Warehouse Receiving & Assembly Line Process Improvement Project

Cardinal Health – Don Haskins Facility

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PRESENTATION ROADMAP

01 **Company Background**
What Cardinal Health does and the role of the Don Haskins facility in distribution and production operations.

02 **Warehouse Receiving: Project Overview & Problem Context**
Focus on receiving complexity, vendor issues, unclear documentation, multi-page POs, mixed shipments, and rework.

03 **Warehouse Receiving: Proposed Solutions**
Recommendations include documentation improvements, visual marking, PO consolidation, standard work, and vendor-specific actions.

04 **Warehouse Receiving : Implementation Road Map**
Phased plan to prioritize quick wins first, followed by medium-term improvements and long-term vendor/process changes.

05 **Assembly Line: Project Overview & Problem Context**
Focus on cardboard buildup, walking distance, staging congestion, setup time, and other concerns during production.

06 **Assembly Line: Proposed Solutions**
Recommendations include 5S, visual controls, ergonomic carts, cardboard control, layout support, and improved material flow.

07 **Assembly Line: Proposed Solutions**
Phased plan to reduce non-value-added movement, improve setup flow, support ergonomics, and monitor results over time.

COMPANY INTRODUCTION & BACKGROUND

Company & Project Background

Cardinal Health is a global healthcare services company that distributes pharmaceuticals, medical supplies, laboratory products, and specialty healthcare solutions.

Company Scale
30 countries | 58,000 employees | $222.6B FY2025 revenue

Healthcare Impact
Serves 90% of U.S. hospitals, manages 70,000+ daily pharmaceutical and specialty deliveries, and supports 24M+ parcel packages through logistics operations.

Don Haskins Facility
The El Paso facility operates as a medical distribution center supporting hospitals, clinics, and pharmacies across the region.

Our team supported improvement efforts in warehouse receiving/put-away and conducted production assembly time studies. Findings from both areas are presented in this project.

CardinalHealth™

WAREHOUSE RECEIVING & PUT-AWAY

Area Overview

Products are received from 5,000+ vendors and unloaded by forklift into the receiving area. Materials are staged on the floor, then routed based on destination.

Some materials are transferred to Plant 8 or Plant 5 in Ciudad Juárez, while GP-labeled materials remain on-site, are stored in inventory, and later enter the picking process.

The receiving area operates across 2 shifts.

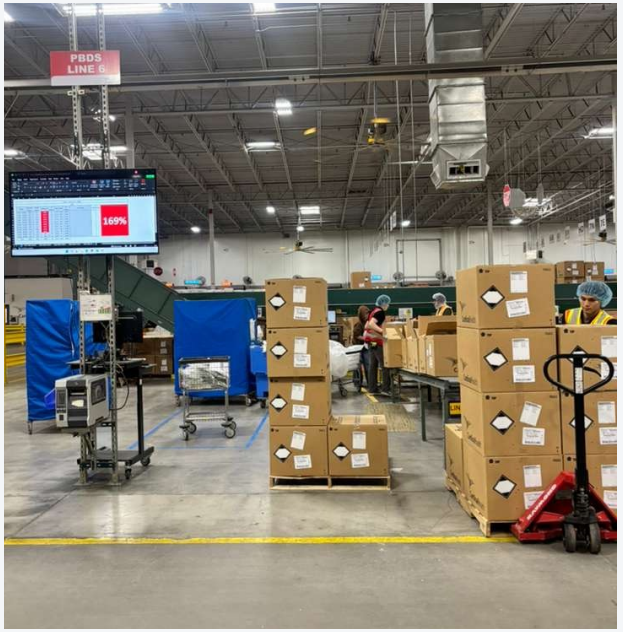
2nd Shift Team Structure:

- 4 receivers
- 2 materialists
- 1 breakdown support
- 1 discrepancy support
- 1 team lead

ASSEMBLY LINE

Area Overview

- The assembly line operates on 1 shift, with approximately 96 employees and a daily labor capacity of 900–950 labor hours.
- This area supports the assembly of key product lines, including PBDS, Piggyback Kits, and Non-Sterile Kits.
- The process includes material delivery to operators, order review, assembly, and movement of finished orders to the conveyors for final boxing.



WAREHOUSE RECEIVING & PUT-AWAY AREA

PROJECT SCOPE

This project analyzes the receiving and put-away process at the Don Haskins Cardinal Health Facility, focusing on the three highest-complexity receiving vendors.

The scope covers the process from material arrival to the put-away or transfer decision.

Includes: documentation review, pallet verification, sorting, rework, discrepancies, and receiving delays.

Excludes: outbound shipping, inventory management, full warehouse redesign, and major equipment changes.

PROBLEM STATEMENT

In the receiving and put-away process, shipments from the three highest-complexity vendors are causing delays, rework, and discrepancy-related costs due to unclear documentation, multi-page POs, mixed shipments, and manual verification.

Key drivers:

- Extra time reviewing paperwork and confirming POs
- Mixed pallets slowing sorting, staging, and put-away
- Documentation issues and discrepancies creating non-value-added time and added cost

WAREHOUSE RECEIVING & PUT-AWAY AREA

PROJECT OBJECTIVES

The project aimed to:

- Identify opportunities to reduce receiving cycle time for the highest-complexity vendors.
- Evaluate rework, discrepancies, and documentation issues affecting receiving efficiency.
- Recommend improvements to support clearer documentation, standard work, and visual controls.
- Prioritize solutions using an effort vs. impact approach.
- Develop a phased implementation plan to support monitoring and follow-up

METHODOLOGY OVERVIEW

Define

- Define company background and Don Haskins receiving operations
- Establish project objectives and scope
- Map the high-level current-state receiving process

