

Company Background

International Healthcare Company



Local site in Altavista, VA



Focused on providing
cost-effective products
and services

700+ employees
running 7 high volume
production lines

Project Background

TetraPak Line Case Packer



Corrugated
paper is is
received from
**International
Paper** and
stored until use

Follow follow
first-in
first-out
procedures to
feed into case
packer

Non-conforming
units cause **jams,
downtime, and
significant
waste**

Project Goals



Reduce waste by **25%**; ~3,750
shippers per day



Increase Mean Time Between Failure;
> **30 min**



Decrease Downtime by 40%; **30 min**



Improve relationship with supplier
(International Paper)

Impact

Current Waste = Potential Improvements



Time:

Faults over 5 minutes
cause fillers to shut
down. Reducing
downtime by 30
mins/day on both fillers
provides 2,160,000
units annually.



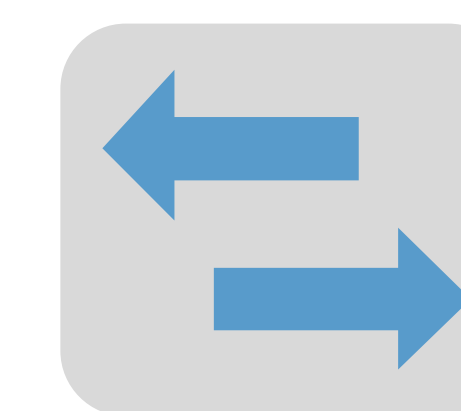
Physical:

1,500 corrugated
paper sheets
disposed of daily
(360,000 per 240
operation
days/year).



Monetary:

At 27¢ each, the
current unconforming
rate at Abbott is \$405
lost daily (\$97,200 in
a 240 day year).



Movement:

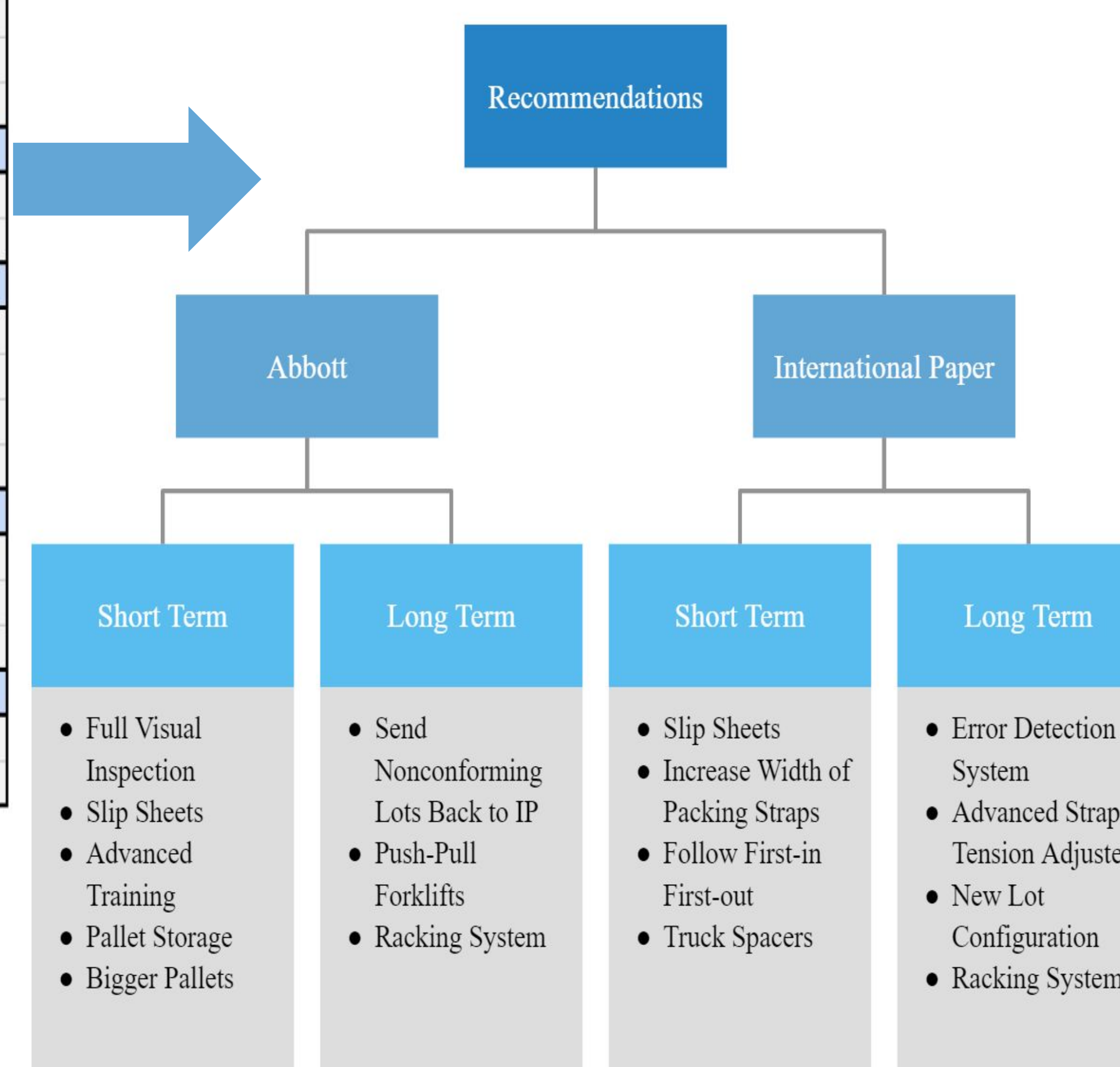
Operators leave their
workstation to
dispose paper. Any
added motion can be
eliminated to give
more productive
tasks.

