present

Introduction to Lean Office
Definition of Lean:

*The identification and removal of waste!*

- Lean principles, evolved from the Toyota Production System, focus on reducing cycle time and increasing process speed.

- The goal of Lean is to accelerate velocity of any process by reducing waste in all its forms.
Lean Applies To . . . . . .

- Order taking and scheduling
- Creating an engineering drawing
- Manufacturing operations
- Being admitted to the hospital
- Administrative systems
- Applying for a mortgage
- Hiring an employee

.......... *Everything!*

A Process is a Process is a Process
Defining Value

**Value Added Activity**
An activity that changes the fit, form, or function, done right the first time and is something the customer is willing to pay for.

**Non-Value Added Activity**
Those activities that take time or resources, but do not directly contribute to the product/service.

**If it’s Non-Value Adding, call it Waste**
**Defining Value**

**Value Added Activity**
If it’s not clear whether a task is Value Adding, imagine what would happen if you **STOP** doing it. Would your external or end customer complain? If yes… VA.

**Non-Value Added Activity**
Pick an activity. If you **STOP** doing it, would any customer (internal or external) know the difference. If not, probably NVA.

**Non-Value Added but necessary**
If you **STOP** doing it, would your internal customer complain? If yes, probably NVA but necessary.
Our goal is to eliminate all NVA wherever possible, and minimize the waste in the required through the use of Lean Methods.
Lean = Eliminating the Eight (8) Wastes

Value Added

Non-Value Added
• **D**efects
• **O**verproduction
• **W**aiting
• **N**on-utilized Talent
• **T**ransportation
• **I**nventory
• **M**otion
• **E**xcessive Processing

Typically 95% of all process time is non-value added
## 8 Types of Waste

<table>
<thead>
<tr>
<th>The Waste of…</th>
<th>Definition</th>
<th>Examples</th>
</tr>
</thead>
</table>
| **Defects**   | Work that contains errors, rework, mistakes or lacks something necessary | • Order entry errors  
• Design errors or engineering change orders  
• Invoice errors  
• Lost files or records  
• Bad or missing information |
| **Over-Production** | Producing more sooner or faster than is required by the customer or next process | • Producing reports that no one reads or needs  
• Making extra copies just-in-case  
• Producing more to avoid set-ups  
• Entering repetitive information on multiple documents  
• Memos or email to everyone |
| **Waiting**   | Idle time created when material, information, people or equipment is not ready | • Waiting for approvals or signatures  
• Attendees not all on time for meeting  
• Slow system response time  
• Delays in receiving information  
• Printer or computer break-down |
| **Non-Utilized People** | The waste of not using people’s mental, creative and physical abilities | • Bypassing procedures to hire a favorite candidate  
• Start using software without prior training  
• Not providing opportunity for professional development  
• Limited authority and responsibility for basic tasks  
• Inadequate business tools / training available |
# 8 Types of Waste

<table>
<thead>
<tr>
<th>The Waste of...</th>
<th>Definition</th>
<th>Examples</th>
</tr>
</thead>
</table>
| **Transportation** | Movement of product that does not add value | • Moving product in and out of storage  
• No signs identifying areas or departments  
• Multiple hand-offs or approvals  
• Bad area layout  
• Excessive filing of documents |
| **Inventory** | More materials or information on hand than needed | • Excessive office supplies  
• Files piled up between desks  
• No storage space because it’s filled with stuff not needed  
• Batch processing transaction & reports  
• Obsolete files or office equipment  
• No sufficient cross-training |
| **Motion** | Movement of people that does not add value | • Looking for items without a defined place  
• Searching for files on computer  
• Employees not working to a standard method  
• Poor work area layout  
• Sorting through materials |
| **Excessive-Processing** | Effort that adds no value from the customers viewpoint (internal or external) | • Multiple signatures  
• Unused or unnecessary information collected  
• Re-entering data  
• Different software working on same document  
• Expediting  
• Unnecessary or excessive reports |
What’s an Employee Worth?

