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# Maintenance Strategy Development and Cost Effective Implementation

## INTRODUCTION

- In the competitive environment of today, availability and reliability of assets is more than ever an important issue. Maintainers are faced with the challenge to deliver the same levels of equipment safety, reliability and availability with smaller budgets. Therefore, maintenance & reliability best practices are critical for every organization who would like to be best in class. Apart from maintenance & reliability engineering, outsourcing maintenance activities to contractors could contribute to this significantly. Because sometimes external parties are better suited to improve the performance than you or you simply do not want to do it yourself.
- This highly-interactive Maintenance Strategy Development and Cost Effective Implementation training course emphasizes the most effective strategies, policies, tactics and practices that are needed to ensure the reliability, integrity and durability of the physical assets through their life-cycle. This training course will ensure that you understand how to decide rationally what maintenance activities to outsource and what not, how to select the best maintenance contractor and how to evaluate the delivered performance of all parties involved. Maintenance contracts used in several branches will be discussed.
- You will have the opportunity to discuss the best practices used in your organization. Through a combination of formal lectures and group work, you will leave the course with the tools to improve your processes and way of working.
- The first module of this workshop delivers many practical and new Maintenance and Reliability Best Practices concepts and tools. You will discuss these concepts and practice using practical tools in case studies and discussion groups. The second module then helps you decide in a rational way which activities are best done with internal resources and which are best outsourced. Tools and techniques are introduced which will help you ensure that outsourcing contracts are comprehensive and avoid the common pitfalls.
- The costs associated with equipment downtime and reduced production can be significant. Learning how to effectively manage all aspects of your industrial facility is a must - so is this ten - day seminar.

The focuses of this training course are highlighted as follows:

- Financial concepts of costs, capital, profit and return on investment
- The model for asset healthcare
- Cost impact of equipment failure and degradation
- Proactive practices and tools to reduce maintenance costs
- Failure analysis to focus cost reduction efforts
- Work management to improve resource efficiency
- Understanding Outsourcing considerations
- Contracting types, incl. Service Level Agreements (SLA's)
- Key Performance Indicators (KPI's) to monitor performance
- Developing Contracts – The Contracting Cycle
- Negotiating skills
- Continuous improvement and performance management: how to evaluate the performance with all parties involved

## OBJECTIVES

By the end of this training seminar delegates will be able to:

- Understand the concepts of costs, capital, profit and ROI
- Understand the cost impact of unanticipated failure
- Apply proactive policies to reduce future maintenance costs
- Structure and analyse failure data to reduce repetitive failures
- Identify root causes of unanticipated failure costs
- Reduce resource costs through efficient work management practices
- Decide rationally what maintenance activities to outsource and what not
- Use the features, functions and benefits of lean maintenance contracts
- Use the most applicable type of maintenance contracts (incl. Service Level Agreements) and when/how to apply them
- Define service levels and monitor the contractor performance
- Develop and negotiate a maintenance contract
- Recognize the pitfalls
- Evaluate the delivered performance of all parties involved
- Implement maintenance contract management

## TRAINING METHODOLOGY

- This Maintenance Strategy Development and Cost Effective Implementation training seminar is a combination of instructor lead topic areas and class discussions. This training seminar will be conducted along interactive workshop principles. Experiences from different areas will be discussed. There will be many opportunities for discussion and sharing experiences.

## ORGANISATIONAL IMPACT

The organisation will:

- Gain an understanding of the sources of maintenance costs
- Be able to focus its resources on the events that contribute most to costs
- Gather and structure failure data in a meaningful way
- Eliminate defects that are driving costs
- Understand how to outsource maintenance activities in a professional way
- Be able to apply proper maintenance contracts very fast
- Get instruments to improve maintenance contract management in both short as well as long term
- Will get the most out of the maintenance contracts
- Avoid potential pitfalls regarding developing and managing maintenance contracts
- Save time, money and irritation

## PERSONAL IMPACT

By attending this training seminar, the participants will be able to:

