

rcm2009

RELIABILITY CENTERED MAINTENANCE

eam2009

ENTERPRISE ASSET MANAGEMENT

mTrain

MAINTENANCE TRAINING

RCM/EAM/MTrain Conferences • March 23-26, 2009 • Daytona Beach Florida

Reliability OEE
Performance Root Cause Failure Mode
Human Error Effectiveness Asset Management
AMS Analytics Maintenance Planning Work Order
Competency Skills RCM EAM Proactive Uptime
Data Design Outage Value ROI 14 Point
Workforce Implement Improvement
Empowerment

Reliability2.0™

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RELIABILITY CENTERED MAINTENANCE

The **Reliability Centered Maintenance Managers' Forum** is designed for beginners and advanced maintenance professionals to discover ways to create new maintenance programs and to ensure that current maintenance programs include the right work at the right time to ensure operational reliability.

eam2009

ENTERPRISE ASSET MANAGEMENT

The **Enterprise Asset Management Summit** includes training and case studies about effective use of technology to plan, schedule and manage maintenance as well as creating Dashboards, Key Performance Indicators and Analytics to make the best decisions possible to support reliability.

mTrain

MAINTENANCE TRAINING

The **Maintenance Training Conference** discusses creating and managing effective training so your workforce has all the skill and knowledge required to support today's advanced reliability based asset management.

These three events are held at one place and one time to encourage your key team members to get up to speed on what works and to bring back new strategies, new techniques and new technologies to make the transition from reactive to proactive management of the physical assets your organization depends on to be successful.

100% Money-Back Guarantee!

We are sure that this Reliabilityweb.com learning event will be worth the time you invest in attending. If for any reason you are dissatisfied with your experience at this conference, we will refund 100% of your paid registration fee.

What to expect at RCM-2009

- Learn everything you need to build a world class Reliability Centered Maintenance Program
- Discover exciting new ideas and learn helpful techniques to jumpstart your Reliability Centered Maintenance program
- Learn how Maintenance & Reliability Professionals just like you are creating results with RCM
- Learn how to conduct a Failure Modes and Effects Analysis
- Learn how Reliability Centered Maintenance and Root Cause Analysis work together
- Meet leading RCM service providers
- Learn metrics to track the effectiveness of your RCM Program
- Learn more about PM Optimization and Maintenance Task Analysis for fast results

What to expect at EAM-2009

- Learn how to build accurate foundational data
- Find out more about how leading companies are using Maintenance Analytics
- Learn to reduce the cost of maintenance purchasing and inventory
- Learn successful software implementation techniques
- Learn to use your maintenance information to improve reliability
- Learn how to use CMMS data to support other improvements
- Discover ways to increase the productivity of your existing CMMS/EAM
- Develop Key Performance Indicators for Maintenance
- Manage a Computerized Maintenance Management System
- Meet leading solution providers in the EAM-2009 Expo

What to expect at MTrain-2009

- Learn how to create effective training by mapping required competencies
- Learn how to blend online, CBT and live training for the best result
- Discover techniques to deal with an aging workforce
- Learn to overcome the maintenance skills shortage
- Much more...

SCHEDULE

RCM1	RCM2	EAM1	EAM2	MTrain
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Monday, March 23

8:00am-8:45am **Welcome and Keynote** What is the next Big Step for Reliability – FLIR (Forward Looking Innovations in Reliability) by Ricky Smith

9:00am-4:30pm **Bonus Certificate Workshops**

BWS1 Root Cause Analysis and Reliability Centered Maintenance by Mick Drew ARMS Reliability Engineers	BWS2 Introduction To RCM Blitz by Doug Plucknette, Allied Reliability	BWS3 The Reliability Game by MRG	BWS4 OUTAGE! The Planning and Scheduling Experience by GP Worldwide	BWS5 Staffing And Training Rules Of Thumb For Maintenance And Reliability Managers "How Do I Make This Happen?" by Ricky Smith, CMRP
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4:30pm-6:30pm **Welcome Reception and Expo**

Tuesday, March 24

8:00am-8:45am **Welcome and Keynote** Value Driven Maintenance by Remco Jonker of Mainnovation

9:00am-4:30pm **Bonus Certificate Workshops**

BWS6 Advancing Reliability & Maintenance to Meet and Beat Global Competition by Jack Nicholas Jr., Author of Advancing Reliability & Maintenance	BWS7 PM Optimization, a hand's-on exercise by Steve Turner, OMCS	BWS8 The Manufacturing Game: Supporting Reliability through Defect Elimination	BWS9 Value Driven Maintenance Business Game	BWS10 Developing, Implementing, and Managing Technical Training Programs by Terry Wireman
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4:30pm-6:30pm **Reception and Expo**

Wednesday, March 25

8:00am-8:45am **Welcome and Keynote** – *Special Surprise Keynote Address*

9:00am-10:00am **Expo and Power Coaching**

10:00am-10:45am **Learning Zone Session 1**

Paper 01 Reliability Centered Design by Ramesh Gulati, CMRP, ATA/Arnold Engineering Development Center	Paper 02 The Psychology of RCM (Reliability-Centered <u>Mindset</u>) Michael Rezendes Zumwalt Class Destroyer	Paper 03 Measuring plant performance - The need for metrics standardization by Walter Nijsen, Cargill Grain and Oilseeds Europe	Paper 04 Master Records are Not Optional! Get the Detail Work Behind You by E. Todd White, MRG	Paper 05 Keith Mobley on Developing an Effective Workforce
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11:00am-11:45am **Learning Zone Session 2**

Paper 06 Reliability in Design and Procurement by Jay West, Viziya and Vince Adorno VP, Alcoa and Claudia Faye, Alcoa	Paper 07 Developing and Implementing RCM for a Limited Staffed Facility by Tim Jackson, Florida Municipal Power Agency and Todd Cooper, Cohesive Information Solutions	Paper 08 Reposition plant culture to achieve EAM results by Robert Bagley, Verso Paper	Paper 09 Reliability in the Regulatory and Compliance Environment Steve Mislan Charleston Water System Charleston, SC	Paper 10 Developing a Skilled Workforce: Shaw Industries' START Program by Mr. Casey Wagner, Shaw Industries Group and Mr. Eric Rodgers, General Physics
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Noon **Lunch and Expo and Power Coaching**