Note: this is production data based on over 700 observations
Employee Empowerment – 3 Levels

Degree of Empowerment & Leadership

- **Enabling** employees to make more and bigger decisions without having to refer to someone more senior
- **Involving** employees in taking responsibility for improving the way that things are done
- **Encouraging** employees to play a more active role in their work

Organizational Benefits

- Getting closer to the customer
- Improving service delivery
- Innovating continuously
- Increasing productivity
- Gaining the competitive edge
People – Our Greatest Asset

Involve and **empower** employees

- Cross-trained and **multi-skilled** employees
- **Continuous** improvement philosophy
- Use of participatory / **team** decision-making
- **Listen** to your people & implement their ideas
- Inspire & **challenge** for personal growth
- Provide the resources so they can be **successful**

---

**No company can be successful with a detached and unmotivated workforce.**

**No competitor can match your highly charged, motivated people who care.**

Montana Manufacturing Extension Center
Module 1 - Lean Office Overview

© Montana State University 2009
The Simple Reason to do LEAN

- Wasted Time
- Wasted Money
- Wasted Resources
- Poorly Defined Requirements
- Inefficient Hand-offs
- Error Correction Loops
- Missed Value Opportunities

Lean Office Results in Increased Productivity and Profits!
So now what?

How do we get getting started?
Additional Material

• Simple rules for hold a Lean meeting
• Organization rules to reduce E-mail waste
Quick Time Saver: Simple Rules for Holding Lean Meetings

Rule 1 – Reduce the duration of most meetings. Try restricting meetings to no more than thirty minutes in most cases.

Rule 2 – Have only a single topic on the agenda, or perhaps several closely related items – it’s hard to run a multi-topic meeting efficiently.

Rule 3 – Only invite those people who have a need to be there. Uninvited attendees should be discouraged – they can waste the rest of the group’s time.

Rule 4 – Foster a culture that discourages lateness. If an attendee is running late, they should notify the meeting holder as to when they will arrive.

Rule 5 – Define the goals of the meeting when it is announced, and identify any pre-work that should be performed or information that is needed.

Rule 6 – Tangential issues should be captured in a “parking lot” for future discussion.

Rule 7 – Ask attendees at the beginning of the meeting if they are expecting any emergency calls, otherwise ALL ELECTRONICS SHOULD BE TURNED OFF! You may need to forcibly remove Blackberrys from peoples’ hands.

Rule 8 – Do not begin the meeting until everyone in the room agrees on the “deliverables” that will be created. EVERY MEETING SHOULD HAVE A DELIVERABLE, OR THE TIME SPENT WILL PROBABLY BE WASTED.

Rule 9 – Ask yourself if a formal meeting is really necessary before interrupting multiple peoples’ value-creating work.
Quick Time Saver: Some “Organizational Rules” to Reduce E-mail Waste

Rule 1 – Limit “CC’s” to only those that are ABSOLUTELY ESSENTIAL. Make a rule that employees can choose to BLOCK all CC e-mails.

Rule 2 – No more than two “cycles” back and forth between correspondents. If the issue is not resolved by that point, USE THE TELEPHONE!

Rule 3 – No unnecessary forwarding of attachments; use a hyperlink instead.

Rule 4 – Always include the POINT and URGENCY of the e-mail in both the subject line and the first few lines of the text.

Rule 5 – Consider using the first few sentences of an e-mail as an ABSTRACT that summarizes the remainder of the communication. Below the abstract, add additional detail with the comment, “More detail follows…”.

Rule 6 – KEEP IT BRIEF! No e-mail should be more than 20 lines in length (consider using a network filter to block any that are longer).

Rule 7 – Start the subject line with “ACTION” whenever immediate action is required by the addressee. Actions should be identified at the beginning of the e-mail.

Rule 8 – Try using the SUBJECT LINE to communicate the ENTIRE message, followed by “EOM” which stands for “End of Message”.

