

Maximizing Value from Central Distribution

Britt Dayton

Vice President, Supply Chain Development,
Lowe's Companies, Inc.

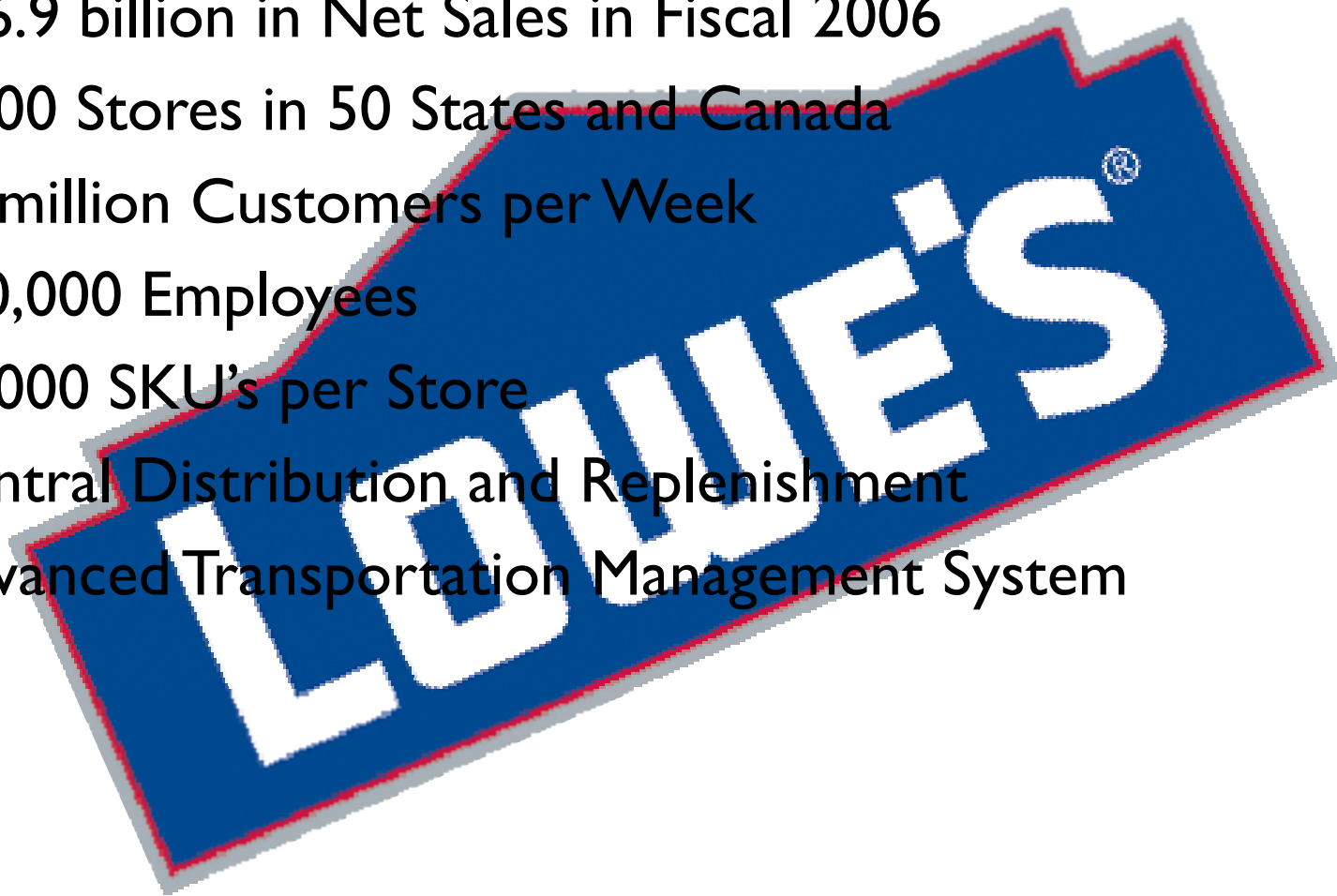
Today's Discussion

- ▶ Some Background and Basics
- ▶ Our Recent Focus
- ▶ Using the Network...
- ▶ ... And Some Challenges



