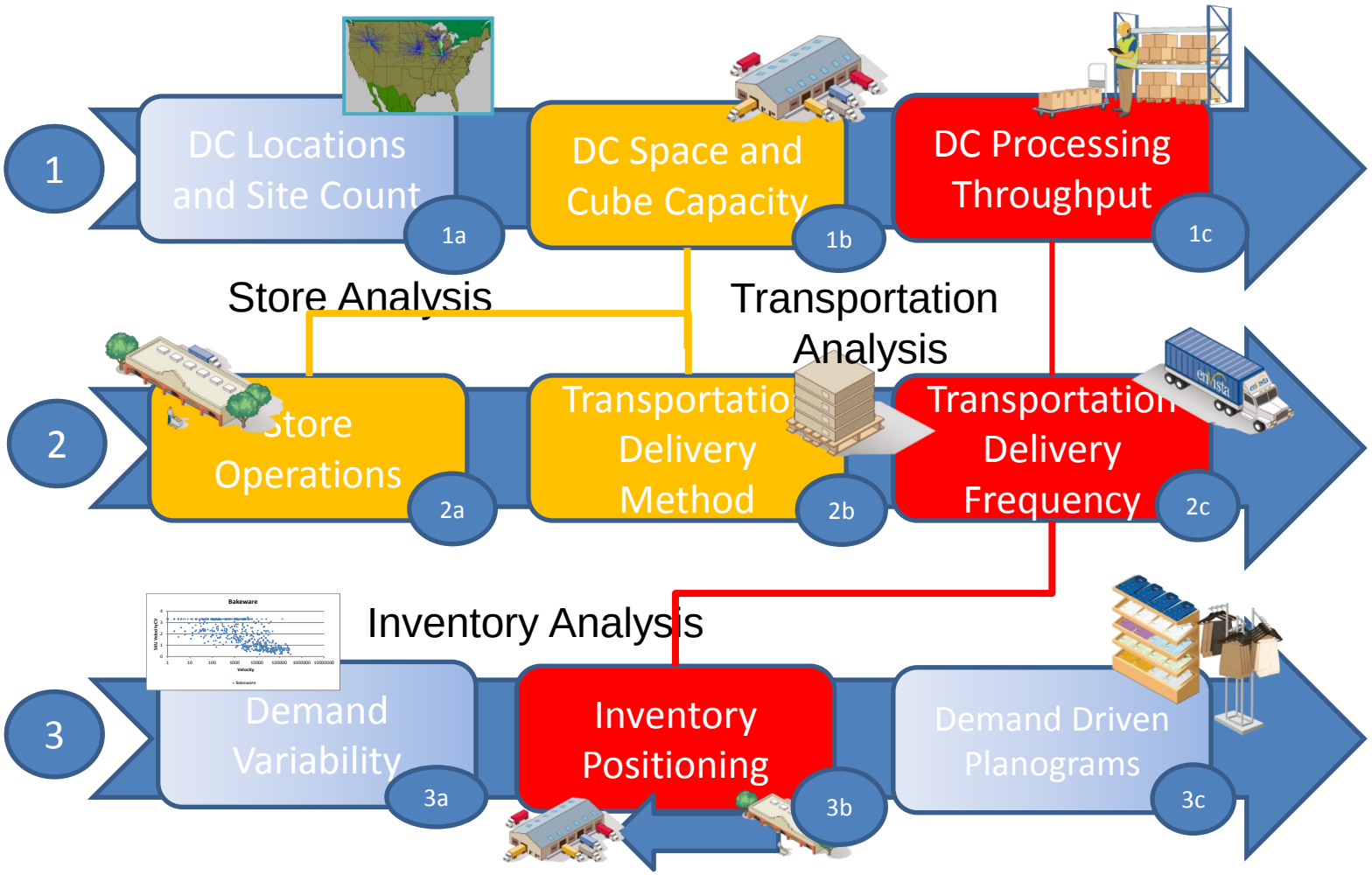
www.ProMatShow.com

Key Takeaways:

- Is Network Strategy Design something your company should consider – who benefits and when
- The critical components and steps necessary for a successful Network Strategy Design project
- How to determine Inventory Flow – what are the key considerations and best practices
- Best practices and lessons learned from companies that have successfully redesigned their supply chain network
- Typical ROI, time to value and benefits attained

