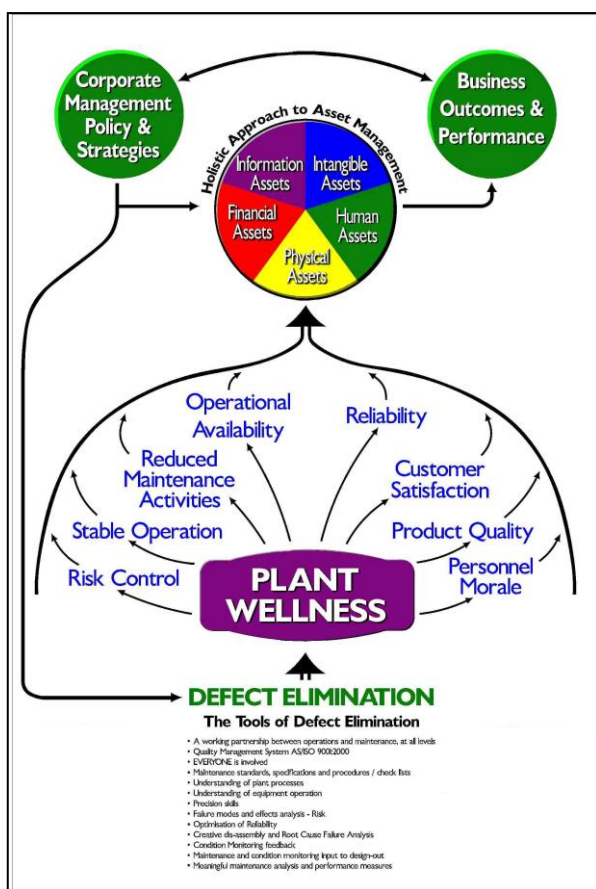


Coherent, complete approach to greater productivity and problem-free industrial, production, manufacturing and operating assets

The Plant Wellness Way: Enterprise Asset Management for World Class Plant Reliability

Straight path to world class plant reliability management excellence



Packed with insights and powerful techniques that you use every day this course helps your operation to make its products better, faster, safer and less costly. Learn the vital enterprise asset management understandings and methods that get you world-class asset maintenance performance and results. See the leading-edge methods to make your equipment run stoppage-free for longer; produce at maximum sustainable capacity with first-pass quality throughput, and make your operation highly profitable.

Discover how to focus your maintenance methods and practices on defect removal and failure elimination in every phase of your plant and equipment life-cycle. You'll come out of the training understanding how to intentionally make your business processes and production equipment more and more reliable in ways that turn organisations into world-class operations.

Businesses wanting to improve asset management and maintenance management performance can immediately adopt a best-practice, coherent and complete business-wide discipline to recover the most value from their facilities, equipment and infrastructure.

Attend 'The Plant Wellness Way to World Class Plant Reliability Management' training and discover how to build the business processes and practices that keep your operating costs low, slash maintenance costs, and deliver top productivity from your operating assets.

- make plant and equipment run consistently at highest availability

- produce at full capacity with 100% first-pass-quality
- make the most operating profit and to be sure you'll get it
- reduce production costs and wastes
- get utmost throughput from existing plant
- make higher productivity inevitable
- all without spending new capital

