[IPRO 306] - Improving Global Supply Management

Goals > Progress > Results
Sloan Valve

- World’s leading manufacturer of water-efficient solutions
- Headquarter: Franklin Park, Illinois
- Founded in 1906
- Facilities in Michigan, Massachusetts, Pennsylvania, California, Arkansas, Mexico, and China
Overall Project Goals

- Establish a foundation for a Green supply chain by benchmarks and policies
- Improve production efficiency by identifying machine & operator downtime
- Improve product tracking by implementing new part status"
The Green Supply Chain

Overview

Input

Transformation

Output

Disposal Process

Reuse Process

Recycled Reclaimed Product and Recyclable Material

End of Life Raw Material

Reclaim, Reuse, Improve By-Products

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Organizational Structure

Supply Chain TO Sloan

Green

Internal Improvements

Lean  SKU

Supply Chain FROM Sloan
Green Team Project Goals

Overview

1. Define Green
   a. Internally and externally
2. Benchmark corporations
3. Create a strategy for a Green supply chain
4. Develop metrics for the supply chain
5. Create a Green policy
### Green Team Progress

## Timeline

<table>
<thead>
<tr>
<th>Event</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial research</td>
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<tr>
<td>Questionnaire Developed</td>
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<tr>
<td>Supplier Interviews Conducted</td>
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<tr>
<td>Green Scale Developed</td>
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<tr>
<td>Green Statement Developed</td>
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<tr>
<td>Executive Interviews Conducted</td>
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<tr>
<td>Green Policy Created</td>
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GREEN Team Results

Results

1. Conducted research on interpretations of GREEN
2. Created a GREEN questionnaire to interview suppliers & Sloan management
3. Created a scale to rate suppliers based on their GREEN policies
4. Created a GREEN statement and policy
Green Team Results

What is Green?

1. Green is a very subjective word & concept
2. No set way to rank or implement Green in an organization
3. The Shades of Green
   a) BRIDGE PAPER™: Environment, Ethics, and Business
Green Team Results

What is Green? - The Shades of Green

**Light**
- **Compliant** with environmental regulations drives strategy
- Discounts value of independent action

**Market**
- **Customer preference** for Green products drives strategy
- Give up principle that Green costs more

**Stakeholder**
- **Responding** to and coordinating the needs of stakeholders drives strategy (customers, investors, community, etc.)

**Dark**
- **Environmental** principles fundamental to business strategy

Suppliers & Green

1. Green policy varied by supplier depending on the product and raw material

2. General trend observed:
   a. Green practices are good for the environment
   b. Green has the potential to reduce costs
   c. Green is good for business
   d. Community obligation to be environmentally conscious
Green Team Results

Sloan & Green

1. Green is a driving force of the business strategy at Sloan since 1906
   a) Recognized industry leader for Green retrofits

2. Sustainable practices are key to protecting the environment
Green Team Results

Benchmarking Green

1. Challenge was *quantifying* a *subjective* topic
2. Based on interviews conducted with suppliers
3. Looked at:
   a. Company’s vision applied to Green
   b. Internal company improvements (Green specific)
   c. Value Impact to Sloan
   d. Manufacturing improvements
Green Team Results

Benchmarking Green

<table>
<thead>
<tr>
<th>Company Vision Applied to Green</th>
<th>Internal Company Improvements (Green Specific)</th>
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<tbody>
<tr>
<td><strong>Topic</strong></td>
<td><strong>Topic</strong></td>
</tr>
<tr>
<td>Social Responsibilities</td>
<td>Past Improvements</td>
</tr>
<tr>
<td>5-year Green Objective</td>
<td>In-progress Improvements</td>
</tr>
<tr>
<td>Opportunity Cost Scale Points</td>
<td>Future Improvements</td>
</tr>
<tr>
<td><strong>Total Vision Score:</strong></td>
<td><strong>Total Internal Score:</strong></td>
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<tr>
<td>0</td>
<td>0</td>
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<table>
<thead>
<tr>
<th>Value Impact</th>
<th>Manufacturing Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topic</strong></td>
<td><strong>Points Awarded</strong></td>
</tr>
<tr>
<td>Amount Spent yearly</td>
<td>&quot;Greenness&quot; of raw material</td>
</tr>
<tr>
<td><strong>Total Value Impact Score:</strong></td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>&quot;Greenness&quot; of finished good</td>
<td>0</td>
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All categories are on a 1 - 5 Point system (1 = worst; 5 = best)

**Overall Total:** 0

<table>
<thead>
<tr>
<th>Overall Total Green Color Scale Range</th>
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<tbody>
<tr>
<td>0-14 Light</td>
</tr>
<tr>
<td>15-29 Market</td>
</tr>
<tr>
<td>30-42 Stakeholder</td>
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<tr>
<td>43-55 Dark</td>
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Green Team Results

Creating a Green Statement/Policy

1. Green statement had to reflect Sloan and its current mission & vision
2. Had to be something to inspire internal & external Green policy going forward
Green Team Results

Green Statement:

Green means preserving the environment in everything we do daily.
• Overall Equipment Effectiveness (OEE)

• A measure of the effectiveness of machinery being used.
Lean Team Project Goals

• To **develop** a method to document data pertaining to the performance of the specific machinery.