- Understand the behaviour and events that are driving costs
- Understand how poor reliability is a major factor in the cost equation
- Implement a PM program to improve reliability
- Implement root cause analysis to eliminate defects
- Apply best practice work management to ensure early detection and correction of defects
- Gain understanding and practical insight of outsourcing and contracting aspects
- Improve the level of personal knowledge
- Be more professional in contracting processes and negotiations
- Work more effectively by applying the right approach
- Add value for themselves
- Plan and develop a future career

## WHO SHOULD ATTEND?

- Planners
- Supervisors
- Engineers
- Reliability Engineers
- Maintenance Team Leaders and Managers
- Operations Team Leaders and Managers
- All Professionals involved in procurement and supply chain management
- All Professionals negotiating, managing and verifying maintenance contracts
- Teams who have been assigned the responsibility of establishing a maintenance contract will find it extremely useful to attend this seminar as a unit
- Anyone who wishes to update themselves on Maintenance Contracts & Outsourcing

## Course Outline

### MODULE I - Maintenance & Reliability Best Practices: Lowering Life Cycle Cost of Equipment

#### Equipment Life-cycle Cost Introduction

- Definitions of Reliability, Maintenance & Asset Management
- The Concept of Costs, Capital, Profits and Return On Investment
- The 'Asset Healthcare Model'
- Key Areas of Asset Management
- Open Discussion Sessions

#### Cost Factors and Causes

- The Real Cost of Unanticipated Failure
- Asset Performance Standards
- The Forms of Asset Failure and Degradation
- The Causes and Nature of Asset Failure and Degradation
- The Effects, Cost and Risks of Asset Degradation
- Practical Application and Discussion of Case Study

#### Breaking the Cycle of Degradation and Costs

- Programmed Maintenance
- Programmed Maintenance Intervals
- Condition-based Maintenance Intervals
- Implementing Optimised PM Programs
- Optimizing Spares to Support the Maintenance Program
- Practical Application and Discussion of Case Study

#### Cost Reduction through Defect Elimination

- Failure Data Collection and Analysis
- The Impact of Chronic Failures vs. Intermittent Failures
- Focus Improvement through Pareto Analysis
- Quantify Losses in Life Cycle Terms
- Rigorous Root Cause Analysis Techniques
- Root Cause Analysis Case Study
- Discussion of Software and Templates to Support Analysis

## Work Management Converts Strategy to Practice

- Work Identification and Defect Reporting
- The Importance of Backlog
- Planning for Quality and Reliability
- Capacity Planning
- Scheduling for Efficiency
- Work Logistics and Preparation
- Checklists and Practical Aspects Work Quality Control
- Final Discussion and Evaluation

## MODULE II - Maintenance Contracting & Outsourcing

### Outsourcing Considerations

- Introduction
- Asset Management - The Business Impact of Maintenance
- Considerations in Outsourcing Maintenance – What to outsource and what not?
- Activity on Asset Matrix
- Risks Involved
- Outsourcing Maintenance Activities – case study

### Maintenance Contracts

- Maintenance Contract Types
- Parties Involved
- The Tendering Process – Modern Ways of Tendering
- Choosing the Right Contractor
- Costing the Service
- Defining Key Performance Indicators to Monitor the Performance of All Parties Involved
- Use of Balanced Scorecard with Performance Contracts
- Interactive Exercise and Examples

### Developing the Maintenance Contract

- Vendor Management
- The Contracting Cycle
- Assemble a Team
- Assess, Determine and Specify the Required Service Levels
- Writing the Contract – Contents of a Maintenance Contract
- Interactive Exercise: Review Some Existing Contracts
- Implementing Contract Management – How to make it work? (Performance Management)
- Periodic Evaluation & Improvement