Overall Impact: estimated annual savings of \$237,600

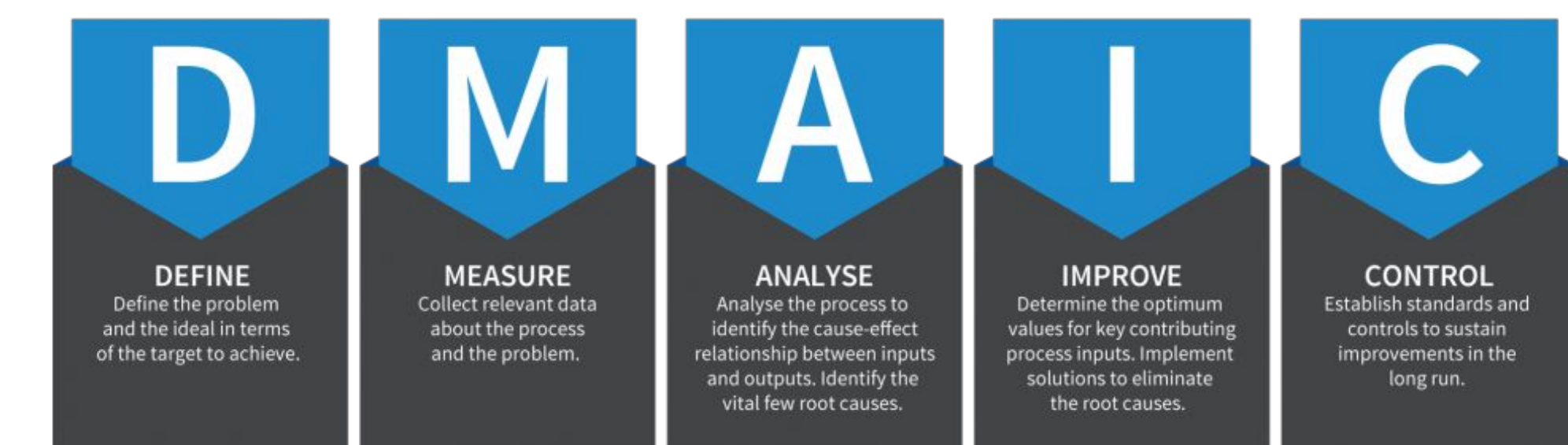
Solutions/Recommendations

Abbott								
Criteria	Cost	Time To Implement	Space	Labor Demand	Desirability	Weighted Total	Total	
Weight	2	4	5	1	3			
Material Handling								
Full Visual Inspection	1	1	1	2	1	16	6	
Send Lots Back	3	1	3	3	1	31	11	
Push Pull Forklifts	4	3	1	1	4	38	13	
Slip Sheets	2	2	2	1	4	35	11	
Advanced Training	1	1	1	2	3	22	8	
Lot Storage								
Bigger Pallets	4	2	3	1	4	44	14	
Racking System	5	5	5	1	2	62	18	
System to Count Bad Shippers								
Pitch Counter	1	1	1	1	4	24	8	
Button on Workstation	2	2	1	2	4	31	11	
Tally on Lot Receipt	1	1	1	2	4	25	9	
Barcode Scanning System	4	3	1	1	2	32	11	
Design Changes								
Curved Edge	1	4	1	1	1	27	8	
Lot Configurations	1	5	1	1	1	31	9	
Change Supplier	3	5	4	1	4	59	17	
Machinery Advancements								
Compressed Air	3	2	3	2	4	43	14	
Weighted System	1	1	1	2	1	16	6	

A weighted decision matrix was created to analyze potential solutions. They were categorized to understand who they would impact and then the team shared conversations with the client to assign weights to each solution. Thus, providing the optimal solutions.

