

Network Design for Licensed Apparel Manufacturer

In 2022, Brands added (3) 3PL distribution nodes to address immediate capacity constraints. 3PL operations were not viable long-term solutions due to cost, complexity and control. Legacy DCs served the same customers with no strategic location advantage.

Establish long-term Brands distribution facility strategy that optimizes cost, improves service levels and aligns with global supply chain objectives

Data Collection & Analysis:

- Analyze data and fully evaluate all relevant volumes / costs for each node in the supply chain.
- Detailed future state projections aligning with Long Range Plan (LRP) to model future scenarios.
- Facilitated regular meetings to gather input & align on key assumptions.

Baseline Supply Chain Network:

- Conducted a detailed cost analysis, breaking down key cost elements such as inbound logistics, outbound shipping, handling, and storage expenses.
- Refined & validated baseline network (Cost to Serve & Service Levels) with client supply chain teams.
- Developed current state supply chain network model & secured leadership consensus & buy in.

Option Development:

- DC locations under study: Nashville, Indianapolis, Dallas, Atlanta, Charleston, Phoenix & Reno.
- Used scenario modeling / sensitivity analysis to validate or disprove each option.
- Analyzed high level network impacts & feasibility under each option (estimated cost to serve and service level impacts).
- Brainstormed & refined options to develop go forward Brands distribution strategy.

Business Outcomes

- Total Est. 5 Year Savings: \$116 MM
 - IB & OB Transportation Savings: \$79 MM
 - Increased Direct Shipments: \$29 MM
 - DC Ops / 3PD Opex: \$8MM
 - Payback Period: 4.2 years







Network Design for Licensed Apparel Manufacturer (cont'd)

2023+ Brands DC Network Objectives:

Inbound Transportation

- Improve Container Density
- Reduce Inbound Lane Complexity
- Reduce Overall CPU

DC Operations

- On Time Shipping
- Reduce CPU (3PL Expense and DC Fixed \$)
- Consolidate Inventory / Reduce Complexity
- Omni-Channel Capable DC (DTC / WHSL)

Outbound Transportation

- Reduce Transit Time to Customer
- Reduce DTC Shipping Expense

Units per Container:

Container Fill Rate Drives CPU Low Container Utilization → Higher CPU +10% ~+2,000 Units/Cont. = (\$0.04) CPU



2025



Units per Container - CPU Impact



Inbound Node KPIs Vs Baseline:

Nautical Transportation							
Nashville	+1%	Atlanta	+3%				
Indianapolis	+1%	Charleston	+3%				
Drayage / Inland Transportation							
Nashville	+178%	Atlanta	+24%				
Indianapolis	+175%	Charleston	(88%)				
Overall Cost							
Nashville	+\$19K	Atlanta	\$(1.1M)				
Indianapolis	+\$36K	Charleston	\$(1.9M)				

Assumes 40% improvement in container density

	OC , Norman, NFI, T1	Nasl	hville	Indian	apolis	Atla	inta	Charl	eston
Inbound KPI	Baseline		% Change		% Change		% Change		% Change
Naut. Miles/Container	5,833	5,890	1%	5,915	1%	6,004	3%	5,980	3%
Dray. Miles/Container	201	559	178%	553	175%	250	24%	25	-88%
Cost/Unit	\$0.69	\$0.69	0%	\$0.69	-1%	\$0.53	-24%	\$0.40	-42%
Annual Adj. Cost ∆*		(\$0.02) M	0%	(\$0.04) M	-1%	(\$1.07) M	-24%	(\$1.86) M	-42%

Outbound Node KPIs Vs Baseline:



	OC , Norman, NFI, T1	Nashville		Indianapolis		Atlanta		Charleston	
Outbound KPI	Baseline		% Change		% Change		% Change		% Change
Miles/Shipment	1,043	713	-32%	506	-51%	597	-43%	692	-34%
Avg Transit Time	2.7	2.4	-12%	2.3	-16%	2.4	-12%	2.8	2%
2 Day Shipping %	34%	71%	37%	66%	32%	69%	35%	48%	14%
DTC Cost / Shipment	\$8.58	7.45	-13%	7.48	-13%	7.59	-12%	8.09	-6%
Annual DTC Cost Δ		(\$0.44) M	-13%	(\$0.43) M	-13%	(\$0.38) M	-12%	(\$0.19) M	-6%

New DC Location Inbound Network:



Ideal Inbound Location – East Coast / Minimize Drayage Minimize Inland Distance from Port of Savannah, Charleston, Baltimore



Market Comparison – Node Selection:

	Atlanta	Nashville	Ch
Node Selection Evaluation Criteria			
nbound Transportation			
Proxity to Major Port	250 Miles 🗸	500 Miles 💻	0 - 1
Inbound Trans Cost vs Baseline	-24% 🗸		
Real Estate Market	21/2 4		
Market Size / Growth	648M sf / 10% 🜙	213M sf / 16% 🚽	62M
Rent Comps (\$ / SE)		\$5 90 - \$6 25 V	\$7.0
abor Market	Ş5.55 🔻	Ş5.50 - Ş0.25 ▼	Ş7.0
Warahaura Lahar Availibility	20 4 / 104	CEV / OV	
Warehouse Labor Availability	50 K / 4%	DSN / 9% V	
Wage Rate Comps (\$ / hr.)	Ş14.52 🗸	\$15.18	
Outbound Transportation			
2-Day Shipment %	69% 🗸	71% 🗸	
Detailed RE & Labor Comps			
Real Estate (1.5M SF Comps)			
Market Availability			
Industrial Market Size	648M Square Feet	213M Square Feet	62M
Vacancy	5./%	5.4%	
Construction 36-Mon Forecast	CENA Courses Freed	2484 Causers Frank	1014
Planned Construction*	55M Square Feet	34M Square Feet	TOM
Market Growth	10%	10%	
Market kates			
Current Average (\$ DSE NNN)	¢5.05	\$5.00 - \$6.25	¢7
26 Month Engenest (\$ DSE NINN)	\$3.55 ¢7.50	\$5.50 - \$0.25 66.55 66.75	ېرد Tolo
Expected Costs / Allowances	\$7.50	30.23 - 30.75	10 11
On Ev / RE Tayor /S DSE)	¢1.25	\$1.25 - \$2.00	
Ave TI Allowance (\$ PSE)	\$6.00	\$2.00 - \$5.00	
abor Market (25-Mile Radius)	Ş0.00	92.00 - 95.00	
Population			
Total Population	811K	741K	
Warehouse Workforce	30K	65K	
% Warehouse Workforce	4%	9%	
5-Year Proj. Annual Growth	0.54%	0.60%	
Wage / Demographics			
Unemployment	2.60%	2.70%	
Crime Index**	162	172	
Median Hourly Wage***	\$14.52	\$15.18	



