

# USING ANALYTICS TO OPTIMIZE YOUR MATERIAL HANDLING FLEET

IF YOU SUPPLY THE SUPPLY CHAIN,  
YOU BELONG AT MODEX.

The greatest supply chain show on earth.



*Presented by:*

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Fleet Optimization Manager

# INTRODUCTION:

**LISETTE BERMUDEZ**

**FLEET OPTIMIZATION MANAGER AT ASSOCIATED**

- 10+ Years in Material Handling Industry
- Accounts Across USA/Canada/Mexico
  - Various Supply Chain Industries
    - Pet Food > Medical Supplies > Metal Fabrication



# FLEET MANAGEMENT DEFINED:

## GOAL OF A MATERIAL HANDLING FLEET MANAGEMENT PROGRAM

Not Just Report Generation

### Analyzing

- Labor Costs
- Maintenance Costs
- Safety Issues
- Utilization

### Implementing

- Cost Savings Recommendations
- Procedures to Optimize Your Existing Fleet
- A Strategic Plan to Replace/Rotate Your Fleet



# WHERE TO BEGIN? YOU ARE NOT ALONE



- A DC Velocity reader survey found that **75%** are NOT using a fleet management program, nor tracking hours of use and repair records for each vehicle. (*“Survey: Forklift Fleet Management Programs Still a Work in Progress.” DC Velocity*)
- And **94%** of material handling end-users do NOT know their real maintenance costs. Even more do NOT have programs in place to reduce these expenses. (*“Forklift-free plants: Considerations for success, article by K-TEC Inc.”*)

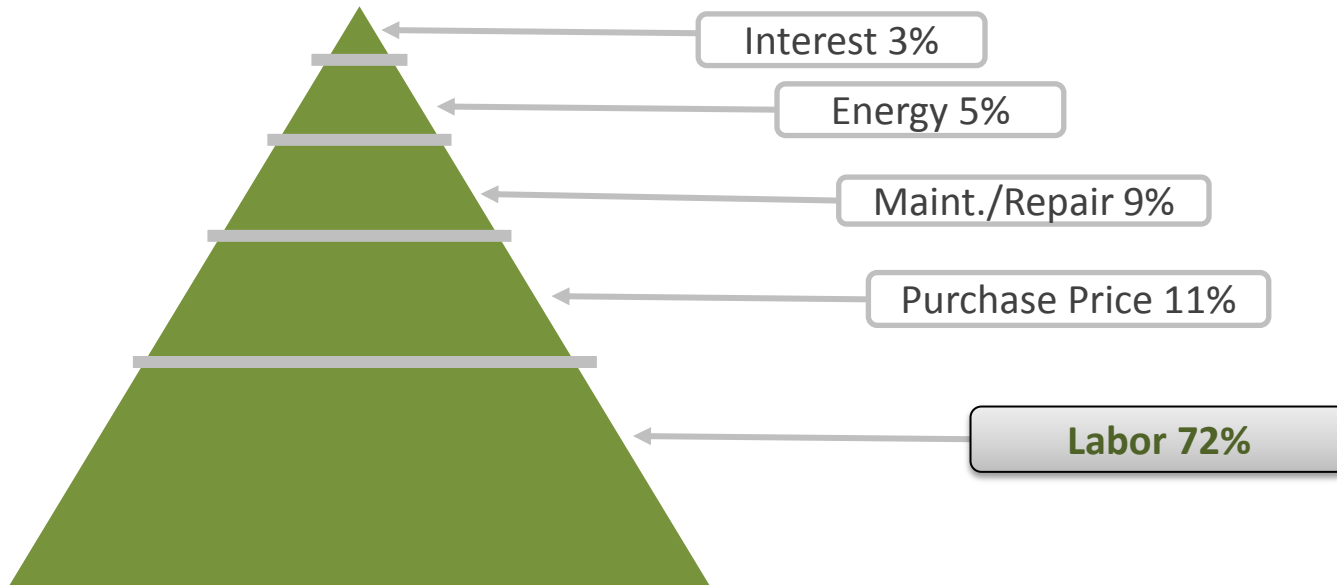


# IDENTIFY METRICS - TO ASSIST YOU IN DETERMINING COST DRIVERS

- Labor Costs
- Equipment Utilization
- Cost per Hour
- Cost Trends
- Top Cost Drivers
- Focus on Avoidable Damage
  - What Safety Concerns Do These Highlight
- Implement an Action Plan to Reduce Lift Truck Expenses
- Equipment Rotation Strategy



# LABOR COST SAVINGS TO RIGHT SIZING YOUR MATERIAL HANDLING FLEET



Forklift Operators are typically the highest paid hourly employee in the supply chain industry, when taking into account benefits, bonus, over time and if hiring temporary staff? And for facilities that run more than one shift that cost can **triple**. (per an article "On 5 ways to reduce costs of your industrial vehicle fleet"- A Supply Chain Industry Review published by ID Systems, Inc.)



