



# Maintenance Workshops

Workshop 1: 11th - 13th March 2013, Kuala Lumpur, Malaysia

## Condition Based Maintenance with Preventive & Predictive Technologies

Workshop 2: 14th - 15th March 2013, Kuala Lumpur, Malaysia

## Maximizing The Value Of Your CMMS/EAM



Ralph W. "Pete" Peters

Founder - President  
The Maintenance  
Excellence Institute

### Membership

- Association of Facility Engineers.
- The Institute of Industrial Engineers.
- The Society of Maintenance and Reliability Professionals.

### Publications

- Maintenance Benchmarking and Best Practices - A Profit and Customer-Centered Approach Maximizing Maintenance for Profit Optimization.
- Maximizing the Value of Facilities Management Operations.
- The Guide to Computerized Maintenance Management Systems.
- Reliable Maintenance Planning, Estimating and Scheduling (current book in progress scheduled).

### TESTIMONIALS FROM PETE'S CLIENTS:

*"There are very few people with his total asset management knowledge and the ability to teach like he does around the world".*

**Managing Director-Nigerian Liquid Natural Gas**

*"Your Reliable Maintenance Excellence Index is a terrific tool for us to finally measure the true value of maintenance".*

**Maintenance Manager, BP Texas City Refinery**

*"A great course on Electrical System Inspection, Testing and Commissioning with a great focus upon asset integrity management. Very useful for shutdown and outage planning as well!"*

**Training Manager, Sinopec China**

*"This is the only company and trainer that I know about that offers free one on one support to attendees long after the training is over to help them implement topics and practices from each of his sessions".*

**CEO, The MAT Group**

*"His knowledge of CMMS system functionality helped our company evaluate more closely the existing EAM system maintenance module that we owned as part of our plant EAM. Instead of spending thousands of dollars for another separate CMMS we now have a fully integrated system .that works!"*

**VP Maintenance and Industrial Engineering-Anderson Packaging**

### KEY BENEFITS OF ATTENDING

#### Workshop 1

**Achieving Condition Based Maintenance with Effective Preventive Maintenance and Today's Predictive Maintenance Technologies.**

#### Workshop 2

**How to Optimize the Return on Investment for Your Computerized Maintenance Management System (CMMS)/Enterprise Asset Management (EAM).**

### FREE TAKEAWAYS

#### Best Practice Benchmarking Tools in Excel Format

- **The scorecard for maintenance excellence.**
- **The computerized maintenance management system benchmarking system.**
- **The reliable maintenance excellence index.**
- **Complimentary E-Book** version of Pete's McGraw Hill's book *"Maintenance Benchmarking and Best Practices: A Profit and Customer-Centered Approach"*.
- **Complimentary follow-up support via phone, email and even virtual sessions when needed.**

#### Limited Attendees

We have strictly limited seats. This to ensure maximum learning and experience for all delegates.

#### Certificate of Attendance

You will receive a Certificate of Attendance bearing the trainer's signature and the details of the Continuous Professional Development awarding organization.

#### Interactive Training

You will be attending a training designed with the latest knowledge and backed up by practical experience through interactive sessions. This will provide you with deeper and more long-term understanding of your current issues.

#### High Quality Course Materials

Both online and printed course manual will provide you with working materials throughout the course and will be an invaluable source of reference for you and your colleagues after the course.



**Workshop courses are HRDF Claimable**

\*subject to approval

**Skim SBL (C category) - 1433**

**Applicable to Malaysian company only.**

Proudly organized by: Absolute BME SDN BHD



ABSOLUTE Solution To Your Business Competency

**Absolute BME Sdn Bhd**

# THE AGENDA

## WORKSHOP 1 - 3 DAYS **Condition Based Maintenance with Preventive & Predictive Technologies**

### WORKSHOP OVERVIEW

Maintenance's key objective is to increase uptime without over-doing maintenance and the challenge lies in how to determine the right mix of Preventive Maintenance and Predictive Maintenance. Many organizations are also facing key decisions on whether to repair or to replace aging physical assets. By utilizing life cycle costing and value engineering concepts, companies can fully capitalize on existing assets and save on unnecessary expenses. ABSOLUTE BME's 3-day intensive Masterclass "Effective Preventive, Predictive & Condition-Based Maintenance" is a practical "How-to-Do-it Guide" for implementing, measuring results and successfully applying today's best practices for Preventive (PM) and Predictive Maintenance (PdM), covering essential maintenance operations that range from equipment selection and maintenance interval planning to condition-based monitoring techniques and lifecycle costing. In addition, delegates will be introduced to strategies that will enhance and improve PM & PdM - Reliability Centered Maintenance (RCM), Total Productive Maintenance (TPM), and Risk-Based Maintenance (RBM).