Measure

- Document process steps and key decision points
- Conduct time studies in the receiving area
- Gather operator feedback and vendor complexity data

Analyze

- Identify nonvalue added activities using Lean waste
- Analyze bottlenecks in receiving, staging and sorting
- Identify root causes affecting cycle time and accuracy

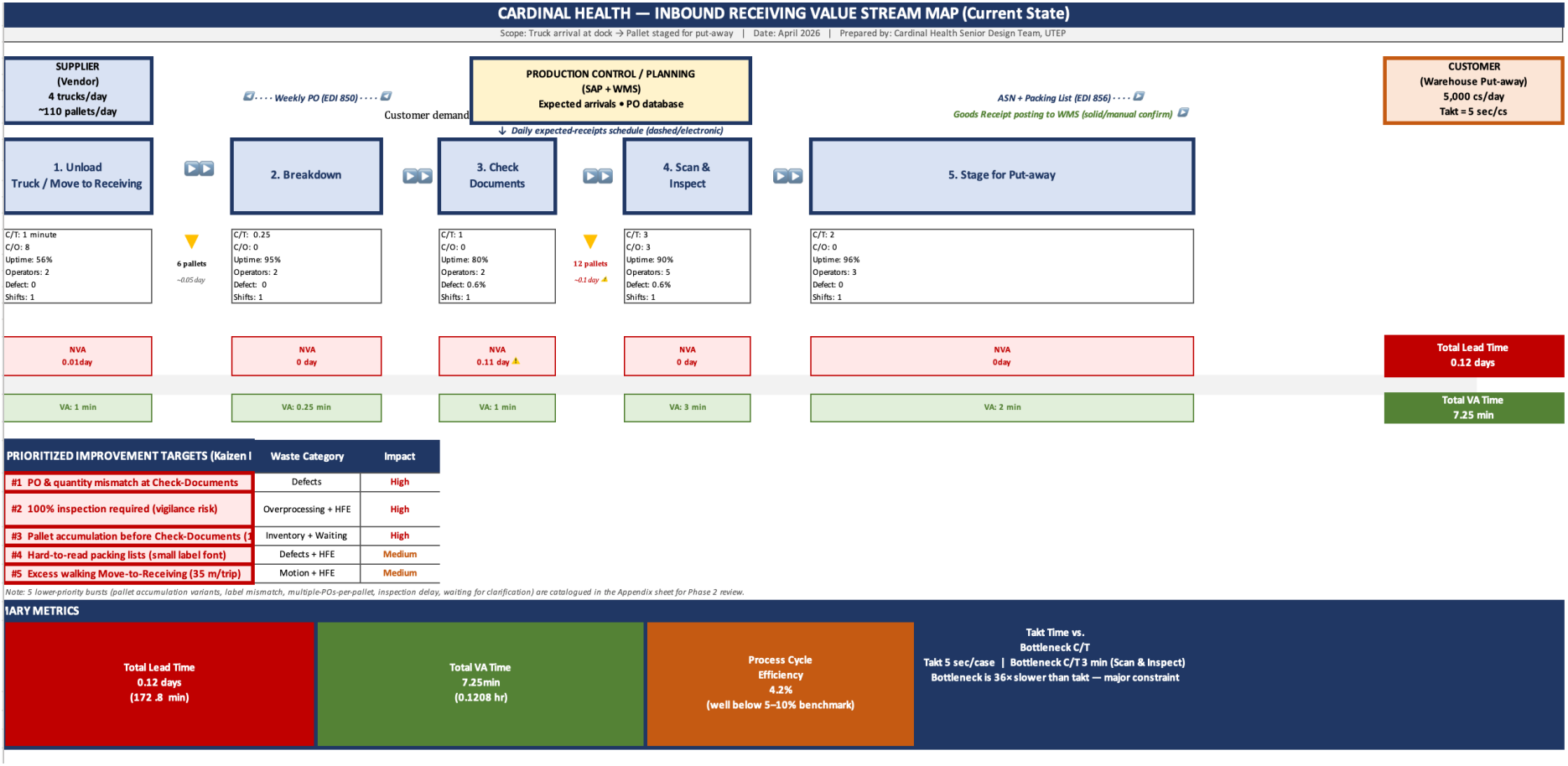
Improve

- Prioritize solutions using an effort vs. impact matrix
- Estimate impact on cycle time. Efficiency, and cost savings
- Develop solutions organized by quick wins, medium-term and long-term actions

Control

- Provide a phased implementation roadmap
- Establish KPIs to monitor receiving performance
- Assign ownership to support follow-up and sustainability

RECEIVING VALUE STREAM MAP



VENDOR COMPLEXITY CATEGORIZATION

After operator and team lead interviews, process observations, and selected time studies, the following vendors scored in the high-complexity range, making them the focus vendors for this receiving improvement project.

Stryker
28 complexity score

Medline
27 complexity score

Merit
26 complexity score

KEY FINDINGS

Factors & criteria use

Vendor complexity was categorized using a 1–5 scoring system across six factors: documentation clarity, PO complexity, mixed shipments, discrepancy frequency, receiving time, and manual verification effort.

Category	Data Measured
Documentation Clarity	Are packing slips, POs, and labels easy to understand?
PO Complexity	Does the vendor use multi-page POs or multiple POs per shipment?
Mixed Shipments	Are different items, POs, or destinations mixed together?
Discrepancy Impact	How often are there overages, shortages, or mismatches?
Receiving Time	Does this vendor take longer to receive than others?
Manual Verification Effort	How much checking is needed by the receiver?