1:00pm-1:45pm **Learning Zone Session 3**

Paper 11 Allison Transmission Inc. Machine and Equipment Purchase Process by Russell Combs, Allison Transmission	Paper 12 The Statistical Outliers Are In Control Of Asset Management by Tom Carroll III, NETJETS Inc	Paper 13 Roadmap for Effective EAM Implementation or re-implementation by Jim Davis, PCA	Paper 14 The Dead Zone In Work Management by Bob Guthrie and Brian Heinsius, Rio Tinto Energy America	Paper 15 Aging Workforce Exodus by Dave Abecunas, Signum Group
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2:00pm-2:45pm **Learning Zone Session 4**

Paper 16 Condition-Based Maintenance - How Do You Solve The Scheduling Challenges by Jay West, Viziya	Paper 17 Completing the P-F Curve Douglas J. Plucknette Allied Reliability	Paper 18 Enterprise Asset Management for Multiple Sites by Tim Jackson, Florida Municipal Power Agency Jim Sawyer, Cohesive Information Solutions	Paper 19 Creating an Asset Management Framework For Successful EAM Configuration by Marc Yarlott, Veolia Water North America, Terry Nelson, Inspiraworks and John Clow with Oracle	Paper 20 Blended Training: Combining Live training and e-learning for optimum results by Jason Tranter
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3:00pm-3:45pm Learning Zone Session 5

Paper 21 99% Reliable 100% of the Time: How an airline meets amazing reliability metrics under the worst of conditions by Bill Brinkley AP/IA/AME Manager of Reliability and Development USAirways Express / Piedmont Airlines	Paper 22 Measure Behavior – Measure Success! by David A. Army, CMRP, Strategic Asset Management	Paper 23 EAM Supporting Lean Maintenance by Dave Swenson, Maintenance Manager of Intek Plastics, Inc	Paper 24 Engineering Content Management by Verl Davis, AssetPoint Reliability Services	Paper 25 There's More to Training than Skills Development by Ken Bass, Field Manager, Management Resources Group, Inc.
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4:00pm-4:45pm Learning Zone Session 6 – The Chill Out Sessions

Paper 26 The Concorde Disaster Explained; an interface of Nuclear Work Model & Root Cause Analysis by Lloyd Hamilton, Think Reliability	Paper 27 Enhancing electrical safety through RCM by Martin Robinson, IRISS and Doug Plucknette, Allied Reliability	Paper 28 The Optimization Trap by Phillip Slater Initiate Action	Paper 29 The Analytics Advantage by Steve Turner, OMCS	Paper 30 Advanced Degree Programs For Maintenance and Reliability by Wes Hines, University of Tennessee and Ray Beebe, Monash University
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5:00pm Certification Exams

6:30pm-9:00pm Casino Night

Thursday March 26

8:00am-8:45am Learning Zone Session 7

Paper 31 A facilitated-group approach to RCM by Marge Romero, Team Leader, Reliability Centered Maintenance, Naval Air Warfare Center, and Nancy Regan	Paper 32 Reliability Beyond Maintenance: Reliability started with Physical Assets, and now spreads into all business endeavours Henry Ellmann, Aladon Licensee, Latin America	Paper 33 Optimized Planning and Scheduling by Bart Lorang, DTS	Paper 34 Calibration Management and your ERP: have the best of both worlds by Bill Taliaferro, Blue Mountain Quality Resources, Inc	Paper 35 Craft Training Solutions for a Retiring Workforce by Chuck Kooistra, General Physics
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9:00am-9:45am Learning Zone Session 8

Paper 36 RCM - From Analysis to Action: How to Successfully Implement RCM by James Nesbitt, Reliability Practitioner, Ivara Corporation	Paper 37 The RCM Project Management Guide by Jack Nicholas Jr., PE, CMRP	Paper 38 Maintenance Planning and Scheduling: Back to Basics By Vito DeMalteris, IBM	Paper 39 Business applications for iPod generations by Anders Lif, IFS World Operations	Paper 40 Workforce development by Ramesh Gulati, Asset Management and Reliability Planning Manager, ATA/ Arnold Engineering Development Center
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10:00am-Noon Challenge Session, Giveaway Drawings and Conference Wrap up

1:00pm-2:30pm

Bonus Post Conference Sessions:

- Session 1A: When Does It Pay To Use Reliability Centered Maintenance? By Paul Dufresne, CMRP, CPMM and Todd Zeigler
- Session 2A: Infrared Thermography As An Asset Management Tool by Larry Welch, AIRT
- Session 1B: Management Considerations for CBM Success by Daniel E. Lynn, Commtest
- Session 2B: Air Liquide Breaks Down Condition Monitoring Information Silos by Heather De Jesus, Azima-DLI and Chad Broussard, National Maintenance and Reliability Programs Engineer, Air Liquide

- Program subject to change -

KEYNOTE SPEAKERS



Richard (Ricky) Smith, Co-Author Rules of Thumb for Maintenance and Reliability Engineers and the Industrial Repair Handbook

Ricky has over 30 years in maintenance as a maintenance manager, maintenance supervisor, maintenance training specialist, maintenance mechanic, maintenance consultant and is a well known published author. Ricky has worked with maintenance organizations in hundreds of facilities, industrial plants, ships, etc, world wide in developing reliability, maintenance and technical training strategies.

Ricky worked as a professional maintenance employee for Allied Reliability, Exxon Company USA, Alumax (this plant was rated the best in the world for over 18 years), Kendall Company, and Hercules Chemical providing the foundation for his reliability and maintenance experience.