Rule 9 – Limit the number of times during the day that you cleanup or respond to e-mails. Turn off the e-mail alarm, so YOU control when you deal with e-mail.
Introduction to 5S
What is 5S?

• A structured approach and easy-to-understand methodology for systematically creating and maintaining an…
  ▪ Organized
  ▪ Clean
  ▪ Safe
  ▪ high-performance

  ... work environment.

• Creates a foundation for continuous improvement
Sort

Separate the necessary from the unnecessary.

*Identify what is required to work a process or perform a particular operation or task.*

- Remove unneeded items from the work area (red tag)
- Remove all excess items from the work area

Keep only what is needed
Sorting Opportunities
Sorting Opportunities
Set in Order (Simplify)

**Set in Order**

Arrange and Identify for ease of use, organize!

Organize materials according to frequency of use and use visual controls to aid in eliminating variation.

• Based on people and product flows by frequency of use, determine a permanent location for each item

A place for everything and everything in its place
Set in Order Example

Before

After
Office Manuals

Bad

Good
Shine (Sweep)

Shine

Perform daily cleaning and inspection of area and equipment

A daily discipline to an agreed upon plan that is executed by the work area team members.

• A method of detecting abnormalities and preventing reoccurrence.
• Area should be clean and free of clutter. A documented method of performing regular sweeps should be developed.

To be Lean, you must be Clean!
<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>T</th>
<th>W</th>
<th>T</th>
<th>F</th>
<th>Wk</th>
<th>M</th>
<th>T</th>
<th>W</th>
<th>T</th>
<th>F</th>
<th>Wk</th>
<th>M</th>
<th>T</th>
<th>W</th>
<th>T</th>
<th>F</th>
<th>Wk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organize Desk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conference Rooms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organize Printer Area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-S Lobby</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dust</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shred Paper</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clean desk top</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Restrooms are Clean

- Check (✔) when task was performed.
- Press the call button when done to alert manager that cleaning is complete.

<table>
<thead>
<tr>
<th>WOMEN'S</th>
<th>MEN'S</th>
<th>OTHER</th>
<th>SPOTLESS perform each hour</th>
<th>STOCKED replenish as needed</th>
<th>SHINY perform as needed</th>
<th>INITIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Toilet Paper</td>
<td>Soap</td>
<td>Paper Towel</td>
<td>Feminine Hygiene Products</td>
</tr>
</tbody>
</table>

- **deep clean manager inspection**
- **manager inspection**

<table>
<thead>
<tr>
<th>Time</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 a.m.</td>
<td></td>
</tr>
<tr>
<td>9:30 a.m.</td>
<td></td>
</tr>
<tr>
<td>10:30 a.m.</td>
<td></td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td></td>
</tr>
<tr>
<td>12:30 p.m.</td>
<td></td>
</tr>
<tr>
<td>1:30 p.m.</td>
<td></td>
</tr>
<tr>
<td>2:30 p.m.</td>
<td></td>
</tr>
<tr>
<td>3:30 p.m.</td>
<td></td>
</tr>
<tr>
<td>4:30 p.m.</td>
<td></td>
</tr>
<tr>
<td>5:30 p.m.</td>
<td></td>
</tr>
<tr>
<td>6:30 p.m.</td>
<td></td>
</tr>
<tr>
<td>7:30 p.m.</td>
<td></td>
</tr>
<tr>
<td>8:30 p.m.</td>
<td></td>
</tr>
<tr>
<td>9:30 p.m.</td>
<td></td>
</tr>
</tbody>
</table>

- Air freshener is working (overnight maintenance).
- Give to ETL-GE and file for 30 days.
## Restrooms are Clean

**Date:** 3/11/09

- Check (✓) when task was performed.
- Press the call button when done to alert manager that cleaning is complete.