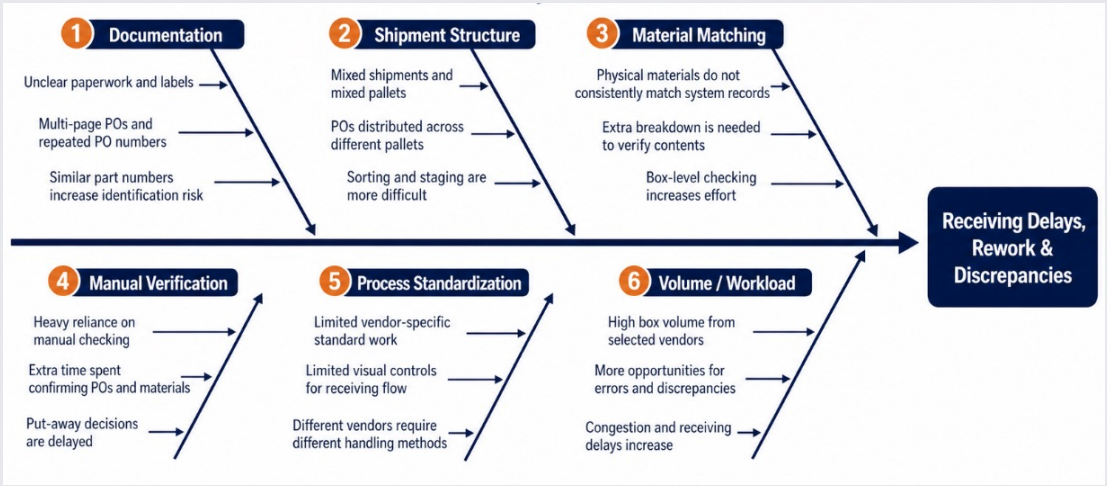
Scoring Table

Vendor Complexity Scoring Table								
Vendor	Documentation clarity	PO identification complexity	Mixed shipments	Discrepancy Impact	Receiving Time	Manual Verification	Total Score	Level
Stryker	5	4	4	5	5	5	28	High
Medline	5	5	4	4	4	5	27	High
Merit	4	4	5	4	5	4	26	High

Complexity Level	
Total Score	Level
24-30	High Complexity
15-23	Medium Complexity
6-14	Low Complexity

RECEIVING ROOT CAUSE ANALYSIS

Focused on Stryker, Medline & Merit



KEY OBSERVATIONS

The fishbone diagram shows that the main root causes are connected to Lean wastes in the receiving process.

Lean wastes observed:

Waiting: delays during discrepancy resolution and put-away decisions

Motion: extra trips between the dock and office to solve questions

Overprocessing: repeated review of multi-page POs, labels, and system records

Defects/Rework: overages, shortages, mismatches, and documentation errors, includes $2.4 M in discrepancy costs for all three vendors

Inventory/WIP: materials waiting on the floor for verification or routing

SELECTED HIGH COMPLEXITY VENDORS

The receiving process is impacted by the three selected highest-complexity vendors, which accounted for over 90,000 boxes received between December 2025 and February 2026. Unclear documentation, multi-page POs, and mixed shipments contribute to variability, errors, and operational delays.

Stryker

- High material variability; physical materials often do not match the system records, complicating the receiving process
- High receiving complexity due to manual verification and box-level checking
- Over $1.5M in discrepancy costs

Medline

•Same PO number appears across different pages, and similar part numbers increase misidentification risk.

•High documentation complexity due to multiple pages and part number verification.

•Over $600K in discrepancy costs.

Merit

•POs are distributed across different pallets, making verification and sorting more difficult.

•High material volume, with 14,603 boxes received in the past 3 months.

•Over $480K in discrepancy costs

RECEIVING SOLUTION OVERVIEW

Recommendations are organized by implementation horizon for the three focus vendors. Quick wins are designed to support the overall warehouse by improving communication and material flow across the operation, while medium-term and long-term solutions are tailored to each vendor's specific receiving challenges. Approximate implementation timing is identified based on the complexity of each solution.

GENERAL QUICK WINS
0–4 Weeks

- Implement a color-coded pallet system to indicate pallet status improving visibility and workflow control.
- Pre-plan pallet drop- off for complexity orders by allocating space for an additional empty pallet reducing congestion and preventing bottlenecks

MEDIUM-TERM
1–3 Months

- **Stryker**
  Create a system-to-physical verification checklist
- **Medline**
  Create a PO summary cover sheet to consolidate multi-page PO information
- **Merit**
  Pallet-to-PO visual marking system

LONG-TERM
3–6 Months

- **Stryker**
  Improve vendor label accuracy and shipment consistency
- **Medline**
  Standardized vendor documentation format & assign a document pre-review role
- **Merit**
  Pre-Shipment verification order, including number of boxes, PO's and order numbers per pallet

GENERAL QUICK WINS

IMMEDIATE IMPROVEMENTS: RECEIVING

WHAT WE RECOMMEND

Implement a color-coded pallet system with cards to indicate status (if breakdown or manifest is needed, if order is ready for transport, or if there is an issue), and pre-plan layout space for breakdown pallets to reduce congestion and unnecessary handling.

WHY IT MATTERS

Operational complexity and limited staff to breakdown and handling discrepancies in a fast-paced receiving environment increase cognitive load and error risk. Improved visibility and standardized communication improve accuracy and improve how discrepancies are managed.

EXPECTED IMPACT

5-10%

Expected reduction in discrepancy handling time

1.5 min

Estimated time saved per discrepancy event

15%

Reduction in communication delays / improved process visibility

During direct observation, discrepancies often required receivers to stop, verify paperwork and pallet status, and communicate between the dock and office. These conservative estimates reflect the expected reduction in confusion, communication loops, and unnecessary walking during discrepancy resolution

STRYKER MEDIUM-TERM SOLUTION

STANDARDIZED RECEIVING DOCUMENTATION & PRE-PROCESSING

Specific checklist to verify physical material against the system and packing list before receiving is started.