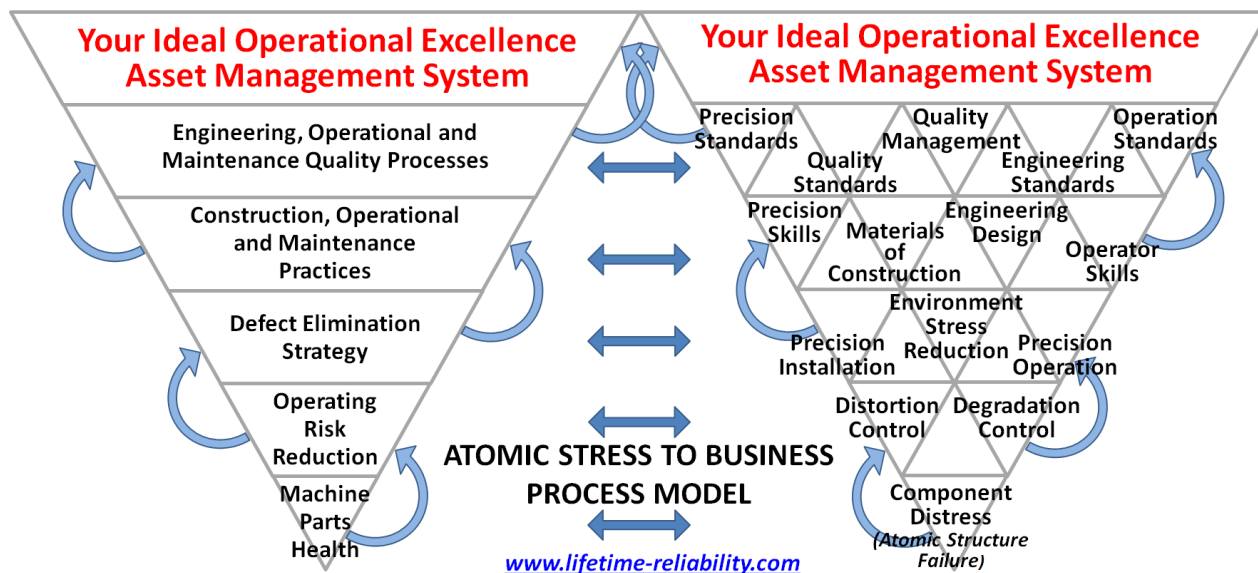
Learn what to clearly focus on and which activities really create a world class enterprise asset management system that drives world class plant and equipment performance. Understanding how you intentionally make your business processes and production equipment more and more reliable turns average organisations into world-class organisations.

Now get the least maintenance costs and the highest equipment uptime

Successful plant and equipment reliability management needs effective life cycle Enterprise Asset Management (EAM). It takes a business-wide discipline full of powerful life cycle asset management methods that focus your efforts on

doing what is important to bring high equipment reliability. You'll get greater productivity and lasting performance improvements for your operation by creating reliability by using Plant and Equipment Wellness in your operation. In this course you learn the Plant and Equipment Wellness way to successful life cycle enterprise asset management that brings world class plant reliability. You will discover the few critically valuable processes and practices you need to have in-place for best equipment uptime and high operating profit from physical assets. You get deep insights to new and better reliability improvement methods and a sound appreciation of where to focus your business' efforts for maximum asset productivity and high operating profits.

The Plant and Equipment Wellness Way



- Discover the processes and systems that solve Enterprise Asset Management, reliability and maintenance problems.
- Understand why your business processes (projects, engineering, operations, finance, and quality) need to interact correctly to get lasting low operating costs and high plant availability, and learn how that is done.
- Discover the novel, innovative and even revolutionary concepts needed to be a world-class operation.
- Learn the fundamental practices and understandings vital for successful enterprise asset management.
- See how to achieve your business plans and profits with the systems and processes of Plant and Equipment Wellness.
- Manage your plant and equipment life cycles from concept through to decommissioning so you and your people make the great decisions that bring business success.
- Learn to integrate design, operations, maintenance, and finance for maximum business risk management
- Why operational excellence needs a quality focus if you want to get 100% right-first-time performance.



With the Plant and Equipment Wellness systems, methods and practices of you learn how you can have:

- an operation designed for outstanding success
- 100%-dependable full production,
- in-full-on-time delivery,
- first-pass quality product every time,
- sustained maximum throughput,
- no penalty claims,
- zero breakdowns,
- non-stop highest plant availability,
- dramatically extended time between failures,
- extra production from your 'hidden factory'.

Learn new solutions to the life-cycle issues affecting your operating plant and equipment performance. Discover simple, certain methods that produce the highest pay-offs from industrial and manufacturing plant and equipment. Find out how to involve and motivate your workforce to minimize your operating risks and maintenance problems, while consistently producing maximum throughput. Know how to make your plant and equipment truly reliable.