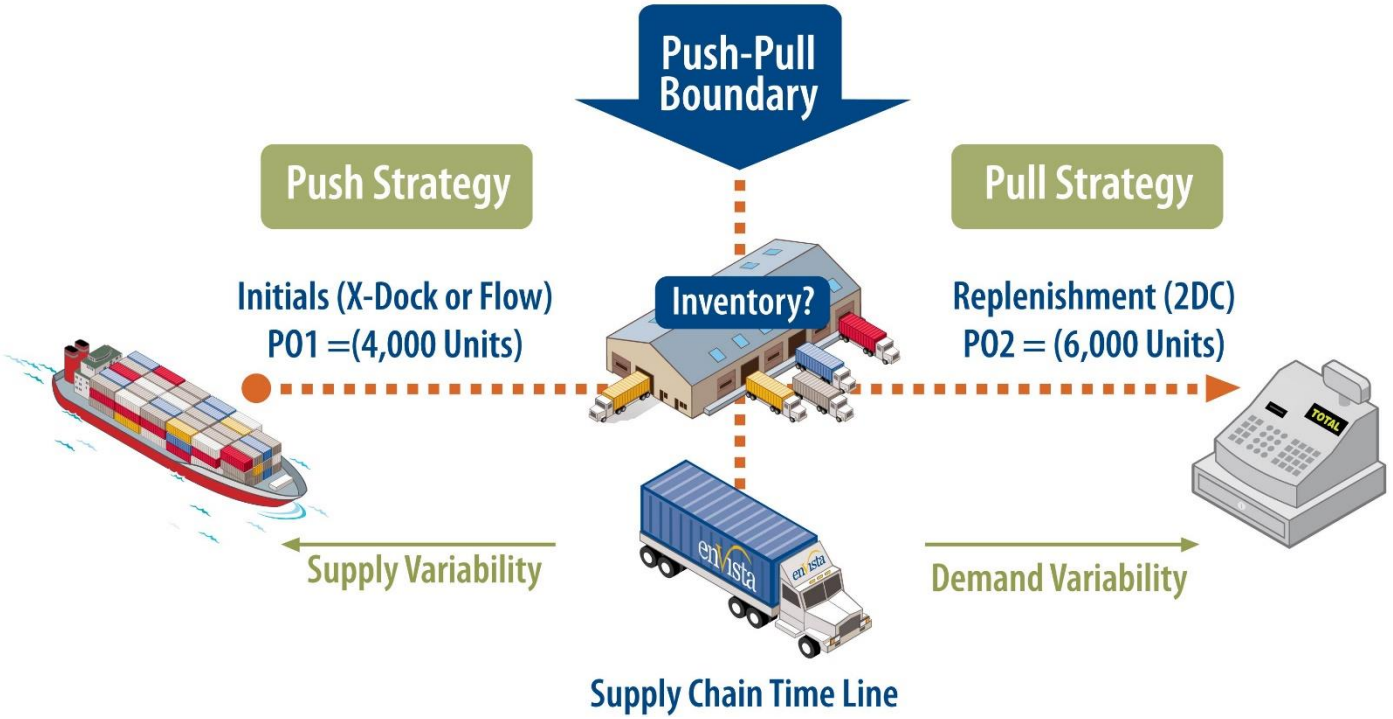

EBIT
Revenue Growth
Comp Sales
Right product – save a sale
Higher fill-rates in all channels, yielding more demand satisfied (e.g., fewer cancelled customer orders and back orders via less out of stocks)
Growth
Integrated omni-channel operational support SKU growth and alternate selling channels
Sharing new selling channels
Profitable endless-aisle
Operating Income Margin (Profitability)
Cost of Goods Sold as Percentage of Revenue
Improved GM– less markdowns, higher services, reduction of processing errors
Better landed costs (e.g., inventory execution at the chain level)
Selling, General & Administrative as Percentage of Revenue
Decreased shipping expenses– real time order management
Decreased labor requirements in the call centers/DC/fulfillment centers
Improved labor efficiencies
Depreciation & Amortization as Percentage of Revenue
Better DC and call center utilization
Reduced carrying costs– first year
Asset Utilization
Cash Operating Cycle
Days in Inventory
Less days of inventory (higher turns)
Days Sales Outstanding
Higher save-a-sale rates
Improved in stock– stores/DTC
Days Purchases Outstanding
Ability to manage payments just-in-time
Improved vendor negotiations
Fixed Asset Utilization
Longer useful life of call center, stores and distribution assets
More sales per square foot


Product Flow and Network Strategy
Strategic Direction
Product Flow Requirements
Network Analysis
Alternative(s) Evaluation
Business Direction
External Influences
IT Environment
Business Drivers
Focus
• Executive Alignment
• EBIT, Growth
• Innovation, Cost, Service, Value
Retail Store Requirements
E-Commerce Requirements
Inventory Optimization
Focus
• CV Analysis
• Forecast Accuracy
• SKU/Loc Targets
• Define Inventory Management Tactics
• Define supporting S&OP
IT Requirements
Store Operations
Node Optimization
Focus
• Stores
• e-Comm Customers
• DCs
• Suppliers
Transporation Optimization
Focus
• Ocean
• Supplier to Store
• DC to Store
• Parcel —e-commerce
IT Solutions / Environment Changes
Store Operations
VAS, Labor, Backroom
Outsource Evaluation
DC Facility
Role, Geography, Operational Costs
Define Transportation Network

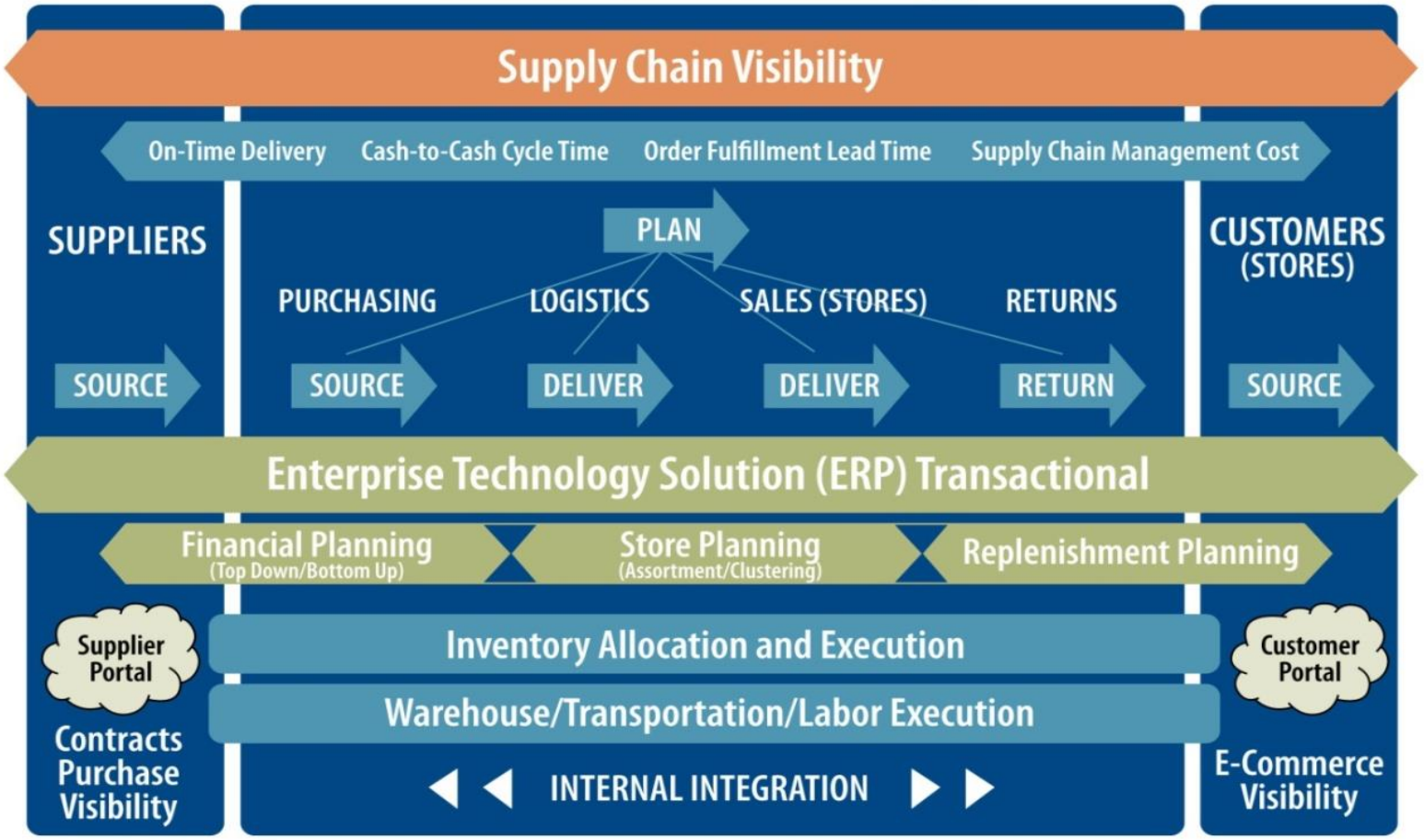

1
DC Locations and Site Count
1a
DC Space and Cube Capacity
1b
DC Processing Throughput
1c
Store Analysis
Transportation Analysis
2
Store Operations
2a
Transportation Delivery Method
2b
Transportation Delivery Frequency
2c
Inventory Analysis
3
Demand Variability
3a
Inventory Positioning
3b
Demand Driven Planograms
3c

Primary Strategy	Source of Advantage	Basis of Competition	Key Supply Chain Contributor
Innovation	Brand and unique technolgy	Desirable and innovative products	Time to market
Cost	Cost-efficient operations	Lowest price in the product catagory	Efficient, low cost infrastructure
Service	Superb service	Tailored to meet customer specific needs	Designed "from the customer in"
Quality	Safest, most reliable products	Product you can count on	Supply chain excellence and quality control