Ricky recently spent over a year deployed in support of Operation Iraqi Freedom. Ricky served as a Direct Support Maintenance Company Commander providing maintenance to US and Coalition Forces throughout Kuwait and Iraq. He recently served as the investigating officer for the Walter Reed Medical Center, Building 18 Investigation for the Independent Review Group as directed by the Secretary of Defense Gates and his recommendations for changes were presented to Congress.

Ricky also writes for different magazines including Uptime Magazine during the past 20 years on technical, reliability and maintenance subjects.

Ricky holds certification as a Certified Plant Maintenance Manager from the Association of Facilities Engineering as well as a Certified Maintenance and Reliability Professional from the Society for Maintenance and Reliability Professionals. Ricky is also an active member of the Association for Maintenance Professionals.

Ricky lives in Charleston, SC with his wife. Aside from spending time with his 3 children and 3 grandchildren, Ricky enjoys kayaking, fishing, hiking and archaeology.



Remco Jonker, M. Sc. Partner of Mainnovation

Remco Jonker studied at the Royal Netherlands Naval Academy and joined the Navy for ten years in various operational functions. He also holds a degree in industrial engineering from Eindhoven University of Technology in the Netherlands, where he specialized in the management of maintenance. In 1998 he moved to the Maintenance & Service Consulting Practice of Ernst & Young Consulting and performed various maintenance and asset management projects in multinational companies. After the merge with Cap Gemini he became manager of the Maintenance and Industrial Service group.

Today Mr. Jonker is partner at Mainnovation, the company he joined in 2001 during the start up.

In the course of his career, Mr. Jonker has become a maintenance expert with a wide array of expertise. He has acquired considerable knowledge and experience of various maintenance methods (including RCM and TPM), benchmarking and optimizing maintenance organizations, selecting and implementing Enterprise Asset Management (EAM) systems and facilitating outsourcing projects. He contributes actively to the development of his field of specialization through published articles, international seminars and training courses. He is chairman of the CMMS section of the Dutch Maintenance Association (NVDO) and co-writer of the book entitled "Value Driven Maintenance, New Faith In Maintenance".

NETWORKING AND POWER COACHING

Reliabilityweb.com learning events offer much more than sit and listen presentations. Each day includes ample time to meet and network with peers, subject matter experts, book authors, magazine editors and solution providers.

Power coaching is a popular new feature offered where you can take advantage of small focused group coaching session with various subject matter experts to ask the questions you really want answers for in areas like:

- Enterprise Asset Management
- Reliability Centered Maintenance
- PM Optimization
- Root Cause Analysis
- Analytics
- Asset Health Management
- Effective Training Program Development
- Mentoring and Intern Programs

PRIVACY POLICY

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Where is the Conference Held?

Hilton Daytona Beach Ocean Walk Village
100 North Atlantic Avenue
Daytona Beach, Florida 32118

To book your hotel accommodations, call (386) 254-8200 and please mention the RCM/EAM/MTrain-2009 Conference to get the special discount rate of \$117.00 per night on a single/double room.



Certificate Workshops

Enhance your professional standing and your learning experience by registering for pre-conference workshops. RCM/EAM/MTrain-2009 already provides 12 hours toward CMRP, CPMM and other professional re-certification. Each workshop is valued at 6 additional hours of credit toward CMRP or CPMM re-certification. A certificate will be provided for each workshop.

BONUS WORKSHOPS

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RELIABILITY CENTERED MAINTENANCE

March 23



BWS1 Reliability Centered Maintenance Or Root Cause Analysis - Chicken Or The Egg? by Mick Drew, ARMS Reliability Engineers

The chicken or the egg causality dilemma arises from the expression "which came first, the chicken or the egg?" Chickens hatch from eggs, but eggs are laid by chickens, making it difficult to say which originally gave rise to the other. To ancient philosophers, the question about the first chicken or egg also evoked the questions of how life and the universe in general began.

In today's engineering world, we are faced with an ever increasing amount of solutions surrounding maintenance improvement. All these solutions are offering maximum return on investment for the shareholders, with significant reductions in downtime, increase in production output, less accidents, all of which are very attractive to any business. Two solutions on offer are the use of Reliability Centered Maintenance and Root Cause Analysis – but which comes first? Should we put all our eggs in one basket and focus on one solution or spread the eggs across two baskets and implement the outputs from both?

In this workshop we look at how RCM and RCA are actually complementary of one another and how they both work towards the elimination of undesirable events through a proactive approach to maintenance.

BWS2 Introduction To RCM Blitz by Doug Plucknette, Allied Reliability

In 1978, Stand Nowlan and Howard Heap created Reliability Centered Maintenance as a process to develop a complete maintenance strategy for commercial aircraft and the success of their methodology changed how both maintenance and reliability were viewed in this industry.

In 1997, using the original Nowlan and Heap RCM model, RCM Blitz was created to develop a complete maintenance strategy for manufacturing equipment and in the last ten years companies around the world are now using a methodology specifically designed to deliver reliability for manufacturing assets.

RCM Blitz offers a Reliability Centered Maintenance approach that reduces the time and resources required for Analysis. Attend this workshop to:

- Learn how to develop a complete maintenance strategy for your equipment
- Learn where to apply predictive and preventive maintenance tasks
- Learn how to determine what spare parts are critical to your business and what parts can be eliminated from your inventory
- How to improve manufacturing and equipment reliability
- Reduce maintenance costs
- Reduce unit cost of finished products
- Reduce health, safety and environmental incidents and accidents

March 24

BWS6 Advancing Reliability & Maintenance To Meet And Beat Global Competition by Jack R. Nicholas, Jr., P.E., CMRP Co-author: Advancing Reliability & Maintenance

This workshop provides an understanding of the basics that all organizations should routinely practice in order to be successful in reaping the benefits of cost reduction, avoidance and/or bottom line profit increases from one of the last frontiers for improvement in any manufacturing or service organization.