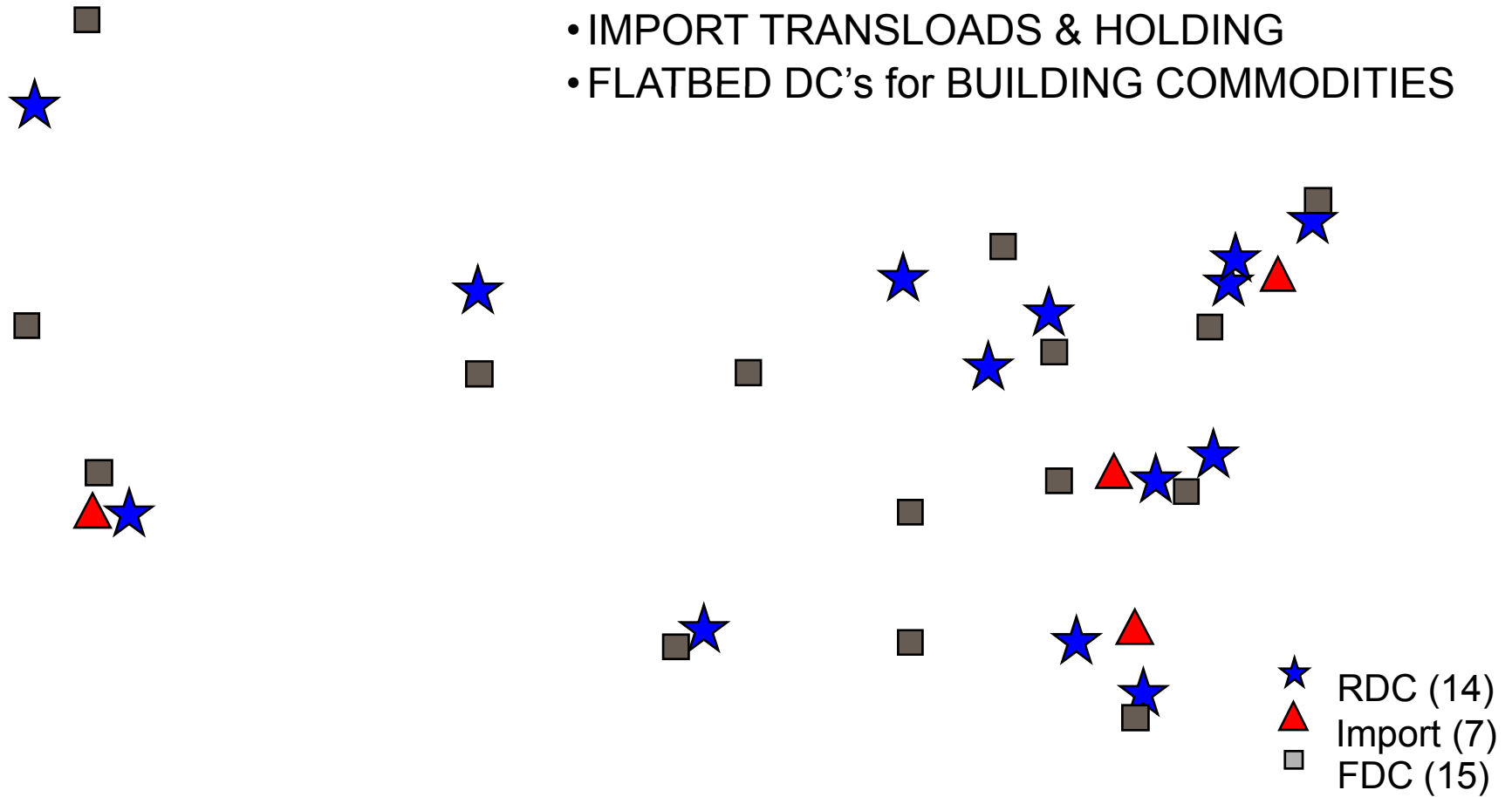
At a Glance

- ▶ \$46.9 billion in Net Sales in Fiscal 2006
- ▶ 1,500 Stores in 50 States and Canada
- ▶ 13 million Customers per Week
- ▶ 210,000 Employees
- ▶ 40,000 SKU's per Store
- ▶ Central Distribution and Replenishment
- ▶ Advanced Transportation Management System



Lowe's Distribution Network

- REGIONAL DC's for CARTON GOODS
- IMPORT TRANSLOADS & HOLDING
- FLATBED DC's for BUILDING COMMODITIES



Why Central Distribution?

Store Direct Can Be Efficient



BEST WHEN:

- ▶ Store frequently sells a vendor full truckload shipment
- ▶ Vendor ship point near stores

BECAUSE:

- ▶ Low cost flow
- ▶ Store turns inventory
- ▶ Manage freight costs



A Few Products Fit This Profile



Most Products Don't

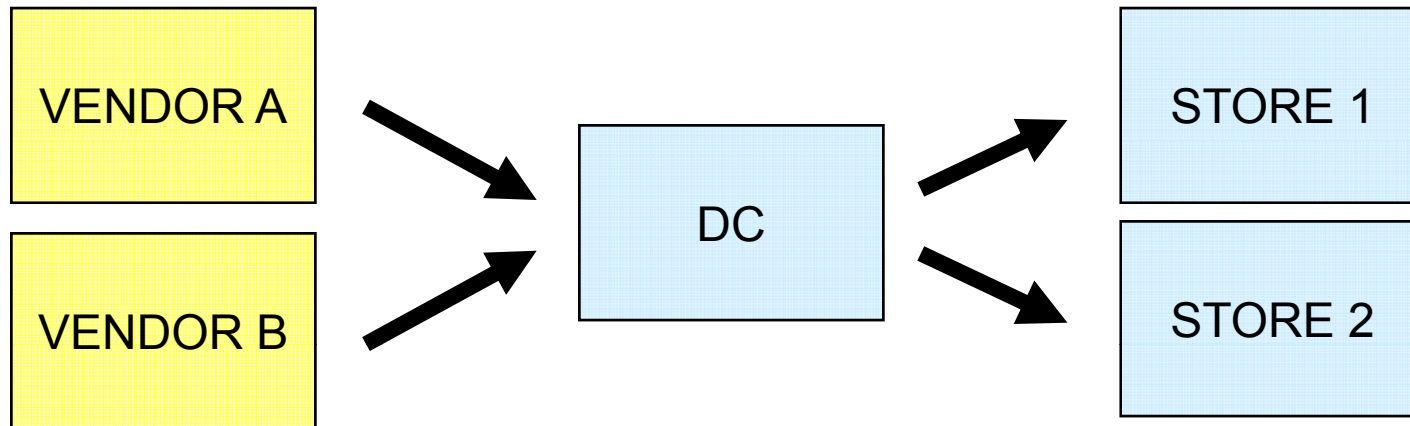


Store Direct Would Have:

- HIGHER COSTS
- MORE STORE INVENTORY



Central Distribution Offers Value



VALUE COMES FROM:

- ▶ Efficient freight moves
- ▶ Risk pooling
- ▶ Delayed allocation
- ▶ Store service
- ▶ Vendor efficiencies

WITH TRADE-OFF's:

- ▶ Facility costs
- ▶ DC inventory
- ▶ DC labor



Achieving Value from Distribution

- ▶ Transportation Efficiencies
- ▶ Labor Productivity
- ▶ Volume of Right Products in Distribution
- ▶ Right Mix of Stock/Cross-Dock
- ▶ Facility Design and Layout
- ▶ Network Design
- ▶ Align with Store Operations
- ▶ Negotiate Vendor Pricing