Attend this course and discover the specific methods that really make the difference in getting highly productive operating plant. Learn how to use them to improve your business' performance. You get the right information and methods to improve your business processes and its operating and maintenance practices, so world-class performance becomes natural, normal and inevitable for you. A Plant Wellness driven operation will deliver least cost production that delivers big operating profit margins. It does not matter the industrial or manufacturing business you do.

Use the processes and discipline that bring world-class equipment performance to your operation

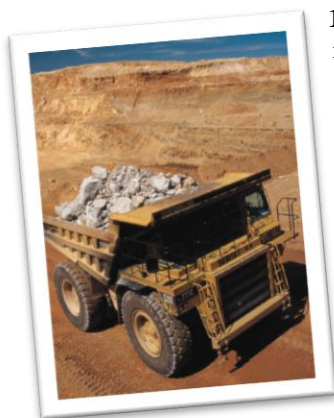
The training content coverage in 'The Plant Wellness Way to World Class Plant Reliability Management' training course is comprehensive and includes the work processes and the business systems needed to coordinate and achieve maximum production plant performance and equipment reliability. Find out how to institute the few vital practices and processes to get maximum life-cycle profits from your operating plant and equipment. Be guided in your workplace with new understandings of the right concepts to use—from their fundamental implications through to their masterful implementation.

During the course you are given details on the methods that actually work to deliver excellent plant and equipment performance. You find out how to deliver lower production costs and higher profit margins by:

- **controlling the inherent variability in both business and operating processes to within designated limits,**
- managing risk by reducing the likelihood of adverse incidents, along with minimising their consequences,
- **using failure preventing quality standards throughout your plant and equipment lifetime, including capital equipment acquisition and installation,**
- stopping human error by ensuring the accuracy and precision of human activity and intervention,
- **minimising total life cycle costs with proactive spreadsheet modelling of what robs your operating profit.**



Covering key elements of systems engineering, reliability engineering, maintenance management, operational management, risk management, industrial engineering and guided by sound financial management practices, the course provides a full coverage of the important factors that create asset management success. The training addresses the three areas to focus on that surely improve production plant and equipment performance.



1) Equipment Reliability: The fundamentals and understandings of what drives machine reliability. You learn the critical concepts that get the most out of your operating plant's performance. Important issues, such as maximising series process reliability, reducing operating risk with chance reduction strategies and not only focusing on consequence reduction strategies, grasping the implications of the 'physics of failure' when considering parts replacement and equipment purchases, and when to proactively apply reliability engineering on your equipment.

2) Parts Maintenance Strategy: Knowledge on the quality standards, component risk strategies and right methods to use to sustain high reliability of your operating equipment. You will learn how to develop a one-page operational risk management model for your business. You learn how to build holistic maintenance plans containing the fewest actions, the simplest equipment monitoring and the most powerful continual improvement strategies to create the safe, sure, high reliability, low maintenance costs and full production you want. *(This holistic plan is perhaps the most important document that you can create in the life of an operation.)*

3) Asset Life-Cycle Management: Core factors critical to successfully build and run operations for high reliability and availability. Including the best way to maximise life cycle profits, identifying and using the systems and practices that produce most benefit for your operation, and wonderful ways to involve and motivate your workforce to produce great results. You see how to combine the best reliability and maintenance knowledge into a lifetime strategy for your plant and equipment that moves your business toward top-class performance and keeps it there. You learn how the Plant Wellness Way turns companies around to become places of operational excellence.

In the course you learn exactly how to ensure that your machines last longer, that production quality is maintained and that delivery schedules are surely met. The best asset management and maintenance processes prevent failure by designing

their business systems and business processes to produce the right outcomes. You will discover and learn to use the right principles and the proper practices of successful asset maintenance systems that you will naturally gain by imbedding Plant Wellness best practice life cycle asset and maintenance management processes into your organisation.

Details of Your Course Presenter:



Mike Sondalini: Your trainer and course presenter has extensive industrial business experience, equipment reliability and plant maintenance optimization expertise. He uses that knowledge and the insights gained over the years in industry to take course attendees on a thorough and comprehensive coverage of the key reliability improvement knowledge, understandings and skills to improve asset productivity, reduce maintenance costs and maximise production performance and quality.



