



**TRAINING PROGRAM ON
PM OPTIMIZATION
(PMO) - Basic**

ABOUT ARRELIC TRAINING INSTITUTE

Arrellic Institute is focused to equip both industry professionals and college graduates with the skills and knowledge required for bridging the desire state of workforce which industry needs to compete globally.

Arrellic Institute provides over 75 different type of customized training programs in the field of Reliability Engineering, Asset Management, Best Practice, Operation & Maintenance, Predictive Maintenance, NDT, Predictive Analytics, Quality, Risk & Safety.

Arrellic Institute conducts public trainings and workshops in 38 locations across India and 10+ International locations. We are working for large corporate house from 15 different types of industries ranging from Airlines, Automobiles, Cement, Defence Manufacturing, FMCG, Glass, Marine, Metals, Mining, Oil & Gas, Power, Pulp & Paper, Facility Management and Fertilizer.

ARRELIC INSTITUTE: AT A GLANCE



www.arrellic.com/offerings/training-and-development

ARRELIC AWARDS & RECOGNITIONS

NASSCOM®
TOP5

Won the Top 5 Startups in eastern India in Thieve 30 by NASSCOM



GLOBAL ENTREPRENEURSHIP SUMMIT
INDIA 2017

Selected for GES – 2017, Hyderabad and showcased among top 100 Start-ups from India.



TOP50

Emerged as one of the top 40 startups in #Smartfifty' – a search for solutions to transform India



Top 24 Start-ups selected over 1850 startups across India By CNBC.



Selected for NPC – Bangalore and NPC – Kolkata for Product showcase.



Product showcased in TIECON – 2017 and selected through Govt. Of Odisha.

#startupindia

Startup India Recognize



STARTUP ODISHA recognised.



birac
Ignite Innovate Incubate

BIRAC finalist in SPARCH - 2017



Selected for Web summit - Lisbon



Selected for Hello tomorrow, Paris Summit.



Selected and presented in 1000 open startups.

ABOUT THE TRAINING COURSE

PM OPTIMIZATION (PMO) - Basic

In today's competitive market, companies are under increasing pressure to produce higher quality goods and services at lower production costs. A key component of the overall cost of manufacturing is maintenance and the key role of maintenance is to guarantee the reliability of the production plant. The crucial element for ensuring that maintenance is cost effectively delivered is the planning and scheduling of maintenance tasks. *The foundation of excellence and achieving cost-effective equipment reliability starts with PM Optimization (PMO).* The primary goal of PM is to mitigate the negative effects caused by unplanned, reactive maintenance and avoid untimely and expensive emergency repairs.

Organizations spend considerable time Designing A Preventive Maintenance Program, which is a significant step toward preventing failures, enacting maintenance process improvements and more. Once programs are established, there often isn't a plan in place to review and reassess preventative maintenance activities to eliminate tasks that fail to add value or may induce failures. Many organizations continue down their original path, and are blindsided when failures occur, or they are not realizing the full benefits they expected when first starting out.

Often, the approaches we take for preventive maintenance optimization (PMO) are too conservative. In this course, receive the basic knowledge you need to execute a PMO exercise in your organization that will cut cost and improve reliability. Learn what to complete before you even take the first step—and what to do once you've completed your course. Learn how to transform your existing program into an effective and efficient system, and establish a culture of continuous improvement.



LEARNING OBJECTIVES & KEY BENEFITS OF ATTENDING THE WORKSHOP

By attending this technical training on “PM Optimization (PMO) - Basic” delegates will be able learn and deliver the following things.

- ✓ Accurately assess risk and formulate an optimized maintenance strategy based on actual problem seen in the plant.
- ✓ Building an enterprise-level PM plan for various equipment classes.
- ✓ Determine how to apply the plans at the site- and equipment-specific levels.
- ✓ Develop an action plan that can be tracked to ensure on-time completion
- ✓ Create a team with the right resources, time and abilities for success--and ensure they understand the goal is efficiency and not position elimination.
- ✓ Reduce the machine downtime.
- ✓ Identify waste from every source and how it contributes to the overall inefficiency of many programs.
- ✓ Reducing the downtime as compared to unplanned repairs.
- ✓ Reducing the replacement costs.
- ✓ Preserving and restoring equipment reliability.
- ✓ Maintaining and prolonging the functional life of any equipment.
- ✓ Reduce the ambiguity of maintenance tasks.
- ✓ Allows planning to occur and eliminates complete shutdown of a process.

WHO SHOULD ATTEND ?

