



John P. Kravontka, CMRP **President - Manufacturing Solutions**

John Kravontka, CMRP, Certified Maintenance & Reliability Professional and President of Manufacturing Solutions LLC, is a training specialist, Maintenance professional, and Continuous Improvement consultant. John has more than 38 years of training, troubleshooting and rebuild/retrofit experience, with all types of machine tools and equipment. Mr. Kravontka uses many Lean manufacturing methodologies to help his clients increase their equipment productivity and reliability. His strength has been to transfer that knowledge and experience, providing immediate and sustainable results for his clients.

Education

AS, Industrial Technologies - 1988
Manchester Community College

Licenses and Registrations

Certified Maintenance and Reliability
Professional

TOTAL PRODUCTIVE MAINTENANCE

Starting out as a Machine Tool Maintenance Apprentice, Mr. Kravontka has experience implementing Total Productive Maintenance in many different industries. A sample of results includes:

North Haven, CT: Assisted client in improving productivity of main Corrugator. In one week's time, improved the output of Corrugator by 9%. Improved converting equipment productivity (down line) by 7% (better quality). Reduced CART changeover time by 34%. ROI for company for this work was 3 weeks.

Newark, DE: Consulted and trained a Pharmaceutical client, to assist them in improving the output of their 5 production lines. Within one year the output of those 5 lines had improved 20%. 5 years later they have sustained a 40% increase in equipment output.

Las Vegas, NV: Trained Operators and Maintenance personnel at an automotive supplier. Within two months their Haven Cut-off/Chamfer machine output was improved by 25% with a scrap reduction of 96%. PM guidelines were optimized, shims were eliminated from tooling and the equipment was modified to provide better accessibility and ease of maintenance.

EQUIPMENT RELIABILITY

Mr. Kravontka believes in "hands – on" involvement and innovative team approaches to improve equipment effectiveness. Here are a few client examples:

Milford, DE: Consulted with a Dental supply company to improve the productivity and reliability of their production filling equipment. Primary filling machine output was doubled, allowing them to eliminate a second machine, and bring another product line into the space vacated by machine number 2.

Windsor, CT: This client's most critical piece of equipment, had its output improved by 60%, in a one week time frame. Rework and overtime costs were reduced by \$65,000 per year, saving over 23,000 kilowatt hours of energy.

MAINTENANCE EXCELLENCE

Mr. Kravontka and his team have developed a set of criteria (measurement system) that will assist clients in developing a maintenance strategy to improve and sustain equipment productivity/reliability.

Worcester, England: Worked with a Latch Manufacturer to improve the reliability of their main assembly machine, using PM Optimization tools and Overall Equipment Effectiveness observations. In three days time equipment output was improved by 250% and scrap reduced by 10%. 10 major air leaks were repaired, resulting in a \$2,200 annual savings and the preventive maintenance guidelines were optimized for sustainability.

Wichita Falls, TX: Consulted with a Tool Manufacturer, over a two year period. Over that time frame, maintenance costs were reduced by 20% (\$1.4M), while equipment reliability was being improved by an average of 10%. Enough air leaks were eliminated to be able to shut down a 200HP air compressor, saving \$30,000 per year in energy costs. Counter Measures were created, designed and implemented that reduced water consumption by 46%.

Bloomfield, CT: Improved the maintenance and the effectiveness of environmental systems at this aerospace manufacturer. A more focused Maintenance PM was developed that required 1 maintenance technician 1 hour, instead of 2 technicians, 8 hours. Part of the improvement was the modification of the PM documentation. It now matched the NESHAP paperwork exactly.

Moosup, CT: Consulted and trained with an aerospace manufacturer to improve the maintenance and reliability of their production equipment. During a 4 year time frame (while the equipment output improved), maintenance costs were reduced by 10%, when typically those costs would be steadily increasing. More focused PMs, use of new predictive maintenance tools, operator input, better data and reduced use of outside contractors were all part of the formula for success.

Maintenance Manager 101 **3 Day Workshop**

Do you have a strategy for improving maintenance in your facility?

- Are you just “treading water” going from breakdown to breakdown, every day, with no hope of getting out of the breakdown cycle?
- Have you just taken over as Maintenance Manager, and in need of a plan forward?
- Are you a seasoned maintenance manager, looking to take your maintenance crew to the next level?
- Are you trying to get out of the breakdown mode of operation and perform more proactive maintenance in your facility?
- Are performing preventive maintenance, but not getting any return from it?
- Can you measure the return from your PM's?
- Do you want to perform more condition based PM?
- Are you worried every day about a breakdown that will shut down your plant?
- Do you feel you do not have enough maintenance personnel?
- Do you know where the waste is, in your maintenance process?
- Do you know the tools that can find that waste and minimize it?
- Are you planning maintenance effectively?
- Do you know what maintenance skills are needed in your plant?
- Do you have a specific training plan for your maintenance technicians?
- Can you utilize your maintenance history to improve your equipment?
- Are you using the latest predictive tools to improve equipment and lower energy costs?
- Do you know what causes the failures in your equipment?
- Do you know the 6 major equipment related losses, and how they relate to your maintenance efforts?
- Do you know where the lubrication problems are in your plant?
- Have you attended classes & seminars that don't explain “HOW” to implement?