Mike has been involved in engineering, reliability and maintenance careers in a wide range of companies and operations including original equipment manufacturing, beverage production, resources and mining industries, fabrication and construction, process plants, industrial chemical manufacturing, quality management, project management, industrial asset management, maintenance management and industrial training. They use their years of experience in business and industry to focus on the critical success factors of what to do for sure reliability improvement, and how to do it quickly and well.

Mike shows you how you and your people can make wise reliability improvement decisions, effectively use your resources, work expertly in the least time necessary, and continually improve your operational and maintenance productivity, efficiency and effectiveness.

A 100% Money Back Guarantee

You are afforded maximum protection in our seminars, courses and workshops by a 100% Money Back Guarantee. If, for whatever reason, you believe that your expectations have not been met, our fees will be totally refunded. As further compensation you keep all materials handed out during the presentation. (Guarantee is subject to the booking fee being received by the due date.)

Request More Course Information and Details

Please contact us by email at info@lifetime-reliability.com or by telephone on +61 8 9457 6297 or on cell/mobile +61 8 402 731 563 to get more information in answer to any questions that you have.

We provide free quotations and can give experienced advice on running our training course in your operation.

Contents of the Plant Wellness Way to World Class Plant Reliability Management Excellence Course

The best maintenance processes prevent failure but still use systematic inspection, detection, and correction of embryonic failures before they develop into problems. You will discover and learn to use the right principles and the appropriate practices for successful maintenance management systems by attending this training course.

A certificate of training is provided to participants at the completion of the course.

The table below contains the training content in the 'The Plant Wellness Way to World Class Plant Reliability Management' course. You get all the necessary concepts, the process design, the work processes and the business systems needed to coordinate and achieve maximum production plant and equipment performance using the Plant Wellness Way methodology. You learn the vital practices and systems to achieve maximum life-cycle profits from your operating plant and equipment. You gain the right knowledge and the right approach to build an operation guided by the correct concepts, solutions and practices that bring world class operational, maintenance and reliability performance.

Lifetime **R**eliability **S**olutions
...your edge in RELIABILITY

Day 1 – Foundational Concepts & PROCESS 1	Day 2 – Operating Risk Analysis & PROCESS 2	Day 3 – Plant Reliability Strategy & PROCESS 3	Day 4 – Work Quality Control & PROCESS 4	Day 5 – Get to Excellence & PROCESS 5 and 6
<p>Introduction</p> <ul style="list-style-type: none"> • Build a System for Reliability • Plant Wellness Way Overviewed • IONICS Processes • Plant Wellness Way Vision 	<p>Asset Management for Plant Wellness</p> <ul style="list-style-type: none"> • Successful Asset Management by Design • Analyse Operational Consequences during Project Design • DOCTOR • EAM the Plant Wellness Way • Introducing Enterprise Asset Management and Plant Wellness into Organizations • Asset Management and Plant Wellness Policy • Maintenance Vision, Policy and Maintenance Strategy 	<p>Removing Risks and Raising Reliability</p> <ul style="list-style-type: none"> • Identifying Equipment Reliability Growth Opportunities • Apply Series System Reliability Property 1, 2 and 3 • Developing a Highly Successful Equipment Risk Prevention Plan • Physics of Failure Mechanisms and Their Failure Causes • Physics of Failure Factor Analysis for Reliability Strategy Selection • <i>Example:</i> Physics of Failure Factors Analysis • Developing Physics of Failure Based Reliability Strategy 	<p>The Accuracy Controlled Enterprise</p> <ul style="list-style-type: none"> • The Precision Principle • Plant and Equipment Defects, Failures and Errors • Creating Standard Operating Procedures • Adding Job Accuracy Controls • Good, Better, Best' Quality Bands • Train People to Your SOPs • Make Your Organization an ACE • The Value of Precision Quality • ACE is a Business Culture and Personal Philosophy • Using ACE 3T Procedures 	<p>Reliability Growth</p> <ul style="list-style-type: none"> • Failure Patterns and Failure Modes • Reliability Growth Cause Analysis • <i>Example:</i> Reliability Growth Cause Analysis • Including POFFA in a RGCA • Setting Reliability Standards • Challenge Your Business to Meet High Precision Standard • Set Precision Targets for Accuracy Controlled Reliability
<p>Reliability of Work, Processes and Machines</p> <ul style="list-style-type: none"> • Jobs and Work Process Reliability • Maximizing Work Process Success • Business Process Reliability • Industrial Equipment Reliability • Reliability, Safety and Risk • Control of Series Process Reliability 	<p>Quality Standards for Failure Prevention</p> <ul style="list-style-type: none"> • The Need and Purpose of Standardisation • How to Use Standardization in Your Business • Set the Risk Management and Quality Standards Required • Defect Creation, Defect Management, Defect Elimination Business Model 	<p>Chance Reduction Risk Management</p> <ul style="list-style-type: none"> • Impact of the Choice of Risk Reduction Strategies • Power Law Implications • Similarity between Safety Incidents and Equipment Failures • 3-Factors Risk Analysis 	<p>Organization Structure and Teams</p> <ul style="list-style-type: none"> • The Reliability Improvement Value of Autonomous Team • Using Reliability Principles to Create Organizational Structures 	<p>Measuring to Improve Performance</p> <ul style="list-style-type: none"> • Monitoring a Process and Its Process Steps • Process Performance Distribution Curves • Monitoring and Measuring Maintenance • <i>Example:</i> Developing a Performance Distribution Curve