### KEY BENEFITS OF ATTENDING

- **ASSESS** your present Preventive (PM) & Predictive Maintenance (PdM) needs and **IMPROVE** current performance.
- **APPLY** Reliability-Centered Maintenance (RCM) & Total Productive Maintenance (TPM) principles to your maintenance strategy for PM and PdM.
- **LEARN** how "state of art" wireless CBM gives you a very economical continuous monitoring system using "cloud technology for analysis or data download to in house analysis system.
- **DEFINE** your critical asset repair or replacement problems via life cycle costing.
- **DEVELOP** the optimum strategic maintenance program for your physical assets.
- **COMMUNICATE** and **OBTAIN** management buy-in for maintenance programs by justifying with costs versus benefits.
- **DEVELOP** a phased installation or improvement plan for successful implementation.
- **MEASURE** and **VALIDATE** your resulting benefits by benchmarking against best practices.

### COURSE OUTLINE - 3 DAYS WORKSHOP

#### **DAY 1: 11th MARCH 2013**

##### INTRODUCTION

- Participants review Top 5 areas for improvement
- Today's maintenance challenge
- Maintenance around the world
- Proactive vs. Reactive maintenance
- How to ensure other best practices are in place
- Developing your maintenance excellence strategy
- Using the scoreboard for maintenance excellence to define "Where You Are"

**Case study: *The Anderson model: Best the best using the scoreboard***

##### DETERMINING THE RIGHT MAINTENANCE STRATEGY FOR YOUR EQUIPMENT

- Reliability - Centered Maintenance (RCM): An important tool to define the right maintenance strategy
- Lifecycle Costing - Optimizing repair/ Replacement decisions
- Different types of maintenance strategies and tasks:
  - \* Preventive maintenance (PM)
  - \* Predictive maintenance (PdM)
  - \* Condition based maintenance (CBM)
  - \* Continuous monitoring

##### HOW TO DEVELOP AND INSTALL A GOOD PM SYSTEM

- The 6-step PM installation program
    - \* Phase I Management awareness
    - \* Phase II Management commitment
    - \* Phase III Pilot program design
    - \* Phase IV Evaluate pilot program
    - \* Phase V Expand and operate the Total Program Evaluation of Total Program
    - \* Phase VI Continuous improvement and evaluation of Total Program
  - PM work orders/PM checklists/PM reports
  - Involve operators in basic PM Tasks with TPM
- Case study: *Best of best: A color illustrated PM tasks list***

##### SPECIFIC PDM TECHNIQUES AND APPLICATIONS

- Overview of PdM technologies now available
- Vibration analysis/monitoring
- Shock pulse method
- Spectrographic oil analysis
- Ferrographic particle analysis
- Thermography/temperature measurement
- Non-destructive testing (NDT)
- Ultrasonic testing and more

**DAY 1 moves us through the PM and PdM stages of CBM, both very as standalone program.**

**DAY 2 and DAY 3 will show you how to integrate these two along with RCM into an integrated CBM Program. In addition we will discuss "state of the art" and best value for implementing continuous monitoring using.**

# THE AGENDA

## WORKSHOP 1 - 3 DAYS **Condition Based Maintenance with Preventive & Predictive Technologies**

### DAY 2: 12th MARCH 2013

#### INTRODUCTION TO AND DEFINITION OF CONDITION BASED MAINTENANCE (CBM)

- Why change?
- CBM history
- Achieving more effective maintenance
- Goals of CBM
- Benefits of CBM

**Case study: Real world PDM analysis examples of what you can find with CBM**

#### BACKGROUND OF CBM

- Traditional maintenance
- How is maintenance accomplished today?
- Reactive and proactive maintenance approaches

#### ESSENTIAL ELEMENTS OF CBM

- CBM policy and doctrine
- Business strategy
- RCM relationship

#### TECHNICAL

- Hardware and software infrastructure and tools
- Architecture for CBM
- Open systems and data strategy
- CBM essential elements summary

#### GETTING STARTED - CBM IMPLEMENTATION

- Creating the CBM environment
- CBM and the acquisition life cycle
- CBM planning/technology selection phase
- CBM implementation phase
- CBM operations phase
- Forget the loop control wires: Getting started with wireless continuous monitoring