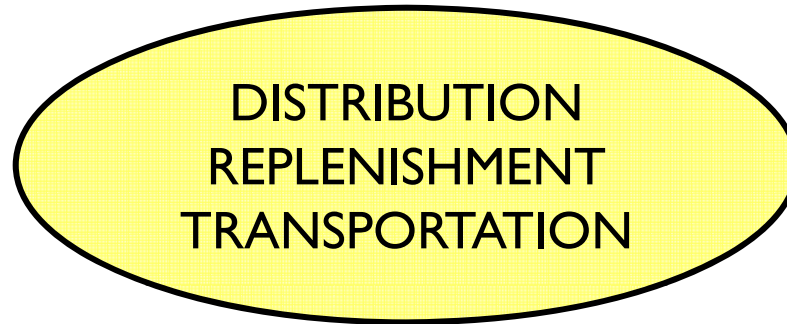
INCREASING DIFFICULTY



Getting Back to Basics at Lowe's

Rapid Response Replenishment

CORE PLATFORM

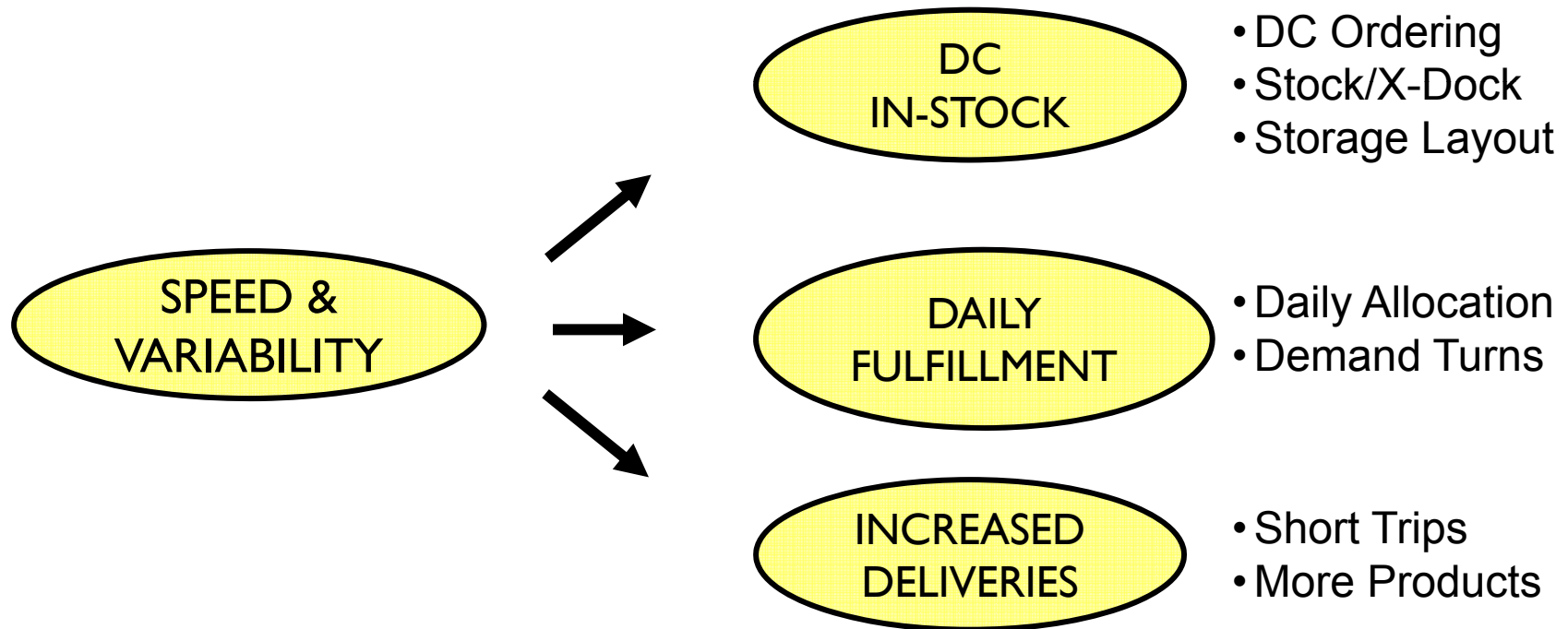


LEVERAGE the PLATFORM

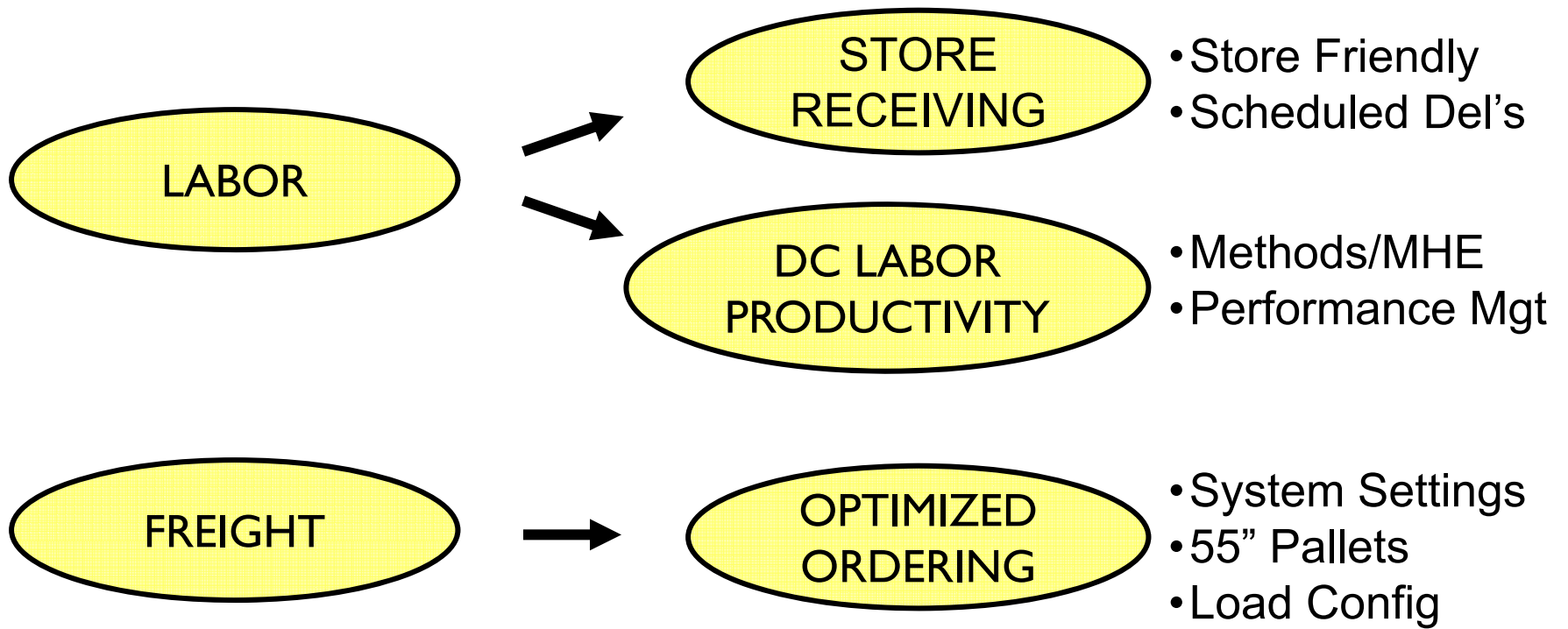


Improving Service

- ▶ Service = Faster with Less Variability
- ▶ Better In-Stock at Store



Reducing Costs



Big Savings from Inbound Freight

- ▶ Inbound moves = $\frac{1}{2}$ cube, 2X miles of outbound

BEFORE



2,253 Cube

AFTER



2,503 Cube

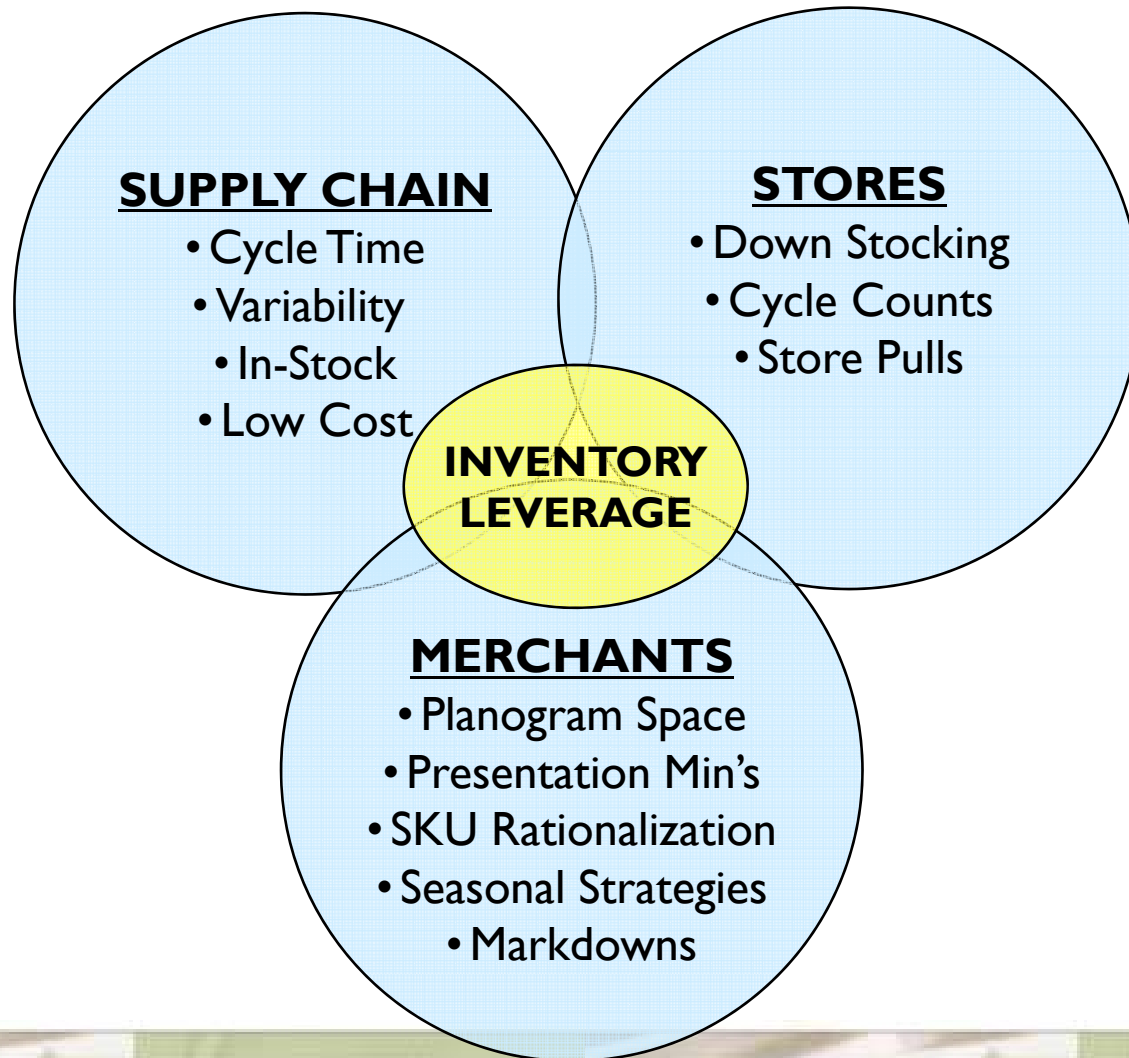


Labor Savings Are Making an Impact

- ▶ Performance Management Fully Implemented
 - ▶ Measure effort and performance of coaches and team members
 - ▶ Train to achieve goals, and celebrate success
 - ▶ Significant productivity improvements
- ▶ Reduced labor cost under higher work content & wage pressures



Reducing Inventory Takes a Village!



Store Presentation Trumps SC

Paint Aisle from a Supply Chain Perspective...



... and from a Retail Perspective



Planogram vs. Rate of Sale

Pure Rate of Sale for Slow-Moving Items...



