# DAY 1

#### The Need for Maintenance

- Maintenance & Asset Management as a Business Process
- Risk Based Maintenance (RBM)
  - Causes of Failure
  - o Likelihood & Severity of Failure Risk Analysis
  - o Failure Mode Effect & Criticality Analysis (FMECA)
  - o Choosing the (preventive) Maintenance Tasks
  - Optimization of Maintenance Decisions
    - o Failure Pattern Identification
    - Statistical Analysis of Failures
    - o Weibull Analysis
- Zero Base Budgeting
  - o Define the Production Requirement
  - o Define the Maintenance Requirement



## Developing the CMMS

- Database & Structure
- CMMS & Workflow
- CMMS & Maintenance Strategies
- Asset Register
- Configuration Management



## The Planning Function

- The Maintenance Workflow and How It Relates to the Preventive Maintenance Strategy
- Roles & Responsibilities in Work Preparation, Planning and Scheduling
- Principles of Work Preparation & Planning
- Principles of Scheduling
- Network Planning



#### **Predictive Maintenance**

- Potential Failure Analysis (PFA)
  - o Integration of PFA with FMECA & RBM
  - Understanding the P-F Interval
  - Decide which Technologies to Apply
- Predictive Maintenance Technologies
  - Vibration Analysis
  - Visual Inspection
  - Infrared Thermography
  - Temperature Sensitive Labels
  - Megger Tests
  - Ultrasonics
  - Oil Analysis



#### Control of the Maintenance Process

- Implementation Stages of Preventive & Predictive Maintenance Strategies
- CMMS Integration
- Reporting Use of (Key) Performance Indicators
- Case Study