• To **generalize** the methods developed so they can be applied to all machinery.

• To **identify** the relevant people on the floor to be in charge of data collection
Lean Team Progress

Timeline

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<tr>
<td>Initial research</td>
<td>![Orange Bar]</td>
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<tr>
<td>Exploring Initial Ideas</td>
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<tr>
<td>Meeting with Sloan Management</td>
<td>![Blue Bar]</td>
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<tr>
<td>Round Table with Operator</td>
<td>![Blue Bar]</td>
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<td>![Blue Bar]</td>
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<tr>
<td>Developing Data Collection Method</td>
<td>![Green Bar]</td>
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<td>Finalizing Data Collection Sheets</td>
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Lean Team Results

1. Researched OEE
2. Analyzed Sloan Valve’s OEE program
3. Developed New Ideas
4. Combined Findings to generate method that is both user friendly and effective.
Lean Team Results

• Data Collection sheet to be used by operator.

• The data collected is to be entered into an excel worksheet.
Lean Team Results

• Impact
  – When implemented OEE can be used to:
    1. Determine causes of downtime
    2. Devise Preventative Maintenance plans
    3. In future purchases of equipment
Organizational Structure

Supply chain TO Sloan

Green

Internal Improvements

Lean

SKU

Supply chain FROM Sloan
Project Goals

Current Issues

1. **Errors occur** because on hold inventory is controlled manually
2. Orders are booked at the **Incorrect plant**
3. Inventory exists at locations where it will **not be utilized or be identified easily**
4. No easy way to **determine inventory** in wrong location or SKU stocking plan by plant
5. **No reports or procedure** to manage inventory outside of standard cycle counting reports
6. **No way to allow for different stages in new product development**
Progress

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<tr>
<td>Developing Logic Sheet</td>
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<td>Pulling Data from SAP</td>
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<td>Bulk Assigned Statuses</td>
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<td>Individually Assigned Statuses</td>
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<td>Loading New Data into SAP</td>
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<tr>
<td>Create Reporting Procedure</td>
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EDC > WDC > FKP > CDC (CN01/ MX01)
Results

Outcome

1. Develop **new part statuses**
2. All domestic part statuses ~50,000 updated to the **correct new status in SAP**
3. Reports are created and owner buy in is achieved to maintain and **control inventory based on new SKU statuses**
4. **Presentation** to stakeholders showing accomplishments
Manual Inventory Quality Hold

- Inventory on hold manually (margin for error)
- Created Quality Hold status
- Systematically prevent suspect product from build/ship
Manual Inventory Quality Hold

Old and New Statuses in SAP
* Quality Hold
Orders entered at incorrect plant

Create S1, S2 and Not Active, statuses to determine if order can be entered at each plant, returning error message when switching order to non S1 and S2 plant

Prevent Delays in Order processing/Extra Processing
Inventory at location not used

Created obsolete, not-active and obsolete with dispositions statuses. *Report ran regular basis on non active SKU's to determine why disposition is not occurring.

$57,000 > Ability to identify and correct issues
Results

Inventory at location not used

Dollar Value of Inventory at Improper Distribution Center
Results

SKU Stocking-plan by plant

No way to identify SKU Stocking-plan by plant

Statues created that define stocking-plan (S1, S2, NA, IU)

Sales and customer service rep has knowledge of Long Lead time items versus stocked items
Results

New Product Development

Only one NPD status that does not allow all stages of process

Made 3 statuses to allow functionalities – no movement, prototype, buy

No longer have to move to “production” status, while in NPD functionality now available
New Product Development

New Statuses for New Product Development
The Green Supply Chain

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Key Takeaways

- A Green supply chain reduces costs and benefits the environment
- Maximizing OEE does stuff
- Updated inventory management and implementation in SAP reduce costs and be more responsive to the customers
Acknowledgements

- Mr. John Caltagirone, Faculty Advisor
- Michael Skrypek & Brian Capo
  - Sloan advisors for the Green team
- Jane Klink and Hetul Thakkar
  - Sloan advisers for the SKU team
- Steve Mader, Jim Gabelhausen & Monique Divarco
  - Sloan advisers for the Lean team
- IPRO Office
- Everyone present today
QUESTIONS?