... Wouldn't Always Look Good to Customers



Using the Network to Maximize Value

The Need for Decision-Support

- ▶ Leveraging the Network Required Better Decisions
 - ▶ Which items through distribution?
 - ▶ Stock or cross-dock?
 - ▶ Full case or break-pack?
 - ▶ What's the right pack size?
 - ▶ What vendor order quantities? Frequency?
 - ▶ How much inventory should be where?

- ▶ Needed a Total Cost Model to Evaluate Trade-offs:
 - ▶ Purchase Price from Vendor for Ordering Method
 - ▶ Freight
 - ▶ Handling – at both DC and Store
 - ▶ Inventory
 - ▶ Infrastructure Costs – Building, MHE
 - ▶ Other Costs – Damage, Duties



Solution was SC Channel Model

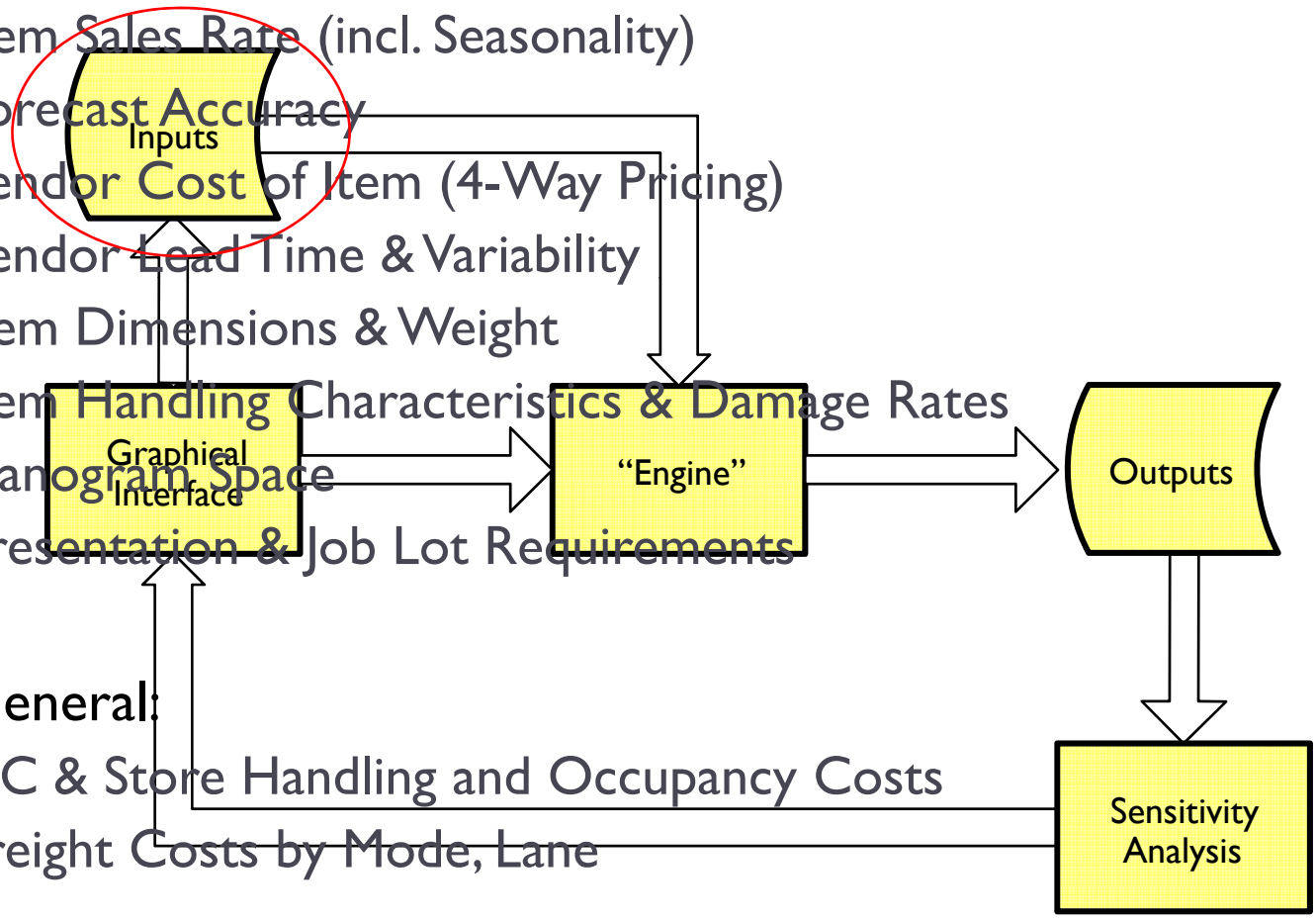
- ▶ Tool Calculates Lowest Total Cost Alternatives:
 - ▶ Domestic vs. Import
 - ▶ Direct to Store vs. Distribution; Cross-Dock vs. Stock; Full Case vs. Eches
 - ▶ Freight Mode (LTL, TL, Parcel); Prepaid vs. Collect; Ocean vs. Intermodal
 - ▶ Order Strategy (EOQ, Order Frequency, Truck Constraints, Ship Units In/Out)
 - ▶ DC and Store Target Inventory and Service Level
- ▶ Inventory Modeling Mirrors Replenishment Systems
- ▶ Vendor Program can Generate 100 Million Options!



