

HOW TO INCREASE EFFECTIVENESS OF MAINTENANCE PLANNING AND SCHEDULING

BY: **RICKY SMITH,
CMRP, CMRT, CRL**



Maintenance Planning and Scheduling is the one function which makes the most impact in any Maintenance Department resulting in increased “Wrench-Time” (Hands on Tool Time)

Wrench time (sometimes also referred to as tool time) is a metric that shows how much time maintenance techs spend with a tool in their hand, performing actual maintenance work.

Many organizations struggle with increasing “Wrench-Time” through either ineffective Maintenance Planning and Scheduling or not having a Planning and Scheduling Function.

World Class Wrench Time is 55

-65%; most companies’ Wrench Time is between 18-30%

Transition from “Ineffective” to “Effective” Planning and Scheduling

FTE Positions	Before	After
Maintenance Techs	43	35
Maintenance Planners	0	4
Reliability Engineering Techs	0	4
Contractors	35	12
Total Personnel	78	55
	Wrench-Time = 28% 35 Contractors 18% OT	Wrench-Time = 55% 12 Contractors 5% OT

Example: Ineffective to Effective Planning and Scheduling Results

Low wrench-time impacts maintenance cost, production rate, stores stockouts and so much more.

- Example: If you have 10 Maintenance People who work 40 hours a week and your wrench-time is only 35%
- Here is the math:

Current State Wrench-Time Example: 35%

- 10 Maintenance Tech
 - Work 40 hours a week
 - $10 \times 40 \times .35 = “152”$ hours of proactive work (hands on tool Time)
- Future State Wrench-Time Example: 65%

- 10 Maintenance Tech
- Work 40 hours a week
- $10 \times 40 \times .65 = “260”$ hours of proactive work (hands on tool Time)
- 58% Increase in Wrench-Time

How to know if Maintenance Planning and Scheduling is effective or not?

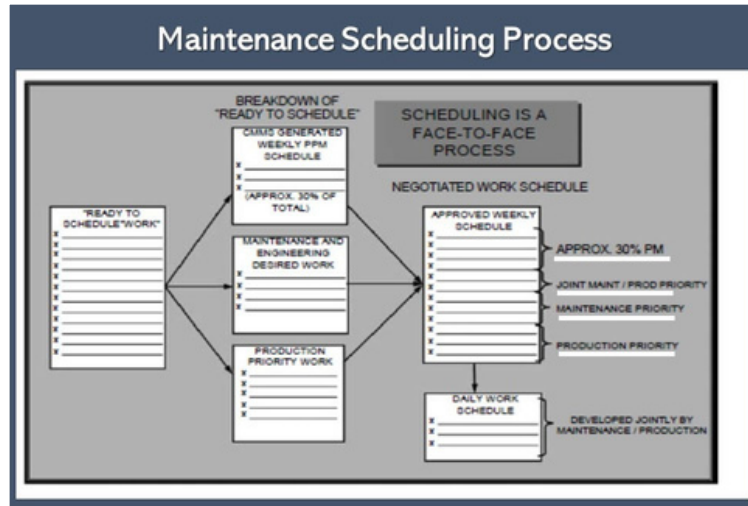
- People do not have the knowledge or understand the benefits of maintenance planning and scheduling, "Example": A reduction in reactivity thus resulting in reduced stress for everyone, increased capacity, decrease in cost, and reduction in equipment failures
- No Maintenance Planner/Scheduler – technicians planning/scheduling is Adhoc and thus ineffective
- Maintenance is Reactive, Tech looking for parts, looking for supervisor, looking for production, waiting on equipment to shut down
- Leadership does not demonstrate support for successful planning and scheduling resulting in stress for everyone
- People have biases based on experience with planning and scheduling however they have never seen "Proactive Planning and Scheduling"
- We are measuring the wrong things
- People say they have seen it before, and it does not work
- No one knows the "Score in the Game" (Maintenance Planning and Scheduling)
- Management does not want to invest in Planning and Scheduling Training
- People are afraid people will lose their jobs as wrench time increases
- We don't know what we don't know

What to do about Planning and Scheduling is either not effective or nonexistent?