### SPOTLESS
**Perform each hour**

<table>
<thead>
<tr>
<th>Time</th>
<th>Pick up Paper</th>
<th>Wipe Sinks and Mirrors</th>
<th>Wipe Toilets/Urinals</th>
<th>Wipe Baby Table</th>
<th>Empty Trash/Staff Receptacles</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 a.m.</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:30 a.m.</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:30 a.m.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### STOCKED
**Replenish as needed**

<table>
<thead>
<tr>
<th>Time</th>
<th>Toilet Paper</th>
<th>Soap</th>
<th>Paper Towel</th>
<th>Feminine Hygiene Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:30 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:30 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SHINY
**Perform as needed**

<table>
<thead>
<tr>
<th>Time</th>
<th>Sweep</th>
<th>Mop</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 a.m.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:30 a.m.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:30 a.m.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Date:** MAR 11 2009

- Air freshener is working (overnight maintenance).
- Give to ETL-GE and file for 30 days.
Operators claim a 50% improvement in overall efficiency
Creating guidelines for keeping an area organized, orderly and clean.

Processes and methods are clear and well-understood by all.

- Make standards visual and obvious
- Variation is eliminated, speed and quality are consistent.
- Prevents setbacks in the first three steps of 5S
- Create **Standard Operating Procedures** for all work processes.

**Without standards there can be no improvement**
Clearly Identify
Sustain

Maintain improvements and look for opportunities

Ensure the first 4Ss are maintained and used properly.

• All associates doing their part to sustain the gains
• Use audits to monitor adherence to plan
• Incorporate 5S into goals and objectives
• Continue to make daily improvements

Sustain all gains through Self-discipline
## 5S Audit Sheet Example

<table>
<thead>
<tr>
<th>5S ScoreCard</th>
<th>Area:</th>
<th>Prior Score:</th>
<th>1=No Evidence 2=Little Evidence 3=Main processes meet requirements 4=Main and a few auxiliary processes meet requirements 5=All processes meet requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date:</td>
<td>Auditor:</td>
<td>Score:</td>
<td>Evaluation Criteria</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.</td>
</tr>
<tr>
<td>Sorting</td>
<td></td>
<td></td>
<td>“Junk” drawers and catch-alls have been eliminated.</td>
</tr>
<tr>
<td>Totals: /15 =</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simplify</td>
<td></td>
<td></td>
<td>“Keep only what is needed.”</td>
</tr>
<tr>
<td>Totals: /15 =</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shine</td>
<td></td>
<td></td>
<td>“Managing is a game, a visual sweep.”</td>
</tr>
<tr>
<td>Totals: /15 =</td>
<td>11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Sorting (4/15)

1. “Junk” drawers and catch-alls have been eliminated.
   - Score: 3
   - Observations/Evidence: Found two junk drawers

2. Obsolete documentation/files are purged from area. All information posted on the bulletin boards/walls is current.
   - Score: 4

3. All office fixtures and supplies are in regular use (monthly). i.e. desks, computers, office equipment, bulletin boards.
   - Score: 5

4. All excessive documentation & supply inventory has been eliminated. Excessive = having 3 months of supply when it takes 1 week to refill.
   - Score: 3
   - Observations/Evidence: Found a year’s worth of brochures

5. Evidence of regular sorting exists. If a Red Tag area exists, it is clearly marked and has schedule for disposition posted.
   - Score: 2
   - Observations/Evidence: Stuff is starting to stack up in storage room

### Simplify (7/15)

6. Equipment/supplies are located at the point of use and by frequency of use.
   - Score: 4

7. All shelves, frequently used items, etc. are clearly labeled as to content and responsibility of control and revision.
   - Score: 2
   - Observations/Evidence: Not all shelves are labeled

8. Common areas and aisles are identified and labeled with responsibility known.
   - Score: 3

9. Clear indicators of max. and min. inventory quantities exist. Storage areas contain clear replenishment instructions.
   - Score: 3
   - Observations/Evidence: Not all supplies on replenishment system

10. Open storage of all supplies, WIP, and finished items is well organized and labeled.
    - Score: 4

### Shine (11/15)

11. Common areas and aisles are kept clean and orderly. Fire extinguishers, exits, and control panels are unobstructed.
    - Score: 5

