BOOST
THE LEADING TRAINING PROVIDER

Maintenance & Reliability Management

Effective Maintenance Management and Reliability Practices (SMRP BOK – CMRP oriented)

Course Introduction

Effective Maintenance Management is the hub of a well-functioning maintenance organization. In order for maintenance to work, many other systems need to work well.This comprehensive 5-day program is designed based on the SMRP Book of Knowledge to benefit both new and experienced professionals. The SMRP BOK is based on 5 pillars that build vertical and horizontal knowledge of the 21st-century maintenance professional. It covers advanced best maintenance practices that a qualified professional would require to carry out his duty starting with the first steps and building up knowledge and experience to a fully functional maintenance organization.

The program is built on two parallel tracks: the first is learning applicable concepts that can benefit participants immediately after the session, and the second is providing a roadmap to pass the CMRP certification exam. This program is designed to transfer knowledge and to be a stimulating experience. It is highly interactive with many discussions, group activities, and case studies.This certification program (CMRP) provides a unique skill set by going beyond textbook knowledge and testing real-world experiences and abilities. SMRP values data-driven excellence, sharing/collaboration, membership focus, continuous improvement, accountability, trust and respect, integrity, and social responsibility.

Target Audience

This course is designed for Maintenance Engineers, Supervisors, Managers, Planners, Schedulers, and Asset Management professionals. Also, we recommend it for Operation Engineers.

Learning Objectives

- The 5 Pillars of SMRP BOK
- Developing a solid knowledge of all essential Maintenance and reliability concepts and terminologies
- Implement numerous KPIs into their work process to guide business toward its ultimate targets
- Understand new maintenance methodologies and their application
- Identify and plan best practices for an effective maintenance and reliability program.
- Leading their Organization and Management into Planned Maintenance Effectiveness
- Improve the use of information and communication tools between related parties and/or departments in Maintenance and Reliability.
- Improve consistency and reliability of asset management
- Utilize leadership and personal skills to achieve maintenance and reliability excellence
- Optimize preventive and predictive maintenance strategies to maximize returns.
- This course is a great preparation for the CMRP exam together with your accumulated practical experience.

Course takeaways:

- The participants will not only get the session presentation, but also a big set of complementing documents that will help them directly on the two tracks of the session.
- Links to more than 200 CMRP exam questions to simulate the exam and practice their knowledge.

Course Outline

- **01 DAY ONE**

  Introduction

- Definitions in Maintenance
- Evolution of Maintenance Methodologies
- What is SMRP
- Why CMRP
- Maintenance types: Reactive / Periodical / Condition Based / Proactive
- The P-F / DIPF Curves: understanding Maintenance over Asset Lifecycle.
- The universal Maintenance Management process

1. Pillar 1 – Business and Management

- 1.1. Provide Vision, Mission, and measurable goals
- 1.2. Organizational structure
- 1.3. Key Performance Indicators,
- 1.4. KPIs development cycle
- 1.5. KPI Examples from SMRP Best Practices
- 1.6. Stakeholder analysis
- 1.7. Maintenance coordination with EHS

2. Pillar 2 – Manufacturing Process Reliability

- 2.1. Understanding Process and its parameters
- 2.2. Flow diagrams: SIPOC / VSM
- 2.3. What is Process Improvement
- 2.4. Understanding waste and variability – Lean Six Sigma
- 2.5. Wastes Analysis
- 2.6. Understanding and studying variability: Six sigma
- 2.7. DMAIC process
- 2.8. Total Productive Maintenance – TPM and Overall Equipment Effectiveness (OEE)
- 2.9. Total Effective Equipment Performance (TEEP)
- 2.10. Uptime, Idle Time, and Utilization Time
- 2.11. Change Management

- **02 DAY TWO**

3. Pillar 3 – Equipment Reliability

- 3.1. Visual Management and 5S Methodology
- 3.2. Systems Covered by Criticality Analysis
- 3.3. Root Cause Analysis – RCA – techniques

- 3.3.1. 5 Whys
- 3.3.2. FMEA
- 3.3.3. Ishikawa Diagram
- 3.3.4. FTA
- 3.3.5. Pareto Analysis

- 3.4. Main Case study for RCA based on client industry
- 3.5. Essential Data Analysis and Visualization
- 3.5.1.Data Management Cycle
- 3.5.2. Data Integrity
- 3.5.3. Essential Statistics
- 3.5.4.Data Charting and visualization
- 3.6. Cost Benefit Analysis, CBA
- 3.7. Reliability of Series and Parallel Systems

- **03 DAY THREE**

4. Pillar 4 – Organization and Leadership

- 4.1. Skills Gap Analysis
- 4.2. Inventory staff skills, determine performance gaps
- 4.3. Leadership role

- 4.4. Situational Leadership
- 4.5. Basic motivation theories
- 4.6. Avoiding the blame culture
- 4.7. The cycle of decision making
- 4.8. Understanding team development phases

• **04 DAY FOUR**

5. Pillar 5 – Work Management

- 5.1. What is a Prioritization System?
- 5.2. Reliability Centered Maintenance, RCM
- 5.3. Basic Planning parameters for effective maintenance job and work order
- 5.4. Essential Maintenance Planning skills
- 5.5. Essential Maintenance Scheduling skills
- 5.6. Maintenance Shutdown Costs
- 5.7. Actual Cost to Planning Estimate
- 5.8. Planning Variance Index
- 5.9. Planned Backlog /Ready Backlog
- 5.10. Stores Management essentials
- 5.11. The ABC store Management
- 5.12. Determining different store levels (Reorder, Minimum, Maximum, Danger) and the spare part life cycle
- 5.13. Economic reorder quantity, EOQ

• **05 DAY FIVE**

6. Extra topics (according to time availability or client preferences)

- 6.1. Review of Lubrication basics
- 6.2. Essential Computerized maintenance management System (CMMS) functions and development phases
- 6.3. Technical Report Writing Basics
- 6.4. Life Cycle Costing - LCC

The following KPIs will be discussed through the session in their relative locations and according to time availability.

- Mean Time Between Failures (MTBF)
- Mean Time to Repair or Replace (MTTR)
- Mean Time Between Maintenance (MTBM)
- Mean Downtime (MDT)
- Mean Time to Failure (MTTF)
- Ratio of Replacement Asset Value (RAV) to Craft-Wage Head Count
- Stocked Maintenance, Repair, and Operating (MRO) Inventory Value as a Percent of Replacement Value
- Total Maintenance Cost as a Percent of Replacement Asset Value
- Maintenance Training Cost /hours
- Maintenance Training Return on Investment (ROI)
- Preventive Maintenance (PM) & Predictive Maintenance (PdM) Work Orders Overdue
- PM & PdM Yield and Compliance
- Craft Worker to Supervisor / to Planner ratios
- Direct to Indirect Maintenance Personnel Ratio
- Overtime Maintenance Cost

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
Aug. 18, 2025	Aug. 22, 2025	5 days	4250.00 $	UAE - Dubai
Sept. 1, 2025	Sept. 5, 2025	5 days	4250.00 $	UAE - Abu Dhabi
Dec. 1, 2025	Dec. 5, 2025	5 days	4250.00 $	UAE - Dubai