Green Suppliers Network (GSN)

An Innovative Industry-Government Collaboration
Achieving Lean & Clean Performance Improvement

Judy Wlodarczyk

GSN in a Nutshell

• GSN provides Lean and Clean technical assistance to small and mid-sized manufacturers
• Lean and Clean approach expands the traditional Lean definition of waste from eliminating non-value added time, labor, money to include environmental wastes (energy, emissions)
• This dual approach aligns OEM, supplier and Government interests
GSN Key Players

- US Environmental Protection Agency (EPA)
- Manufacturing Extension Partnership (MEP)
- OEMs
- Suppliers

OEMs

- Healthcare/Pharmaceutical
  - Baxter Healthcare, Pfizer, Johnson and Johnson, Bristol-Myers Squibb, Abbott, Wyeth and Roche
- Automotive
  - General Motors, Daimler/Chrysler
- Aerospace
  - UTC, Northrop Grumman, Raytheon, Pratt & Whitney, Lockheed-Martin, Boeing, GE Aircraft Engines
- Office Furniture
  - Herman Miller, Steelcase, Hon AllSteel, Haworth, Kimball, Light Corp.
- Farm/Construction
  - John Deere
- AMTRAK
- Others
  - Appliances and Truck & Buses
The Clean & Lean Approach

Clean Strives For...
- Nature-friendly Substitutes
- Optimized Material And Energy Efficiency
- Waste Elimination
- Air/Water Emission Reductions
- Solid/ Hazardous Waste Reduction
- Toxic Material Reduction Or Substitution
- Efficient Packaging

Lean Eliminates...
- Defects
- Overproduction
- Waiting
- Non-utilized People
- Transportation
- Inventory
- Motion
- Extra processing

National Results to Date

Project Activity Update

<table>
<thead>
<tr>
<th>Impact of Opportunities – Results Identified by 12 Completed Projects</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Savings from Environmental Impact Opportunities</td>
<td>$1,259,571/yr</td>
</tr>
<tr>
<td>Energy Conservation (MM BTUs)</td>
<td>53,561</td>
</tr>
<tr>
<td>Water Conservation (Gallons)</td>
<td>3,329,459</td>
</tr>
<tr>
<td>Cost Savings from Lean Opportunities</td>
<td>$5,850,405/yr</td>
</tr>
<tr>
<td>Cost Savings from One-Time Lean Opportunities</td>
<td>$2,855,295</td>
</tr>
<tr>
<td>Cost Savings from Other Opportunities</td>
<td>$48,331</td>
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<tr>
<td><strong>Total Potential Cost Savings</strong></td>
<td><strong>$10,013,602</strong></td>
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Program Approach

• Top-level operational benchmarking assessment
• Value stream and process maps to identify sources of waste
• Facilitated opportunities sessions
• Full facility energy assessment (CT)
• Final report of opportunities with cost benefit analysis

Figure 8: Opportunities and Cost Benefits

Performance Metrics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Current</th>
<th>Mode/Proposed Target</th>
<th>Final Target</th>
<th>Annual $ Benefit</th>
<th>One-Time Conversion to Cash</th>
<th>% of Total Annual Benefit</th>
<th>% of One-Time Conversion to Cash</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lateness</td>
<td>30</td>
<td>95</td>
<td>95</td>
<td>267,000</td>
<td>1,145,124</td>
<td>16%</td>
<td>1.5%</td>
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<tr>
<td>Machine Run-Hrs % Available</td>
<td>80</td>
<td>90</td>
<td>90</td>
<td>900,000</td>
<td>3,000,000</td>
<td>8%</td>
<td>8%</td>
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<tr>
<td>% Time in Production</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>900,000</td>
<td>3,000,000</td>
<td>8%</td>
<td>8%</td>
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<tr>
<td>Scrap Rate</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>100</td>
<td>710</td>
<td>1%</td>
<td>1%</td>
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<tr>
<td>Days Performed</td>
<td>9</td>
<td>20</td>
<td>20</td>
<td>2,000</td>
<td>5,000</td>
<td>3%</td>
<td>3%</td>
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<tr>
<td>Percentage</td>
<td>45</td>
<td>50</td>
<td>50</td>
<td>500</td>
<td>1,250</td>
<td>4%</td>
<td>4%</td>
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<td>Downtime % @ IOC</td>
<td>7</td>
<td>10</td>
<td>10</td>
<td>700</td>
<td>2,000</td>
<td>3%</td>
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<tr>
<td>Employee:Customer % 1:1</td>
<td>40</td>
<td>50</td>
<td>50</td>
<td>500</td>
<td>1,250</td>
<td>4%</td>
<td>4%</td>
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<tr>
<td>Schedule %</td>
<td>95</td>
<td>95</td>
<td>95</td>
<td>950</td>
<td>2,375</td>
<td>3%</td>
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<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>$810,000</td>
<td>$2,000,000</td>
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Performance Target: Percent of Annual Benefit

Contribution to One-Time Conversion to Cash

1090 Elm Street, Rocky Hill, CT 06067  1-800-CONN-MRC  www.connstep.org
HAR-CONN Chrome Company

- Metal finishing company, specializing in aerospace
- 55 employees
- Annual sales $6,000,000
- NADCAP approved
- FAA repair station facility

Project Focus

- Hard chrome plating line
- 15% of company’s business
- Significant contributor to environmental aspects
- Generates large amount of rework and rejects
Current state VSM – Chrome line

Takt time

Detail of Chrome process block
Project Results

- Identified $425,000 in annual savings in Lean and Clean opportunities
- Identified $77,750 in energy savings opportunities; 16% reduction in energy bills
- Follow-on project to reduce rework and reject

"After working with CONNSTEP, we began using Clean and Lean manufacturing techniques to reduce waste and decrease rework costs – saving us hundreds of thousands of dollars."

Tim Backus, President, Har-Care Cleanroom Company
Summit Corporation of America

- Metal finishing company, specializing in aerospace
- 121 employees
- Annual sales $18,000,000

Project Focus

- Nickel barrel plating line
- Runs 24 hours/day, 5 days/week
- Represents 3% of business
- High volume line
- High reject line
- Significant environmental impact contributor
Project Results

- Identified $980,000 in annual savings in Lean and Clean opportunities
- Identified $95,000 in energy savings opportunities; 8% reduction in energy bills
- Follow-on project to assist with Automotive Quality Standard

Review Specifics

- **Cost**
  - $7,000  Cost Of Review
  - $2,500  EPA Program Discount*
  - $4,500  Total Cost To Supplier For GSN Review

- $2,500  CONNSTEP contributes if a defense supplier

- **On-site Reviews Take 2-3 Days**

- **$1,000 Credit Toward Implementation Assistance**

*Suppliers Must Qualify Under SBA Definitions

** Work must be coordinated within 3 months of facility review through 360vu provider
Why Successful?

• CEO/top management involved starting with Operational Assessment
• Facilitated team based activity
• Looks holistically at waste - not just lean measurements or P2 efforts
• Builds upon the operational improvements identified in the Review

Questions?

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