# EQUIPMENT UTILIZATION

UNDER  
UTILIZED  
EQUIPMENT

OVERAGE FEES –  
SHORT/LONG  
TERM RENTALS

OVER UTILIZED  
EQUIPMENT OR  
REACHED ITS  
ECONOMIC LIFE



# COST PER HOUR

## HOW TO CALCULATE YOUR MATERIAL HANDLING EQUIPMENT CPH?

*Total Cost of Equipment / Utilization Hours = Cost per Hour*  
*{ i.e. \$4,555 / 1,150 hours = \$3.96 }*

- LTD vs YTD
- Considerations When Analyzing Data:
  - Large Repair vs Under Utilized
  - Data Integrity
  - Industry Average vs Your Environment
  - Fluctuations In Business Needs
- Total Cost of Ownership



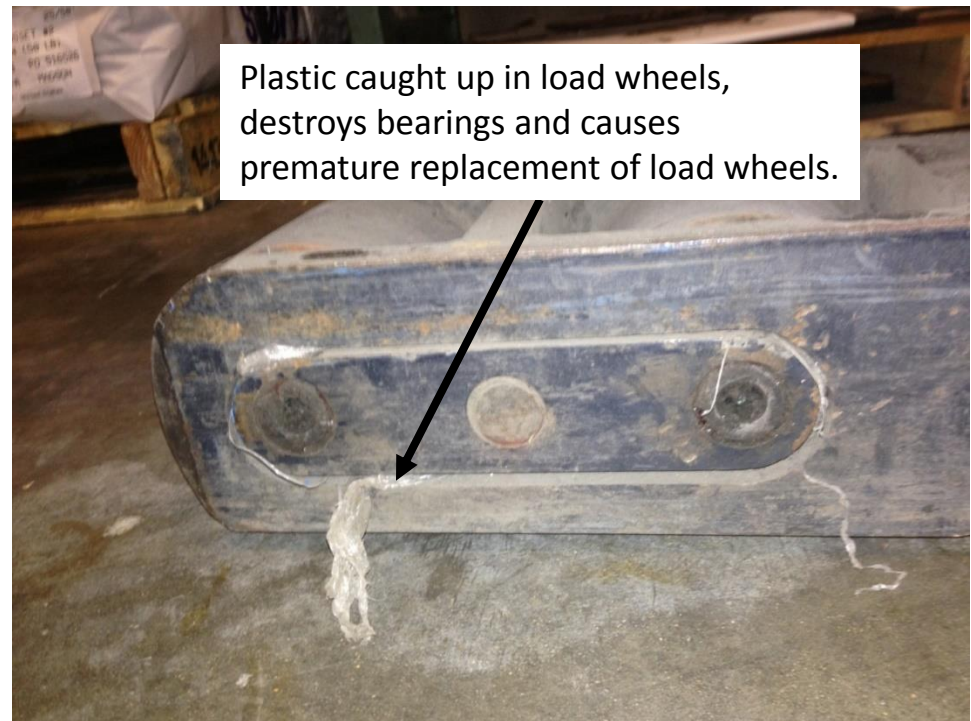


# ANALYZING FOR COST DRIVERS

## Top Lift Truck Expenses:

### Wheel & Tire Repairs

- Chunking / Flat spotting
- Debris



# ANALYZING COST DRIVERS

## Top Lift Truck Expenses:

### Electrical Repairs

- Wet / Caustic Environment



# ADDITIONAL COST DRIVERS

## Battery/Charger Repairs

- Battery Maintenance
  - Spillage – Acid
  - Watering

## Scheduled Maintenance (SM's)

- Frequencies Adjusted to Your Utilization Needs
  - Less or More Frequent



# AVOIDABLE DAMAGE – A SAFETY CONCERN

## Examples:

### Impact Damage

- What Is The Operator Hitting
  - Rack Or Other Equipment?

## Did You Know?

### Lift Truck Damage Accounts For 90% Of Rack Damage

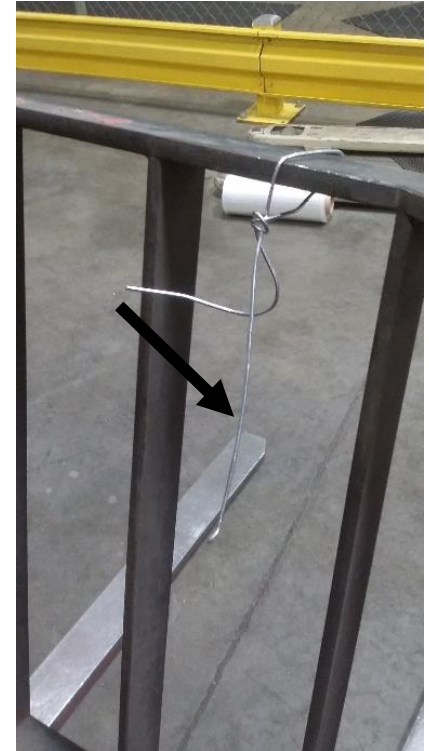
*(per an Article by Material Handling Management on How “Broken Racks Can Break the Bank”).*