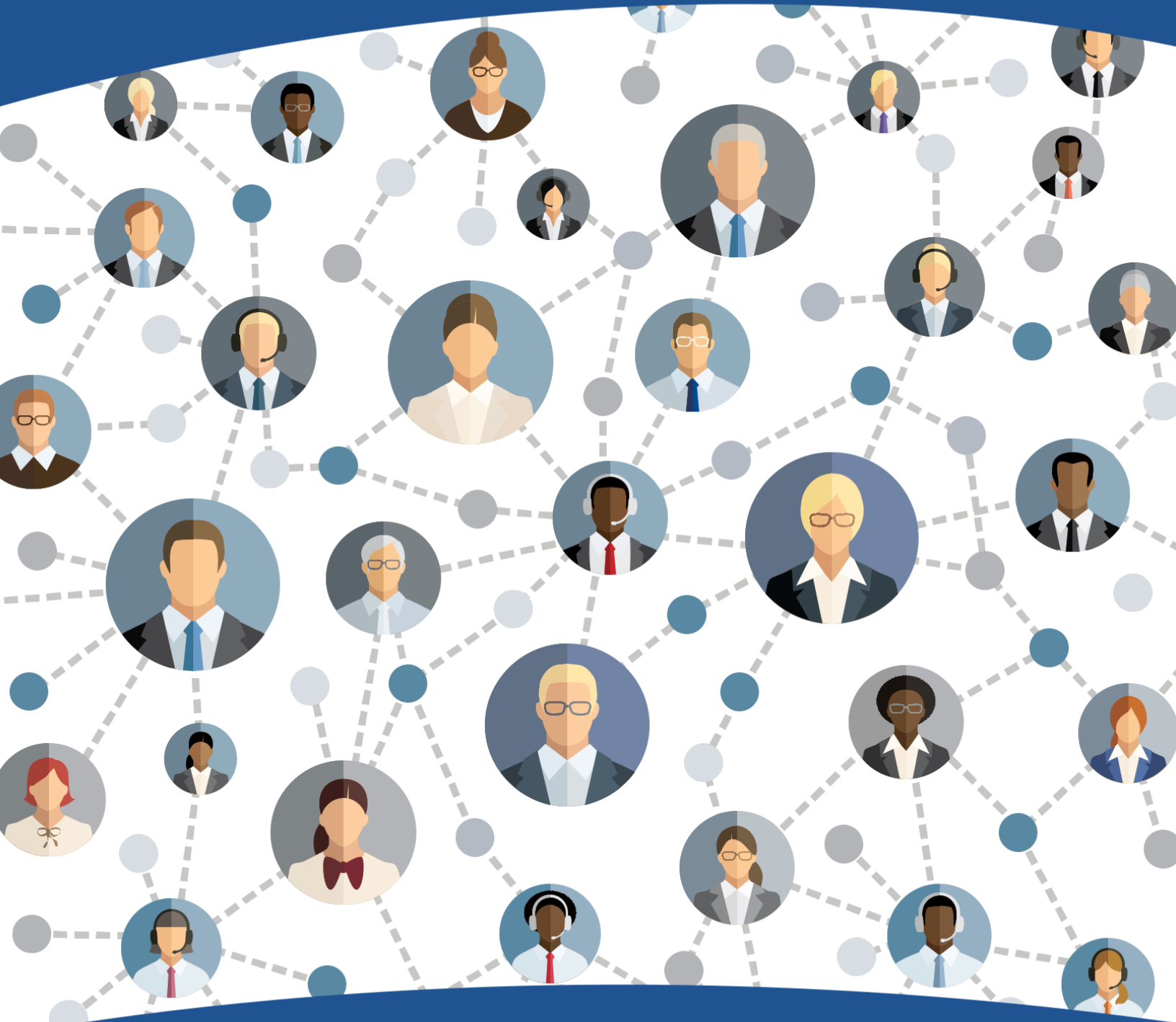
## Grounding and Negotiating the Contract

- Expectations about Availability, Reliability and Costs
- The Extensive Preventive Maintenance Schedule – “tricks” of Maintenance Contractors
- The Seven Steps to Develop a Risk Based Maintenance Concept
- Using the Maintenance Concept to Negotiate More Effectively Lean Maintenance Contracts
- Negotiating the Contract – negotiation ploys
- Negotiating the Contract – negotiation tactics
- Negotiating Tips
- Interactive Exercise and Role Play Regarding Negotiating

## Final Workshop

- Development of a Maintenance Contract in Groups
- Defining the Requirements and Service Levels
- Develop the Offer
- Selection Criteria
- Presenting the Bid
- Closing the Contract
- Evaluation of Results
- Wrap-up

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