Subjects covered include:

- Human Error in Reliability and Maintenance (R & M) - What to Do About It
- Eleven Basic Rules to Attain R & M Excellence

- The Argument for Use of Detailed Procedures and Checklists for Doing the "Right Kind" of Maintenance – aka - Beating the Odds in Reliability & Maintenance
- Maintenance Process Analysis – Basis for Reliability in Maintenance, Maximum Asset Availability, Minimum Downtime and the Basis for Teaching Everyone in an Organization Exactly What Their Jobs Are
- The Fastest, Cheapest and Most Permanent Way to Find and Fix the Majority of Root Causes of Failures in Physical Assets
- Lessons Learned from Award Winning Reliability Achievements
- How to Bring Your Company from the Brink of Closing to Being the Target of an International Bidding War for Acquisition

During the workshop no less than 25 real-world case studies will be presented. These are from named North American companies that have survived and thrived (and some that failed because they started too late) to meet and overcome global competition even as pundits concluded they couldn't continue to do

BWS7 PM Optimization, a hand's-on exercise by Steve Turner, OMCS

This hand's on workshop will emphasize the PM Optimization (PMO) methodology, an RCM based approach to maintenance analysis. Whereas RCM was developed for new plant and the design process, PMO was developed specifically to improve the performance of established maintenance operations quickly and effectively utilizing RCM principles.

Rather than starting from scratch and evaluating many failure possibilities, PMO directly focuses on plant and personnel productivity by:

- Eliminating all redundant PM work and task duplication;
- Ensuring that all PM is done at the correct interval by the most effective means;
- Achieving substantial improvements in uptime by moving to a more rational maintenance program based on specific business and production needs;
- Quickly identifying preventable failures and addressing them through PM tasks.
- Forming a close knit relationship amongst those involved in managing the plant at the "grass roots" level, that is, the operators, trades people and other hands-on specialists. A significant strength in the program is its ability to harness the latent knowledge of these people and empower them to "make a difference".
- Focusing on implementation rather than analysis

Participants will experience a facilitated PMO exercise to learn how to select the best maintenance tasks on a system to ensure reliability.

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March 23

BWS3 The Reliability Game by MRG

Is your organization hesitant to adopt a reliability-based approach to maintenance? Trying to change organizational culture is often challenging, but it is also very rewarding. The Reliability Game is designed to teach participants how to make the transition from a reactive to a proactive maintenance environment. They will learn to "follow the money" and further their understanding of the business potential of reliability.

Participants will learn:

- The financial opportunity associated with proactive maintenance
- Where the money goes
- How to stop wasting money
- How is it used?

The Reliability Game is played by teams of four people who will assume one of the following roles: Finance Manager, Purchasing Coordinator, Maintenance Resource Planner, Operations Coordinator. The concept is simple: each team determines the best way to manage their equipment, money, time, labor and material resources. Throughout the simulation, each team's financial performance is tracked and discussed, creating a competitive atmosphere. By the game's end there is typically a greater appreciation for the value of reliability and the entire reliability philosophy.



BWS4 OUTAGE! The Planning And Scheduling Experience by GP Worldwide

Your organization is asking your maintenance departments to keep machinery running longer with fewer people, solve problems and reduce failures, improve reliability, implement new programs, execute professional shutdowns and outages, and do so at reduced cost. This can only be accomplished if the maintenance organization is efficient, effective and good at coordinating with production.

OUTAGE! is fun, but it is also powerfully meaningful in the way it reinforces planning and scheduling concepts and best practices. This game is an exciting, interactive 8-hour simulation that replicates a real maintenance outage with the typical problems of parts, manpower constraints, QC problems, contractor issues, scheduling dilemmas, work orders, safety issues, work identified late, risk assessment, etc. It is played by teams of six to eight players. The element of competition works wonders. Each team is given an identical set-up, including parts, work orders, personnel requirements, schedule conflicts, etc.

March 23 ...continued



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March 24

BWS8 The Manufacturing Game: Supporting Reliability Through Defect Elimination

The Manufacturing Game Workshop is a thought provoking simulation of an actual manufacturing facility. It has been used for the past 20 years in various types of facilities to get managers, engineers, materials procurement personnel, support staff and front line workers more involved in day-to-day improvement activities as part of their job. The Manufacturing Game® changes the way people think; thereby, changes the way they work. It shows employees that they are not only valued, but that their opinions are valuable. They discover how to communicate with each other and work cross-functionally to achieve a goal.

Participants in the workshop learn how defects coming into a facility from many sources can cause major catastrophes that result in machinery breakdowns, safety incidents and environmental issues. And how defect elimination at the source can lead to added value for the facility as well as reducing the workload up to 40%. This reduction in the workload leaves employees less stressed and more relaxed. There is time to pursue more engaging projects, eventually leading to less forced overtime and more family time, making for a more productive, happier employee.

Over thirty thousand people worldwide have participated in Manufacturing Game workshops. It has been used at facilities all over the world with not only documented proven results, but sustainable results! The best part is this is not another initiative to add to your already heavy load, but a way to enhance the reliability programs you are already using. The Manufacturing Game® is not only a tool to change the paradigm of the organization; it is a catalyst to launch action to change results.



BWS9 Value Driven Maintenance Business Game

You and your team members will learn how to derive a focused strategy, deal with the demands of your CEO, read and analyze KPI benchmarking reports, which variables you can change over time and what effect they will have on the overall KPI score.

Being responsible for maintenance or asset management performance is not the easiest job. Whether your equipment is old and worn out or brand new and state of the art, you will face technical challenges on a daily basis. Empowering your people, improving your work, processes and leveraging your (IT) tools sounds good but how to do it in the best way? The results we have achieved so far, how do they compare to other companies in our type of industry? Should we focus on more uptime or reduce costs? Which are the 'buttons' to press on, what results will they have? There are so many best practices and 3 letter buzzwords out there, which of them to start with?

VDM Business experience is dynamic like real life. Strategy and decisions of all the teams are entered in a simulation tool, so your competitors will affect your situation. The team that creates the most economic value after a number of playing rounds wins the prestigious VDM award. Needless to say it is fun to play!

Are you ready to experience the VDM Business experience yourself?