How it works:

- One-page checklist for Stryker shipments
- Verify item number, PO/order number, quantity, lot, and pallet count
- Mark each shipment as Match / Mismatch / Needs Review
- Attach checklist to receiving paperwork or keep it with the pallet until closed
- Review checklists weekly to identify repeat mismatch patterns

Expected Benefit:
Reduces variation in the verification process and helps catch system-to-physical mismatches before the material moves forward.

Stryker Receiving Verification Checklist					
Shift			PO / Order Number		
Date			Pallet ID / Location		
Receiver			Shipment / Load #		
Verification Item	**Match**	**Mismatch**	**Needs Review**	**Notes**	
PO/order number matches	☐	☐	☐		
Item number matches system	☐	☐	☐		
Physical material matches system	☐	☐	☐		
Quantity matches paperwork and	☐	☐	☐		
Box label is clear and readable	☐	☐	☐		
Lot/serial number matches, if	☐	☐	☐		
Pallet count matches	☐	☐	☐		
No overages or shortages	☐	☐	☐		
Material is ready for receiving/put-	☐	☐	☐		
Discrepancy / Review Section					
Type of Issue	☐ Overage ☐ Shortage ☐ Wrong item ☐ Label issue ☐ System mismatch ☐ Documentation ☐ Other: _____	**Action Taken**	☐ Accepted ☐ Held for review ☐ Escalated to team lead ☐ Sent to discrepancy support ☐ Waiting for clarification	**Final Status**	☐ Cleared ☐ Put-away ☐ Transfer ☐ Issue open

Timeline
6-8 Weeks

Est. Cost
Low- $ 500

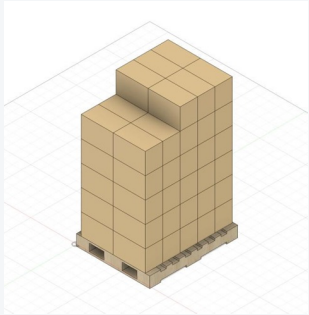
Owner
Shift Lead (2nd Shift)
Receiving Supervisor

KPI
Discrepancy Cost Reduction – 75K-150K
Verification Time Reduction - 10-15%
Rework Time Reduction – 5-10%

STRYKER LONG-TERM SOLUTION

Standardized Labeling & Pallet Setup for Receiving Efficiency

- Standardize label format, size, and visibility requirements
- Enforce uniform pallet labeling orientation
- Improve data accuracy between labels and packing lists with medium-term checklist
- Implement vendor compliance and performance tracking system with weekly tracking from Team Lead



EXPECTED IMPACT

Timeline
3-6 months

Est. Cost
Low - < $500

Owner
Warehouse / Operations Manager

KPI
Total Cycle Time Reduction: 27%
Time Saved per Cycle: 0.06 min (3.6 sec)
Reduced handling and improved label visibility

MEDLINE SOLUTIONS

Time studies for this vendor reflect lower-than-typical receiving volume during the observation window; recommendations for these vendors are based on documented discrepancy data and operator interviews rather than direct cycle-time measurement

Standardized Documentation & Pre-Verification Process for Receiving Efficiency

MEDIUM-TERM

- Develop a PO summary cover sheet to consolidate multi-page information
- Align packing list and system data to improve clarity during receiving
- Reduce time spent searching for PO lines and resolving discrepancies
- Improve visibility of key information (qty, plant, items) for faster processing

LONG-TERM

- Implement standardized vendor documentation format across all shipments
- Assign a document pre-review role before materials reach receiving
- Ensure accuracy and completeness of packing lists prior to processing
- Reduce dependency on manual verification and improve consistency

EXPECTED IMPACT

Timeline
3-6 months

Est. Cost
Low - < $500

Owner
Warehouse / Receiving Supervisor

KPI
Time Saved per Cycle: ~0.8–1.2 min
Reduction in document-related delays and discrepancies

MERIT SOLUTIONS

Time studies for this vendor reflect lower-than-typical receiving volume during the observation window; recommendations for these vendors are based on documented discrepancy data and operator interviews rather than direct cycle-time measurement

Pallet-to-PO Visual Marking & Pre-Shipment Verification

MEDIUM-TERM

- Add a visual marking system to identify which PO belongs to each pallet
- Use color tags, pallet labels, or pallet ID sheets to separate orders clearly
- Reduce time spent matching pallets to PO numbers during receiving
- Improve pallet visibility before breakdown and inspection

LONG-TERM

- Require pre-shipment verification from Merit before pallets are sent
- Include number of boxes, PO numbers, and order numbers per pallet
- Standardize pallet-level shipment details to reduce receiving confusion
- Track compliance for each shipment to prevent repeated discrepancies