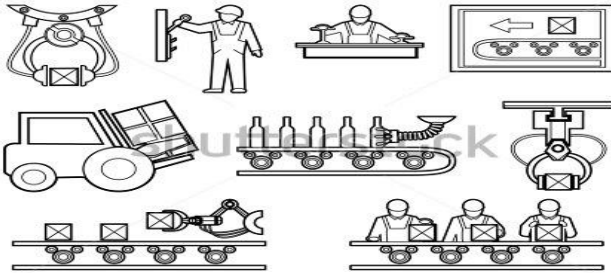
Successful maintenance planning and scheduling programs require the disciplined application of proven processes and interdepartmental partnerships. It is important for departments that are influenced and impacted by the processes to understand the processes. People in the following roles should participate in this training:

- ✓ Quality Managers
- ✓ Quality Engineers
- ✓ Lean practitioners
- ✓ Business Process Owners
- ✓ Process Improvement Managers
- ✓ System Implementers
- ✓ Management representatives
- ✓ System Coordinators



INDUSTRIES THAT CONCERN ABOUT

LOW PRODUCTIVITY



Conventional use of time-based approach for maintenance does not take into consideration the way assets are being utilized, their current condition and real world operating conditions.

HIGH DOWNTIME



Failure to curb unplanned downtime and lack of control over value chain processes lead to high costs, inefficiencies and poor compliance. These severely impacts the profit and industrial growth.

INADEQUATE ASSESS CONTROL



Industries lack the ability to interpret assets data and because of unavailability of proper predictive methods they are unable to predict equipment failures which leads to unplanned downtime.

HIGH MAINTENANCE COST



Increased competition, pressure to grow revenue & profit, tighter regulations, scarcity of raw material, fluctuation demand and obsolete technologies have impacted the way industries are being operated.

COURSE OUTLINE

DAY - 1

INTRODUCTION

- ✓ What is maintenance & why is it performed?
- ✓ Failure rate over time (Bath-tub curve)
- ✓ Evolution of the maintenance
- ✓ Reactive Maintenance
- ✓ Preventive and Predictive Maintenance
- ✓ Reliability Centered Maintenance (RCM)
- ✓ Benefits and risks of a PM Program

HOW TO DEVELOP A GOOD PM SYSTEM?

- ✓ Fundamental Principles of development
- ✓ Approaches to develop & optimise PM
- ✓ Key stages in setting-up a PM program
- ✓ Determining Task Interval
- ✓ Managing Hidden Failures
- ✓ Impact of PM frequency on Reliability
- ✓ Packaging Maintenance Program

COMPONENTS OF A WELL-ORGANIZED PM PROGRAM

- ✓ Essential Care (EC)
- ✓ Fixed Time Maintenance (FTM)
- ✓ Condition monitoring (CM)
- ✓ Documented processes and procedures
- ✓ Maintenance management system
- ✓ Tools facilities and equipment
- ✓ Spare parts inventory/forecast
- ✓ Training, awareness and competence
- ✓ FRACAS feedback programs

REVIEW & Q/A

DAY - 2

RELIABILITY CENTERED MAINTENANCE (RCM)

- ✓ RCM Definitions and History
- ✓ RCM philosophy, principles & Benefits
- ✓ The 7 Basic Questions of RCM Analysis
- ✓ RCM review process (the 7 steps)
- ✓ RCM Decision logic phase
- ✓ Key points summary

MANAGING HUMAN ERROR IN MAINTENANCE

- ✓ Elements for managing maintenance error
- ✓ Avoid Unnecessary Preventive Maintenance
- ✓ Maintenance Quality Management tools

INSPECTION, TESTING AND DIAGNOSTICS

- ✓ Introduction to Risk Based Inspection
- ✓ Review of main Inspection and NDT methods

COMBINING MAINTENANCE METHODS

- ✓ Selecting best mix maintenance methods
- ✓ Lean Maintenance
- ✓ Key points Summary

POST ASSESSMENT

PROGRAM SCHEDULE

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|--------------|---------------------------------|--------------|---------------------------------|
| 09:00 -10:30 | Morning Session 1 | 13:30 -15:00 | Afternoon Session 1 |
| 10:30 -11:00 | Refreshments & Networking Break | 15:00 -15:30 | Refreshments & Networking Break |
| 11:00 -12:30 | Morning Session 2 | 15:30 -17:00 | Afternoon Session 2 |
| 12:30 -13:30 | Lunch | 17:00 -17:30 | Day review & Q/A |