March 23

BWS5 Staffing And Training Rules Of Thumb For Maintenance And Reliability Managers "How Do I Make This Happen?" by Ricky Smith, CMRP

With the US and World economy going through stressful times we know maintenance budgets are going to see the affect so Ricky wants managers to have options to staff and train which will impact reliability of their assets in a proactive manner without having to go to anyone to ask for permission.

March 23 ...continued

Ricky knows most of you either do not have all the positions that would make effective maintenance performance attainable including maintenance or reliability engineers. In many cases companies cannot staff all positions without exceeding the budget allowed. Ricky will discuss in this open workshop the function of maintenance and reliability engineering positions and offer you options so implementing these functions is possible with existing staff. You will learn some simple ways to make these functions work in your organization effectively with what you have.

March 24

BWS10 Developing, Implementing, And Managing Technical Training Programs by Terry Wireman, Author, The Maintenance Strategy Series

In the past decade, most apprentice and technical training programs have been eliminated. The result has been a tremendous lack of technically skilled people entering the workforce. This coupled with the increasing levels of technology has left many companies with a severe shortage of technically skilled personnel in their plants.

The only solution? It is to re-institute technical training programs to raise the number of skilled individuals capable of maintaining and improving plant equipment and processes. Based on several case studies, this workshop highlights the processes necessary to develop technical training programs. Secondly, the workshop addresses the steps necessary to implement technical training programs. Finally, the workshop will show how to manage an on-going technical training program, including how to continuously track the training program to insure it delivers a return on investment.

Topics to be covered include:

- Identifying Performance Problems
- Potential Skill Improvement Needs
- Understanding a Duty-Task-Needs Analysis
- Developing the Flexible Curriculum
- Selecting the RIGHT Trainers
- Motivating the Learners
- Organizing the Training Environment
- Measuring the Results

The attendees will leave this workshop with the tools to evaluate their current workforce skills, the training options available to their organization, and a method for gaining executive support for the training initiative.



PAPER TOPICS

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RELIABILITY CENTERED MAINTENANCE

Paper 01 Reliability Centered Design by Ramesh Gulati, CMRP, Asset Management and Reliability Planning Manager, ATA/Arnold Engineering Development Center

One of the key factors in asset/system performance is its reliability- inherent reliability or designed in reliability? Are we designing the system with reliability and maintainability in mind? The O&M cost, which is about 80% plus of the total life cycle cost of the system, get fixed during early design phase. Are we specifying the reliability and maintenance needs in our requirement documents? Do designers understand how to build for reliability & maintainability? All of these and many more thought provoking questions will be discussed in this presentation.

Paper 02 The Psychology Of RCM (Reliability-Centered Mindset) Michael Rezendes, Zumwalt Class Destroyer, RCM Lead Logistics Engineering, Raytheon Technical Services Company

This presentation will discuss the relationship between the mindset and mental processes of the maintenance developer and the outcome of a maintenance analysis. The presentation will walk thru the life of the person selected to perform an RCM analysis and the issues that may arise.

Paper 06 Reliability In Design And Procurement by Jay West of Viziya and Vince Adorno, VP of Alcoa, and Claudia Faye of Alcoa

When Reliability philosophies, theories and practices are integrated into the Capital Management Process, dramatic results are achieved. Equipment Reliability needs to start in the design phase of a new plant or system and continue through construction, start-up and operations. When done correctly this process results in a far more reliable production facility that will produce more output at a lower cost.

Paper 07 Developing And Implementing RCM For A Limited Staffed Facility by Tim Jackson, Florida Municipal Power Agency and Todd Cooper, Cohesive Information Solutions

The Treasure Coast Energy Center was constructed and went commercial in May of 2008. This MW Combined Cycle generating plant has been designed to be operated and maintained by a smaller than average maintenance and operations staff. The need was identified to establish a mature maintenance process early in the plant life to allow the staff to maximize the effectiveness of their program, minimize unnecessary activities, and increase the reliability and therefore worth of the plant equipment.



Paper 11 Allison Transmission Inc. Machine And Equipment Purchase Process by Russell Combs, Allison Transmission

The Allison Transmission Machine and Equipment Purchase Process allows us to apply lessons learned from equipment in our plants and standardize components on equipment to improve reliability and maintainability of the equipment we receive from our suppliers. By doing the work up front we are able to get a machine that meets our requirements and has components that we have in inventory, thus reducing our inventory cost and the number of items stocked in our Parts System.

Paper 12 The Statistical Outliers Are In Control Of Asset Management by Tom Carroll III, Director of Reliability Engineering, NETJETS Inc.

The performance and material support of assets can be predicted by statistical models, which set the course for resource planning and provisioning. This presentation will describe the development of statistical outliers, focus on some of the resulting negative effects, and outline the means necessary to control them.

Paper 16 Condition-Based Maintenance - How Do You Solve The Scheduling Challenges by Jay West, Viziya

Today many companies are working hard to implement Condition Based Maintenance programs. They've invested in all the cool new technology for detecting equipment problems early. They have their operators and their maintenance technicians taking readings and monitoring conditions so they can identify any "functional failures in progress". This presentation outlines a clear, simple and coherent approach to work prioritization and maintenance scheduling in a Condition Based Maintenance environment. It also outlines the kind of systems and processes that need to be in place to be successful.

Paper 17 Completing The P-F Curve by Douglas J. Plucknette, Allied Reliability

Understanding the P-F curve is a foundational element for world-class maintenance organizations. In 2006 Doug Plucknette created an Article for Uptime Magazine that expanded the traditional P-F Curve to include Reliability Tools and Precision Maintenance techniques prior to installation that eliminate failure modes causing potential failures. This presentation will focus on the complete P-F curve, the dangers of not understanding the complete P-F curve and the benefits of utilizing Reliability Tools and Precision Maintenance Techniques to increase the I-P interval.