### DAY 3: 13th MARCH 2013

**THEME: PredictiveOnline™ Cloud Monitoring System**

#### MANAGING A CBM INITIATIVE OR PROJECT

- A CBM program review checklist
- A CBM management approach
- CBM relationships with other maintenance improvement efforts
- CBM and total life cycle systems management
- CBM and reliability centered maintenance
- CBM and performance based logistics
- CBM and systems engineering
- CBM and information technology portfolio management
- CBM and focused logistics.
- Overcoming barriers to CBM implementation
- Twenty questions a manager should consider

**Case study: Why should you consider CBM cloud services?**

#### MEASURING SUCCESS

- Implementation metrics - How to measure a successful implementation
- How to measure a maintenance program operating with CBM
- Using the reliable maintenance excellence index to
- Validate overall results

#### OTHER IMPORTANT MAINTENANCE BEST PRACTICES FOR SUCCESSFUL CBM

- Maintenance Planning, Estimating and Scheduling
- Using Risk-Based Maintenance as a Risk Management Tool
- Maximize the Value of Your CMMS Program
- Equipment inventory/numbering system
- We will demonstrate two system; one EPAC that is client based and the second eMaint that is "cloud based"
- Spare Parts Inventory Management

**Team presentations and closing remarks**

#### WHY YOU SHOULD ATTEND

By the end of this 3-day intensive Masterclass, delegates will be able to bring back with them a comprehensive and enhanced understanding of Maintenance tools and concepts, such as Reliability-Centred Maintenance (RCM), Total Productive Maintenance (TPM), Risk-Based Maintenance (RBM) etc.

In addition, delegates will receive practical hands-on experience in terms of defining the optimal mix of Preventive and Predictive Maintenance, and make informed choices regarding Condition-Based Monitoring techniques that are appropriate for their equipment.

To wrap up the course, delegates will draw up specific action plans to implement when they go back to their organizations.

Furthermore, even after the workshop is over, complimentary follow-up support is provided via phone, e-mail or Go To Meeting virtual sessions when needed.

#### WHO SHOULD ATTEND

- Maintenance Superintendents
- Maintenance Managers
- Maintenance Supervisors
- Maintenance Engineers
- Maintenance Planners
- PM/PdM Coordinators
- Reliability Managers
- Reliability Engineers
- Maintenance Foremen
- Engineering Managers
- Operations Managers
- Facility Managers
- Plant Directors
- Plant Engineers
- Physical Asset Managers
- Instrumentation Engineers and Key Process & Instrumentation Technicians

From industries including but not limited to:

**Mining, Oil & Gas, Utilities, Petrochemicals, Pharmaceutical & Healthcare, Government, Construction, Food & Beverages, Manufacturing, Automotive, Chemicals etc.**

All other industries that see physical asset management as a factor to business success such as facilities management and healthcare facilities management operations.

This course will support almost any organization needing better PM, how to bring in PDM and then advance to CBM with continuous real time monitoring.

# THE AGENDA

## WORKSHOP 2 - 2 DAYS **Maximizing The Value Of Your CMMS/EAM**

### WORKSHOP OVERVIEW

The ability of using Computerized Maintenance Management Systems (CMMS) to improve maintenance processes is very often limited after the actual purchase. Much depends on the people using the CMMS and the maintenance business process of which the system is part of. As many as over 90% of organizations are capable of improving an existing CMMS to reap greater value from an existing CMMS and achieve improved profit and customer-centered maintenance support to their total operation. In fact, surveys show that only about 30% of CMMS functionality is actually being used effectively.

ABSOLUTE BME's 2-day Masterclass on "Maximizing the Value of Your CMMS Systems" is guaranteed to help you gain better use of your CMMS and improve the utilization of CMMS in both the public and private sectors. The primary purpose is to help you improve your existing CMMS regardless of the vendor. It has universal applications and benefits, whether you are using SAP, MAXIMO or any of the many systems available. This course will help you improve all six maintenance resources; people, physical assets, technical skill resources, parts/materials, the hidden assets of teamwork and of course, information resources. Our goal is for you to get the best value possible from the CMMS you have or are intending to put in place.

### KEY BENEFITS OF ATTENDING

- **MEASURE** results from your overall maintenance operations.
- **ENSURE** data integrity of your current databases and "**Do It Right the First Time**".
- **BENCHMARK** against other best practices needed to make CMMS more valuable.
- **UNDERSTAND** and **OVERCOME** implementation barriers to CMMS to make CMMS work for you.
- **EVALUATE** your current CMMS and show a true return on investment for your CMMS.
- **SEE LIVE demonstrate two system**; one EPAC that is client based and the second eMaint that is "cloud based".