1. Send your Maintenance Planner and Best Maintenance Technician to Maintenance Planning and Scheduling Training
2. Create an SOP for Maintenance Planning and Scheduling
3. Define Roles and Responsibilities for Maintenance Planning and Scheduling

Task	Ops Mgr.	Maint Mgr.	Maint Foreman	Maint Head Foreman	Stores FM	Trades person	Maint Super	MRC Planner	Maint Planner	Asset Wrt Support
Repeatable Procedure	I	A	R	R	I	R	R	C	R	R
Scope of Work	C	A	R	R		C	R	R	R	
Parts Availability	I	A	C	R/C	R/C		R/C	I	R	C
Asset Availability	A	I	C	R/C			R	R	R	
Work Request	R	A	R	R		C	R	R	I	R
PM / PdM		A	R	R	C	R	R	C	R	R
Work Order Close Out		A	R	R		C	I	I	R	I
Scheduling	A	I	I	C/I	I	I	R/C	R/C	R	I
Verification of Work	I	I	R	C		C	A	I	I	
Failure Reporting	C/I	A	R	C		I	C	I	C	
Work Execution	I	A	C	C		R/C	C	I	I	
Special Tools/Equipment Availability	I	C	R/C	R/C	C	C	A	I/C		
Craft Availability	I	A	R	R			R	C	I	

4. Create a Process Map for Maintenance Planning and Scheduling



5. Create a Dashboard for Maintenance Planning and Scheduling



6. Assess the Current State of Planning and Scheduling

Planning

Calculation: Identify the number of "yes" answers and multiply by 10 for a total for this section. (Possible 100 points)

Questions	Yes/No
a) Does most of the maintenance work scheduled have pre-planned job packages developed for them? (all specifications, procedures, parts, labor, etc. identified)	
b) Does the planner use the maintenance staff to assist in the development of pre-planned job packages?	
c) When a planner/scheduler (or just a planner) is performing their day to day job they are never called upon to rush parts in for a breakdown?	
d) Does your planner identify backlog based on categories? (ie. Ready to schedule, waiting on parts, waiting on engineering, waiting to be planned, etc) and measured by labor hours, weeks of backlog?	
e) Does the planner validate whether a work request is valid or not?	
f) Does the planner provide feedback to the requester when a work request or notification has been entered into the CMMS/EAM System?	
g) Does the planner visit the job sites of work to be planned on at least 30% of jobs?	
h) Can the planner check status of planned work parts on the CMMS/EAM within 5 minutes or less of any job?	
i) Does the planner validate work request in 3 days or less?	
j) Do you have at least one planner or planner/scheduler for every 7 to 25 maintenance personnel?	
Total "yes" answers times 10 =	

Scheduling

Calculation: Identify the number of "yes" answers and multiply by 10 for a total for this section. (Possible 100 points)

Questions	Yes/No
a) Is someone responsible for scheduling either as a full-time maintenance scheduler or fulltime planner/scheduler?	
b) Do planner/schedulers or schedulers work closely with production to schedule maintenance work?	
c) Is maintenance work scheduled one week out at least?	
d) Is maintenance work scheduled by day?	
e) Is maintenance work scheduled with maintenance person's name or names assigned?	
f) On large outages do maintenance personnel provide input into the schedule?	
g) Does the scheduler or planner/scheduler facilitate the maintenance weekly scheduling meeting?	
h) The scheduler or planner/scheduler does not report to maintenance supervision. Reporting to maintenance manager is acceptable.	
i) Next week's schedule is posted at least the Friday prior for all to view to include maintenance and production.	
j) Is schedule compliance above 80%?	
Total "yes" answers times 10 =	

7. Create a Master Plan based on the assessment results applying the plan with “Quick Wins” and Long-Term Sustainment” along with measuring success along the way.