12. All shelves & desks are kept clean. No items are unidentified or laying on top of cabinets/shelves/tables.
    - Score: 2
    - Observations/Evidence: Coats on back of chairs, use coat rack

13. It is visually obvious what items are ready for work, what items are in work, and what items are finished.
    - Score: 1
    - Observations/Evidence: Too many projects on desk at one time

14. The current status of the area is visually obvious. Is the area ahead, behind, how does the work flow?
    - Score: 1
    - Observations/Evidence: No visual being used

15. Due to the use of visual control methods, it is easy to distinguish what belongs in the area and what does not.
    - Score: 2
### 5S Audit Sheet Example

<table>
<thead>
<tr>
<th>Standardization Tools</th>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>Cleaning and checking are completed routinely per a controlled checklist.</td>
<td>3</td>
</tr>
<tr>
<td>17</td>
<td>There is evidence of a standard process for each document/work product.</td>
<td>2</td>
</tr>
<tr>
<td>18</td>
<td>There are standard work/operation instructions at all work stations.</td>
<td>1</td>
</tr>
<tr>
<td>19</td>
<td>Visual controls are consistent in appearance throughout the work area - i.e. same colors mean same things.</td>
<td>2</td>
</tr>
<tr>
<td>20</td>
<td>Controls minimizes the work required to maintain the first 3Ss by insuring waste cannot accumulate over time.</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sustaining</th>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>Internal audits are performed at scheduled intervals and are on-time and current.</td>
<td>1</td>
</tr>
<tr>
<td>22</td>
<td>External audits are performed at scheduled intervals and are on-time and current.</td>
<td>1</td>
</tr>
<tr>
<td>23</td>
<td>5S audit scores are displayed in work area and communicated regularly.</td>
<td>1</td>
</tr>
<tr>
<td>24</td>
<td>Methods and evidence exists to continue to improve. Sorting events continue to happen, visual controls are improved, etc.</td>
<td>2</td>
</tr>
<tr>
<td>25</td>
<td>It is apparent that standard work, cleaning checklists, etc. are strictly followed.</td>
<td>2</td>
</tr>
</tbody>
</table>

#### 5S Bar Chart

<table>
<thead>
<tr>
<th>Calculation</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sort Score</td>
<td>3.4</td>
</tr>
<tr>
<td>Simplify Score</td>
<td>3.2</td>
</tr>
<tr>
<td>Sweep Score</td>
<td>2.2</td>
</tr>
<tr>
<td>Standardize Score</td>
<td>2</td>
</tr>
<tr>
<td>Sustain Score</td>
<td>1.4</td>
</tr>
</tbody>
</table>

**Total** 12.2

**5S Score** 2.4
Benefits of 5S

For You:
• A more pleasant work environment
• More satisfying jobs – less stress
• Makes your job easier
• Pride in the workplace

For The Company:
• Lower costs through Waste Elimination
• Improved safety
• Increased standardization
• Ease of training new employees

“5S CREATES A BETTER PLACE TO WORK”

© Montana State University - 2009
Keys to 5S Success

- Get everyone involved
- Must become part of everyone’s daily work
- The first S (Sort) must be done well
- Communicate need for 5S, roles of all participants, how it is implemented
- Be consistent in following 5S in all areas (office/factory)
- Periodic senior management involvement is absolutely required
- Follow through—finish what is started—5S takes effort and discipline
- Link 5S with other improvement initiatives
**5S Summary**

*5S sounds so simple that people dismiss its importance.*

- However the fact remains that a neat & clean workplace...
  - has **higher productivity**.
  - produces **less defects**.
  - meets deadlines better.
  - is a much **safer** place to work.
  - generates **pride** in the workplace.
  - improves **morale** of all involved.
Lean Summary

• Lean is about the identification and elimination of waste

  ▪ it’s about working smarter not harder!

  ▪ it’s tapping into your employees talents to help you improve the business operation.