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Distribution Master Plan for Automotive Parts Distributor

A leading automotive parts distributor, generating $25 million in annual revenue, faced significant operational challenges in its warehouse operations. With a vast inventory of 15,000 unique SKUs across two key warehouse locations, inefficiencies in core activities—picking, packing, shipping, and receiving—led to increased fulfillment times, higher labor costs, and order inaccuracies. Additionally, multiple initiatives were underway simultaneously, causing implementation misalignment and operational disruptions.

Optimize storage capacity, warehouse activities (picking, packing, shipping, replenishment, receiving etc.) at 2 warehouse locations for future state in alignment with defined capital strategy

Business Outcomes

- Total Est. Savings: $6.0 MM
- Total Capital Investment: $10.7 MM
- Payback Period: 1.8 years
- Faster order fulfillment & error free deliveries
- Reduced labor costs & improved productivity

Data Analysis & Process Review:

- Analyzed order, inventory & SKU data to fully evaluate and validate current operations and create order profile, SKU assortments by business channel & product categories.
- Reviewed current DC processes (receiving, put away, replenishment, picking & shipping etc.) and current systems (WMS, TMS, ERP etc.) to identify quick wins and/or automation opportunities.
- Worked with the team to align on future state parameters and develop list of options for evaluation.

Option Development:

- Determined estimated budget costs, storage capacity, FTEs etc. under each option.
- Explored automation technologies (ship sorter, AMR etc.) to improve order picking and packing processes and minimize manual labor dependency.
- Suggested improvements to existing SKU slotting based on ABC segmentation, SKU Types, and by business channel.
- Brainstormed & refined options to develop a go forward distribution master plan with a planned roadmap for execution.

		Savings [Annual]	Investment	Payback [Years]
Option 1: 2–Facility (Right Sized)	Operate in HK1 and BP HK - WD & Performance BP – Rock & Drop Ship	$2.0 M	$3.8M	1.9
Option 2: 1–Facility (Pick-up & Move)	Shutter BP Occupy HK2 for distribution Single Consolidated Facility [assumes caliper divestment]	$5.9 M	$10.7M	1.8
Option 3: 1–Facility (Best in Class)	Option 2 (1-Facility) + Best in Class Improvements *VNA Pallet Racking* *Mezzanine GTP*	$8.1 M	$20.3M	2.5

Distribution Master Plan for Automotive Parts Distributor (cont'd)

	Option 1: 2-Facility (Right Sized)	Option 2: 1- Facility (P/U & Move)	Option 3: 1-Facility (Best In Class)	Notes
Cost Savings				
Short Term Improvements				
WMS Implementation	$736,573	$736,573	$736,573	Overhead labor & replenishment
HK Automation	$958,394	$958,394	$958,394	Picking & packing labor (HK Only)
HK Slotting	$138,383	$138,383	$138,383	Picking & replen labor (HK Only)
Rock Paper Pick Conv.	$212,309	$212,309	$212,309	Picking & packing labor (Rock Only)
Facility Consolidation				
Fixed Facility	-	$1,608,332	$1,608,332	BP rent, utilities, insurance
Fixed Labor	-	$1,655,312	$1,655,312	Redundant dept labor (leads, supervisors)
Transfers	-	$553,717	$553,717	Picking transfers, driver + truck
Best in Class	-			
Goods to Person Picking	-	-	$2,273,314	Picking & replen labor
Total Savings	***$2,045,659***	***$5,863,019***	***$8,136,333***	
Budget				
Short Term Improvements				
WMS Implementation	$450,000	$400,000	$400,000	Est. all in cost (Opt. 1 Multi site +$50K)
HK Automation	$2,530,000	$2,530,000	$2,530,000	Numina budget (original)
HK Slotting	$51,676	$51,676	$51,676	Est. re-slot labor required
Rock Paper Pick Conv.	$150,000	-	-	Est. hardware + integration BP Only
HK1 Build Out (WD)	$658,682	-	-	Addl. racking for WD transfer from BP
Facility Consolidation				
HK2 Prep / Caliper Divest	-	$400,000	$400,000	Est. HK2 preparation / equip divestment
HK 1&2 Build Out	-	$3,242,368	$3,242,368	Racking and office space build out
Parcel Automation	-	$2,725,000	$2,725,000	Replicate parcel automation HK
Inv Relo / Contingency	-	$1,378,166	$1,378,166	Est. relocation expense + contingency
Best in Class	-			
Goods to Person Picking	-	-	$9,553,658	GTP picking, mezzanine, VNA racking
Total Budget	***$3,840,358***	***$10,727,211***	***$20,280,869***	
Payback Period (Years)	***1.9***	***1.8***	***2.5***	