### COURSE OUTLINE - 2 DAYS WORKSHOP

#### DAY 1: 14th MARCH 2013

##### INTRODUCTION

- Review of Top 5 priorities for improvement by attendees
- CMMS: A maintenance business system for profit and Customer-Centered results
- **Defining where you are:** Using the CMMS benchmarking system

##### A STRATEGY TO GAIN MAXIMUM VALUE FROM CMMS

- Determine the true need for CMMS
- Determine maintenance best practices needed
- The CMMS evaluation and selection process
- The maintenance best practice implementation process
- The CMMS implementation process
- The CMMS benchmarking process

##### RETURN ON CMMS INVESTMENT

- How to improve operations culture & PRIDE in-Maintenance for CMMS acceptance
- Using CMMS to validate savings and benefits and to improve customer service
- CMMS success stories and case studies: BP, Marathon Oil, Nigerian Liquid Natural Gas
- Case studies: Evaluating, selecting and justifying a CMMS and related best practices (SIDERA Steel)

**Activity: Review of participant's CMMS benchmarking system results: Strengths and weaknesses**

##### IMPROVING EXISTING CMMS DATABASES OR "DOING THEM RIGHT THE FIRST TIME"

- Physical assets /Equipment history database
- MRO parts/Material database
- PM/PdM procedures
- Standard job plans and others
- How to conduct a scoreboard for maintenance excellence self-assessment

**Activity: Review scoreboard and define priority of best practice needs**

#### DAY 2: 15th MARCH 2013

##### EFFECTIVE CMMS REQUIRES BEST PRACTICES FOR GREATEST POSSIBLE RETURN ON INVESTMENT (ROI)

- Best practices in using CMMS to improve:
  - \* Work management and control
  - \* Planning, estimating and scheduling
  - \* Inventory and MRO materials management
  - \* Budget and cost control
  - \* Preventive/Predictive maintenance
  - \* Overview of Reliability-Centered Maintenance (RCM)

**Activity: Review prioritized best practice needs of participants**

##### WORKING SMARTER SO CMMS WORKS FOR YOU

- How PM/PdM improves overall equipment effectiveness (OEE)
- Improving craft productivity and overall craft effectiveness
- Measuring OCE (Overall Craft Effectiveness)
  - \* *Craft utilization*
  - \* *Craft performance*
  - \* *Craft service quality*

##### CMMS FUNCTIONALITY EVALUATION: DETERMINING THE THINGS YOUR CMMS NEEDS TO ACHIEVE

- Achieving and Validating Results with Your Reliable Maintenance Excellence Index
- Key Performance Metrics and Measures of CMMS Success
- Review of Qualitative & Quantitative Factors for Effective CMMS Utilization

**Case study: A look at CMMS functions and how to compare different systems**

# THE AGENDA

## WORKSHOP 2 - 2 DAYS **Maximizing The Value Of Your CMMS/EAM**

### CMMS IS ESSENTIAL FOR CONTINUOUS RELIABILITY IMPROVEMENT

- Going well beyond Total Productive Maintenance and Reliability-Centered Maintenance to improve all six maintenance resources:
  - \* *People*
  - \* *Physical assets*
  - \* *Technical skill resources*
  - \* *Parts/materials*
  - \* *Teamwork*
  - \* *Information resources*
- **Activity: Developing a plan of action to increase the value of your CMMS**

**Team presentations and closing remarks**

### WHY YOU SHOULD ATTEND

By the end of this intensive 2-day Masterclass, delegates will be able to benefit from a Computerised Maintenance Management System (CMMS) that is integrated with the overall maintenance and business processes, ensure the data quality and integrity of the current databases, save costs by doing it right the first time, evaluate their current CMMS and benchmark against best practices using TMEI's CMMS Benchmarking System, in order to demonstrate a true Return on Investment. In addition, delegates will take home universally applicable concepts to make their CMMS more valuable.

#### Workshop Schedule:

08:30	Registration & Tea
09:00	Starts of morning session
10:40	Refreshments & Networking
10:55	Resume of Morning Session
12:30	Lunch
13:45	Starts of afternoon session
15:10	Refreshments & Networking
15:25	Resume of Afternoon Session
17:00	End of Day / Course

### WHO SHOULD ATTEND

This course will be valuable professional development for a wide range of persons involved with **Maintenance**.