Day 1 – Foundational Concepts & PROCESS 1	Day 2 – Operating Risk Analysis & PROCESS 2	Day 3 – Plant Reliability Strategy & PROCESS 3	Day 4 – Work Quality Control & PROCESS 4	Day 5 – Get to Excellence & PROCESS 5 and 6
<p>The Physics of Failure</p> <ul style="list-style-type: none"> • The Cause of Machinery and Equipment Parts Failure • Science of Failure • Limits of Material Strength • Engineering Limitations are a Part of the Design • Production Limitations are a Part of the Design • Equipment Reliability Cliffs 	<p>Operating Equipment Risk Assessment</p> <ul style="list-style-type: none"> • Estimating Risk • Assess Allowable Frequency Using the Risk Formula • Equipment Operating Criticality • Determining Asset Operating Criticality • Conducting a Risk Analysis • Using the Risk Matrix to Gauge Risk 	<p>Selecting Reliability Strategy</p> <ul style="list-style-type: none"> • Maintenance for Risk Control • Failure Prevention Focus • Physics of Failure Reliability Strategy Analysis • Life Cycle Tasks, Work Procedures, Critical Spares • Verifying Business Benefits • Documenting Plant Reliability and Operating Strategy • Set the Business Objectives • Document Asset Maintenance Strategy and Plans • Rolling 5-Year Maintenance Program • Rolling 2-Year Maintenance Budget 	<p>Precision Maintenance Skills and Standards</p> <ul style="list-style-type: none"> • Financial and Operating Benefits of Precision Maintenance • Importance of Work Quality Standards for Machine Reliability • Precision Maintenance Program • Setting Precision Quality Standards for Your Equipment • Accuracy Controlled Maintenance Quality System • Engaging the Workforce • Precision Maintenance the Plant Wellness Way 	<p>The Chance of Success</p> <ul style="list-style-type: none"> • Chance of Success Mapping • Estimating Chance of Process Success • Estimating Chance of Equipment Success • <i>Example:</i> Chance of Success Analysis
<p>Variability in Outcomes</p> <ul style="list-style-type: none"> • Observing Variability • Controlling Process Variation • Controlling Business Process Performance • What Quality Is • Defect Elimination Strategy 	<p>PROCESS 2 – Order Risks by Importance</p> <ul style="list-style-type: none"> • Specify the Asset Performance that delivers the Operational Requirements • Determine the Business Risk from Operating Failures • Assessing Operating Equipment Risk • <i>Example:</i> Operating Criticality Analysis • The Problem with Standard Equipment Criticality 	<p>PROCESS 3 – Numerate Risk Elimination Options</p> <ul style="list-style-type: none"> • Plant Wellness Way Risk Elimination and Reliability Methodology • How to Do a Physics of Failure Reliability Strategy Analysis • <i>Example:</i> POF Reliability Strategy Analysis • Selecting High Reliability Strategy • Doing a 3-Factors Risk Analysis • Organisational Factors Analysis of Critical Parts Failure • Allocating Responsibility to do Strategy Requirement • Confirming Economic Value of New Strategy 	<p>PROCESS 4 – Introduce Risk Control Solutions</p> <ul style="list-style-type: none"> • Set Operating, Maintenance and Engineering ACE Quality Standard • Write Accuracy Controlled Enterprise 3T Procedures • Make Delivery of Defect Elimination and Failure Prevention a Management Duty • Training and Competency Assessment Plans • Build Autonomous Cross-Functional Teams • Setting ACE Target – Tolerance – Test Requirements • Examples of an Accuracy Controlled Procedure • Personnel Assessment and Training • Set Up Cross-Functional Knowledge Teams 	<p>PROCESS 5 – Control Operational Processes</p> <ul style="list-style-type: none"> • Processes Engineered to Run Most Successfully • Process Chance of Success Modelling • Establish Process and Step Performance Indicators • Gather Evidence and Monitor Results and Chance of Success • Monitor for New Reliability and Improvement Opportunities • <i>Example:</i> Process Reengineering

