

# CMRP

**Certified Maintenance &  
Reliability Professional**



# Course Description:

- Maintenance Best Practices are critical for every successful individual and company. Maintenance is a unique business process. To be successfully managed, it requires an approach different from other business processes. The program provides a framework for managing maintenance with options that allow decision makers to select the most successful ways to manage maintenance



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# The Training Course will highlight:

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- The effectiveness of maintenance practice has not improved significantly in many organizations despite the implementation of powerful computerized management systems. Measuring, comparing, and improving maintenance practice underpins the success of the whole business process.

## Course Objective:

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**Participants attending the program will:**

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***Identify maintenance best practice key elements for taking action on them, starting with foundations and building up to best practice that will deliver maximum business benefits.***

Evaluate practices compared to those of others.

Improve the use of information and communication tools.

Improve productivity through use of better, timelier information.

Understand how world-class organizations solve common maintenance problems.

Improve consistency and reliability of asset information.

Formulate preventive and predictive maintenance strategies.

Optimize planning and scheduling resources.

Develop a proactive maintenance regime within the organization.

Carry out failure analyses thereby avoiding repetitive failures.

Allow tighter control of maintenance budgets by the avoidance of unplanned equipment failures in service.



# WHO Should attend?

- Delegates should represent a wide range of personnel in the organization who are involved in, or dependent on, effective maintenance management.
- **These should include:**
  - Maintenance and Reliability Managers
  - Maintenance and Reliability Supervisors
  - Personnel designated as planners or identified to become planners.
  - Team leaders from each Maintenance craft
  - Key Operations Supervisors
  - Materials Management Managers/Supervisors
  - CMMS Administrator or key users
  - Key Maintenance support assistants
  - Other stakeholders in the Work Planning Function.

# Training Methods:

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- This interactive Training will be highly interactive, with opportunities to advance your opinions and ideas and will include.
- Lectures
- Workshop & Work Presentation
- Case Studies and Practical Exercise
- Videos and General Discussions



# Day 1

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## **An Overview of Maintenance Practice and Benchmarking**



## **Introduction to Maintenance (Asset) Management**

Definitions of key terms

Types of Maintenance - Reactive, and Proactive

Maintenance in the Business Process

Evolution in Maintenance Management

The Principle of Prioritization



## **The Concept of Best and Worst Practice**

Why Systems Fail?

Cases of Failures From Different Industries

Failure Analysis and Technical Causes of Failures

Generic Lessons Learned and Improvements

# Day 2

## Performance Measures and Improvement

### Performance Measure and Benchmarking

- Challenges of Performance Measures
- Performance Measures as a Continuous Improvement Process
- Desirable Features in Maintenance Performance Measures
- Best and Worst Practices in Performance Measures