**Information Technology staff** serving as Systems Administrators will find it most helpful. While focused upon improving an existing CMMS, it will be extremely useful to operations that are either upgrading or implementing CMMS for the first time.

**Reliability Managers, Reliability Engineers, Maintenance Managers, Supervisors, Superintendents,** as well as **Planners & Schedulers** will find this course extremely valuable.

If you are managing **Contract Maintenance** operations, this course will help you integrate contractor work into CMMS and gain maximum value from expensive contract labor resources.

This course is targeted at all industries and types of maintenance processes. It is particularly relevant to: **Mining, Oil & Gas, Utilities, Pharmaceutical & Healthcare, Government, Construction, Food & Beverages, Manufacturing, Chemicals** etc

#### PRE - COURSE QUESTIONNAIRES:

A Pre-course Questionnaire will be sent to you upon your registration, which allows you to raise your specific interests and questions. The course trainer will review and analyse the questionnaires prior to the event and will address your interests & questions during the event, seeking to fully meet your learning objectives.

#### IN - HOUSE TRAINING:

Absolute BME can also customize this course exclusively for your organization on an in-house basis, tailored to meet your specific needs, at a place and time of your convenience.

To discuss how we can work with you to meet your training requirements, please contact: [ih@absolute-bme.com](mailto:ih@absolute-bme.com)

## ABOUT YOUR WORKSHOP FACILITATOR

**Ralph "Pete" Peters** is a highly recognized author-trainer and leader around the World in the areas of implementing maintenance and manufacturing best practices, developing effective productivity measurement systems and initiating long term sustainable operational improvement processes. He has also supported both the public and private sectors. His value as a consultant has been enhanced through his direct leadership and profit and loss responsibilities within large maintenance and manufacturing plant operations prior to focusing upon consulting. He is the author of major books, e-Books and five handbook chapters with 200 articles and publications. And as a frequent speaker, he has delivered speeches and TrueWorkShops™ on maintenance and manufacturing excellence related topics Worldwide in over 40 countries.

**Focused Upon Measured Shop Level Results:** TMEI's success is based simply on validating client results from implemented solutions. Pete recognizes that "Maintenance is Forever!" And he continues to build The Maintenance Excellence Institute (TMEI) by developing new tools/concepts, writing new books and enhancing TMEI's *PRIDE in Maintenance* philosophy into a Worldwide positive attitude toward the maintenance profession. This philosophy is the cornerstone for TMEI's maintenance management consulting and it's TrueWorkShops™ for maintenance and reliability excellence. Pete continues to be a prolific writer-trainer on maintenance, manufacturing, personal motivation and leadership topics.

# ABOUT YOUR WORKSHOP FACILITATOR

Pete has helped achieve success and return on investment in plant, fleet, healthcare operations and pure facilities maintenance operations. He has performed over 200 maintenance audits/assessment using TMEI's Scoreboard for Maintenance Excellence™, a prescriptive tool that goes well beyond the current PAS 55: 2008 guidelines. Annually he performs pro bono support to selected organizations such as Brevard College (NC) and various large church facilities management operations.

## **Professional Career:**

**President/Founder-The Maintenance Excellence Institute:** Established The Maintenance Excellence Institute in 2001 with consulting and training services focused on maintenance process improvement in all types of operations within both the public and private sectors. TMEI provides *Maintenance and Reliability Excellence Consulting Services* for implementing today's best maintenance practices. TMEI also provides temporary *Operational Services* and has developed over 20 *Training for Maintenance Excellence TrueWorkShops™* summarized and with complete content agendas at [www.PRIDE-in-Maintenance.com](http://www.PRIDE-in-Maintenance.com). TMEI operates with a Worldwide team of highly experienced maintenance and manufacturing professionals as formal Alliance Team Members.

**Principal-Tompkins Associates Inc:** Responsible for the creation and direction of the maintenance consulting practice within Tompkins Associates including support to sales, marketing and management of consulting projects. Provided client services in maintenance operations assessments, strategic maintenance operations planning and best practice implementations within plant, facilities management, healthcare facilities and fleet maintenance operations.

**Director of Facilities Management, - North Carolina Department of Administration:** Managed 225-employee physical plant operation with over \$30 million annual budget and eight million square feet of facilities including the State Capitol of North Carolina. He was responsible for all physical plant operations, construction planning/renovation and inventory management. And he was responsible for commissioning three major office buildings (over 1,000,000 square feet each) and starting up a new central steam plant without significant staff additions.

