



Implementing Effective Preventive and Predictive Programs

Achieve Profit and Customer-Centered Maintenance

This TrueWorkShop™ is Tailored for Participants from Maintenance and Facilities Management Operations to Achieve Measurable Bottom-Line Results

On-Site Training Opportunities

Put TMEII's expertise in maintenance and reliability training to work in your organization

TMEII is a results-oriented resource and provider of maintenance and reliability initiatives. You can benefit from our experience of presenting hundreds of on-site training and consulting sessions for large and small companies world-wide.

Contact Pete Peters at 919-270-1173 or Pete@PRIDE-in-Maintenance.com for more information!



100% Guarantee

A complete refund is provided if you cannot achieve a 10 to 1 return on investment from this training.

Ralph W. Peters
President, TMEII

This TrueWorkShop™ Will Provide You Answers to These 4 Important Questions:

1. Are you taking risks related to safety, security, health, and the environment?
2. Could critical equipment failures completely shut down your operation?
3. Should you consider contract maintenance?
4. Are you dissatisfied and really want to improve?

And

Will Help You To:

- Avoid having major equipment or facility failures and
- Implement two very important maintenance best practices

TMEII CONTACTS:

Pete at 919-270-1173 (Pete@PRIDE-in-Maintenance.com) or Anne at 919-896-5368 (Anne@PRIDE-in-Maintenance.com) to coordinate a custom in-house session.

Implementing Effective Preventive and Predictive Programs

You Can Achieve Measurable Results from PM and PdM:

Preventive Maintenance (**PM**) is the first line of defense for your physical assets, whether they are in a manufacturing plant, a university facilities complex, a hospital, a fleet of delivery trucks, a sports arena or a golf course. PM is that very important first step of performing PM tasks based upon time interval, miles or operating hours. And where PM leaves off, Predictive Maintenance (**PdM**) needs to take over and provide a “prediction” of potential failures based upon actual operating conditions.

This **TrueWorkShop™** will also briefly cover two more strategies that go way beyond PdM, Reliability-Centered Maintenance (**RCM**), and Risk-Based Maintenance (**RBM**). This practical **TrueWorkShop™** will:

- Present in detail the key elements of PM and PdM maintenance approaches plus RCM and RBM
- Explain their positive impacts on equipment reliability, productivity, and cost of maintenance
- Describe how to develop and install a tailor-made P/PdM program to obtain these results

It is an important “How to Do it Guide” for implementing, measuring results and successfully applying today’s best practices for Preventive (PM) and Predictive Maintenance (PdM). This **TrueWorkShop™** will help ensure you have other basic practices in place for a profit and customer-centered operation.

Who Should Attend:

- Engineering Manager
- Facility Managers
- Future Foremen
- Future Supervisors
- Maintenance Coordinators
- Maintenance Engineers
- Maintenance Foremen
- Maintenance Planners
- Maintenance Supervisors
- Plant Directors
- Plant Engineers
- Property Managers
- Storeroom Managers

What is a TrueWorkShop™?

The Maintenance Excellence Institute believes the [principles](#) and [practices](#) covered can be taken back and put into practice for a true return on investment for the training. We provide:

- Extensive practical exercises on key topics
- Extensive idea sharing and instructor’s case studies from over 300 plant and facility sites.
- Each attendee with today’s most comprehensive benchmarking tool; *The Scoreboard for Maintenance Excellence* to complete prior to start date.

You will begin parts of this **TrueWorkShop™** *before* the actual start date; and you will receive personal follow up *after* it is over.

It’s a ‘How To’ Step-by-Step Approach

This **TrueWorkShop™** will guide you step-by-step through the PM & PdM installation process, helping you to:

- Assess your current needs and present PM performance
- Define criticality of assets, your repair problems, and goals
- Plan for PdM and Develop the optimum PM & PdM program for your operation
- Understand how RCM and RBM can apply for the optimum solution
- Justify your investment and validate the benefits
- Develop a realistic Plan of Action
- Measure benefits with your Maintenance Excellence Index
- Sell your program to Top Leaders and continue it long term

After this **TrueWorkShop™** you will know how to evaluate your maintenance situation with [The Scoreboard for Maintenance Excellence](#), improve top priority areas, and get the results you want.

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TrueWorkShop™ Topics

On-site TrueWorkShops™ are customized to meet your specific goals and objectives. Below is a sample outline which can be modified as needed to ensure the results you are looking for.