We will cover these questions and more in a 3 day Maintenance Manager 101 session.

Before you return to your facility, you will be introduced to a Maintenance measurement system that will help you put a plan together. You will develop a step by step plan to take your maintenance group to the next level of operation. These are do-able, bite size steps that will move your maintenance group forward.

Here are some of the topics that we will cover during the 3 day session.

Maintenance Manager 101 3 Day Workshop

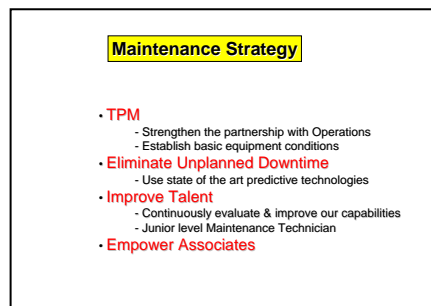
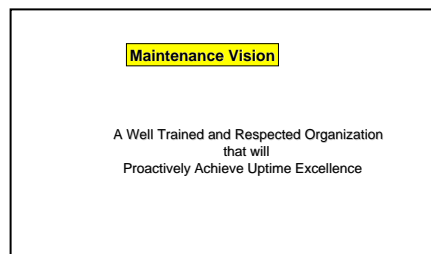
Day 1:

- **What is your Maintenance Vision?**
 - **Develop a Maintenance Vision**

In their book, “The Strategy Focused Organization”, Kaplan and Norton advocate understanding the mission of an organization, since it aligns all employees’ efforts, eliminating waste that is typical of all organizations without focus.

As a Maintenance organization, what do we want to become, in 5 years and what is the strategy to get there? What does maintenance want to achieve, who are its customers? In some organizations the name for Maintenance is Machine or Equipment Repair. What does that tell you their function is? To repair equipment, after it breaks down!

With the main members of a Maintenance department, in less than 4 hours, we can ask questions, put issues on the table, and start to get those Maintenance personnel, to view themselves and what they want to be doing 5 years down the road. This becomes the basis for their Maintenance Vision. We can then start to put together a strategy on how we can accomplish this Vision. Examples:



- **What are your critical pieces of equipment?**
 - **Ratings A, B or C**
 - **Within 30 days determine your critical equipment**

- **What is the condition of those critical pieces of equipment?**
 - **Evaluate critical equipment; assign a “code” for use with annual capital plan.**

Develop a condition code evaluation process to evaluate your production and facility equipment. For use by Maintenance and Production Managers, to develop an effective capital plan for equipment replacement and upgrading.

Asset/ Equipment Evaluation Condition Code	
Name: _____	Date: _____
Asset #: _____	Plant: _____
Description: _____	Department #: _____
	Location: _____
Condition Code <input type="checkbox"/>	Equipment Criticality <input type="checkbox"/>
0 = No Repair Needed 1 = Minor Repairs 2 = Major Repairs 3 = Semi-overhaul 4 = Rebuild/ Retrofit/ Replace? Capital \$\$ 5 = Obsolete/ Replace	A = Plant Major/ Critical B = Line Major/ Can be by-passed C = Major/ Can be by-passed D = Non-Major Production Accessory E = Non-Major Support Accessory
<input type="checkbox"/> Pneumatic system	Comments: _____
<input type="checkbox"/> Hydraulic system	Comments: _____
<input type="checkbox"/> Motors/ Drives	Comments: _____
<input type="checkbox"/> Controllers/ PLC	Comments: _____
<input type="checkbox"/> Mechanical systems	Comments: _____
<input type="checkbox"/> Lubrication system	Comments: _____
<input type="checkbox"/> Cooling & Chilling Systems	Comments: _____
<input type="checkbox"/> Electrical Systems	Comments: _____
<input type="checkbox"/> Safety/ Guarding	Comments: _____
<input type="checkbox"/> Tooling/ Fixtures	Comments: _____

- **What are the maintenance skills required, to maintain that critical equipment in your facility?**
 - **Perform a maintenance “skills matrix” evaluation, to provide training in the correct areas, or to hire people with the correct skills.**

Develop a Maintenance skills matrix to evaluate Maintenance personnel in your manufacturing facility, on your equipment. To: 1) develop a training plan for providing focused Maintenance training 2) use for hiring of future maintenance personnel.