### Battery Repairs Due To Chemical Spillage

- Safety Procedures For Watering/Charging Batteries

### Equipment Damage Due To Inappropriate Use Of Equipment

- Operator Accountability – Operator Re-training



# IN-HOUSE MAINTENANCE VS SERVICED

## Are You Tracking?

- Certifications – Ongoing Training
- Technical Updates
- Documentation Of Maintenance Records

## Additional Items

- Labor Costs
- What You Don't Know
  - Maintenance Cost Drivers
  - Impact Damage, Abuse, Avoidables





# IMPLEMENTING A DATA DRIVEN ROTATION STRATEGY

| Department   | Facility        | TYPE        | Serial Number  | Age Rank | Max Hrs Rank | Service Costs Rank | Usage Rank | Cost/ Hour | Weighted Avg Rank | Age Yrs | HourMeter 3rd Qtr | YTD Total Cost | Annual Usage | 2015 YTD CPH | Truck YEAR |
|--------------|-----------------|-------------|----------------|----------|--------------|--------------------|------------|------------|-------------------|---------|-------------------|----------------|--------------|--------------|------------|
| Distribution | Bolingbrook, IL | CB Sit Down | 9A104030       | 3        | 3            | 3                  | 3          | 3          | 3.00              | 18.0    | 12,112            | \$ 5,000.00    | 50           | \$ 100.00    | 1997       |
| Bldg F       | Bolingbrook, IL | CB Sit Down | 9A104050       | 3        | 3            | 3                  | 3          | 3          | 3.00              | 18.0    | 10,250            | \$ 3,550.00    | 100          | \$ 35.50     | 1997       |
| Bldg F       | Bolingbrook, IL | CB Sit Down | 9A104054       | 3        | 3            | 3                  | 3          | 3          | 3.00              | 18.0    | 11,819            | \$ 2,500.00    | 80           | \$ 31.25     | 1997       |
| Returns      | Bolingbrook, IL | Orderpicker | 560-12-A13445  | 1        | 3            | 1                  | 3          | 1          | 2.00              | 3.1     | 2,036             | \$ 400.00      | 1,112        | \$ 0.36      | 2012       |
| Returns      | Bolingbrook, IL | Reach       | 750-12-BC32100 | 1        | 3            | 1                  | 2          | 1          | 1.75              | 3.1     | 2,081             | \$ 90.00       | 1,017        | \$ 0.09      | 2012       |
| Bldg F       | Bolingbrook, IL | CB Stand Up | 415-12-33635   | 1        | 2            | 1                  | 2          | 1          | 1.50              | 3.1     | 1,784             | \$ 90.00       | 875          | \$ 0.10      | 2012       |
| Returns      | Bolingbrook, IL | CB Stand Up | 415-12-33636   | 1        | 2            | 1                  | 2          | 1          | 1.50              | 3.1     | 1,750             | \$ 250.00      | 830          | \$ 0.30      | 2012       |
| Returns      | Bolingbrook, IL | Reach       | 750-12-BC32095 | 1        | 3            | 1                  | 1          | 1          | 1.50              | 3.1     | 2,326             | \$ 500.00      | 1,245        | \$ 0.40      | 2012       |
| Distribution | Bolingbrook, IL | CB Stand Up | 415-12-33637   | 1        | 2            | 1                  | 1          | 1          | 1.25              | 3.1     | 3,529             | \$ 250.00      | 1,835        | \$ 0.14      | 2012       |
| Distribution | Bolingbrook, IL | CB Stand Up | 415-12-33638   | 1        | 2            | 1                  | 1          | 1          | 1.25              | 3.1     | 3,168             | \$ 1,000.00    | 1,788        | \$ 0.56      | 2012       |
| Bldg F       | Bolingbrook, IL | CB Stand Up | 415-12-33628   | 1        | 2            | 1                  | 1          | 1          | 1.25              | 3.1     | 1,765             | \$ 100.00      | 898          | \$ 0.11      | 2012       |

## FACTORS TO CONSIDER:

- Age of Equipment
- LTD Hour Meter Reading
- Utilization
- Maintenance Costs
- Cost Per Hour



# ACTION PLAN

## WHERE DO YOU GO FROM HERE?

- **Optimizing Your Lift Truck Fleet By Formulating A Rotation Strategy.**
- **A Strategy For New Equipment Purchases Based On Key Factors.**
  - **Utilizing Data To Implement Cost Savings Recommendations.**
  - **Right Sizing The Fleet Assists In Reducing Labor Costs.**
  - **Focusing On Key Cost Drivers To Decrease Your Maintenance Costs.**
  - **Using Data To Validate Purchases To Procurement & Upper Management.**



*(In a e-week article on a study of Chief Procurement Officers, conducted by IBM Institute of Business Value it “showed that high performing procurement organizations are deploying advanced data-driven tools to make more informed procurement decisions”, an article on an IBM Institute of Business Value Study.)*



## FOR MORE INFORMATION:

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