Day One:

Introductions, Participants Review Areas for Improvement and Select Project Teams

- Today's Maintenance Challenge
- Maintenance Around the World
- How to Ensure Other Best Practices are in Place
- Developing Your Maintenance Excellence Strategy (Boeing Case Study)
- Using The [Scoreboard for Maintenance Excellence](#) to Define "Where You Are Now"

The Maintenance and Equipment Audit: Key Step before Starting PM/PdM

- Determine your current maintenance productivity
- Establish your current equipment condition and equipment performance (baseline)
- Determine the need for PM and PdM
- Calculate costs and benefits of P/PdM

Determining the Right PM System for Your Type Maintenance Operation

- Different types of PM
- PM organization and staffing

PM Techniques

- How to determine PM requirements for your equipment
- Equipment cleaning and lubrication
- Equipment inspections, adjustments and servicing

Day Two

How to Develop and Install a Good PM System

- The 10-step PM installation program
- Keeping an effective and useful equipment history
- PM work orders/PM checklists/PM reports

How to Plan and Schedule PM and Measure Results

- Determining PM frequencies and how to schedule PM
- Time-based or usage-based scheduling
- How to measure PM effectiveness and results
- Measuring and analyzing downtime and downtime trends

Day Two (cont'd):

Predictive Maintenance Techniques, Applications, and Instrumentation

- Elements of PdM (mechanical and electrical)
- Equipment condition monitoring
- Predicting potential equipment breakdowns or expensive repairs

Specific PdM Techniques and Applications

- Vibration analysis/monitoring
- Shock pulse method
- Spectrographic oil analysis
- Ferrographic particle analysis
- Thermography/temperature measurement
- Non-destructive testing (NDT)
- Ultrasonic testing, and more

Day Three:

Getting Organized for PdM

- Planning for PdM; the preparatory steps
- Starting with a PdM pilot program
- Scheduling PdM
- Combining PdM with PM for greatest overall effect and least cost
- Organizational requirements

Measuring Results of PdM

- PdM database/data collection
- Costs of PdM (equipment/instruments, labor, and services)
- How to determine PdM benefits and return on investment (ROI)
- Decision factors for in-house vs. contracted PdM

Components of a Well-Organized PM/PdM Program

- Equipment inventory/numbering system
- Spare parts inventory/forecast
- Sequence of tasks (PM and PdM routes)
- Equipment and maintenance performance indicators and trends

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Day Three (cont'd):

Combining Planned Maintenance, PM, PdM and TPM for Best Overall Results at the Least Costs

- Custom-making your maintenance system based on your equipment, plant location(s), and plant size
- Selling your solution to management (and getting the budget and management commitment)
- Phased installation for guaranteed results

Other Important Maintenance Best Practices

- Continuous Reliability Improvement (CRI)
- Making (RCM) Work for You
- Strategies for Total Productive Maintenance (TPM)
- Using (RBM) as a Risk Management Tool
- Maximize the Value of Your CMMS
- Using the CMMS Benchmarking System (SIDERAR Case Study on SAP)

Additional TrueWorkShop™ Deliverables

This TrueWorkShop™ provides these important additional deliverables in easy to use Excel format.

1. A **SCOREBOARD FOR MAINTENANCE EXCELLENCE** that can be used by each attendee's operation for benchmarking against today's best practices.
2. The **CMMS BENCHMARKING SYSTEM** - For gaining maximum value from an existing CMMS.
3. The **RELIABILITY & MAINTENANCE EXCELLENCE INDEX** - A powerful, performance measurement process to validate shop level results.

Gain an Understanding of the True Value of Maintenance:

Regardless of the type of operation, Top Leaders must understand the "true value of maintenance."

Maintenance Leaders must develop and nurture an organizational culture that clearly supports long-term continuous maintenance improvement.

Training for Maintenance Excellence supports our belief in the basics and building upon basic best practices as the foundation for advanced maintenance practices that achieve reliability and maintenance excellence.

Your Instructors and Coaches



Ralph W. (Pete) Peters the Founder/President of The Maintenance Excellence Institute International is your primary instructor. His experience of over 40 years has included being a manufacturing plant manager at two sites; director of facilities management. He has had extensive maintenance experience within the US

Army beginning in Vietnam (1970) and with the US Army Corps of Engineers building what is now called, the National Highway. He consults and provides maintenance best practice training in over 30 countries, written maintenance chapters in four books as well as a book on *Maximizing the Value of Your CMMS*. In 2006, he wrote and published *Maintenance Benchmarking & Best Practices* for McGraw-Hill's professional book division. In 2015 he completed *Reliable Maintenance Planning, Estimating and Scheduling* for Elsevier's Gulf Publishing Division. Pete's positive approach and his experience from consulting, allows him to be an excellent coach for today's top leaders, maintenance leaders and craft leaders. His worldwide **PRIDE-in-Maintenance** initiative will be highlighted in his next book with key topics from this universal book included in all of his worldwide **TrueWorkShops™**.