**Plant Manager-Channel Master Incorporated:** Managed a 350-employee manufacturing operation for high volume machining, fabrication and assembly of traditional TV antennas and satellite systems. He was responsible for both the plant industrial engineering and tool and die operations.

**Plant Manager-Crescent/Xcelite Plant, Cooper Tools, and a Division of Cooper Industries Inc:** Managed a 550 employee, high quality hand tool manufacturing operation. Successfully implemented closed loop MRP-II system (Class A) as the pilot plant within Cooper Industries. Directly responsible for plant industrial engineering, manufacturing services, standard costing and purchasing functions.

**Group Manager of Industrial Engineering-Cooper Tools Division of Cooper Industries Inc:** Provided internal consulting and technical leadership to all Cooper Tools plants in areas of maintenance management, continuous improvement, integrated manufacturing improvement, plant start-ups/expansions, wage plan administration and computerized direct labor measurement systems. Supported start-up of North America's largest forging operation.

## **Director, Productivity Management-North Carolina Department of Transportation (NCDOT):**

Managed an industrial engineering staff group that provided productivity and quality improvement services throughout NCDOT. He led the implementation of the first fleet maintenance management system in US for planning, estimating and scheduling of fleet maintenance work in 1972. This included operator-based preventive maintenance for 12,000 statewide vehicles, selection, and training and on site installation of 50 planners, maintenance performance reporting documenting annual savings of over \$3,000,000 per year and establishing a team-based maintenance improvement process.

**Publications:** Pete is the author of a best selling McGraw-Hill Professional Division book; *Maintenance Benchmarking and Best Practices- A Profit and Customer-Centered Approach*. He has also authored two E-Books; *"Maximizing Maintenance for Profit-Optimization"* and *"Maximizing the Value of Facilities Management Operations"*. He was editor/primary author for *The Guide to Computerized Maintenance Management Systems*, Scientific American LLC and is author of the maintenance chapters in three major publications; *The Warehouse Management Handbook* and *The Future Capable Company* from Tompkins Press and John Wiley's 2001 *Handbook of Industrial Engineering, 3<sup>rd</sup> Edition*. Most recently he authored a key chapter in the Fourth Edition of the Instrument Engineers' Handbook: Process Software and Digital Networks published in 2011.

His current book in progress is *Reliable Maintenance Planning, Estimating and Scheduling* from Elsevier's Gulf Professional Publishing scheduled for January 2014 completion and focused upon surface facilities maintenance processes within the oil/gas/petro chemical and heavy industry sectors.

He is the creator/inventor of new tools (beginning in 1983) for maintenance process improvement and all are now available at <http://www.pride-in-maintenance.com/products>.

1. *The Scoreboard for Maintenance Excellence™* (plant maintenance focused)
2. *The Scoreboard for Facilities Management Excellence™*
3. *The Scoreboard for Healthcare Facilities Management Excellence™*
4. *The Scoreboard for Fleet Management Excellence™*
5. *The CMMS Benchmarking System™*
6. *The ACE Team Process™ for Estimating Maintenance Work*
7. *The Reliable Maintenance Excellence Index™*
8. *The Total Asset Integrity Management Benchmarking Survey™*

The Future: Pete recognizes that *"Maintenance is Forever"* and the application of new technologies is essential to global and local success for physical asset management. He continues to build *The Maintenance Excellence Institute* by developing new tools/concepts and writing new books. His focus on enhancing and expanding the *PRIDE in Maintenance™* philosophy into a worldwide standard attitude and operating philosophy as a cornerstone for TMEI's consulting and training for maintenance excellence. Pete also continues to be a prolific speaker and writer on maintenance, manufacturing, personal motivation and leadership topics..

## **Pete's client list includes:**

- Campbell Soup
- British Petroleum
- Nigeria Liquid Natural Gas
- Honda of America
- Ford
- Marathon Oil Corporation
- Atomic Energy Canada Ltd
- Boeing Commercial Airplane Group
- Caterpillar
- UNC-Chapel Hill
- Anderson Packaging Inc
- Polaroid

- BigLots Stores
- Sheetz Inc
- Great River Energy
- Wyeth-Ayerst (US & IR)
- Cooper Industries
- National Gypsum
- Sarasota County Government-Operations and Maintenance Division
- Carolinas Medical Center
- NC Department of Transportation
- the US Department of Health and Human Health Services' Indian Healthcare Service
- Air Combat Command
- US Army Corps of Engineers