

# Preventive Maintenance of Facilities

#### INTRODUCTION

- As an owner and/or user of facilities such as buildings, workshops, warehouses, housing, utilities, security systems and landscaping you will have the challenge to maintain and develop the agreed services and performance which should support and improve the effectiveness of the primary activities of the organization. Leading industrial organizations are evolving away from reactive ("fix-it-when-it-breaks") management into preventive and predictive management ("anticipating, planning, and fix-it-before-itbreaks"). This evolution requires well-planned and executed actions on several fronts.
- You probably will make use of contractors to provide a diversity of services, varying from regular cleaning to specialized maintenance services, but how to select the right contractor and contract type which suits your facilities management strategy and how to manage and monitor the results?
- This highly interactive training course will ensure that delegates understand how Preventive Maintenance of Facilities will fit in the context of Asset Management. Topics such as risk-based maintenance, predictive maintenance strategies, contracting and performance management in a complex environment will be considered. Delegates will leave the course with the tools to make Preventive Maintenance of Facilities highly effective.

## This training course will highlight:

- The basic principles of Preventive Maintenance of Facilities within the context of Asset Management
- Risk Based Maintenance approach
- Maintenance & Reliability Engineering best practices
- Developing your (out)sourcing strategy
- The diversity of contract types and their useful application
- Monitoring & managing performance

## **OBJECTIVES**

# At the end of this training course, you will learn to:

- Apply the basic elements of effective Preventive Maintenance of Facilities and how it fits within Asset Management
- Develop and maintain a Long-term Maintenance Plan for the Facilities
- Identify, evaluate, and manage the risks involved
- Develop and negotiate effective (out)sourcing strategies
- Manage & monitor the performance

#### TRAINING METHODOLOGY

 The training course will be conducted along workshop principles with formal lectures, case studies, group discussion and interactive practical exercises. There will be many opportunities for discussion and sharing experiences.

#### ORGANISATIONAL IMPACT

## The organisation will:

- Have a comprehensive understanding of developing preventive & predictive maintenance strategies for the Facilities.
- Benefit from the application of Preventive Maintenance best practices
- Be able to optimize the maintenance effort and make it more effective
- Be able to assess the risks involved and how to manage them
- Be able to develop and implement (out)sourcing strategies
- Have basic instruments to develop and manage a variety of contracts
- · Get the best out of the assets and Facilities
- Save time, money, and irritation

#### PERSONAL IMPACT

## By attending the participants will:

- Gain understanding and practical insight of effective Preventive Maintenance of Facilities
- Be able to manage facilities and contractors more professionally
- Improve their level of subject matter knowledge & skills
- Work more effectively by applying the right approach
- Add value for themselves
- Be able to plan and develop a future career

#### WHO SHOULD ATTEND?

# This training course is suitable to a wide range of professionals:

- Facilities Management professionals
- Maintenance Engineers in a Facilities environment
- All professionals negotiating, managing, and verifying contracts in a Facility Management environment
- Continuous Improvement professionals
- Facilities Management teams
- Anyone who wishes to update themselves on Preventive Maintenance of Facilities

#### **Course Outline**

## Facilities Management – A Strategic Approach

- Assets & Facilities The added value
- Facilities Management within the context of Asset Management From strategy to operations
- Corporate strategy & line of sight Strategic Master Plan for the Facilities
- Decision making process in the triangle Performance Risk Costs
- Life Cycle Management of Facilities
- Long term maintenance & investment planning & workflow

## Assessing & Managing Risk

- Cost-benefit decisions: The right amount of maintenance
- Understanding risk: A key driver for preventive maintenance
- Identification and assessment of risk
- Significance of risk
- Risk management
- Risk register, risk matrix
- Risk on business level
- Risk on asset & facilities level

### Preventive & Predictive Maintenance Strategies

- The maintenance reference plan
- Deterioration of assets Basic failure behaviour of assets and systems
- The seven steps of Risk Based Maintenance: Integration of Failure Mode Effect & Criticality Analysis (FMECA)
- Failure patterns & Weibull distribution
- Determine maintenance tasks and frequencies
- Integrating spare parts, tools, and facilities
- Alternative tasks for specific equipment
- Inspection & testing
- Condition monitoring

# Outsourcing & Contracting Strategies

- Outsourcing strategies
- Contract types
- The contracting cycle From setting the RAMS requirements to choosing the right contractor
- Partnerships
- Monitoring & managing performance of contractors
- Periodic evaluation & continuous improvement

# **Implementation Aspects**

- Optimization: Using Decision Support Tools to optimize maintenance tasks & frequencies
- Implementing Predictive Maintenance technologies
- Implementation aspects and integration with maintenance workflow management and other methodologies like Risk Based Inspection (API 580) and Potential Failure Analysis (PFA)
- Monitoring performance
- Action plan to implement RBM