Sergio Rossi founded RPM4M in 2000, after having worked as a plant engineer, a maintenance manager, a corporate reliability manager and a senior engineer in the food, plastics, and aerospace industries. He learned, hands-on, how to implement Continuous Improvement Processes such as TPM, RCM, OBM, and PdM. After experi-

encing these implementations, he saw the need to simplify, adapt, and improve existing approaches while creating new processes exclusively developed for solving all machine related issues. His vision was to become a complete and single provider of an integrated maintenance, reliability, and performance solution for minimizing reactive maintenance losses in machine-critical manufacturing industries. Finite Element Manufacturing (FEMsm), a process proven to minimize downtime, was the final result of his development efforts. Sergio holds a degree in electrical engineering from the University of Colorado, several patents, and speaks fluent Spanish.

Even in Good Economic Times Maintenance is Forever!

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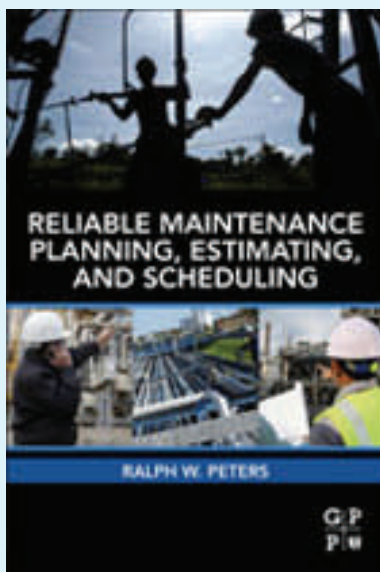
We Personally Guarantee This TrueWorkShop™!

We will give you the firepower and knowledge needed to implement a successful PM program, to use the Predictive Maintenance and Conditioned-Based maintenance technologies that apply to your operation. We will reinforce your current maintenance needs to the top leaders in your organization.

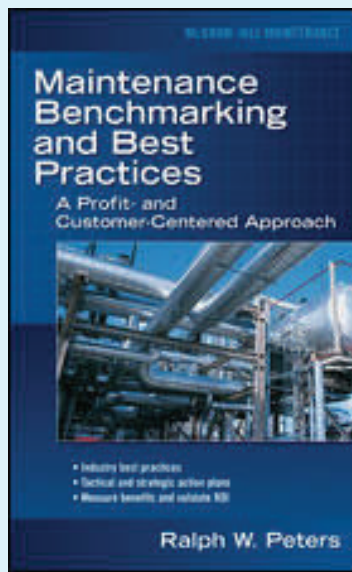
We will help you be “the maintenance messenger” to get action from Top Leaders. We can personally help you make a difference in the total operations success of your organization after you attend this event! Top Leaders must clearly understand your needs and the consequences of gambling with maintenance costs and a bad PM and PdM program.

Extensive Knowledge base of References to Take Home:

This workshop is based on Pete’s two books:



Reliable Maintenance Planning, Estimating and Scheduling



Maintenance Benchmarking and Best Practices

TMEII provides more electronic references for all TrueWorkShops™ than any other series of courses now being offered from around the world.

Each attendee will receive e-book copies of these two major books plus many, many more valuable topic references on CD. The electronic versions are included to allow easy application and duplication of all course materials. Attendees receive all PowerPoint’s used and “one of the largest Maintenance, Reliability and MRO Materials Management Glossary” currently available.

TMEII believes in providing each attendee an extensive knowledge base to support professional development well beyond actual class time.

Take An Important First Step:

This training process is for application and not theory. Like the book, this training is for both the public and private sector in plant maintenance and pure facilities maintenance. Remember, we guarantee this TrueWorkShop™ will help provide you with the important steps to improve the maintenance process and the business side of the maintenance in your operation.

Training is Not Over When it’s Over!

Your company will benefit most if you attend with a 3 or 4 person company team which will work together. You return to your organization with the new knowledge and team support for PM and PdM along with your new plans for reliability and maintenance excellence. We invite your Top Leaders, Maintenance Leaders and Craft Leaders to attend as a team. The workshop “**is definitely not over when it’s over.**” **Yogi Berra once said, “It ain’t over until it’s over!”**

Your session is definitely not over when it’s over! Following completion of this TrueWorkShop™ a personalized follow-up will be scheduled for each attending organization. Our one-on-one coaching is to help you apply the key topics and to implement your plan of action. Implementation is your key to results and we want to help you make that happen!



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