



# Increase production capacity without adding equipment, people

**S**tockholders and corporate boards want their management teams to get every last bit of productivity and capacity from resources currently available.

With regard to the maintenance function, the average plant can improve labor effectiveness by more than 20 percent by establishing control and stability of work management practices. The result would be getting the same amount of work done with 20-percent fewer labor hours. For a typical 100-person maintenance shop that would be  $20 \times \$50/\text{hr} \times 1,750 \text{ hrs/yr} = \$1.75 \text{ million/yr}$ . Those resource hours could be used to do other value-added work; such as taking contracted work in-house, doing more preventive maintenance (PM) or reducing overtime.

How do you know if you have room to improve? You can be reasonably sure you've driven out most of the waste from your work management system if the following performance measures have been achieved:

- Emergency and urgent work orders are under 10 percent of the total labor expended.
- PM completion rates are routinely more than 95 percent.
- More than 80 percent of your mainte-

nance work is planned and scheduled work.

- More than 95 percent of your maintenance work force hours are scheduled several days in advance.
- You have greater than 90-percent work order schedule compliance.
- 100 percent of all labor hours are accounted for on work orders.

If you aren't achieving these performance levels check your opinion of the maintenance function. Do you believe that the maintenance function is just an overhead cost, or do you believe the maintenance function exists to increase production availability and capacity?

The maintenance function's purpose is to preserve or improve availability of production systems. Availability of production systems increases production capacity. It is typically 2.5 to 4 times costlier to run-to-failure and deal with unplanned corrective maintenance than to do planned and scheduled maintenance.

In order to be efficient, your organization must establish control and stability of work management processes. There are several key elements for getting control and

stability established:

- Have a well-defined work management process, and require process discipline.
- Know what work needs to be done, and prioritize the work.
- Plan the work; have the right parts, tools, support equipment and skills identified and available.
- Coordinate the work with operations to minimize impact on production.
- Complete the work and document what was done.

A well-defined work management process includes flow charts and assignment of responsibility and accountability for each activity. Process discipline must be established so supervisors and managers have the foundation for consistent performance expectations.

Identifying and prioritizing work focuses efforts on the important tasks. A good criticality and prioritization model should be applied so only true emergency or urgent tasks are allowed to break coordinated work schedules.

Planning the work means having all the labor skills, parts, support equipment (manlifts, scaffolding, etc.), permits, material safe-

ty data sheets, task descriptions, etc. identified and ready to go. When all the planning is done, the task is ready to schedule. PM tasks are of high importance and must be scheduled ahead of other routine planned maintenance. Other planned maintenance is placed on the work schedule behind the PMs.

When items are placed on the schedule they are not locked in until after the proposed work is coordinated with the operations function. Once the coordination is completed and the schedule is agreed on there needs to be discipline in carrying out the schedule. Only true emergency and urgent requests should be allowed to break the schedule.

As work is completed, care should be taken to ensure the history gets captured in the maintenance management software system. This will provide a way to retain knowledge as personnel retire, analyze impacts of planned and unplanned maintenance on production, and apply reliability engineering tools (failure modes and effects analysis, reliability centered maintenance, and root cause analysis) to reduce impacts on capacity.

For more information, visit [www.alidade-mer.com](http://www.alidade-mer.com) or call (321) 773-3356. ●

## CAN YOU GET MORE FROM YOUR PLANT & YOUR PEOPLE?



**Insight, advice and support for operations and maintenance excellence.**

We're your problem solving partner; helping organizations improve performance.

Results achieved by our clients:

- 98% PM completion rates, over 94% work order schedule compliance
- 22% to 31% improvement in maintenance management labor effectiveness
- Critical system mean time between upsets increased from 3 hours to +240 hours
- 45.2% reduction in PM task hours, while improving reliability & production availability by 1.4% annually

Alidade's business model offers tailored, scalable support from proven, credentialed (PE, CMRP, CRE, MBA) maintenance and reliability professionals that have over 25 years of experience. Alidade's Organizational Reliability Model® provides the framework to establish control & stability of work management processes, providing the solid foundation for proactive reliability.

We're experts at developing supervisor and manager leadership skills, accountability and results.

**Office: (321) 773-3356**  
[www.alidade-mer.com](http://www.alidade-mer.com)

**Mobile: (321) 961-4306**  
[info@alidade-mer.com](mailto:info@alidade-mer.com)

## NEWS UPDATE

### NPRA comments on chemical safety laws



**NPRA**

WASHINGTON — NPRA emphasized the need for chemical safety laws that ensure the protection of the public while encouraging American innovation and economic growth in written testimony given to the Senate Subcommittee on Superfund, Toxics and Environmental Health as the panel held a hearing to discuss the effectiveness of U.S. chemical safety laws.

"There is nothing more important to NPRA's members than the safety of the products they produce," NPRA stated in its testimony. "Our industry supports the reasonable modernization of our chemical safety laws, such as the Toxic Substances Control Act (TSCA), but we also believe any modernization must be tiered, targeted and risk-based."

"Chemical regulation modernization must take into consideration domestic innovation, the ease of entry into the marketplace, American competitiveness and information protection."

"For generations, the United States has been one of most economically pro-

ductive countries in the world. America has long been a world leader in innovation and technology, and our laws should foster this innovation rather than impeding it by giving advantages to our foreign competitors. It is pivotal that any chemical regulation program protect human health and the environment while at the same time promoting innovation, economic growth and American competitiveness in the global marketplace."

"NPRA supports the sound, science-based modernization of our nation's chemical safety laws. However, we urge Congress to be mindful of the need to preserve those areas of regulation that work well while striving to improve the areas that are lacking."

The TSCA, enacted in 1976, provides the EPA authority to regulate chemicals in commerce. Past legislative attempts to modify the law have been unsuccessful.

For more information, visit [www.npra.org/cmsRelatedFiles/NPRA\\_Chemical\\_Safety\\_Statement\\_2\\_4\\_11.pdf](http://www.npra.org/cmsRelatedFiles/NPRA_Chemical_Safety_Statement_2_4_11.pdf) or call (202) 457-0480. ●