Paper 21 99% Reliable 100% Of The Time: How An Airline Meets Amazing Reliability Metrics Under The Worst Of Conditions by Bill Brinkley AP/IA/AME Manager of Reliability and Development, USAirways Express / Piedmont Airlines

Although it may seem that flights are almost always delayed or cancelled – particularly the ones that you are on personally – the numbers really don't bear that out. For example, on January 16th, 2008, we had 390 flights scheduled. Of those 390 flights:

- 7 were cancelled
- 291 departed on time*
- 311 arrived at their destination on time**



These numbers give the airline a reliability score of 98.2% for the day, which is below our target of 100% and slightly below our daily average. Our daily average is in the high 98% to low 99% range. On this particular day, most delays and late arrivals were weather related. So... how do we do it? That is the subject of my presentation.

**Departed on time means the aircraft left the gate at D:00, or exactly when it was supposed to. **Arrived on time means that the airplane reached the gate at the destination within 14 minutes of the scheduled time. This is the standard that the Department of Transportation measures airline performance against. The disparity in the above departure and arrival numbers (291 departed on time versus 311 arrived on time) means that even though the aircraft departed late, it still arrived on time.*

Paper 22 Measure Behavior – Measure Success! by David A. Army, CMRP, Strategic Asset Management

Today's environment requires measurements that can predict, determine, and influence desired outcomes rather than focusing on only lagging or outcome indicators and the need to be able to affect the final outcomes for whatever period we are measuring by developing and monitoring interim indicators. This paper will discuss the need to include people and behavioral indicators back into the equations.

Paper 26 The Concorde Disaster Explained: An Interface Of Nuclear Work Model & Root Cause Analysis by Loyd Hamilton, Think Reliability



How do we influence a Problem Solving Culture? Consider the Navy Work Model for Nuclear Operations. The Concorde Crash incident will be discussed on a more complex level and prevention steps will be explored.

Paper 27 Enhancing Electrical Safety Through RCM by Martin Robinson, IRISS and Doug Plucknette, Allied Reliability

In addressing the Main Function of each asset we apply the RCM process to we consider the ability to maintain Health, Safety, and Environmental standards. In applying the RCM process to main electrical feeds we discuss several Failure Modes where IR would be an outstanding PdM tool for detecting point P, however, with new electrical safe practice standards the task of performing IR inspections falls into an area where it would not be considered safe to perform the inspection under these standards. The installation of IR windows now makes the use of IR on electrical feeds both safe and effective. In this presentation we will introduce several failure modes from an actual RCM analysis where if safe PdM tools could be used to locate point P and the effects of the failure could be mitigated by planning and scheduling repair.

Paper 31 A Facilitated-Group Approach To RCM by Marge Romero, Team Leader, Reliability Centered Maintenance, Naval Air Warfare Center, and Nancy Regan

Operation and Support costs consume 50 to 60 percent of the US Navy's total operating account. In an effort to reduce total ownership costs, Reliability Centered Maintenance (RCM) was implemented on Naval Aviation Common Support Equipment (SE) in 1997 and, eleven years later, continues to produce outstanding results that support the warfighter. This presentation covers the facilitated-group approach to RCM that has been employed.

Paper 32 Reliability Beyond Maintenance: Reliability Started With Physical Assets, And Now Spreads Into All Business Endeavors by Henry Ellmann, Aladon Licensee, Latin America

Awareness of the need for Reliability, started some decades ago in the Maintenance environment. Lately it is being realized that expanding the Reliability concept into other –or all– business areas, major benefits can be achieved. Half a century ago, when Quality issues were introduced, (Juran, Deming) at first "quality" was thought of as the "quality of a product". Soon the "quality" concept grew into "total quality", when it was realized that to achieve product or service quality, everything in the organization has to respond to the "quality concept". Now a similar situation arises with the "Reliability" concept. As soon as Management starts to realize the philosophy behind the concept it becomes wise to expand Reliability into other areas.

Paper 36 RCM-From Analysis To Action: How To Successfully Implement RCM by James Nesbitt, Reliability Practitioner, Ivira Corporation

Organizations invest a significant amount of time, effort and resources in conducting RCM analyses. Yet, a reliabilityweb.com study found that over 85% of RCM analyses never get implemented. This is a staggering percentage and begs several questions - namely why and what steps need to be taken to effectively implement RCM analysis results. See the latest tools and techniques leveraged by companies including ArcelorMittal, Peabody, Domtar, Cadbury Adams and Southern California Edison to enable their RCM execution strategy. Learn the critical success factors that made the proactive activities required by RCM part of their daily life in Maintenance and Operations.



Paper 37 The RCM Project Management Guide by Jack Nicholas Jr., PE, CMRP, Co-Author, Advancing Reliability and Maintenance

This presentation includes vital tips on timing, avoiding pitfalls, leading to a potential failure and metrics information for use by anyone contemplating becoming a champion of a Reliability Centered Maintenance initiative within their organization.

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Paper 03 Measuring Plant Performance - The Need For Metrics Standardization by Walter Nijssen, Asst. Maintenance and Reliability Leader, Cargill Grain and Oilseeds Europe

Understanding how our plants perform and how well we perform in relation to others often reveals opportunities for improvement. That is to say: in principle. The key question first raised is often are comparing apples with apples? If not (as in many cases), the whole exercise of comparison and to some extent measurement becomes somewhat (or completely!) meaningless. On top of that a first question that really should be answered first is WHY should we measure? Secondly WHAT should be measured and HOW? The ones we believe are truly important are often referred to as Key Performance Indicators (KPI), as – apparently – those contain key information on performance as the wording implies. But does it and if so, what precisely is it indicating? This presentation discusses how Cargill, a multinational company, dealt with these challenges.

Paper 04 Master Records Are Not Optional! Get The Detail Work Behind You by E. Todd White, MRG

Populate the system with the correct master records and then and only then will the transactional data lend itself to valid and useful analysis, analysis that will bolster critical thinking, analysis that identifies the vital opportunities that are worthy of pursuit.