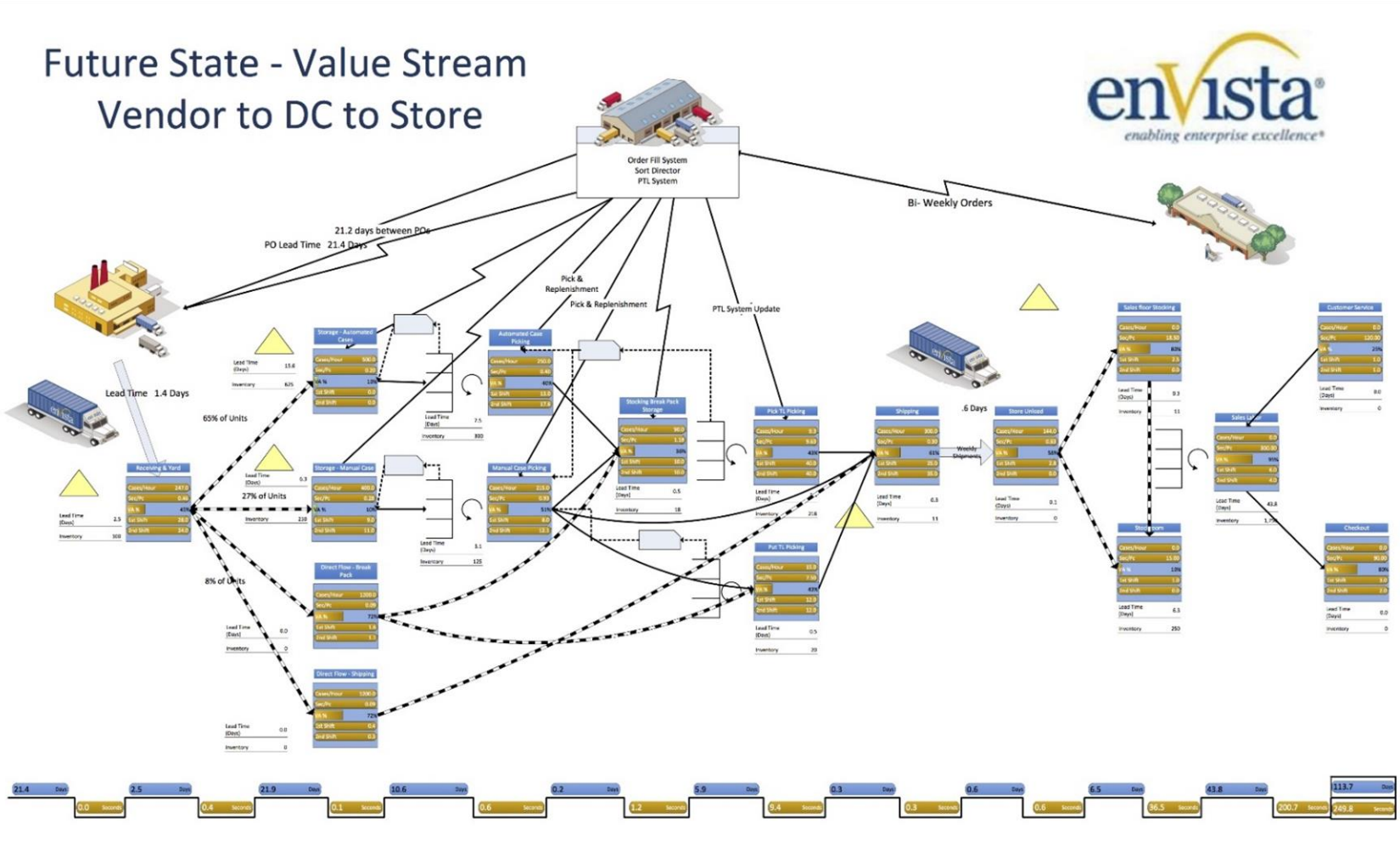
Push-Pull Supply Chains

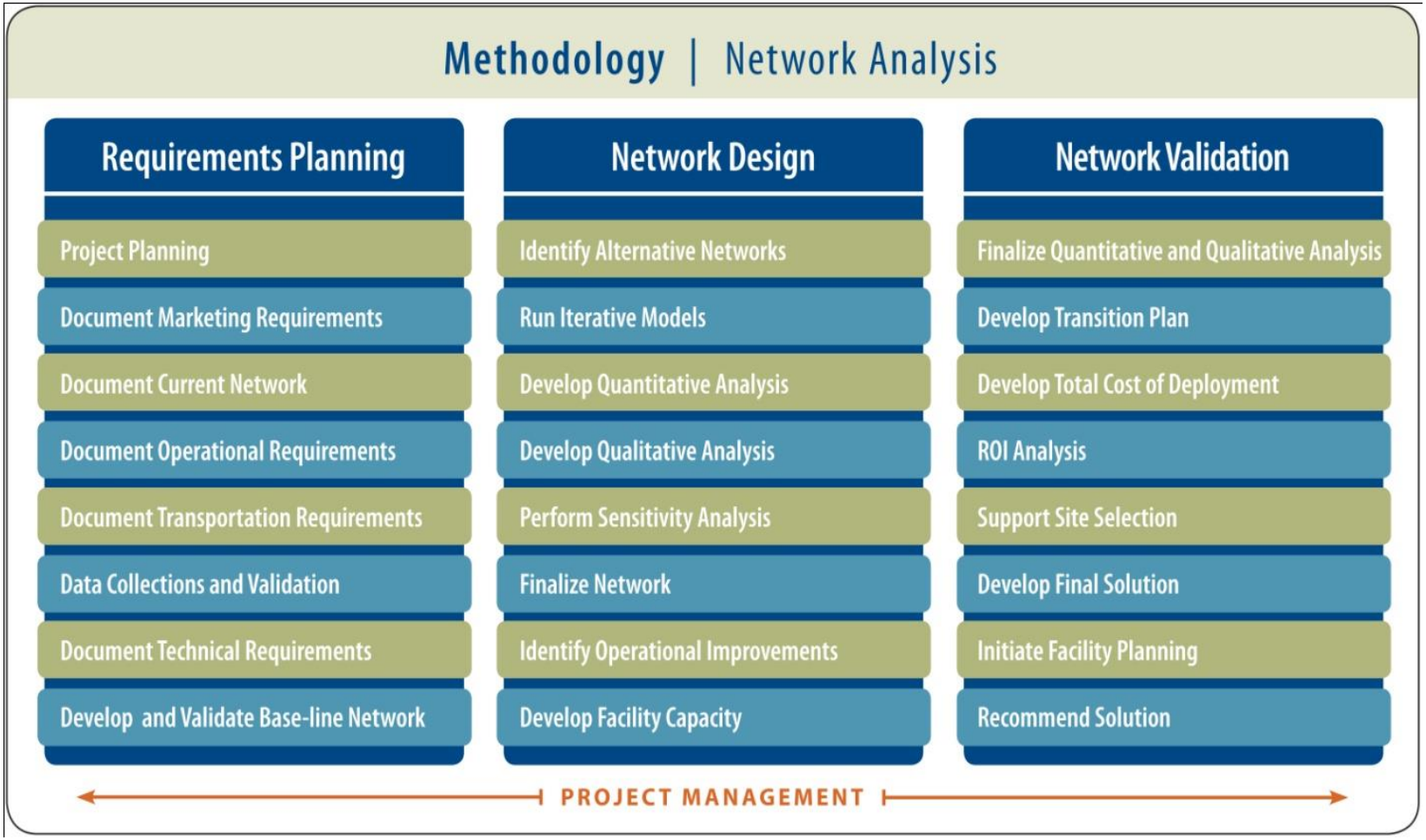


Collaborative Technology

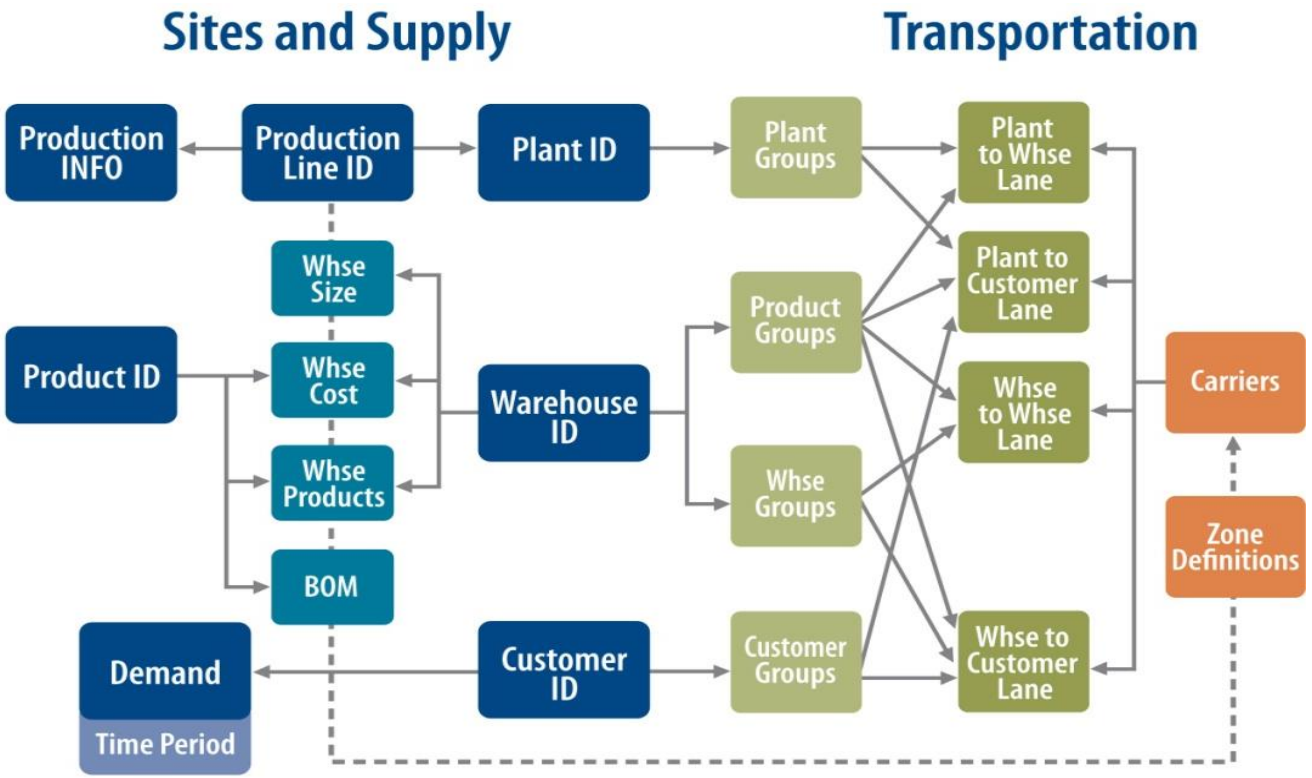


Future State - Value Stream
Vendor to DC to Store




Methodology | Network Analysis
Requirements Planning
Project Planning
Document Marketing Requirements
Document Current Network
Document Operational Requirements
Document Transportation Requirements
Data Collections and Validation
Document Technical Requirements
Develop and Validate Base-line Network
Network Design
Identify Alternative Networks
Run Iterative Models
Develop Quantitative Analysis
Develop Qualitative Analysis
Perform Sensitivity Analysis
Finalize Network
Identify Operational Improvements