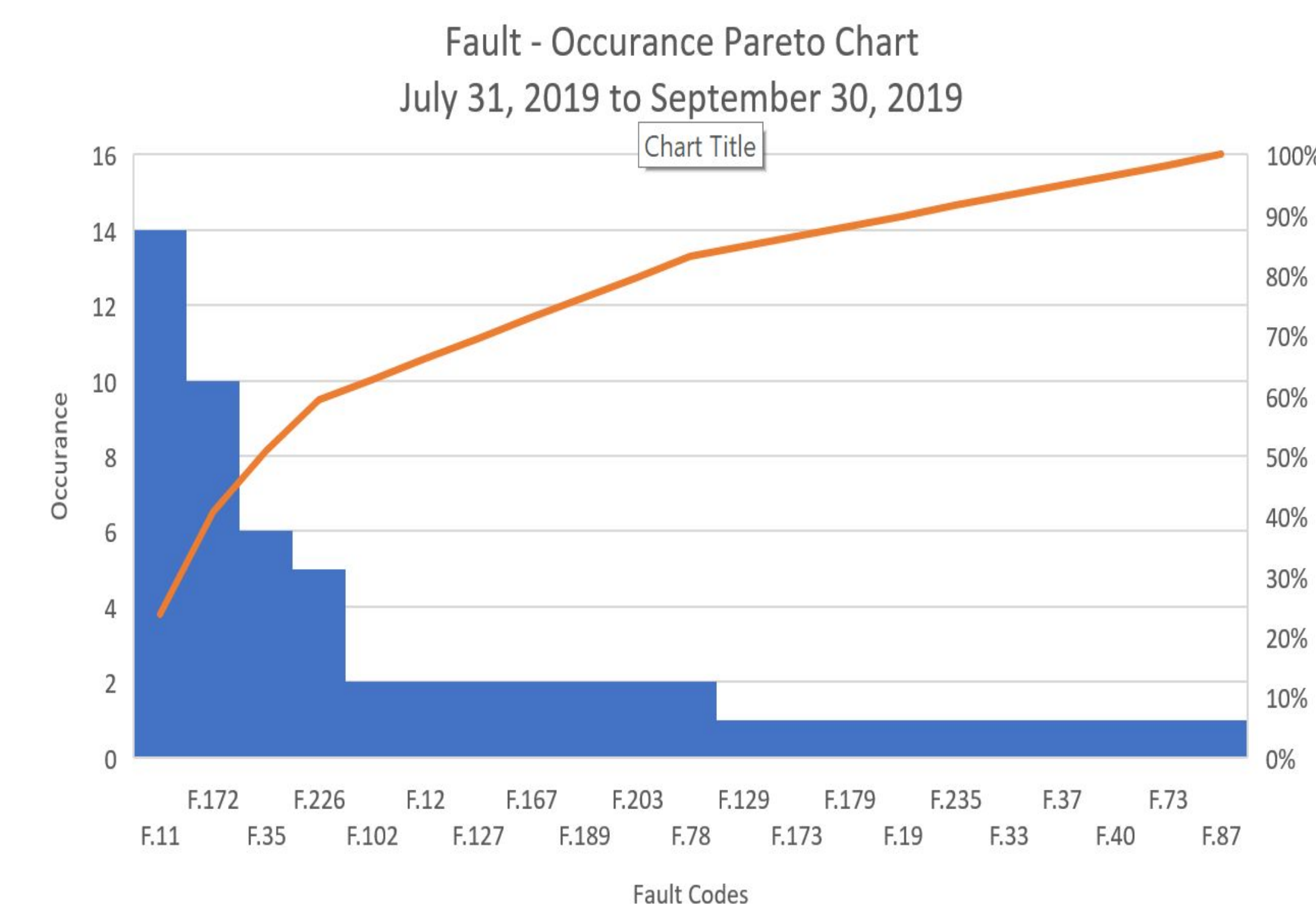


Solution Approach



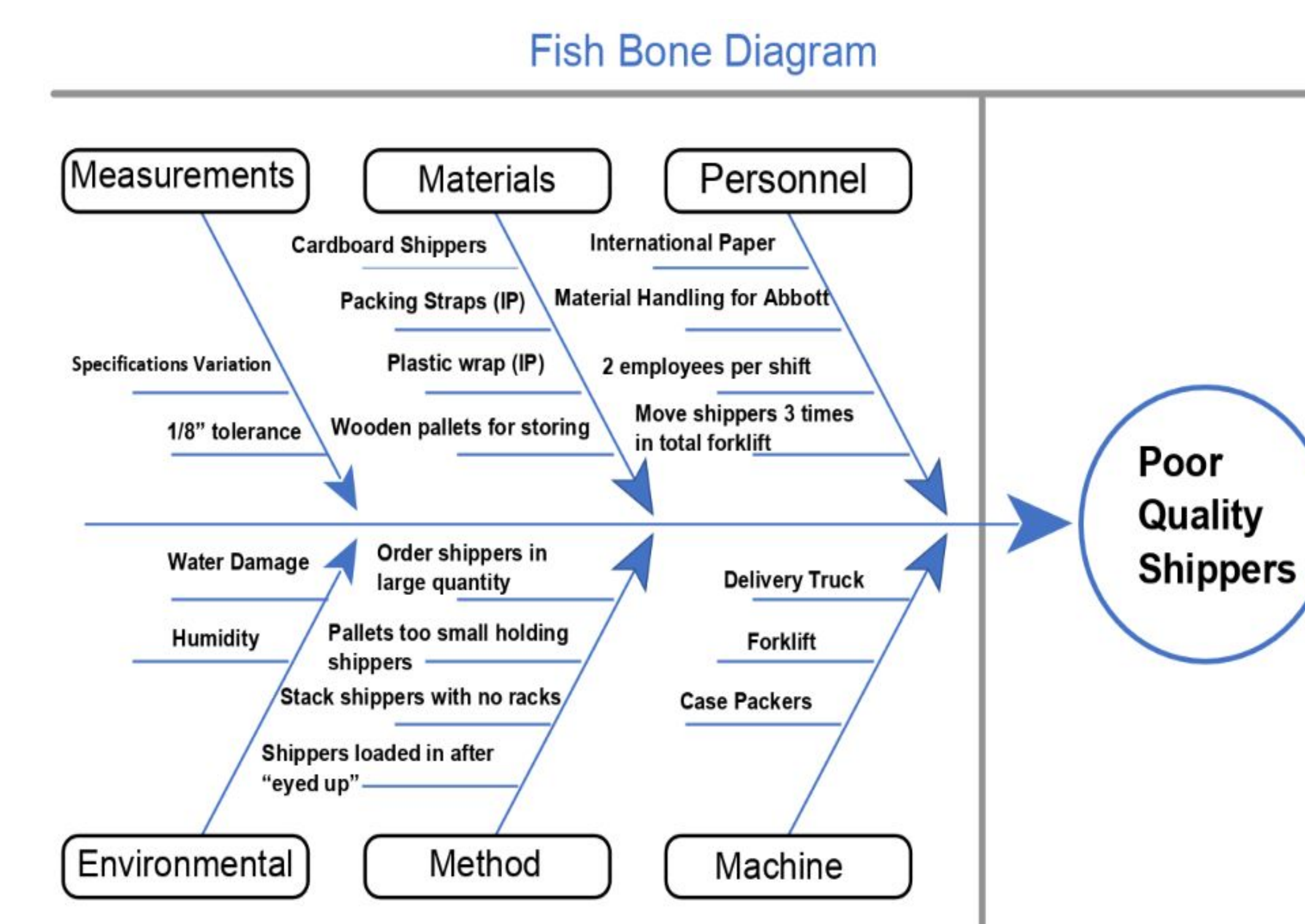
Methodology: DMAIC

The team heavily relied on the DMAIC approach for this Lean/Six Sigma project.



Data Analysis: Pareto Charts

The team used a pareto chart to understand the faults on the case packer related to corrugated paper issues.



Root Cause Analysis: Fishbone

Understanding the issues that could be causes of poor quality corrugated paper sheets (shippers) being used in the lines.