Meaningful Results Depend on Inputs

- ▶ For Each Vendor Program Analyzed:

- ▶ Item Sales Rate (incl. Seasonality)
- ▶ Forecast Accuracy
- ▶ Vendor Cost of Item (4-Way Pricing)
- ▶ Vendor Lead Time & Variability
- ▶ Item Dimensions & Weight
- ▶ Item Handling Characteristics & Damage Rates
- ▶ Planogram Space
- ▶ Presentation & Job Lot Requirements

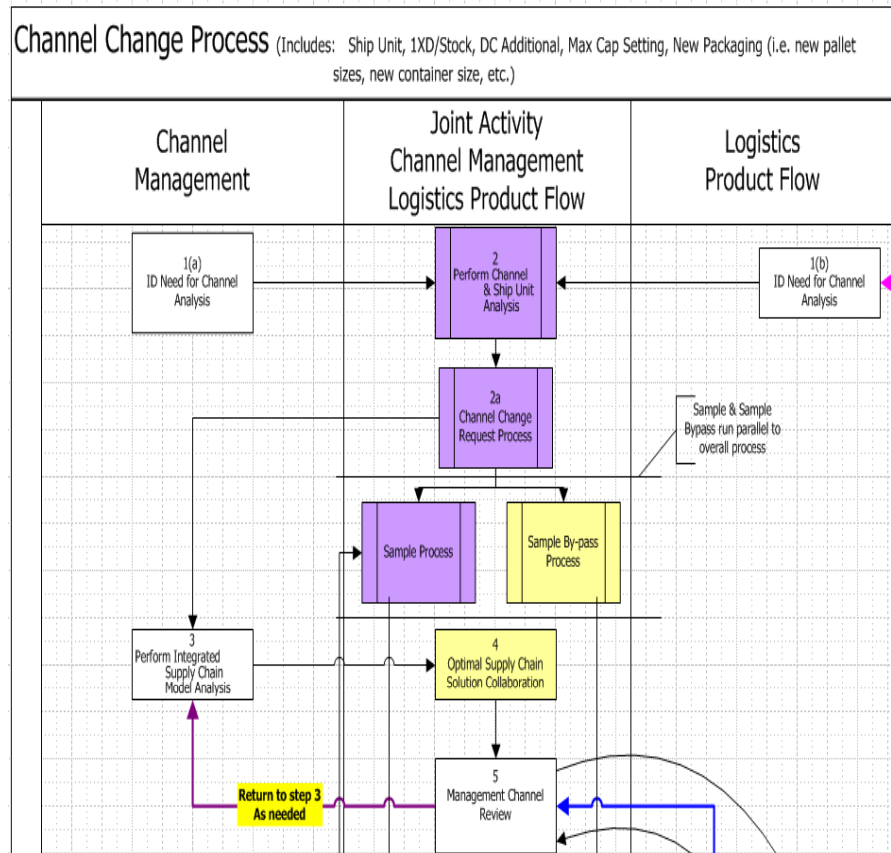


- ▶ In General:

- ▶ DC & Store Handling and Occupancy Costs
- ▶ Freight Costs by Mode, Lane



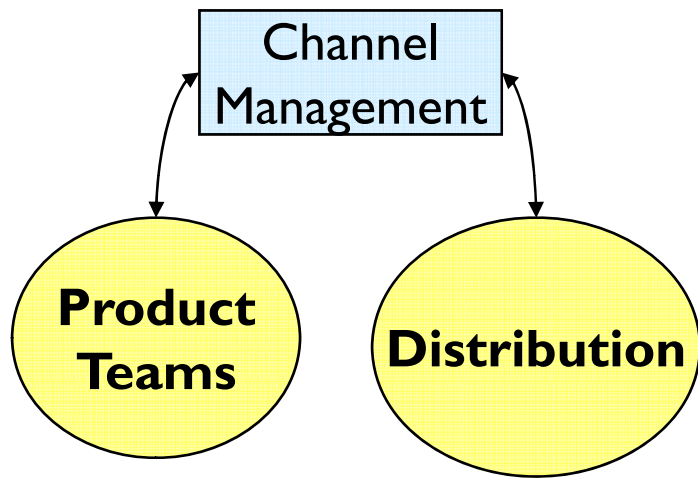
... And Process ...



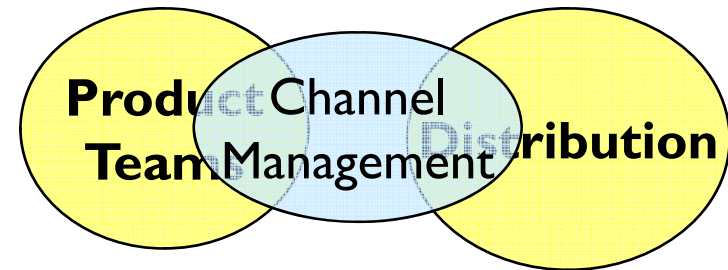
- ▶ Who gathers the inputs
- ▶ How to interpret the output
- ▶ How and when merchant teams use the information
- ▶ When to adjust budgets
- ▶ When to reevaluate



... And Organization



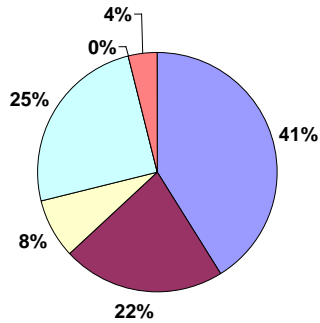
Channel Management Process



Channel Management Organization

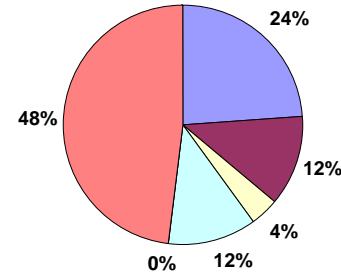


Channel Model Directs Team Efforts



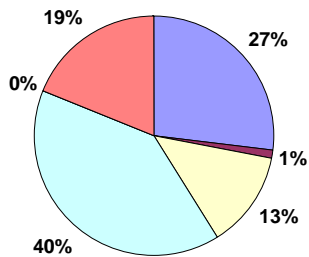
LUMBER

Frnt: 63% Hdl: 33% Inv: 4%



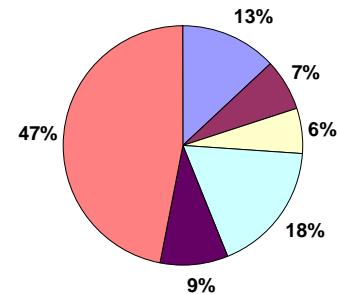
MAJOR APPLIANCE

Frnt: 36% Hdl: 16% Inv: 48%



DECORATIVE HARDWARE

Frnt: 28% Hdl: 53% Inv: 19%



CEILING FAN

Frnt: 20% Hdl: 24% Inv: 56%



And Provides General Guidance

- ▶ Product Costs Determine Profit Drivers

		\$/Unit	
		LOW	HIGH
\$/Cube	LOW	LUMBER Handling Freight Inventory	MAJOR APPLIANCES Handling Freight Inventory
	HIGH	DECOR. HARDWARE Handling Freight Inventory	CEILING FANS Handling Freight Inventory



So Everything is Optimal Now?

