Simplify Work Order Priorities – Low Tech, High Value

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Why We Need a Priority System

“Persons would rather work on (in order)
1. What they enjoy
2. What they are good at
3. What they think is important
BEFORE
What the plant thinks is important”

John E. Day, Jr. Alumax, 1993
Arts and Crafts
One of Management’s Jobs

Point 11. Eliminate work standards that prescribe quotas for the work force .... Substitute aids and helpful leadership ...

Dr. W. Edward Deming 1900 - 1993
One Aid – The Priority System

• A tool in our toolbox
• Low tech, high value
• An organization tool for coordination and communication
Organizations

An organization is:

• A group
• With a common goal
• Can specialize
• Needs coordination
We Understand:

- Groups, common goals, & specialization
- Adam Smith 1776 *The Wealth of Nations*
- 18 pins per person per day

`Do All`

- Became 4800 pins per person per day
That Is Why...

We specialize our plant resources
However...

We do not do a good job with coordination

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The Result

• Less than world-class plant performance,
• Maint wrench time only 35%, and
• Maint culture: “Our job is to take care of Opns (and backlog is fill-in work)”
What We Want

• World-class plant performance,
• Better maint wrench time to complete ALL the work, and
• Maint culture: “Our job is to take care of the backlog which will take care of Opns (and Opns calls are a nuisance)”
Current Organization

- Two Specialized Areas

Maintenance

Operations

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What Operations Wants

- WBR Work By Radio
What Maintenance Wants

• TPM? Ops does some maintenance
But What We Need

- The Specialization and the Coordination

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Using the Priority System Tool

• Not too simple
• Not too complex
• Just right
• Tips
• Managing the priority system
Too Simple <= 3 Levels

3 Levels Mean
• Do it now
  – Maint not doing anything anyway
  – Purpose of the morning meeting
• Do it tomorrow
  – Maint has a short memory
• Backlog
  – They’ll never do it!

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Too Complex

• Too many levels
• Distracters
  – Safety is a WORK TYPE
  – Outage is a UNIT CONDITION
• RIME?
  – Multiplied from worktype and equipment
  – Difficult to explain why is your priority x?
  – Potentially misleading

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Adjectives vs Time Driven

• The pendulum, back & forth, back & forth

• As long as it gives some idea of relativity
• As long as it drives fewer work orders demanding “Now” or “This Week”
“Just Right”

At least 5 levels

• 0  Now
• 1 < 2 days
• 2 < 2 weeks
• 3 < mo
• 4 > mo
Times vs. Adjectives

<table>
<thead>
<tr>
<th>Time</th>
<th>Adjective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Now</td>
<td>Emergency</td>
</tr>
<tr>
<td>1 &lt; 2 Days</td>
<td>Urgent</td>
</tr>
<tr>
<td>2 &lt; 2 Weeks</td>
<td>Serious</td>
</tr>
<tr>
<td>3 &lt; 1 Month</td>
<td>Medium Priority</td>
</tr>
<tr>
<td>4 &gt; 1 Month</td>
<td>Lower Priority</td>
</tr>
</tbody>
</table>
A Reasonable Priority System with at Least 5 Levels

0    Now, Emergency
1 < 2 Days, Urgent
2 < 2 Weeks, Serious
3 < 1 Month, Medium Priority
4 > 1 Month, Lower Priority
Tip

Consider more than 5 levels

• Up to 10?
• TO DRIVE MORE PERSONS TO CHOOSE A LEVEL > 1
• 0s and 1s are defects
Managing

- 0s and 1s are defects
- Pareto charts
- Attack largest defect cause
  - Poor equipment
  - Poor maintenance
  - Poor operation
  - Poor management
Tips

For: Work that has same priority
• Schedule oldest (or largest) first

For: PMs
• Priority 2: past this week
• Avoid sliding dates
Acceptance of Priority and Scheduling Systems

• It is “okay” to break the schedule
• Insist schedule breaker be a 0 if today
• Insist schedule breaker be a 1 if this week

• Then manage the defects
Nevertheless

• Most plants with real heartburn about their priority system do not have a very productive maintenance force
• When weekly scheduling kicks in, the worry shifts from the priority system to finding enough work
Conundrum

• Without a decent priority system, it is hard to get the weekly scheduling effort going

• Go ahead and create a decent priority system, then start weekly scheduling
Conclusion

• A sophisticated priority system is not the answer
• The answer is to do the right maintenance at the right time
• We must identify enough of the right work and coordinate it with a productive work force. Use a simple priority system.

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Credits


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