Develop Facility Capacity
Network Validation
Finalize Quantitative and Qualitative Analysis
Develop Transition Plan
Develop Total Cost of Deployment
ROI Analysis
Support Site Selection
Develop Final Solution
Initiate Facility Planning
Recommend Solution
PROJECT MANAGEMENT

Traditional Supply Chain Data Model and Request

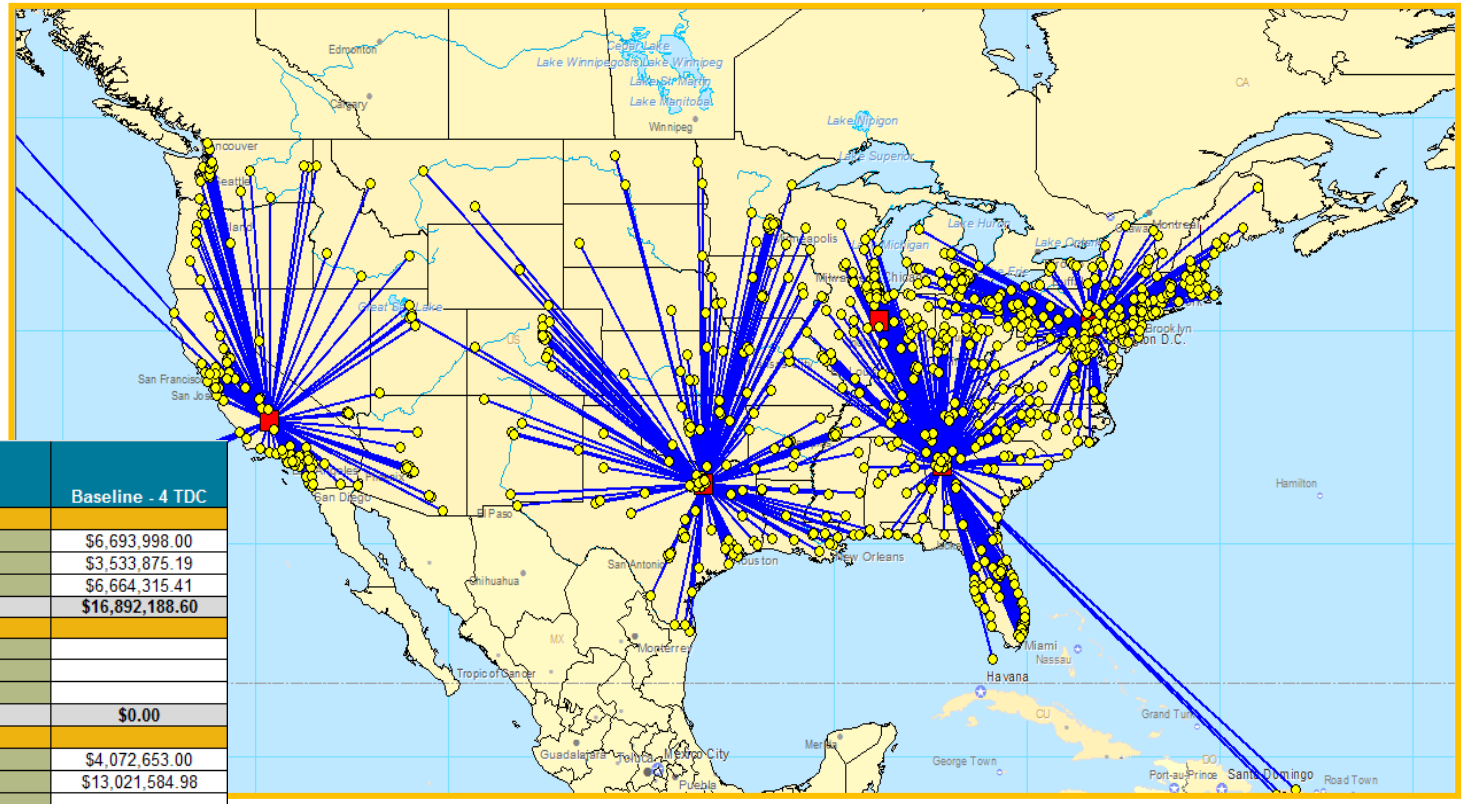


Inventory Position Moves the Needle

Driver	Impact to Inventory Safety Stock	Driver Suggest By
Reduce Forecast Error	<1%	Management
Longer lead-times to Customer	<1%	Management
Inventory Positioning	20% – 30%	Global Optimization
Synchronization	0 – 19%	Global Optimization
Changing Shipment Frequency	5% – 10%	Global Optimization
Changing Transit Times	5% – 10%	Global Optimization