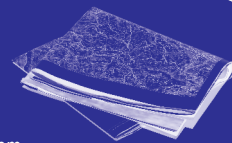
Paper 08 Reposition Plant Culture To Achieve EAM Results by Robert Bagley, Reliability and Planning, Verso Paper

This presentation will show how individual manufacturing sites must analyze, through an honest evaluation of their own cultural reality, how their environment can 'play the game' from a very practical and achievable position. Only then can they possibly re-position much of their own unique environment and 'plant culture' to achieve the EAM results desired.

Paper 09 This presentation discusses the experiences at Charleston Water System in applying RCM principles and techniques in the treatment of wastewater. Initiating RCM in a heavily regulated process can produce a surprising difference in opinions as to just what are the most critical assets that need to be analyzed and evaluated. This presentation is about the identification of assets, the analysis and measuring tools used to determine their criticality and what we plan to do with the information.

Paper 13 Roadmap For Effective EAM Implementation Or Re-Implementation by Jim Davis, PCA

Research shows that less than 25% of the features and functionality of computerized maintenance management systems are ever utilized. In many cases companies implement flawed or poorly developed business process that only exacerbates a computerized system's poor performance. EAM/CMMS performance is not the software's fault. This presentation provides proven EAM/CMMS Best Business Practices and procedures that can maximize the effectiveness and efficiency of a company's Asset Management System.



Paper 14 Killing The Dead Zone by Robert E. Guthrie and Brian W. Heinsius of Rio Tinto

The "Dead Zone" in work management is where you continue to plan and schedule your work but can not get over that +80% scheduled compliance due to breakdowns. This can be a difficult area to break through if you do not understand the causes. To identify the contributors to the breakdowns, we need to look at our maintenance strategies, operating procedures, procurement procedures, maintenance skills and operational skills. This seems like a lot of work to achieve a 5-10% increase in planned maintenance, but what we need to do is understand how this increases our OEE. In this presentation we will look at the correlation between our maintenance strategies, operating procedures, procurement processes, maintenance skills and operational skills to see how to close that gap and not only kill the Dead Zone but sustain the desired planned maintenance percentages.

Paper 18 Enterprise Asset Management For Multiple Sites by Tim Jackson, Florida Municipal Power Agency and Jim Sawyer, Cohesive Information Solutions

Florida Municipal Power Agency started with the strategic goal of implementing common business processes throughout the organization. A phased approach was utilized to minimize the impact on daily operations. The goal was to develop a Strategic initiative for maintenance and for supply chain management.

This presentation will review of the following elements:

- Standardize practices and procedures
- Share information across all sites
- Assist management decisions
- Establish a benchmark for EAM improvement
- Establish maintenance programs such as RCM and Continuous Improvement
- Utilize corporate buying power



Paper 19 Creating An Asset Management Framework For Successful EAM Configuration by Marc W. Yarlott, P.E., Asset Management Project Manager - Technical Direction Group, Veolia Water North America, Terry Nelson, Inspiraworks and John Clow with Oracle

To achieve the strategic advantage that will be gained with a detailed knowledge of lifecycles of water and wastewater related equipment, an Asset Management framework was been selected as a basis upon which to build the EAM configuration. This framework brings together an entire range of other Asset Management tools including: Relative Criticality Analysis, Condition Assessment, a Reliability Centered Maintenance PM Optimization program, and a Life-Cycle Summary library. The design and development of this framework which structures the implementation of the EAM, and it's implications on the configuration will be presented with specific examples.

Paper 23 EAM Supporting Lean Maintenance by Dave Swenson, Maintenance Manager, Intek Plastics, Inc.

Intek began its lean journey in 2003. Under the direction of a new CEO who could be described as bit of a Continuous Improvement enthusiast. As time passed different functional groups began to see multiple quick wins. In this type of environment you cannot be truly successful with questionable equipment reliability. This presentation reveals how our team has used lean, TPM, and simplified six sigma tools to improve our process.

Paper 24 Engineering Content Management by Verl Davis, AssetPoint Reliability Services

Engineering Content Management bridges the gap between engineering and maintenance and controls the drawings, specifications and other documents. When a change is needed to the physical facility or manufacturing process we can use the equipment numbers to access all the related drawings and specifications from the plant design documents in the ECM document vault. This is especially useful when new plants are designed and built, this capability can be used to deliver the design documentation including "as built" drawings in electronic format already linked with the EAM/CMMS capabilities.

This presentation explains how design information is not be lost in translation when delivering it to the owner after construction and how it would facilitate use by plant engineering and the maintenance and reliability operation.

Paper 28 The Optimization Trap by Phillip Slater, Initiate Action

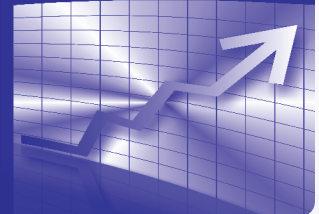
Whether it is maintenance strategy, planning, manning, PMs or inventory, an optimal outcome is always the goal. Yet, pursuing optimization does not always deliver the results that are expected. The optimization trap explains how and why this happens. Surprisingly, most people that are caught by the optimization trap don't even realize it. This paper explains the Optimization Trap, what it is, how to tell whether you are in danger of falling into the trap, and, if you have already, what you can do about.

Paper 29 The Analytics Advantage by Steve Turner, OMCS

Most capital intensive industries collect plant performance data, investigate reliability incidents and eliminate sources of loss. Observations across many industries and companies across the globe lead us to the conclusion that these processes, while very important, are amongst the most fragmented and poorly executed of all.

- *Have you ever had a "no brainer" project knocked back because of poor data?*
- *Are you too afraid to propose the big improvement project because you can't prove your case?*
- *Have you ever thought of creating your own data collection system because the production data is not accurate and does not provide the information you need?*
- *Have you ever heard your accountant say: "in God we trust, but everyone else needs data"?*

The good news is that setting up a first class plant performance data collection system is not a big investment and is not difficult to achieve – in fact your production people probably already have a data collection system!



