EIGHT + 1 TOOLS FOR IMPROVING YOUR WORKPLACE

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Agenda
Continuous Improvement Tools for Purdue Road School
March 11, 2014

Purpose: Experience some continuous improvement tools and share some situations where you can use them

- Agenda review          All
- Warmup                All
- Explain and experience continuous improvement tools    Ray/All
- Discuss successes     Ray
- Consider actions and applications Participants
- Date and agenda for next meeting    All
- Plus Delta             All
Use the tools to...

- Stimulate creative thinking
- Improve meetings, encourage staff participation, and reach consensus
- Communicate with customers
- Organize large amounts of information
- Choose among alternatives
- Gather data to study processes
- Present important information visually
You are frustrated with the seemingly unending complaints you are getting.

You have decided to keep track of them to see if it is as bad as it seems.

So you take the trouble to write down each one over the course of a week.
Check Sheet

A good tool for use at the beginning of any problem-solving cycle for collecting and organizing data into a few categories.

**Step 1:** Sort the reasons into categories, using the *Affinity Diagram* process.

**Step 2:** Create *Operational Definitions* for each category, so that every person entering data will know where to put it.
Working with people sitting next to you, sort the reasons into a few categories.
Operational Definition

- Describes what something is and how it is to be measured, in the specific context of your work.

- Use it for:
  - Assuring that your team understands and agrees upon the meanings of words.
  - Communicating with suppliers
Step 3:
Create the Check Sheet with your categories and your Operational Definitions.

Step 4:
Inform everyone and keep track for a period of time.
**Check Sheet**

<table>
<thead>
<tr>
<th>ISSUE/ PROBLEM</th>
<th>M</th>
<th>T</th>
<th>W</th>
<th>R</th>
<th>F</th>
<th>S</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours</td>
<td>II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In but NOS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet problems</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noise</td>
<td>III</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Photocopy machine</td>
<td></td>
<td>III</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer time limit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restrooms</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature</td>
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<tr>
<td>Other</td>
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<td></td>
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<tr>
<td><strong>Total</strong></td>
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<td></td>
<td></td>
<td></td>
<td><strong>11</strong></td>
</tr>
</tbody>
</table>

**Operational Definitions**
1. Anything related to hours
2. Catalog says the item is in, but it is not on the shelf.
3. Noise—too noisy, cell phones, other noise complaints
4. Photocopy machine—change paper, out of order, not enough machines.
5. Anything related to the public access computers on the time management system.
6. Anything related to restrooms—supplies, cleanliness, vandalism.
7. Temperature—too hot or too cold.
8. Other complaints not included above.
### Complaint Check Sheet

<table>
<thead>
<tr>
<th>Category</th>
<th>M</th>
<th>T</th>
<th>W</th>
<th>Th</th>
<th>F</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications</td>
<td>I</td>
<td>I</td>
<td></td>
<td>II</td>
<td></td>
<td>III</td>
</tr>
<tr>
<td>Meetings</td>
<td>I</td>
<td></td>
<td>I</td>
<td>I</td>
<td>I</td>
<td>III</td>
</tr>
<tr>
<td>Management</td>
<td>II</td>
<td>I</td>
<td>I</td>
<td>I</td>
<td>I</td>
<td>III</td>
</tr>
<tr>
<td>Mistakes</td>
<td>II</td>
<td>I</td>
<td></td>
<td>I</td>
<td></td>
<td>II</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td></td>
<td></td>
<td></td>
<td>I</td>
<td></td>
<td>I</td>
</tr>
<tr>
<td>Total</td>
<td>III</td>
<td>III</td>
<td>II</td>
<td>III</td>
<td>III</td>
<td></td>
</tr>
</tbody>
</table>

### Operational Definitions
- Communications – Anything dealing with passing information and the methods used to do it
- Meetings – Anything dealing with meetings of any kind
- Management – Having to do with decisions and leadership
- Mistakes – Encounters with things that could have been done better or needed to be done over
- Miscellaneous – Odd ball items that don’t fit elsewhere
Pareto Chart

- A visual presentation of data, arranged from most frequent to least frequent in occurrence.

- Use it for…
  - Presenting a compelling picture of most frequent causes of problems
  - Selecting areas in which to work
  - Visually presenting trends over time
Pareto Chart:

Barriers to Using the Public Library

- Don't have time
- Difficulty in parking
- Hours not convenient
- Use other libraries/stores...
- Transportation is a challenge...
- Locations not convenient
- Size of library too big...
- Problems with my library...
- Lack of interest
- Atmosphere of library
- Safety fears
- Unhelpful staff
- Difficult procedures
- Other reasons
**Pareto Chart:**

A Pareto Chart is a type of chart that contains both bars and a line graph, where individual values are represented in descending order by bars, and the cumulative total is represented by the line. The left vertical axis is frequency or count, and the horizontal axis represents the different categories of complaints. The chart shows that the majority of complaints are in the categories of Management, Communication, and Mistakes.
Force Field Analysis

A visual representation of the struggle between forces pushing for something and forces resisting it.

Use it for…

- Engaging a group in identifying the driving and resisting forces and developing action plans
- Thinking through a personal problem
## Force Field by Parents in Children’s Room

<table>
<thead>
<tr>
<th>Signing Up for Summer Reading</th>
<th>Moving Forces</th>
<th>Restraining Forces</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Something productive for my kids to do</td>
<td>Couldn’t make it on sign-up day</td>
</tr>
<tr>
<td></td>
<td>Excellent program</td>
<td>On vacation</td>
</tr>
<tr>
<td></td>
<td>All my kids’ friends are participating</td>
<td>Busy schedule</td>
</tr>
<tr>
<td></td>
<td>Helps fill long summer days</td>
<td>Didn’t know you had a program</td>
</tr>
<tr>
<td></td>
<td>Kids can ride their bikes</td>
<td>My children don’t like to read</td>
</tr>
<tr>
<td></td>
<td>Safe place</td>
<td>Thought my children were too young</td>
</tr>
<tr>
<td></td>
<td>Helps keep up reading skills</td>
<td>My children and I speak Spanish</td>
</tr>
<tr>
<td></td>
<td></td>
<td>My summer babysitter doesn’t drive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Boring</td>
</tr>
<tr>
<td>Driving Forces</td>
<td>Resisting Forces</td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>------------------</td>
<td></td>
</tr>
<tr>
<td></td>
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</tr>
</tbody>
</table>
Multi-voting

Strategy for quickly identifying the top priorities of a group.

Use it for…

- Narrowing a list of possible actions
- Identifying key success factors during strategic planning
- Getting a picture of the level of consensus of a group
Quickly gather feedback from a group about what went well and what could be improved.

Use it at the end of a meeting, workshop, presentation, or training event.

<table>
<thead>
<tr>
<th>+</th>
<th>△</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agenda clear</td>
<td>Wasted time at beginning</td>
</tr>
<tr>
<td>Everyone present</td>
<td>No decaf coffee</td>
</tr>
<tr>
<td>Preparation done before meeting</td>
<td>Some people didn’t participate</td>
</tr>
<tr>
<td>Made lots of progress</td>
<td></td>
</tr>
</tbody>
</table>
Which tools will you use and on what occasions?

Tools

- Agenda
- Affinity Diagram
- Check Sheet
- Operational Definition
- Pareto Chart
- Force Field
- Multi-voting
- Plus/Delta
- Pair and Share