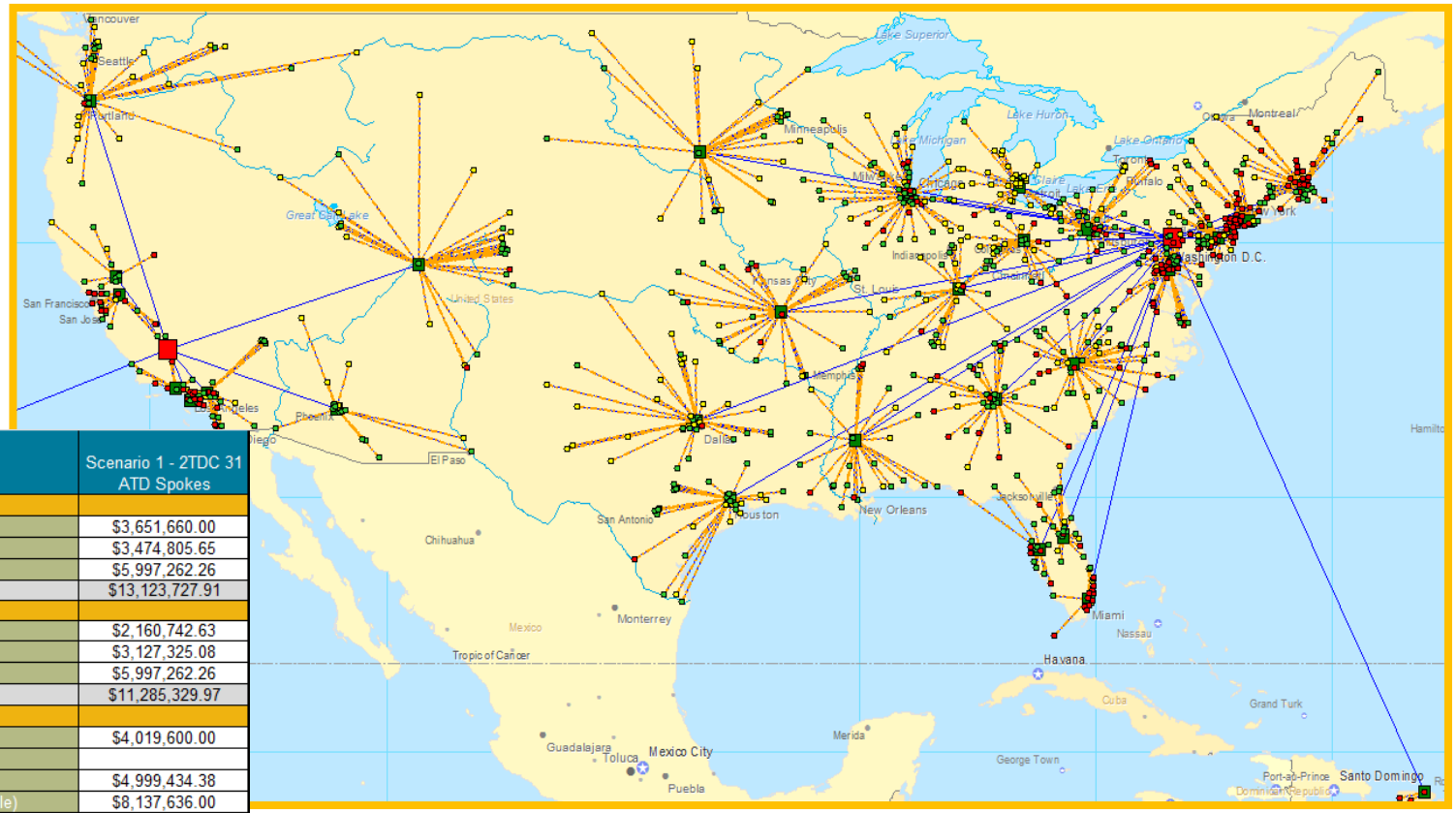
Source enVista, LLC ©

Baseline



Logistics Cost	Baseline - 4 TDC
TDC Warehousing Cost	
Fixed Operating Cost	$6,693,998.00
Variable Handling Cost	$3,533,875.19
Variable Storage Cost	$6,664,315.41
SUBTOTAL	$16,892,188.60
Spoke Warehousing Cost	
Fixed Operating Cost	
Variable Handling Cost	
Variable Storage Cost	
SUBTOTAL	$0.00
Transportation Cost	
Inbound - From Vendor to TDC	$4,072,653.00
Outbound - TDC to Store	$13,021,584.98
Outbound - TDC to Spoke	
Outbound - Spoke to Store (Last Mile)	
Outbound - Out-route Stores (Last Mile)	
SUBTOTAL	$17,094,237.98
GRAND TOTAL	$33,986,426.58

Alternative Strategy



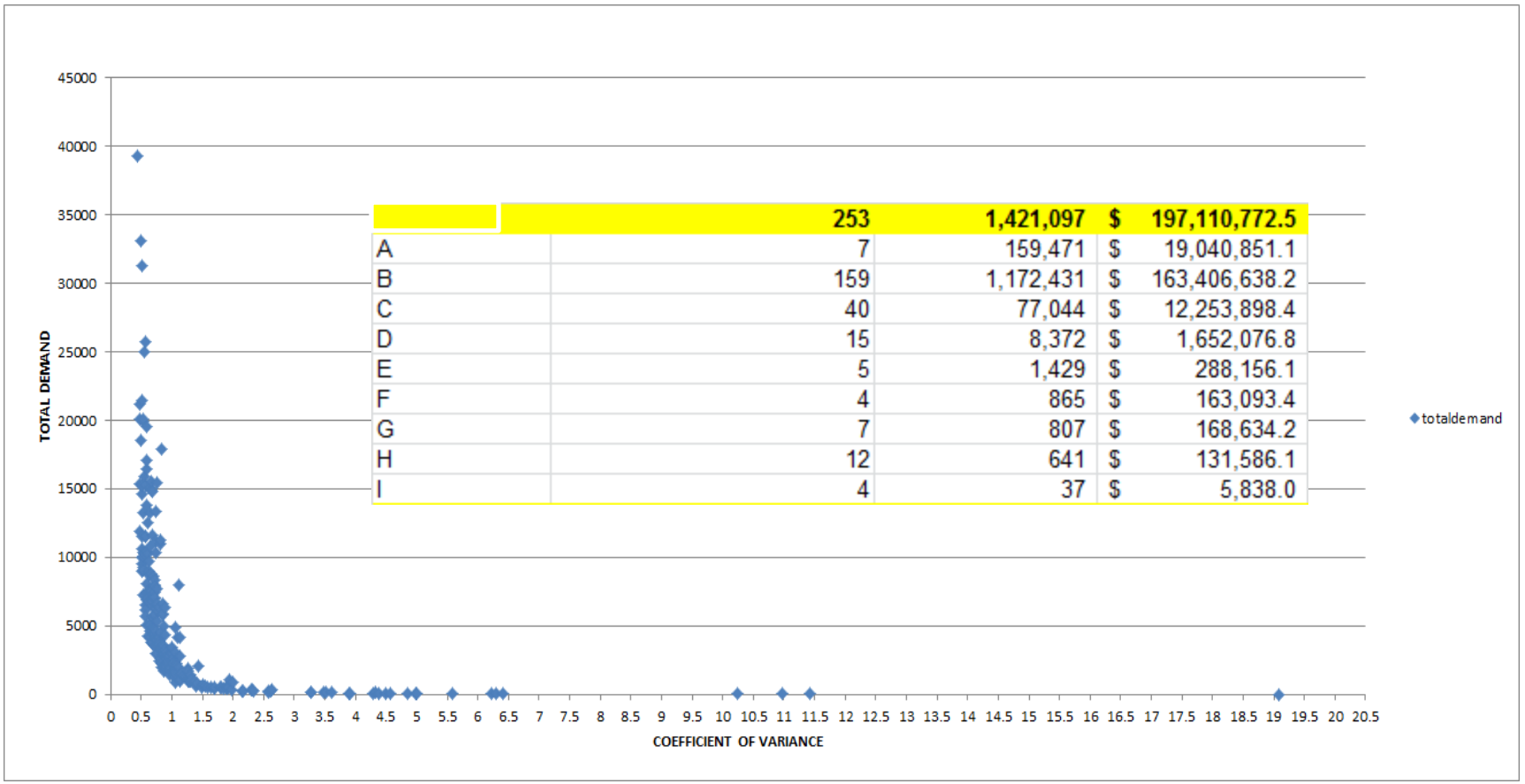
Logistics Cost	Scenario 1 - 2TDC 31 ATD Spokes
TDC Warehousing Cost	
Fixed Operating Cost	$3,651,660.00
Variable Handling Cost	$3,474,805.65
Variable Storage Cost	$5,997,262.26
SUBTOTAL	$13,123,727.91
Spoke Warehousing Cost	
Fixed Operating Cost	$2,160,742.63
Variable Handling Cost	$3,127,325.08
Variable Storage Cost	$5,997,262.26
SUBTOTAL	$11,285,329.97
Transportation Cost	
Inbound - From Vendor to TDC	$4,019,600.00
Outbound - TDC to Store	
Outbound - TDC to Spoke	$4,999,434.38
Outbound - Spoke to Store (Last Mile)	$8,137,636.00
Outbound - Out-route Stores (Last Mile)	$2,482,271.00
SUBTOTAL	$19,638,941.38
GRAND TOTAL	$44,047,999.26

