

Lean/Clean and Practical Energy (E3) Initiative for Continuous Improvement and Energy Efficiency for the Automotive Supplier Base in Alabama

The focus of this initiative is to bring improved competitive performance of participating companies with the ultimate goal of energy intensity reduction, improved profitability, saving jobs and increasing employment in the automotive industry in Alabama. This initiative involves the implementation of the principles of Lean Manufacturing, Environmental waste reduction and Practical Energy through continuous improvement activities. Forty Lean/Clean and Practical Energy Kaizen events will be held at automotive manufacturers throughout Alabama. This program includes assignment of an expert from UAH or the ATN to follow up with the company over time to ensure progress is made on implementation of the improvements and the savings are realized. The results of the Kaizens will be documented and reported to ADECA and independently surveyed by the National Institute of Standards and Technology. Included in the reporting are productivity improvements, energy savings, cost savings and jobs retained and created.

This effort is funded by the Alabama Department of Economic and Community Development Energy Division through the US Department of Energy and does not require the participating company to contribute to the costs of UAH – ATN personnel or travel. Points of Contact for UAH – ATN are Greg Harris, Principal Investigator (256-824-6060 or harrisg@uah.edu) or Anthony Holden (256-824-6289 or holdena@uah.edu).

At the initiation of an engagement, there will be an initial assessment activity beyond the ATN/AIDT lean assessment used to qualify the participating company. The assessments will be executed over a two day time period. The assessments and Value Stream Map included are:

Economy, Energy, and Environment (E3) Technical Assessment

- ATN Lean Assessment
- Energy Audit (Practical Energy or Industrial Assessment Center)
- Lean and Clean Value Stream Map
- Greenhouse Gas (Carbon footprint)

These activities develop a list of prioritized the potential area for project implementation.

The grant will be used to pay for three ATN field staff to assist companies with the five day implementation activities. The implementation assistance is to help the companies rapidly implement the energy saving/productivity boosting ideas rapidly and to build momentum for future improvements.

There are several items that will be the responsibility of the client company and of the Alabama Technology Network.

Responsibilities of the Alabama Technology Network:

- Training in Lean/Clean & Practical Energy (as determined during the assessment & scoping activities)
- Facilitation of the implementation kaizen
- Provide project management during the implementation
- Coaching and mentoring to supervisors and management in sustaining improvements
- Follow-up after event
- Assistance in developing a package to go to funding agencies for potential energy intensity reduction

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Responsibilities of the participating Automotive Supplier:

***Prerequisite – AAMA/ATN Lean assessment must be completed**

- Provide access to necessary personnel during the assessment event
- Provide resources (people and supplies) to the kaizen (usually 1- to 12 people)
- Provide training and kaizen team meeting facilities
- Active engagement by management throughout the event
- Fill out and submit surveys as requested
- Signed agreement prior to the engagement
- Provide a budget or a process for obtaining materials
- Commitment to implement during the weeklong event

Steps to full engagement

1. Auto supplier signs agreement
2. UAH/ATN will contact supplier and schedule E3 assessment
 - a. Supplier provides a copy of Lean assessment and any VSMS
3. Supplier completes Pre-event survey (Mgt, Team members, Non-Team members)
4. UAH/ATN conducts E3 assessment (2-day event)
 - a. Supplier and event facilitators scope the E3 event
5. E3 event is scheduled with supplier (5-day event)
6. E3 event is conducted (3-ATN facilitators, capture all DOE/ARRA required metrics, prepare funding opportunity package)
7. Supplier and ATN facilitator complete impact tool and Post-event survey (Mgt, Team members, , Non-Team members)
8. 6-month follow-up (Review action items, revisit impact tool)
 - a. Supplier completes Follow up survey (Mgt, Team members, Non-Team members)
9. 12-16 months after the event client will complete NIST survey

Typical agenda for the week:

Day 1

Kickoff with Cross-functional team
Train on Lean and Energy tools
Observe current process with team

Day 2

Analyze problems/wastes
Set goals
Formulate process improvements
Perform workplace organization

Day 3

Continue workplace organization
Brain storm additional improvements

Day 4

Refine changes
State process and measure results
Standardize changes

Day 5

Prepare report
Present Results

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At the end of the engagement the ATN team will assist the participating company in the identification of:

- Leveraged Funding
 - DOC Economic Development Administration grants
 - DOL “green jobs” and workforce development grants
- Loan Guarantee Programs
 - SBA 7(a) and 504 loans provide general equipment and working capital loans up to \$2 million and manufacturers’ equipment financing up to \$10 million

Contacts:

Greg Harris	256-824-6060	harrisg@uah.edu
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