Timeline
4-6 Weeks

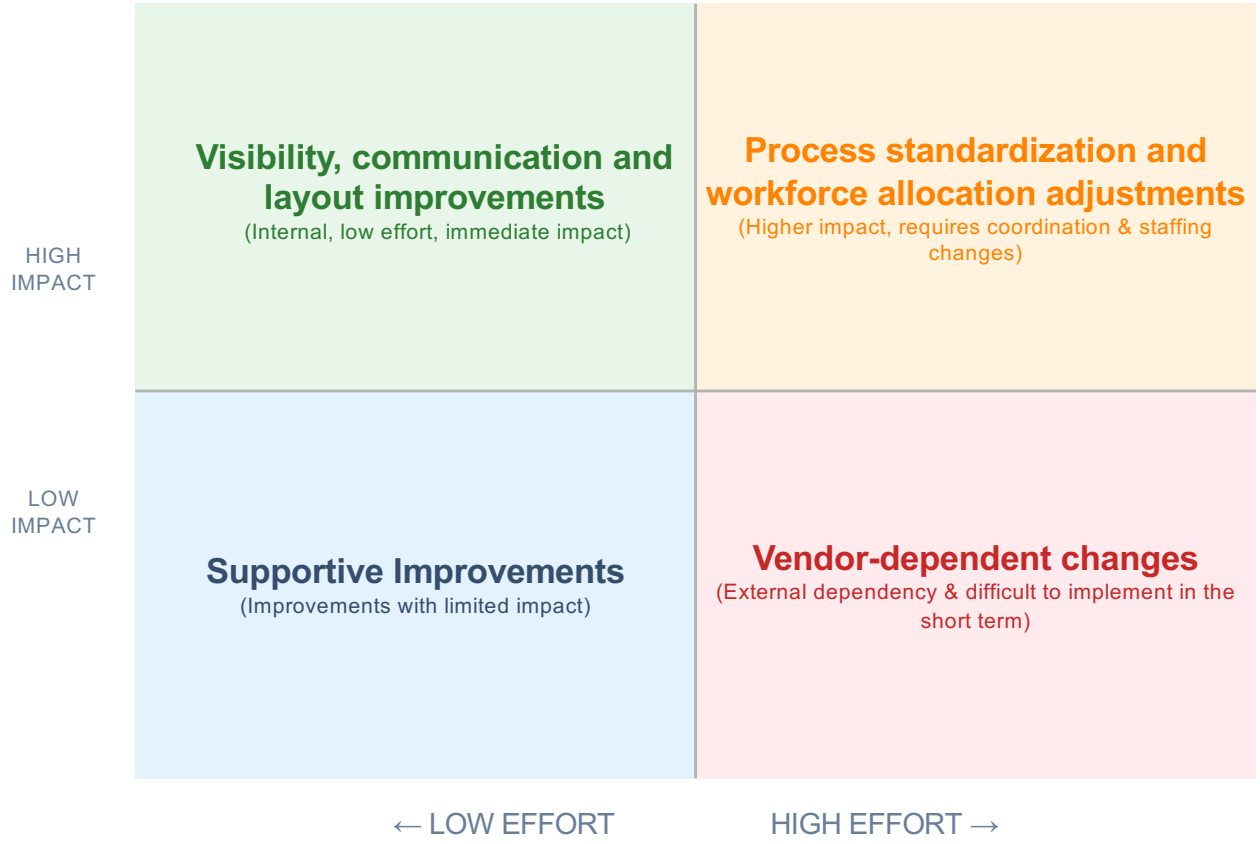
Est. Cost
Low - < $500

Owner
Warehouse / Receiving Supervisor

KPI
Reduced pallet-to-PO matching time
Improved order visibility per pallet
10-15% - Discrepancy related costs

EFFORT VS. IMPACT MATRIX

Prioritize solutions based on implementation effort and expected impact



SOLUTION PLACEMENT

Do First:

- Color-coded pallet system
- Pre-planned layout for breakdown pallets
- Internal re-orientation during breakdown

Plan & Schedule:

- Internal consolidation sheet (summary page)
- Dedicated role for packing list pre-processing
- Receiving verification worksheet

Fill-Ins:

- Visual document highlights / quick reference guides
- Standardized checklists for verification

Reconsider:

- Vendor label orientation standards
- Vendor packing list standardization
- Pre-shipment verification requirements

IMPLEMENTATION ROADMAP

Phased approach for rolling out recommendations

PHASE 1
Weeks 1–2

Quick Wins

•Implement color-coded pallet status system

•Establish designated breakdown pallet space

•Standardize box orientation during breakdown process

•Train operators on new visual controls and flow

PHASE 2
Weeks 3–6

Process Changes

•Implement and deploy suggested page for packing list

•Implement receiving verification worksheet

•Pilot dedicated role for packing list pre-processing (high-complexity vendors)

PHASE 3
Weeks 7–12

Structural Improvements

•Standardize documentation workflow across both shifts

•Optimize workload distribution between receiving and discrepancy handling

•Evaluate vendor-specific improvement opportunities for possible implementation

CONTROL
Continuous

Monitor & Sustain

•KPIs to track:
•Document review time
•Discrepancy rate (over/short)
•Process consistency (variation in cycle time)

•Conduct periodic audits of receiving process

•Collect operator feedback and refine procedures

Assembly Line Process Improvement

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ASSEMBLY LINE

Results and findings were developed based on time studies, direct process observations, and interviews with operators to capture both measured performance and real workflow challenges

Project Objective

Improve the production assembly process by reducing setup variability, material interruptions, rework, and non-value-added motion through 5S, standard work, visual controls, and layout improvements.