CV is a measure of "predictability

- Average Daily Demand/STD DEV of the Demand in terms of units sold
- A lower CV value is easier to forecast and therefore can be pushed/continuous flow of inventory. Due to higher predictability and in theory less inventory is required in the supply chain. Inventory can be positioned farther down-stream (stores)
- A higher CV values is harder to forecast and therefore should be pulled. Due lower predictability inventory should be positioned further up-stream (TDC or Spoke). In theory you pull the inventory, however inventory positioning (TDC or Spoke) is based upon customer tolerance time as well

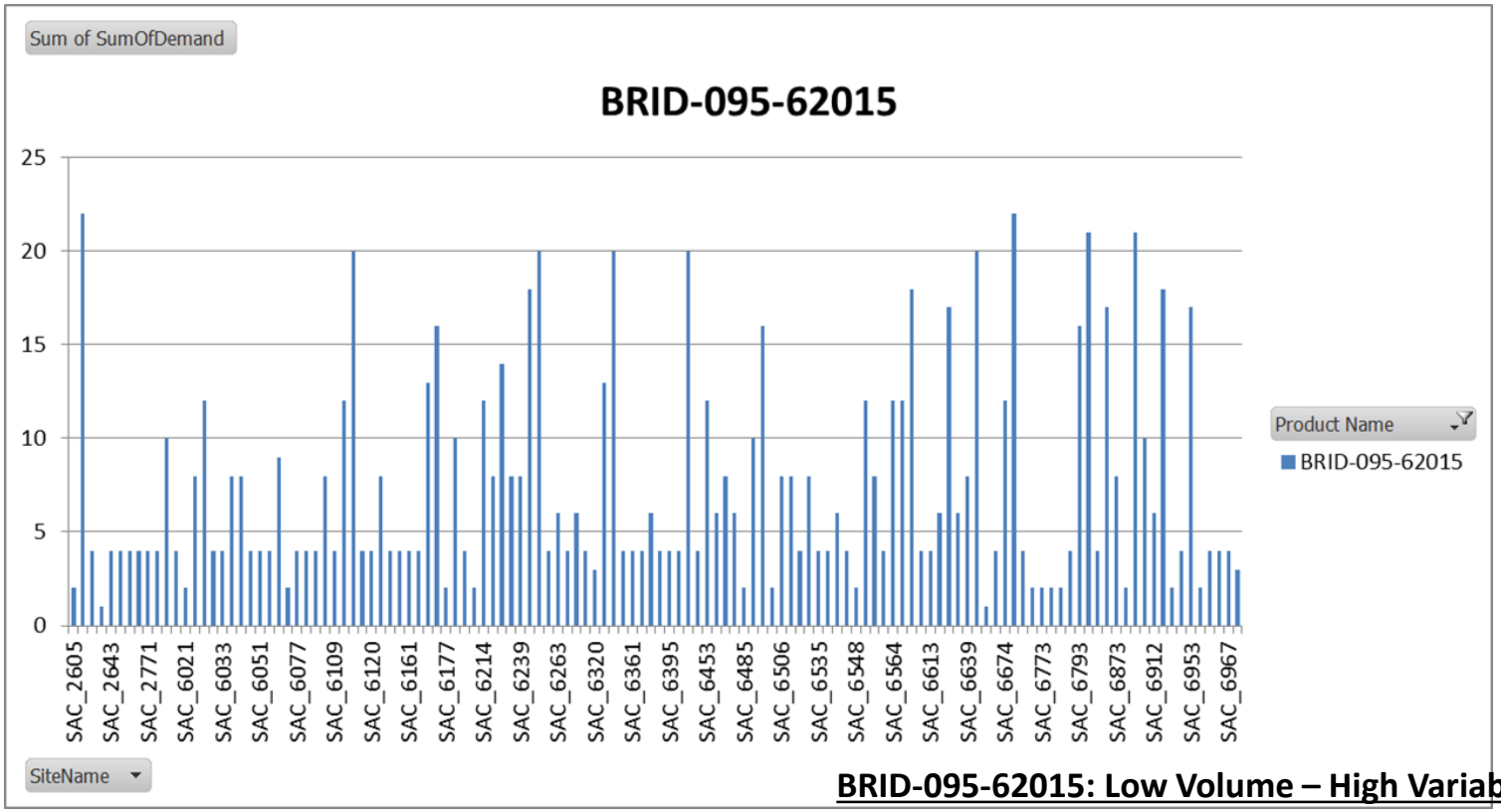
What is driving the demand (dependent or independent variables)?

