

## Key Performance Indicators - eMPS

The following are example key performance indicators to monitor a work management program.

Planning and Scheduling	Definition and Formula	Target
<b>Actual Hours to Planning Estimate</b>	The accuracy with which work is planned and the efficiency of planned work execution	+/- 10%  (between 90-110% of the estimate)
[(Actual Work Order Hours)/(Planned Hours)] x 100		
<b>Actual Cost to Planning Estimate</b>	The actual cost incurred on a work order compared to the estimated cost of completion	+/- 15%  (between 85-115% of the estimate)
[(Actual Work Order Cost (\$))/(Planned Cost (\$))] x 100		
<b>Backlog - Ready</b>	Backlog indicates the demand for labor. Ready-to-schedule backlog are those requests that have been fully planned and are ready to schedule. The result is the number of crew weeks.	Ready backlog - 2-4 weeks of crew hours  Total backlog - 4-6 weeks of crew hours
(Estimated Ready-to-Schedule Labor Hours)/(Weekly Average Crew Size (hrs))		
<b>Labor Utilization</b>	A measurement of the percentage of maintenance labor that is productive	100%
[(Hours Scheduled)/(Hours Available)] x 100		
<b>Percent of Planned Work</b>	Measures the effectiveness of the routine maintenance planning process. (Any completed work that was not planned is defined as <b>Unplanned Work</b> .) It is also a secondary indicator of craft utilization so can provide insight into improvement potential in wrench time.	> 90%  Measured weekly
[(Planned Work Executed (hrs))/(Total Maintenance Hours (hrs))] x 100		
<b>Schedule Completion</b>	Measures adherence to the maintenance schedule, expressed as a percent of total time available to schedule	> 90%  Measured weekly
[(Scheduled Work Performed (hrs))/(Total Time Available to Schedule (hrs))] x 100		
<b>PM &amp; PdM Work Order Compliance</b>	Summarizes PM (preventive maintenance) and PdM (predictive maintenance) work order execution and completion compliance	> 90%  Measured weekly
[(# PM + PdM Work Orders Completed within 10% of Due Date)/(# PM + PdM Work Orders Due)] x 100		

Planner Performance	Definition and Formula	Target
<b>Average Work Order Age</b>	Measures the organization's ability to move work requests through the system.  High work-order age may indicate a potential need for an additional planner, or it may indicate there are a high number of low-priority work orders that should be completed or removed from the work queue.	Due to variations in industry types, no single value can be identified, but it's important to track regularly for undesired trends.
(Sum of Ages for All Work Orders (days))/(Number of Work Orders)		
<b>Job Plans Created</b>	May be lower with new planners, and when planning large work orders.  A significant decrease may warrant analysis and investigation.	Number of work orders by planner should remain stable or trend slightly upward.
Sum of Created Job Plans		
<b>Planned Work Orders Requiring Additional Materials</b>	Measures the accuracy of work planned.	< 10%
[(All Job Plans)/(Job Plans Requiring Additional Materials)] x 100		
<b>Unplanned Work</b>	Measures the amount of unplanned work that is being executed. (Compare to Percent of Planned Work)	< 10%
[(Unplanned Work Completed (hrs))/(Total Maintenance Labor Hours (hrs))] x 100		
<b>Planner Productivity (in Labor Hours or Job Plans)</b>	The average amount of planned work a maintenance planner prepares per month.  Planner skill and experience and the maturity of the site maintenance and reliability processes are factors, so use the metric as insight into the planning process and establish a baseline for monitoring continuous improvement.	Due to variations in industry types, no single value can be identified.
Planner Productivity (hours) = Planned Labor Hours/Number of Months		
Planner Productivity (job plans) = Number of Job Plans/Number of Months		