Short-term improvements apply to all options. See next slide for details.

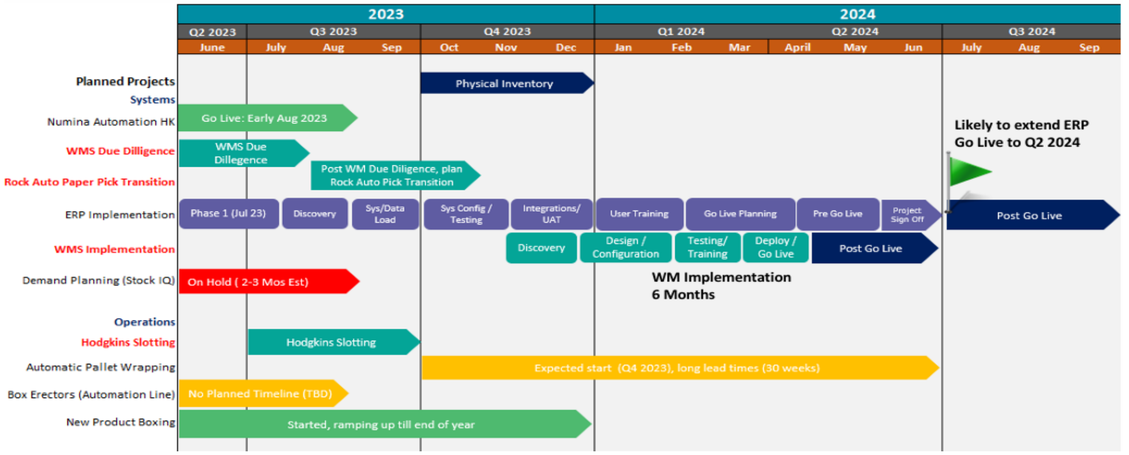
Facility consolidation savings driven by BP exit.

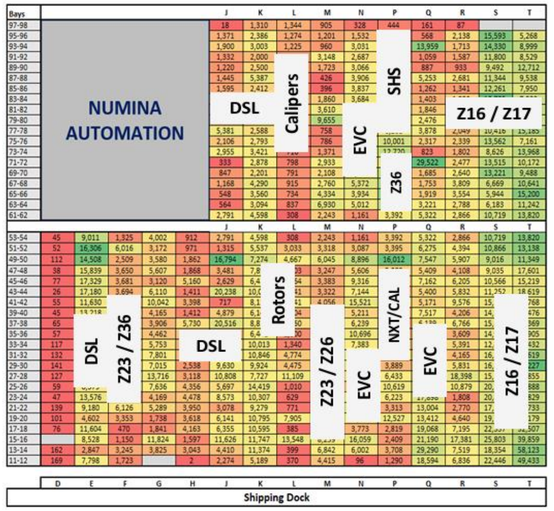
Addl. direct labor savings.

2-Facility option higher short-term cost, 1-Facility costs for Rock & rack build captured below.

Includes HK2 space preparation cost, business impact of caliper divestment NIC.

Best in class picking tech





- **Slotting by Category**
  - Segregation by business channel
    - WD / Performance
  - Performance – Ideally slotted closer to Numina
- **High Moving SKUs**
  - Use ABC segmentation (units) to identify high movers
  - Slotted towards the ends of the aisles
- **Hardware SKUs**
  - Fast moving hardware slotted end of aisles
  - Identify frequently picked hardware for kits
  - Group frequently paired items together
  - Hardware ideally closer to Numina automation