- Price/Value
- Promotions
- Tire Size (Fit)
- MFG Lead Time
- MFG Fill Rate
- Co-Branded
- Brand Loyalty
- Brand Strategy
- Original Equipment Replacement
- Commission Structure
- MFG Subsidies



	253	1,421,097	$	197,110,772.5
A	7	159,471	$	19,040,851.1
B	159	1,172,431	$	163,406,638.2
C	40	77,044	$	12,253,898.4
D	15	8,372	$	1,652,076.8
E	5	1,429	$	288,156.1
F	4	865	$	163,093.4
G	7	807	$	168,634.2
H	12	641	$	131,586.1
I	4	37	$	5,838.0

Variability by Store

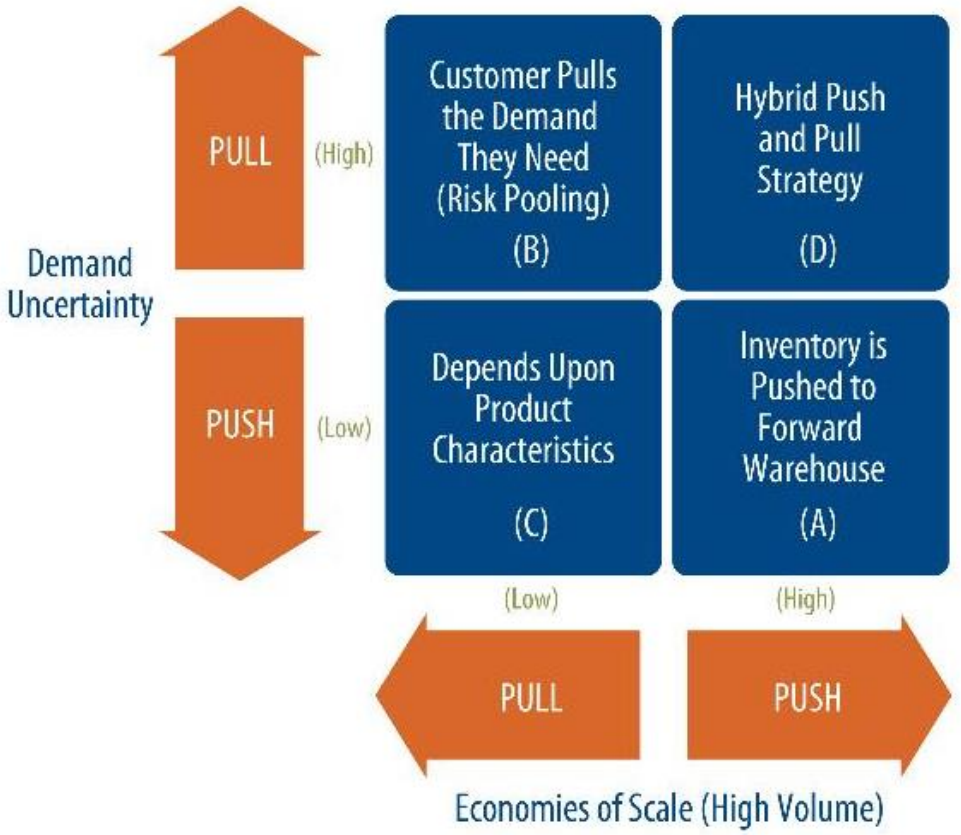


BRID-095-62015: Low Volume – High Variability

126 / 834 (15%) of stores demand this product

65 / 126 (52%) of stores only have 1 Sale all Year

Push or Pull Inventory based upon Demand Variability



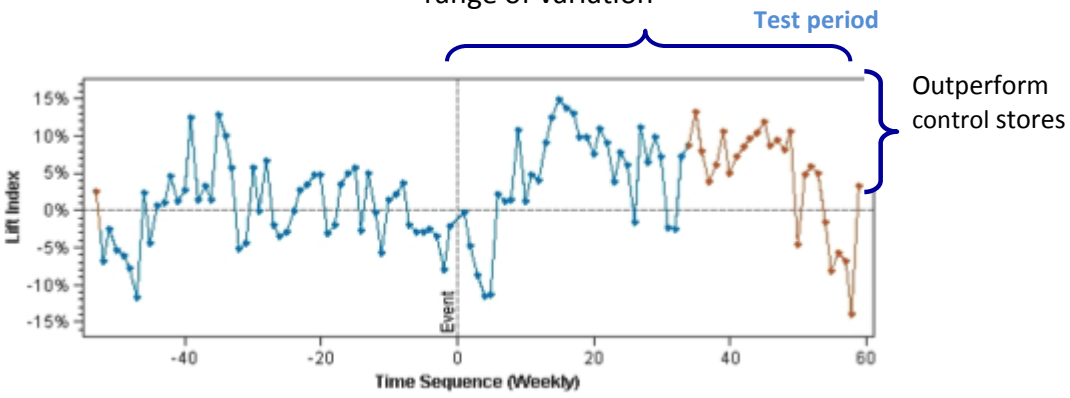
Result Summary Table: The test shows positive impact in sales and margin

Category	Margin - All - Weekly (SPRS) - - W/ MISC	Net Sales - All - Weekly (SPRS) -- W/ MISC	Net Units - All - Weekly (SPRS) -- W/ MISC
xxx - SAC Exec DMA - Tires Impact Areas	4.9% *$484.09*	4.1% *$946.55*	2.8% *15.65*

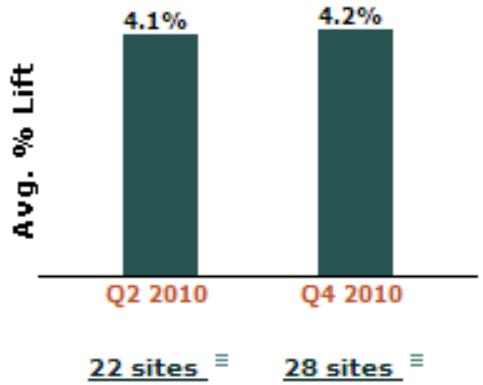
Result by Markets: Chicago and New York both show positive lifts

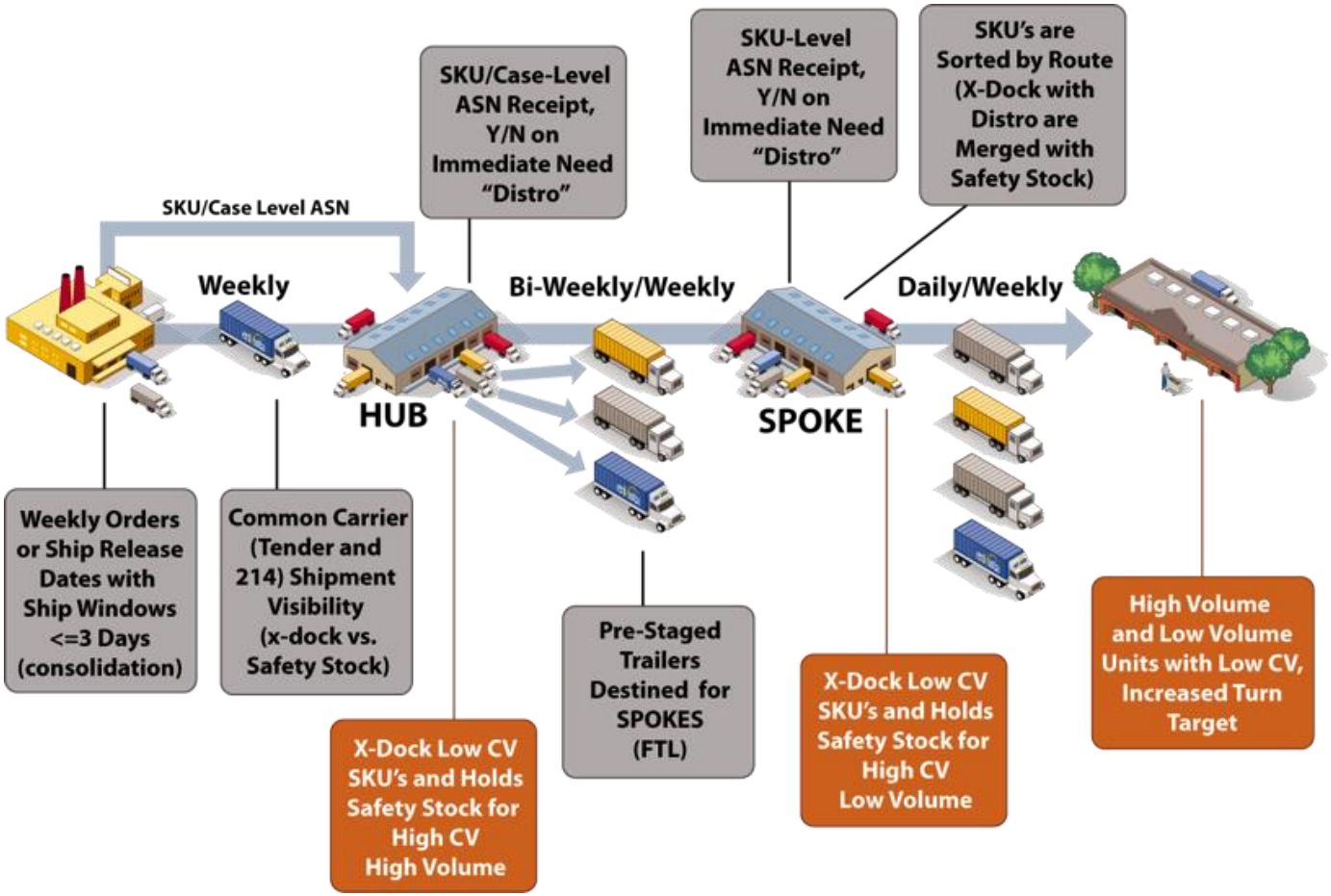
~DMA Info for SAC Updated 8/16/2010	# of sites	# of outliers	Estimatedimpact	Wtd.Avg. % Lift	Wtd.Avg. Significance
501 - NEW YORK	28	1	$1,147.76	4.2%	99.8%
602 - CHICAGO	22	1	$690.45	4.1%	98.6%