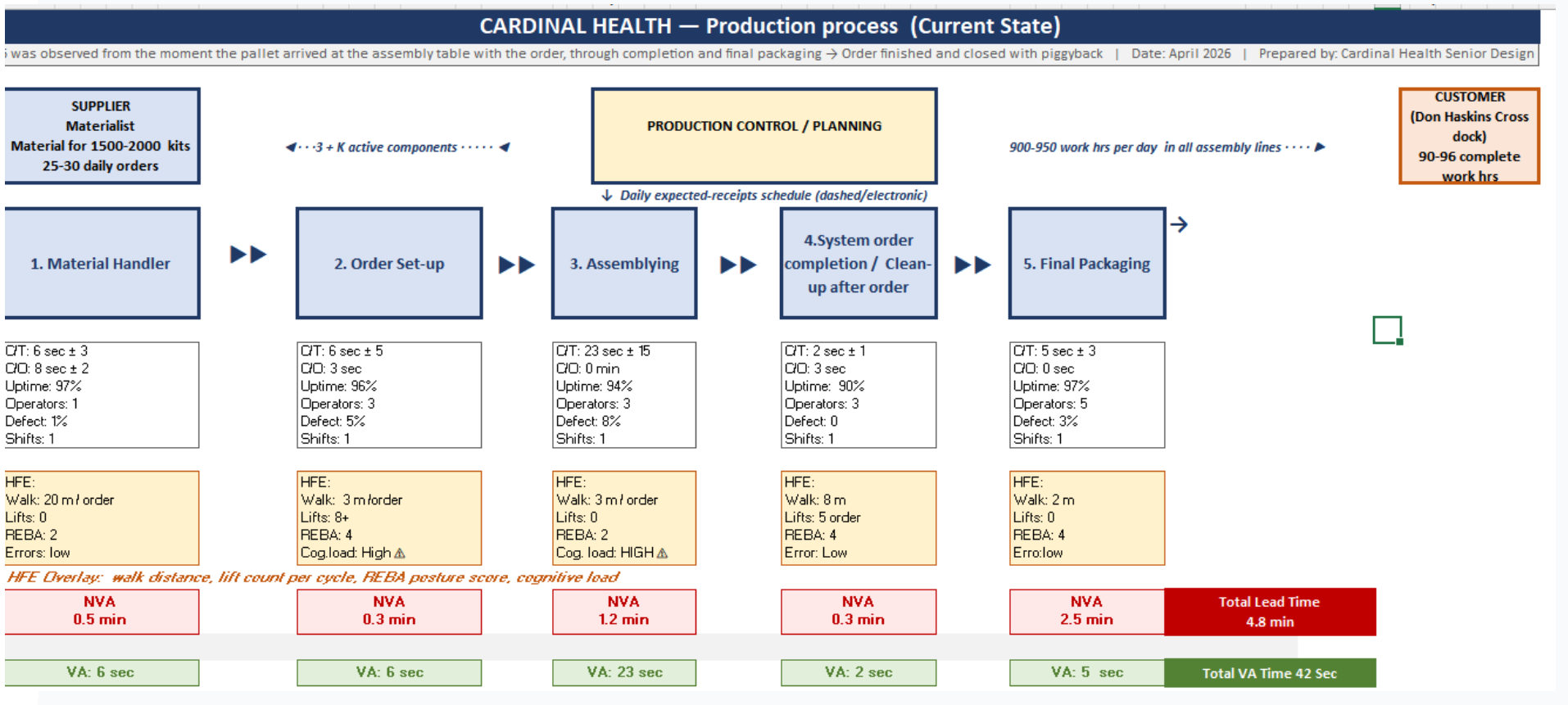
Project Scope

The project focuses on Line 6, from when the pallet/order arrives at the assembly table, through order setup and assembly, ending when the order is completed, closed, and moved to piggyback/final packaging.

Problem Statement

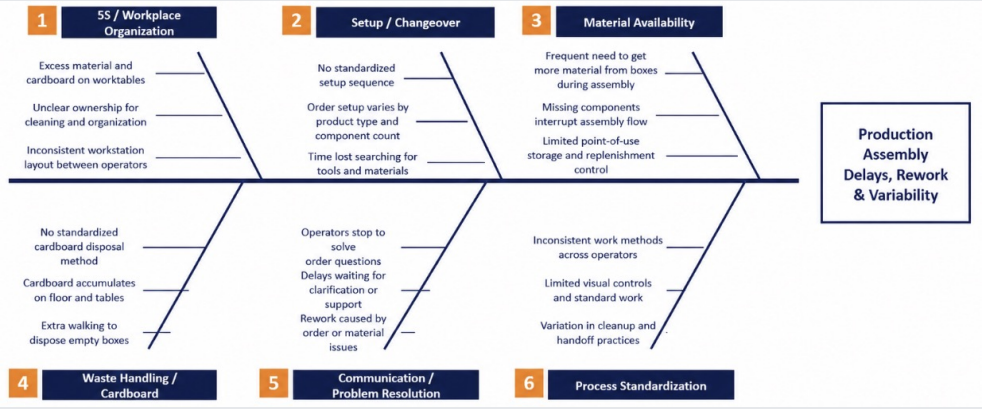
Production assembly is impacted by inconsistent setup practices, material flow issues, workstation clutter, and rework, causing high cycle-time variation, interruptions, and reduced flow efficiency across observed orders.

ASSEMBLY LINE VALUE STREAM MAP



ASSEMBLY LINE ROOT CAUSE ANALYSIS

Root causes based on direct observation, time studies, and operator interviews from assembly line 6



WORKSTATION ASSEMBLY ISSUES

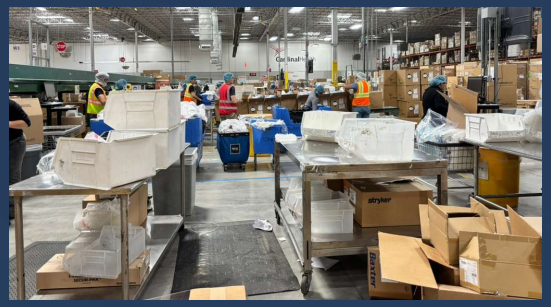
- Assembly delays were mainly linked to setup variation, workstation assembling issues , workstation clutter, and lean practices.
- Cycle time showed high variation: 23 sec/kit average with 15 sec standard deviation.
- Operators often stopped to get more components, solve order questions, or manage rework.
- Cardboard and excess materials created clutter, extra walking, and safety concerns.
- Findings support 5S, visual controls, Kanban signals, and standardized setup to improve flow.

