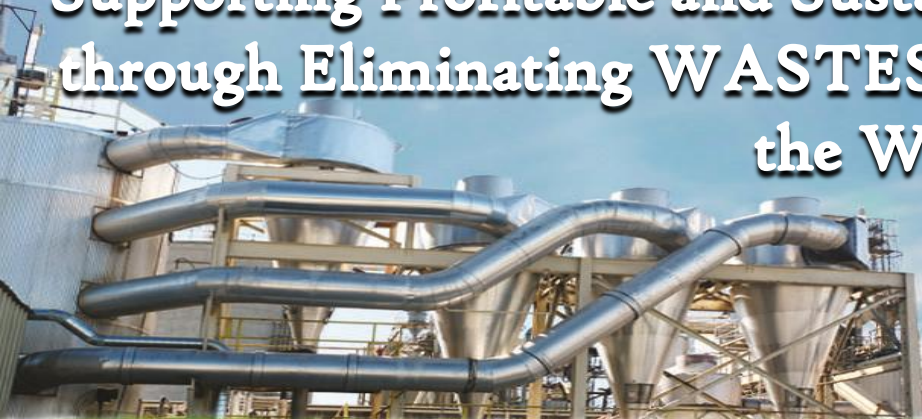




# E3: ECONOMY • ENERGY • ENVIRONMENT

SUPPORTING MANUFACTURING LEADERSHIP THROUGH SUSTAINABILITY

## Alabama E3 Supporting Profitable and Sustainable Manufacturing in Alabama through Eliminating WASTES, Reducing Costs, and Improving the Workforce



*Alabama Industrial Assessment Center*

**ADECA**

Alabama Department of Economic and Community Affairs





# What is Alabama E3?

- 🚧 **Economy, Energy and Environment – Supporting Manufacturing through Sustainability**
  - Joining together of resources/services to assist manufacturers to be profitable and sustainable by creating more efficient production processes, reducing all WASTES (water, air, solids, toxics, energy, safety), and decreasing costs.
  - When manufacturers are profitable, good jobs are retained and created and communities are vibrant.
- 🚧 **Collaboration** among 26+ local and state government, federal agencies, utility companies, associations, non-profits, and manufacturers.

# Alabama E3 Client Service Components



1. Lean, Energy, and Environmental Assessment
2. Lean/Energy/Environmental Implementation
3. “Green” Workforce Training/Education
4. SBDC Fiscal Assessment, Counseling & Assistance (including assistance with ALSaves)
5. Entrepreneurial and Innovation/Growth Services with focus on identifying new “green” markets, products and/or processes

# Estimated Value of Services



Energy /Environmental Assessment	\$2,500 - \$8,000
Lean Assessment	\$2,500
Implementation Event	\$15,000
Training/Education	\$395 - \$10,000
Entrepreneurial & Growth Services	\$1,500 - \$5,000
<b>TOTAL</b>	<b>\$21,895 - \$40,500</b>

Assessment and Training Services are no cost; Kaizens and Growth Services are provided on a fee basis.

## Results to Date

- 15 Practical Energy Assessments completed
- 15 IAC Energy Assessments completed
- 23 Lean Assessments completed & 5 in process
- 40 Lean and Energy Implementation events completed



# ZF Line-side Logistics Kaizen Event

Goal: Reduce the number of parts staged line-side, reduce/eliminate double handling, travel distance & establish min/max for line-side parts

## Results:

	BEFORE (ft/day)	AFTER (ft/day)	% Improve	Miles per Year
Forklift Travel	14078	4072	71.08%	475
Small Parts Travel	128000	44800	65.00%	3939
Operator Travel	28800	14400	50.00%	682
Tugger Travel	106440	66440	38.00%	1894
Big Part Dunnage Travel	6250	2668	57.31%	339
TOTAL				7329

# Additional Kaizen Results



- ▤ Reduced travel to fill parts supply – 66%
  - Reduction of 2.6 miles per day (643 miles/yr)
  - Reduced labor costs
- ▤ Saved recharges of battery – 1.7 charges/day
  - 17,418 kwh/yr = \$1,742/yr
- ▤ Saved purchasing and disposal of 1 industrial battery/yr
  - \$4,500/yr
- ▤ Reduced green house gases = 2710.94 tonnes CO<sub>2</sub> equivalent
- ▤ Amount of criteria air pollutants reduced (SO<sub>x</sub>, NO<sub>x</sub>, CO)  
= 21.98 tonnes
- ▤ **Total Savings = \$35,000/yr**