Net Sales Lift vs. Control stores: The overall test results are within the normal range of variation



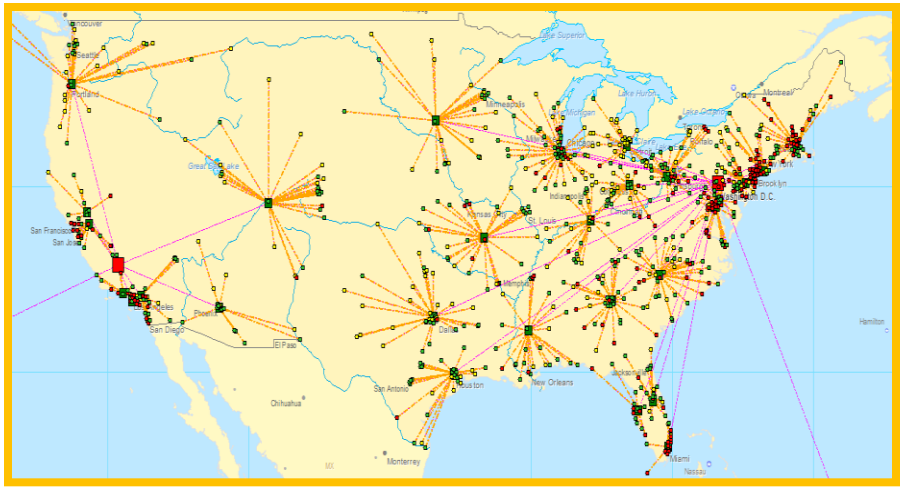
Test Store Start Quarter:




SKU/Case-Level ASN Receipt, Y/N on Immediate Need "Distro"
SKU-Level ASN Receipt, Y/N on Immediate Need "Distro"
SKU's are Sorted by Route (X-Dock with Distro are Merged with Safety Stock)
SKU/Case Level ASN
Weekly
Bi-Weekly/Weekly
Daily/Weekly
HUB
SPOKE
Weekly Orders or Ship Release Dates with Ship Windows <=3 Days (consolidation)
Common Carrier (Tender and 214) Shipment Visibility (x-dock vs. Safety Stock)
X-Dock Low CV SKU's and Holds Safety Stock for High CV High Volume
Pre-Staged Trailers Destined for SPOKES (FTL)
X-Dock Low CV SKU's and Holds Safety Stock for High CV Low Volume
High Volume and Low Volume Units with Low CV, Increased Turn Target

- One time inventory reduction of $22.9M
- $35.9M year over year reduction of inventory (5 years)
- Carrying Cost Reduction = $2.75M
- Improved Tire Inventory Turns = 5.92 from 3.58
- Improved Inventory Turn Over = 6.45 from 3.91 (improved cash flow)
- Proposed Increased Sales Uplift = $43.8m over a two year period (based upon current H&S test model)

January 2013 – January 2017



Scenario	NPV	IRR
enVista H&S (no-lift)	$4.6M	112%
enVista H&S (5%/2% AB Stores)	$5.38M	134%
enVista H&S (12%/5% AB Stores)	$7.2M	177.%
Client H&S (no-lift)	$1.0M	44.3%

S&OP

STEP 5 EXEC MEETING

STEP 4 PRE-MEETING

STEP 3 SUPPLY PLANNING

STEP 2 DEMAND PLANNING

STEP 1 DATA GATHERING

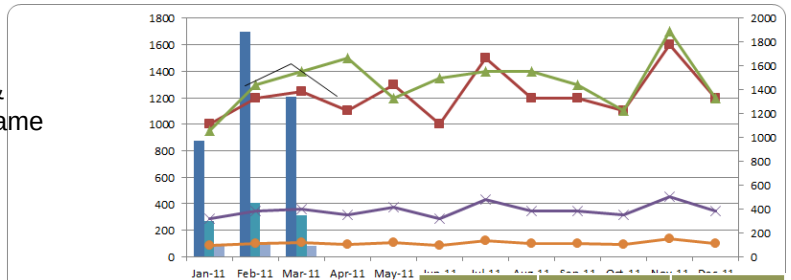
Promotional Department Involvement

7 Monthly Postmortem Executive Meeting

Decisions & Updated Game Plan

6 Business Units Prepare Actual vs. Plan and Build Action Plans

- Tires
- Service
- OTC



	Jan-11	Feb-11	Mar-11	Apr-11	May-11
Actual Sales Units	975	1890	1345		
Actual Inventory Stores	300	450	350		
Actual TDC Inventory	95	120	95		
Forecasted Sales Units	1000	1200	1250	1100	1300
Financial Plan Sales Units	950	1300	1400	1500	1200
Planned Inventory Stores	286	343	357	314	371
Planned TDC Inventory	83	100	104	92	108

Supplier	Fill Rate %	Lead Time STD
Michelin	65%	10 Days
Cooper	95%	2 Days
Goodyear	83%	4 Days

Inventory Level Input

DRP Forecast Finalized

5 Vendor Conference Calls

EDI PO's to Vendors

Sales/Merchants

Inventory

4 Weekly Promotional Readiness

Weekly OTB

3 Financial Forecast

Consensus Forecast Meeting

Historical Data

Market Data

1 Merchant Strategy Meeting

One on One Ad Meeting & Ad Candidates

2 Ad Space Finalized (DVP Marketing)

Complete Marketing Plan (TV, Radio, Circulars)

For More Information:

Speaker email: speaker@company.com

Website: www.sponsorcompany.com

Speaker #2 email: speaker@company.com

website: www.sponsorcompany.com

Or visit ProMat 2015 Booth #####