Some Things Work Against Us

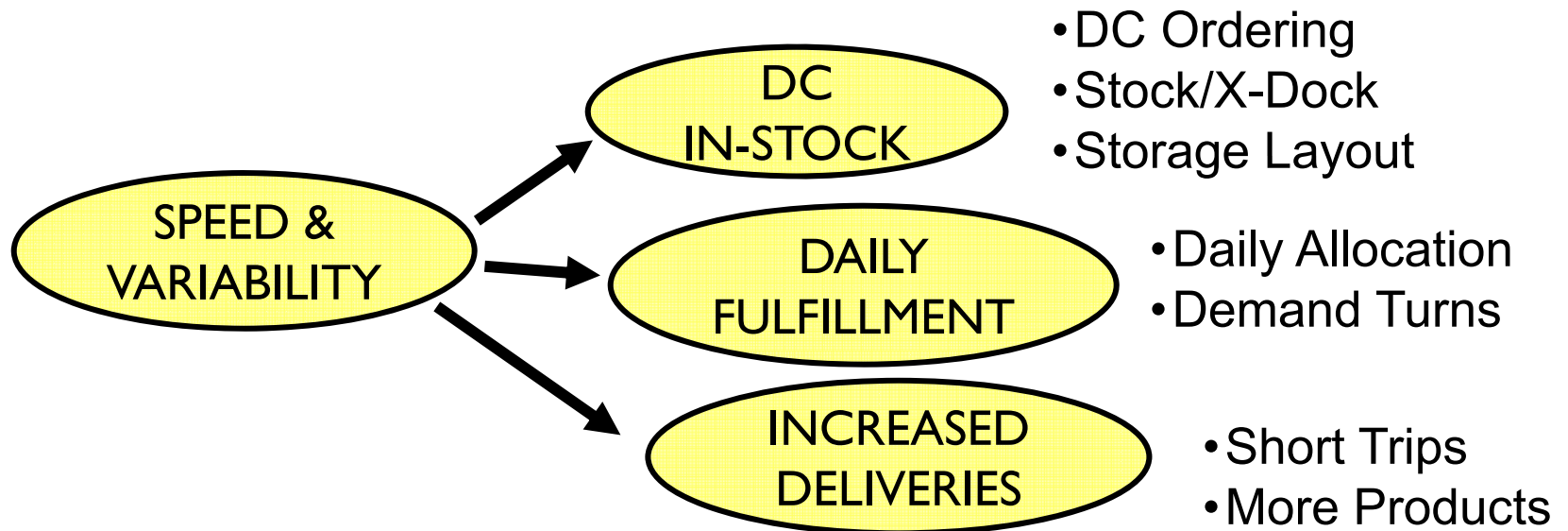
- ▶ **Self-Inflicted Wounds**
 - ▶ Internal Costing System
 - ▶ Metrics & Incentives

- ▶ **Harsh Reality**
 - ▶ Our Capacity to Change
 - ▶ Vendor Infrastructure Investments



Costing Approach... Good and Bad

- ▶ Actual Costing Shows Teams Costs of Service
- ▶ How Costs Charged Impacts Team Decisions
 - ▶ What Comes Through Distribution
 - ▶ Stocked vs. Cross-Docked



Change Costing to Support Strategy

- ▶ Cube-Based Handling Rates... Unit-Based
- ▶ Too Many Costing “Classes”... Reduced
- ▶ Occupancy Costs Included MHE... Shift to Handling
- ▶ Occupancy Fully Allocated... Capacity-Based
- ▶ Store Costs not Included... Still Working On That!



Consider a Merchant's Plight...

- ▶ Channel Decisions Are Easy...

	OPTION A <i>Store Direct Collect</i>	OPTION B <i>RDC Stocked Collect</i>	DIFF
ANNUAL SALES	\$6,153,000	\$6,153,000	\$0
INV TURNS	2.8	1.9	-0.8
GMROI	166.7%	137.2%	-29.5%
MARGIN	\$2,309,000	\$2,560,000	\$251,000
MARGIN %	37.5%	41.6%	4.1%

- ▶ ... Until You're Faced with Conflicting Metrics
- ▶ Total Margin \$ (w/ Asset Charge) is Better



Business Comes at You Fast

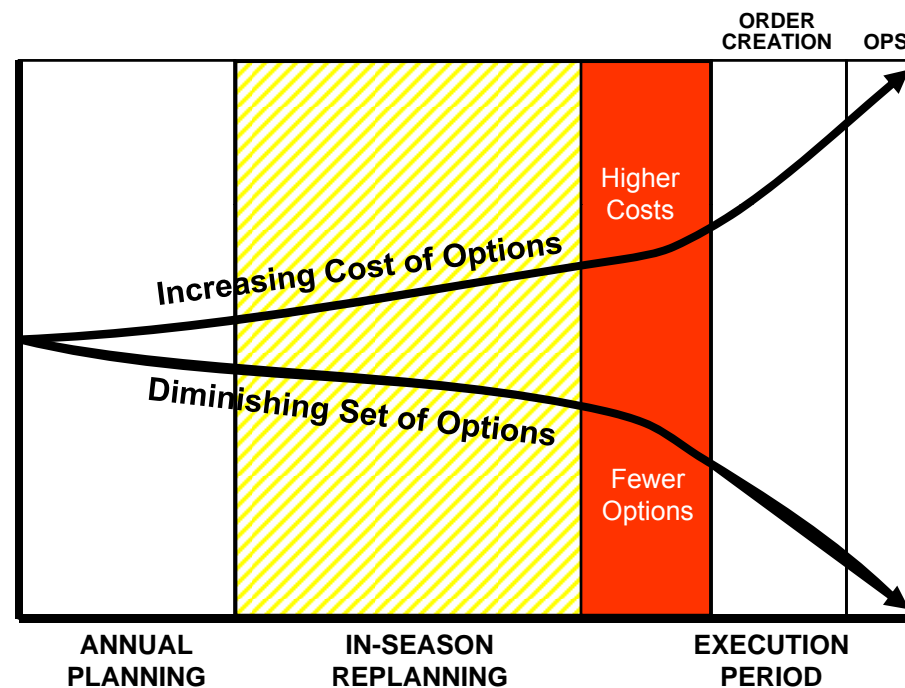
The Best Laid Plans...

