Maintenance Planning and Scheduling Made Simple

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Learning Objectives

1. Tips to apply on Maintenance Planning and Scheduling
2. Understand the ways the organization’s behaviors can limit the effectiveness of maintenance planning and scheduling.
3. Review how the planner scheduler should be focused strategically on the future, working from a foundation of continuous improvement.
4. Comprehend that the majority of maintenance work should be based on business priorities, not uncontrollably emotional ones.
Survey

A few simple questions
Please remain standing until the answer to a question requires you to sit down.

Most importantly, be as honest as you can ...
1. If your site does not have a formal Maintenance Planner Scheduler position, please sit down.
2. If your site has the same person as the Maintenance Planner Scheduler and Supervisor or Team Lead position, please sit down.
3. If your site Maintenance Planner Scheduler is managing contractors, handling emergency work, or finding parts for either emergency or planned jobs in progress (current week)

Please sit down
4. If your site is doing 50% or more reactive work over planned work

Please sit down
5. If your site Maintenance Planner Scheduler does NOT have metrics specific to Planning and Scheduling performance

Please sit down
6. If you do **NOT** have an audit process where you audit at least 3 work orders per month

Please sit down
Where is your organization today?

1st Generation
• Fix it when it breaks
  • Higher availability
  • Lower costs
  • Longer asset life

2nd Generation
• Higher availability
• Lower costs
• Longer asset life

3rd Generation
• Higher availability, reliability, & throughputs
• Greater cost effectiveness
• Greater safety
• Better product quality
• No damage to environment
• Longer asset life

4th Gen.?
• 3rd Gen items
• Risk mgmt.
• Hi Rel. Org.
• Precision Maintenance
• Standards based
• Failure cause elimination
• RCM, RCA
• Zero based budgeting
• ERP systems
• Asset reliability modeling

Reactive  Preventive  CBM/ PdM  Proactive
Benefits of Planning and Scheduling

- More efficiently performed jobs
- Lower cost
- Less customer/tenant disturbance
- Higher quality (reduced variability)
- Improved morale and job satisfaction
- Increased equipment life
- Reduced parts usage
- More work with fewer resources

3 – 5 hours of execution time saved for 1 hour of advanced preparation
Provides the service of generating Labor Hours

20 to 35% Direct Work

Currently

World Class

Becomes

55% Direct Work

57% Improvement

* Direct Work = Not hunting for parts, information, or waiting for equipment to become available

Currently

Work of 30 Technicians

Yields

Equivalent of 47 Technicians

57% Improvement

Proven via work sampling at Jacksonville (Florida) Electric Authority

Source: Maintenance Planning and Scheduling Handbook, Palmer

Avoidable Delays
**Work Management Process**

**Reactive Unplanned**

- **Supervision evaluates**
  - Is it real?
    - Y: Marshall resources
    - N: Feedback necessary
      - N: Execute work
      - Y: Approval process
        - AWAPPR
          - Approved?
            - N: AWPL
            - Y: Parts req’d?
              - Y: AWMAT
              - N: INPL

**Proactive Planned Work**

- Initial job screening
- Job research
- Detailed job planning
- Prepare job package
Materials Management/Storeroom

Y

Order Materials

Receive Materials

Transact Materials

Stage and Kit Materials

Draft Schedule (Priority based)

Weekly Schedule Meeting (Metrics Review)

Note the Feedback Loop

Work Execution

Technician Completes WO/Plan Feedback

Supervisor Reviews

Planner Closes/Archives

Scheduler
Tips for Success

a) Align the organization
   a) The big three
   b) Spans of control
   c) Combined roles
b) Staff the position(s)
   a) Best craftsperson
   b) Educate and coach
      a) Train
      b) Coach monthly for 6 months
      c) Educate the organization
Tips (continued)

c) Focus
   a) Strategic
   b) Tactical
d) Must haves
   a) Next week’s schedule
   b) Corrective job plans
Tips (continued)

e) Measure and share the wins
   a) PM Compliance
   b) Schedule Compliance
   c) Schedule Break-ins
   d) More …
Using Metrics to Influence Planning and Scheduling Behaviors
f) Priorities

<table>
<thead>
<tr>
<th>Priority</th>
<th>Label</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Emergency</td>
<td>Unplanned - Drop everything – Pay Overtime – Current Week focus</td>
</tr>
<tr>
<td>2</td>
<td>Urgent</td>
<td>Unplanned – Cannot wait for formal planning – No overtime – Current week focus</td>
</tr>
<tr>
<td>3</td>
<td>PMs</td>
<td>Planned - Condition &amp; time based Preventive Maintenance – should be &lt;20-30% of planned work</td>
</tr>
<tr>
<td>4</td>
<td>Essential</td>
<td>Planned – Highest planned priority behind PM work – 60% of remaining planned hours</td>
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<tr>
<td>5</td>
<td>Desirable</td>
<td>Planned – Medium planned priority work – 25% of planned hours</td>
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<tr>
<td>6</td>
<td>Least Consequence</td>
<td>Planned – Lowest planned priority work – 15% of the planned hours – ideal for reactive troubleshooters</td>
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</tbody>
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Tips (continued)

- Barriers to success
  - Training/ coaching
  - Accountability w/ roles
  - Lack of partnerships
  - Reactivity
Questions?