A small sample of Maintenance skills is shown below.

Employee Name	Job Title	Industrial Maintenance Worker
Employee # _____	Job Code	

Employee and Supervisor reach agreement on Skill rating (0-10)

- 0 Awareness** - No real exposure to skill. May have limited awareness of issues; an ability to comply with rules & procedures.
- 1-2 Basic Understanding** - Enough knowledge and skill to be of help in doing the job, but needs a lot of direction; learning basics.
- 3-4 Elementary Proficiency** - Sufficient skill to be a real contributor to getting the job done, but still needs direction; still learning.
- 5-6 Full Proficiency** - Adept; sufficient skill development to be an independent performer.
- 7-8 Expert** - Considerably more skill than the job requires; a teacher.
- 9-10 Guru** - Knows more about the skill than virtually any job would ever require; experimenter, inventor, theorist.

Enter 0-10 as applicable

Skills	Date											
BEARINGS												
Theory												
Types - Rotary, Linear, Bushings												
Ratings												
Installation techniques												
Disassembly techniques												
Lubrication												
Troubleshooting/Detection												
Preventive Maintenance												
Storage												

- **What does it take to approach Zero Equipment Stoppages?**
 - **How does equipment fail?**
 - **Stabilizing equipment failure rates**
 - **Overall Equipment Effectiveness (OEE)**
 - **How do you rate in the 4 phases of approaching Zero Stoppages?**

- **How to develop Lubrication Excellence**
- **Evaluate your Lubrication strategy**
 - **Receiving of oils/greases**
 - **Storage of oils/greases**
 - **Delivery of oils/greases to equipment**
 - **Disposal of oils/greases**
 - **Troubleshooting of lubrication systems**

Day 3:

- **Do you perform good solid Preventive Maintenance?**
 - **PM Optimization**
 - **Developing Condition Based Preventive Maintenance**
 - **Predictive Maintenance**

- **Planning & Scheduling**

1) *Identify and understand the six support systems maintenance relies on:*

2) *Planning*

3) *Scheduling*

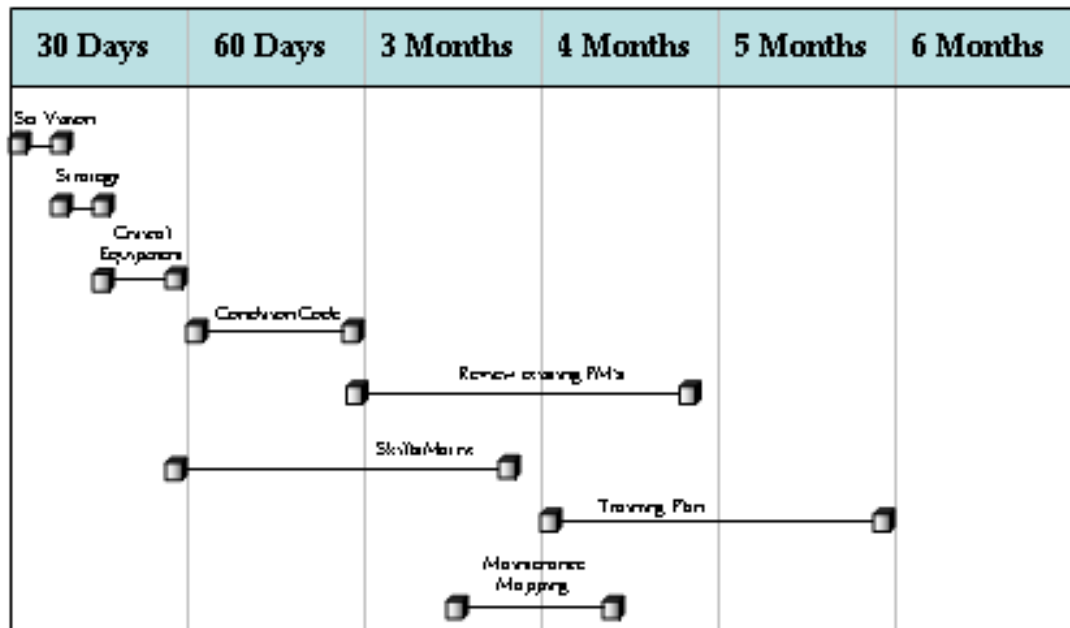
- **Barriers to World Class Maintenance**
 - **Discuss problems**

- **Maintenance Measures**

- **Evaluate your current state utilizing TPM/Maintenance Criteria.**

- Re-cap and develop a going forward plan.

Maintenance Plan



- Questions/answers