ASSEMBLY LINE FINDINGS

Key issues identified from our time studies, analysis and observations that drive the findings below

5S and Workplace Organization

Lack of standardized 5S practices and unclear ownership of workplace cleanliness



Bottleneck and Ergonomic Risks in Setup Operation

Disorganized workstations, excessive materials on tables, and lack of standardized setup procedures, causing delays and material mishandling

From assembly line time study

•Cycle Time: 6 sec ± 5 per assembly kit

•Material Availability: 35–40% of observed orders required process to stop while operators gathered additional components to continue production.

Ineffective Cardboard Management

Lack of a standardized waste disposal system and insufficient enforcement of proper disposal practices by operators

From observation, time study & estimates

- Clean-up cycle time: 2 ± sec per kit
- Avg. cardboard disposal distance: 15.4 ft one way
- Estimated walking time: 4–5 sec one way / 8–10 sec round trip

ASSEMBLY LINE SOLUTION OVERVIEW

Recommendations are organized by implementation horizon for Assembly Line 6. While there may be minor differences between assembly lines, these solutions were developed specifically for Line 6 and may also be adaptable to other production lines

QUICK WINS
0–4 Weeks

- Solution 1 – Add cardboard carts at each station & enforce “no cardboard on floor” rule
- Solution 2 – Standardize number of containers & add 5S visual references
- Solution 3 – Implement cleaning checklist & assign ownership per operator

MEDIUM-TERM
1–3 Months

- Solution 4 – Implement Layered process audits to ensure compliance
- Solution 5 – Implement a Kanban system to control material flow and limit excess inventory
- Solution 6 – Establish visual controls and defined storage zones for all tools and materials

LONG-TERM
3–6 Months

- Solution 7 - Layout redesign with Flex Sim validation
- Solution 8 – Implement a dedicated picking and setup station with ergonomic carts for assembly operations
- Solution 9 – Standardize setup procedures to reduce variability and delays

QUICK WIN

Immediate Actions to Improve Assembly and 5S in Production Floor

WHAT WE RECOMMEND

- Install cardboard carts at each station
- Enforce a “no empty cardboard on floor” rule
- Standardize container quantities at each of the three assembly tables, and label order carts for each line
- Implement cleaning checklists with assigned operator ownership

WHY IT MATTERS

Current conditions reflect weak 5S practices, disorganized workstations, and ineffective waste handling, resulting in excess motion, delays, and contamination.

Time studies highlight cardboard buildup and non-value-added activities driven by searching, rehandling, and clutter-related interruptions.

EXPECTED IMPACT

66.6%

Reduced Walking Distance

10-15%

Rework reduction by improving workstation organization and reducing the risk of accidental material drops caused by cluttered work areas.

30-40%

Estimated reduction in floor obstruction risk by containing cardboard in labeled carts and keeping walkways clear.

QUICK WINS

CURRENT STATE

- 8-12 avg empty boxes per order
- 30ft avg round trip walking distance
- 3-5 trips to dispose carboard per order
- 10-12 sec per disposal trip

- Estimated handling time = 12 sec per box

FUTURE STATE

- 20-25 cardboard boxes per cart
- Avg 1 disposal trip every 2-3 orders
- Materialist sometimes support other operations in assembly, when available he can do the carboard disposal

- Estimated handling time = 8 sec per box

MEDIUM-TERM

Standardizing Processes to Improve Flow and Control

CURRENT STATE

- Excess materials and poor visual organization create clutter and inefficiencies
- No standard visual system is used to show material status, storage location, or replenishment needs
- Operators stop assembly to search for materials, gather more components, or clarify order issues

PROPOSED STATE

- Implement Layered Process Audits to ensure compliance and sustain 5S practices
- Introduce a Kanban system to control material flow and limit excess inventory
- Establish visual controls and defined storage zones for all tools and materials

Timeline
1–3 months

Est. Cost
Low / $500 - $1000

Owner
Assembly Line Team Leader
Production Supervisor

KPI
- Improve 5S compliance to 85%+
- 10–15% reduction in error-related delay time From 4.20 ± 7 sec to approximately 3.57–3.78 sec

MEDIUM- TERM SOLUTION

Layered Process Audit (LPA)- Compliance Tracking Form

LAYERED PROCESS AUDIT - ASSEMBLY LINE						
Area: Production Line 6	**Daily Audit**	**Month**			**Week**	
Work station clean and organized	☐	LAYER 1 DAILY TRACKING (TEAM LEAD)				
Containers clean and appropriate	☐	Monday	Tuesday	Wednesday	Thursday	Friday
No carboard on floor	☐	☐	☐	☐	☐	☐
No floor hazards present	☐					
Cleanning Supplies located in designated areas	☐	LAYER 2 WEEKLY TRACKING (PRODUCTION SUPERVISOR)				
No mixing of materials in containers	☐	Week 1	Week 2	Week 3	Week 4	
Limit areas respected	☐	☐	☐	☐	☐	
Setup follows standard work	☐					
No excess materials on table	☐	LAYER 3 MONTHLY TRACKING (MANAGER)				Audit Compilant
No excess WIP at workstation	☐	Initials	Date	Signature		No compliant audit
Empty containers removed promptly	☐					No audit preformed
ISSUES & ACTIONS LOG						
Issue Found	Root Cause	Action			Owner	Status
						☐
						☐
						☐

Daily, weekly, and monthly checks for 5S compliance; ownership at three layers (Team Lead, Production Supervisor, Manager).