Day 1 – Foundational Concepts & PROCESS 1	Day 2 – Operating Risk Analysis & PROCESS 2	Day 3 – Plant Reliability Strategy & PROCESS 3	Day 4 – Work Quality Control & PROCESS 4	Day 5 – Get to Excellence & PROCESS 5 and 6
<p>Instantaneous Cost of Failure</p> <ul style="list-style-type: none"> • Effect of Failures on a Business • Failure Cost Surge • Total Defect and Failure Costs • Costing the Failure Consequences • <i>Example:</i> Calculating TDAF Cost 				<p>Failure Root Cause Prevention</p> <ul style="list-style-type: none"> • Improve the Process Design • Prevent the Chance of Failure Starting • Identify Where Your Equipment Problems Begin • Behaviours of High Reliability Organizations • Limitations of Materials of Construction
<p>Preventing Life Cycle Risks</p> <ul style="list-style-type: none"> • Raising the ‘R’ • Stress-to-Process Model • Plant Wellness Way Methodology • Asset Management Strategy from Physics of Failure Factors Analysis • Plant and Equipment Risk Identification • Business Risk Impact Review • Risk Reduction Decisions 				<p>Change Management for Workplace Innovation</p> <ul style="list-style-type: none"> • Install Quality Management Your Processes • ‘Push the Limit’ Concept • Driving Continuous Improvement with ACE 3T Procedures • Change Goals to Get Better Results • ‘Change To Win’ Team-Based Business Improvement Program
<p>PROCESS 1 – Identify Business & Operational Risks</p> <ul style="list-style-type: none"> • Start with a Process Map of the Situation • Business Process Maps • Equipment Process Maps • Equipment Failure Review • Work Activity Process Map • Work Process Risk Review • Calculating TDAF Cost • How to Develop TDAF Cost Tables • Risk Rating with TDAF Costs • <i>Case Study:</i> Finding All Business Losses from Failures 				<p>Plant Wellness Index</p> <ul style="list-style-type: none"> • Potential for World Class Reliability • Organizational Capability to Have High Reliability

Day 1 – Foundational Concepts & PROCESS 1	Day 2 – Operating Risk Analysis & PROCESS 2	Day 3 – Plant Reliability Strategy & PROCESS 3	Day 4 – Work Quality Control & PROCESS 4	Day 5 – Get to Excellence & PROCESS 5 and 6
				<p>PROCESS 6 – Synthesize Ideas to Continually Improve</p> <ul style="list-style-type: none"> • Find Hiding Risks and Eliminate • Find Remaining Life Cycle Risks • Identify More Successful Risk Reduction Strategies • 'Push the Limit' Projects • Make the Best Way the Only Way Used in Your Operation • Confirm Reliability Growth in Your Processes