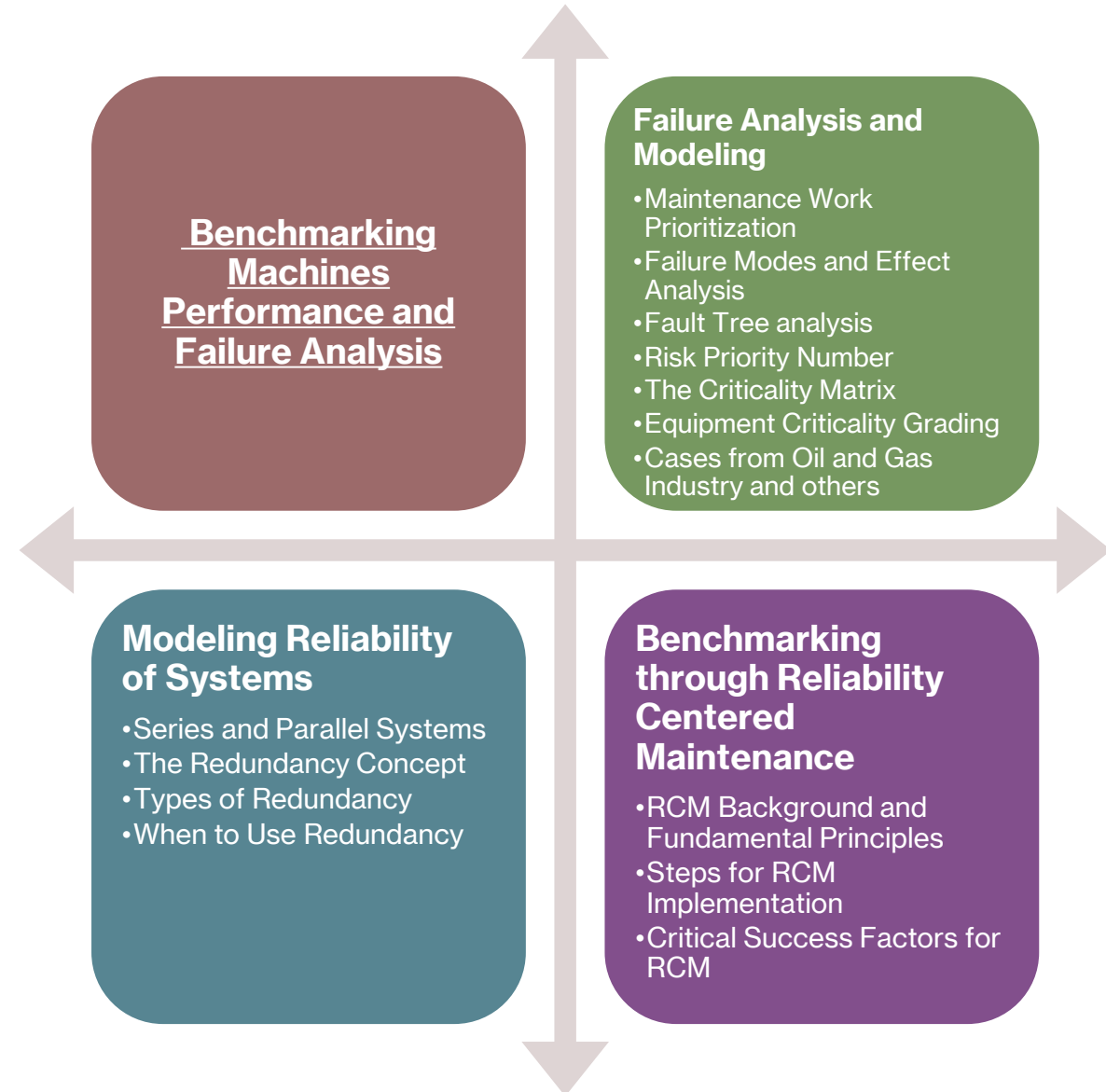
### The Overall Equipment Effectiveness as a Source of Best Practice in Maintenance

- Advantages of OEE as an Improvement Program
- Lean Maintenance using OEE
- Analysis of the Six-Big Losses
- Case Studies for OEE

### Total Productive Maintenance

- TPM Principles
- Old versus New Attitudes
- Key TPM Strategies
- Implementation Plan
- Cases of TPM in Industry
- The Visual Control
- The Concept of Ask Why 5 Times
- Results of Successful TPM Implementations
- Difficulties with TPM

# Day 3



# Day 4

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## Condition Based Maintenance

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### **The Condition Based Approach**

What to Monitor and Where  
Condition Monitoring Systems  
Remaining Life Prediction

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### **Vibration Monitoring**

How and where to Measure Vibration  
Diagnosing Faults Using Vibration

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### **General Purpose CM - Non-Destructive Testing - NDT**

Thermal Monitoring & Imaging  
Lubricant Monitoring & Wear Debris Analysis

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# Day 5

## Best Practice Through Manufacturing and Maintenance Systems



### MRP and ERP Systems.

- What is ERP and how did it develop?
- What is MRP System
- What is MRPII System
- Planning and Control
- The Bill of Materials
- Master Production Schedule.
- Scope of Decisions



### Decision Analysis for Optimization of Maintenance Activities

- How to get the most of your CMMS?
- Benefits that can result from CMMS.
- Optimum Decisions for Maintenance Policies
- Unmet needs in Responsive Maintenance
- Key Features of Next Generation Maintenance Systems
- How to transform Data to Decisions