- ▶ ... May Not Be
 - ▶ Underestimated sales
 - ▶ Not Coordinated with Vendors
 - ▶ Assume Infinite Capacity
- ▶ Sales Can Vary from Plan
 - ▶ Macro
 - ▶ Regional
- ▶ Abundant Opportunities for Performance Failures
 - ▶ Vendors
 - ▶ Carriers
 - ▶ Distribution Centers



Planning Directly Impacts Costs

- ▶ Fewer Options, Higher Costs Close to Execution



- ▶ Forward Planning Sets Up Efficient Execution



Flexible Service Areas

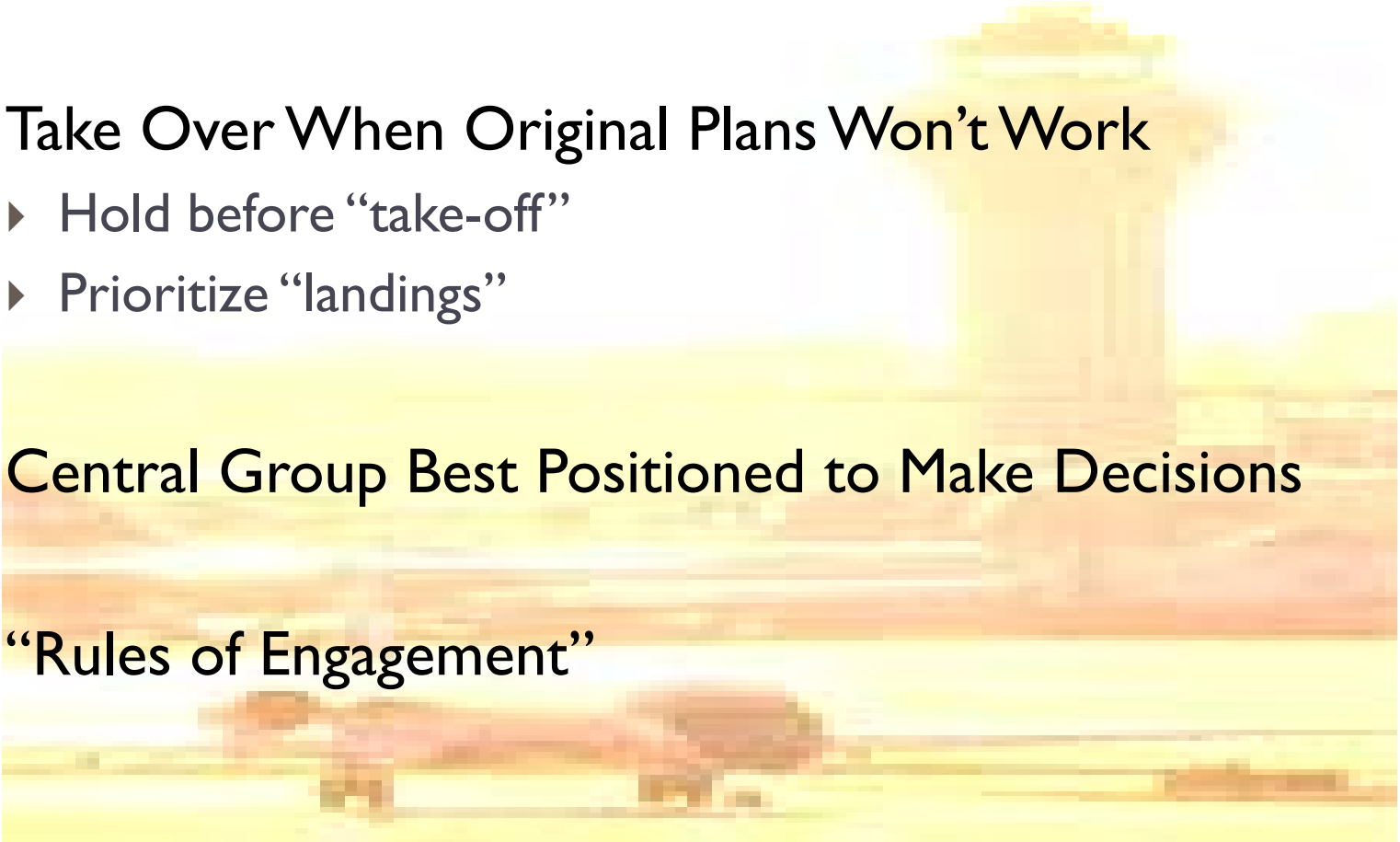


- ▶ Regional Imbalances
- ▶ Network vs. DC Capacity
- ▶ Transparent to Stores



Central Network Flow

- ▶ Air Traffic Control for Flow
- ▶ Take Over When Original Plans Won't Work
 - ▶ Hold before “take-off”
 - ▶ Prioritize “landings”
- ▶ Central Group Best Positioned to Make Decisions
- ▶ “Rules of Engagement”



What Does It All Mean?

The Keys to Maximizing Value

- ▶ Relentlessly Pursue Operating Efficiencies
- ▶ Improve Planning & Forward Visibility
- ▶ Maintain Flexibility and Manage Flows
- ▶ Work Cross-Functionally to Leverage Inventory
- ▶ Understand Where Costs Are in the Total SC
- ▶ Ensure Merchants Know When Costs Shift
- ▶ Partner with Stores to Leverage Improved Service
- ▶ Align Metrics & Incentives with Strategy



Questions?



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