Paper 33 Optimized Planning And Scheduling by Bart Lorang, DTS

For asset-intensive operations, maximizing the use of maintenance dollars is critical. Put simply, planned and scheduled maintenance costs less than unscheduled and reactive maintenance. A common problem experienced throughout asset-intensive industries is figuring out how to drive efficient work execution management practices in order to push valuable data back across the enterprise so more informed decisions can be made at the executive level.

This presentation discusses how your organization can benefit by "taking back" its work execution process, eliminating spreadsheets, hand-written journals, whiteboards -- and find out how you can get to one version of the truth.

Paper 34 Calibration Management And Your ERP: Have The Best Of Both Worlds by Bill Taliaferro, Blue Mountain Quality Resources, Inc.

This presentation will provide some insights into deciding when to integrate with a 3rd party calibration management solution and how workflow typically occurs between the two applications in an integrated solution.

Paper 38 Maintenance Planning And Scheduling: Back To Basics by Vito DeMalteris, Senior Consultant, Enterprise Asset Management, IBM

It appears that many maintenance organizations have drifted away from the basic planning and schedules principles in favor of either excessively elaborate efforts, or allowing the planning group to just "run on automatic" and hope for the best. This presentation will review some of the basic principles implemented by successful planning organizations.



Paper 39 Business Applications For iPod Generations by Anders Lif, M. Sc. Global Director, IFS World Operations

If we could improve user productivity of all IT systems by 10 percent, it would have a dramatic influence on the bottom line. But the traditional focus when designing IT applications has been on adding technology and functionality rather than improving user productivity.

In this session, we take a look at the next generation of IT applications and the impact of designing systems for optimized employee efficiency. Human Computer Interaction research, Rich Internet Applications, new information controls and visualization, Web 2.0, seamless integration of free internet resources – all of these techniques are used when building business applications for the iPod generations. Why should we not use them to increase the usability and agility of our business applications?

Paper 05 Keith Mobley on Developing An Effective Workforce

Join Maintenance Engineering Handbook Author and Reliability Excellence guru Keith Mobley for a no-holds barred discussion about what works and as important – what does not work when developing a maintenance team.



Paper 10 Developing A Skilled Workforce: Shaw Industries' START Program by Mr. Casey Wagner, Industrial Maintenance Training Manager, Shaw Industries Group and Mr. Eric Rodgers, General Physics

This presentation focuses on the core strategies and tactical actions deployed in launching and sustaining a multidiscipline maintenance performance improvement training program. It also addresses the program from the initial planning stage, to designing and developing the maintenance training program, and ending with implementation and evaluation of the program. Furthermore, it begins with the business realization of labor shortages and lack of available skilled maintenance personnel. The resource limitation left Shaw with the task of internally developing those resources and creating a training process that maximizes the learner's time and focus on critical knowledge and skill elements. Maintenance training requires substantial structured on-the-job training and hands-on application of the training practices; the presentation reviews the various hands-on applications that were crafted specifically for this program, ensuring site-specific learning. Concluding, this presentation outlines the core actions Shaw and GP undertook to architect a sustainable maintenance training program and the presentation discusses the challenges associated with such an undertaking as well as the benefits and rewards.

Paper 15 Aging Workforce Exodus by Dave Abecunas, Signum Group

There is a tremendous amount of experience and knowledge that will be leaving the workforce as Baby Boomers retire. Many companies have not either recognized the full impact, or made any concessions for dealing with this mass exodus of knowledge. This is due to the fact that they are not dealing with capital shortages as yet due to this event. This presentation outlines of steps that need to be taken to prevent negative consequences.

Paper 20 This paper will discuss the strengths and weakness of both live training, and e-learning methods. The paper will then discuss the benefits of the combined approach; using e-learning techniques to prepare the student before the live course, using software simulators during the live course, and again using e-learning methods to provide refresher training after the course. The paper will also discuss the use of live Webinars to enhance distance learning.

Paper 25 There's More To Training Than Skills Development By Ken Bass, Field Manager, Management Resources Group, Inc.

Have you considered what type of training leads to success? There's more to training than skills development. It takes more than the traditional training on re-vamped processes and methods to ensure a program's success. Training is vital so that the entire organization understands their new roles and responsibilities. It requires a more holistic approach to your Reliability Improvement training program. The presentation will address what happens when the employees see the reliability initiatives as only benefitting the company. It will address "What's in it for me?" Also, it will review and bring to your attention, the other aspects involved in training that you may want to consider.



Paper 30 The University of Tennessee's Maintenance and Reliability Center partners with Monash University, Australia's largest university and an accredited member of Australia's "Big Eight", to provide an application-oriented program of advanced education. This program is now in the 8th year in North America and has been in existence over twenty years in Australia. This web-enhanced self study program has proven very successful for working professionals who can not reside near campus. Join representatives from each program to discuss professional development for maintenance and reliability professionals.

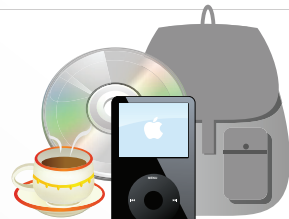
Paper 35 Craft Training Solutions For A Retiring Workforce by Chuck Kooistra, General Physics

This presentation focuses on strategic and tactical methods to address aging and retiring skilled trades' workforces in the future. The discussion starts with framing data associated with an aging workforce and the reality of a labor shortage that could potentially have crippling impacts. The presentation continues on to review real world solutions through actual case studies of successful skilled trades' workforce solutions.

Paper 40 Workforce Development by Ramesh Gulati, Asset Management and Reliability Planning Manager, ATA/Arnold Engineering Development Center

It is all about people. They get things done. We may have great plans and the best processes but; if we don't have the people available with right skills, these plans and processes can't be implemented or carried out effectively. Developing people – the workforce and empowering them to give their best is key to defining the difference between just a company and a great organization. Of course, the processes must be in place to nurture and harness (utilize) the potential of human capital. The maintenance and reliability processes are no different than any other processes in any industrial set-up. Organizations that are considered to be the "Best of the Best" or "World Class" use many of the same key principles.

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What companies attended in 2008? *(Partial list of attending companies) * Indicates team registrations*

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