8. Implement the plan.

9. Measure and adjust the plan as needed



Join me for “Maintenance and Scheduling Workshop” February 8-10
(Live / Virtual via Zoom)

Join me "July 26-28" for Maintenance Planning and Scheduling Workshop
Virtual (Zoom - Internet)

A promotional graphic for a workshop. The top part is a dark blue rectangle with white and yellow text. It says "LIVE VIRTUAL TRAINING" and "COST \$950.00 USD". The main title is "MAINTENANCE PLANNING AND SCHEDULING" in large yellow letters, followed by "3-Days of High-Intensive, Interactive and Engaging Masterclass!". Below that, it lists "DATES: 26-28 July", "LOCATIONS: Virtual via ZOOM", and "Hours: 9:00am ET - 5:00pm ET". The bottom part of the graphic shows a photo of two men in hard hats and safety vests giving thumbs up. To the left of the photo is a smaller photo of a man in a suit, with text: "Learning through Hands-On Exercise and Knowledge Sharing" and "Training by Ricky Smith CMRP, CMRT, CRL".

Questions? Email me at rsmith@worldclassmaintenance.org

#1 Software for Maintenance & Reliability Teams

UpKeep is a service-first company that builds software designed to make maintenance easier for technicians and managers everywhere. Reduce downtime up to 18% by switching over to a preventative maintenance solution!

www.upkeep.com

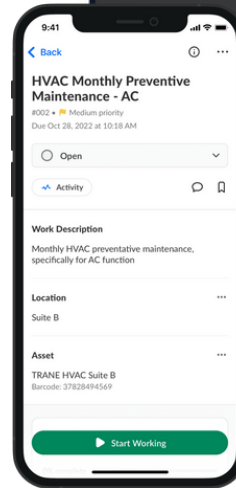
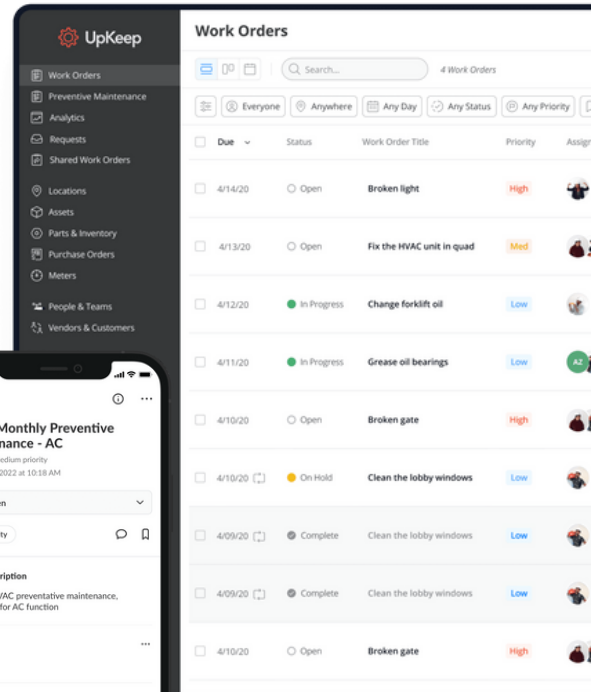
Our Products



Mobile-first maintenance management and collaboration across all location, assets, and teams

With nearly 340 different machines in our work environment, it's an impossible task to manually assign and track PM's. **With UpKeep we can schedule regular maintenance without overlapping tasks with other critical jobs."**

★★★★★ Paul D, Health and Safety Coordinator



An end-to-end solution for remote condition-based monitoring

Connected and secure IoT sensors for real-time remote condition asset monitoring



Integrated & Centralized Data Ecosystem for World Class Asset Operations

The only purpose built Asset Data Platform. Asset Focused ELT Solution for advanced analytics and integrated, real-time asset data.

The Maintenance Community Coalition was founded on the belief that working together will benefit everyone within our community

Committed to helping each other thrive in our individual professional journeys by sharing resources and expertise, granting scholarships, hosting events, and unlocking knowledge – always at no cost.