LONG TERM SOLUTION

Optimizing Layout and Setup for Long-Term Efficiency

CURRENT STATE

- Assembly layout does not support efficient material flow or ergonomic movement
- Setup process is inconsistent
- Lack of dedicated picking/setup areas leads to excess motion, clutter, and delays

PROPOSED STATE

- Redesign layout to optimize flow and reduce unnecessary movement
- Implement dedicated material and setup stations with ergonomic carts
- Standardize setup procedures to reduce variability and improve consistency

EXPECTED IMPACT

Timeline
3-6 months

Est. Cost
High - + $5000 per assembly line

Owner
Manufacturing Manager
Production Supervisor

KPI
- 70–85% : Reduction in cardboard disposal walking distance
- 22–36 sec/order : Estimated time saved from eliminating long disposal trips

LONG TERM SOLUTION

Long- term: Layout Redesign + Ergonomic carts

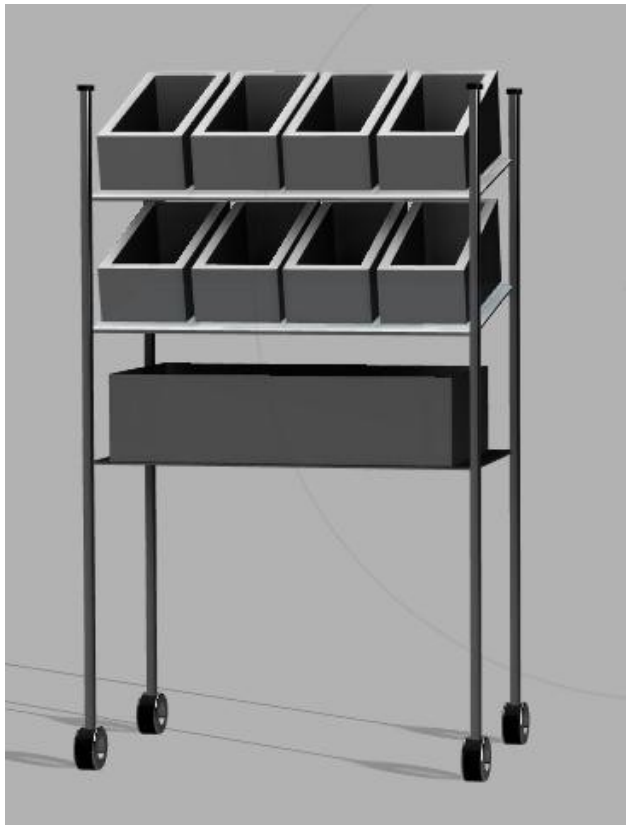


Figure 1. Ergonomic picking cart concept

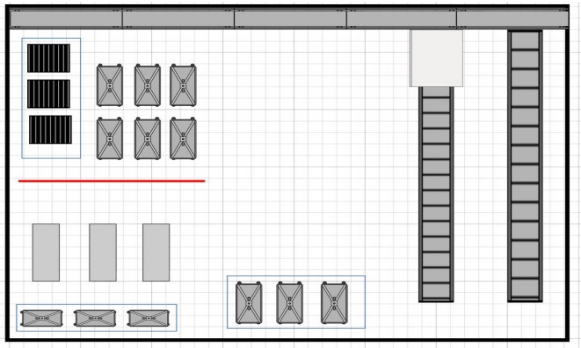


Figure 2. Proposed line 6 layout

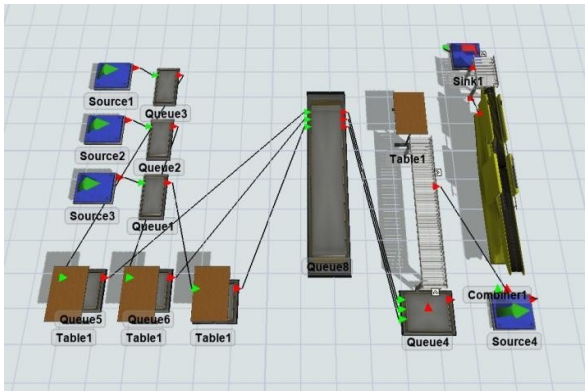


Figure 3. Flex- Sim validation model

IMPLEMENTATION ROADMAP

Phased approach for rolling out recommendations

PHASE 1

Weeks 1–2

Quick Wins

•Add labeled cardboard carts

•Enforce “no cardboard on floor” rule

•Standardize container quantities at each assembly table

•Add simple 5S visual references for tools, bins, and cardboard disposal

PHASE 2

Weeks 3–6

Process Changes

- Implement a 5S audit checklist for each assembly station
- Create standard work instructions for setup and cleanup
- Add visual signals for material status: Ready / Need Material / Issue

PHASE 3

Weeks 7–12

Structural Improvements

- Create dedicated picking/setup zones for Line 6
- Pilot Kanban cards or bin labels to control WIP and material replenishment
- Pilot Assembly carts near conveyor

CONTROL

Continuous

Monitor & Sustain

•KPIs to track:

- Track cycle time variation: C/T standard deviation
- Track 5S audit score, target 85%+
- Conduct weekly layered process audits

ACKNOWLEDGMENTS

Industry Partner

Provided the operational setting, process access, and area expertise needed to understand the current workflow.

- **Cardinal Health** – Don Haskins Facility
- **Jose Martinez** – Manufacturing Manager
- **Sebastian Leija** – Receiving Supervisor
- **Nancy D**. – Team Lead, 2nd Shift

Faculty & University

Provided academic guidance, project structure, and technical support throughout our project and analysis.

- **Dr. Pennathur** – Faculty Advisor

Helped coordinate access to the software and tools needed for the project analysis.

- **Dr. Contreras**
- **Dr. Raman**
- **Jose Hernandez**

Team & Support

Supported the project through process walkthroughs, observations, questions, and operational feedback.

- Warehouse receiving team
- Assembly line team

APPENDIX & REFERENCES

REFERENCES

Company-provided materials

- Receiving packing list for all three vendors analyzed
- Receipts 12.01.25 to 03.09.26.xlsx
- ENTRY DATA Query all 2025.xlsx
- received trailers Analysis all shift.xlsx

THANK YOU

THE UNIVERSITY OF TEXAS AT EL PASO

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