

# PM Optimization Using PMO2000™ Methodology

## Training/Workshop (2 or 3 Days)

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This **2-3 day Training Seminar/Workshop** is ideal for anyone whose job responsibilities include creation, execution and improvement of Preventive and/or Predictive Maintenance procedures.

The program designed to;

- teach the principles of PM Optimization
- show, by case study demonstration (possibly using client-specific data), how such principles could be applied to the client physical assets (possibly achieving benefits from the workshop itself)
- provide a thorough understanding of the PM Optimization process and its benefits, forming the basis from which to evaluate the suitability and value of implementing the process more extensively

This program introduces a participant to the PM Optimization methodology, teaches how to apply the methodology, and provides a basis by which a participant will be able to evaluate the suitability of the process for further application or “roll-out” in their plant(s).

### Course Outline

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#### Introduction

#### The Reactive Maintenance Spiral

- Improvement Tactics
- Problems with Most PM Programs

#### Failure Patterns

#### Introduction to Reliability Centered Maintenance (RCM) Methods

- Origins of RCM
- Functions, Functional Failures and Failure Modes
- Criticality and Task Selection

#### PM Optimization (PMO) Overview

#### Comparing RCM and PMO

- Functional/Methodological Differences between RCM and PMO
- Why PMO is Faster than RCM
- Benefits of PMO Compared to RCM
- The Benefits of an RCM-Based PM Optimization Program

#### PM Optimization Process Steps

- STEP 1—Task Compilation

- STEP 2—Failure Mode Analysis
- STEP 3—Failure Mode Review
- STEP 4—Functional Analysis (Optional)
- STEP 5—Consequence Evaluation
- STEP 6—Maintenance Policy Determination
- STEP 7—Grouping and Review
- STEP 8—Approval and Implementation
- STEP 9—Living Program

#### 🔥 Examples and Case Studies

- Fin Fan Case Study

#### 🔥 Implementing a PM Optimization Program

#### 🔥 Choosing Projects, Collecting Data, Using Cross-Functional Teams, Integrating Operations and Maintenance, Implementing Outcomes

## Get Started with a Pilot Workshop (3 Days to 2 Weeks)

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One of the most effective ways to properly evaluate PM Optimization is to *just do it*, that is, start with a **Pilot Workshop** applying the PM **Optimization** methodology to selected equipment.

A Pilot Workshop makes it possible to:

- 🔥 evaluate whether the PM Optimization methodology can be advantageously applied,
- 🔥 evaluate the alternative full process roll out options,
- 🔥 accurately estimate the cost of such alternative,
- 🔥 accurately estimate the return on investment (ROI) and pay back period,
- and
- 🔥 accurately estimate the costs associated with *not* pursuing PM Optimization.

The **Pilot Workshop** approach is an ideal way to introduce an organization to the PM Optimization methodology, while providing tangible results with real dollar payback from the workshop itself. It is an ideal way to achieve tangible benefits, learn how to apply the methodology, and evaluate the suitability of the process for further application or “roll-out”, all at the same time. After the workshop, the decision as to decide whether or not to proceed further with a PM Optimization rollout can be made; furthermore, it will possible to specify precisely the scope of activity that will be needed from Marshall Institute, how fast it can achieved, and how much investment of time, money, and resources it will take to accomplish specific objectives. This approach reduces the uncertainty, the investment, and the risk associated with a project of this magnitude.

For this initial **Pilot Workshop**, Marshall Institute will provide the services of an expert facilitator and trainer.

## Typical Pilot Program Scope and Schedule

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PM Optimization Pilot Workshops can be scaled from 3 days to two weeks, depending on purpose, scope, and resource availability. Pilot Workshops are usually scoped at one or two weeks. Scope and Level-of-Effort are always negotiable.

The following table summarises activities associated with a typical (one-week) Pilot program:

Timing	Activity	Resources
As soon as practical	Select initial study assets	Marshall Institute, Client Reliability Representative or Engineer
Days 1 & 2 Three weeks prior to workshops	Off site data preparation - Asset identification and documentation of existing or vendor recommended maintenance program (PM and failure data collection on pilot assets)	Marshall Institute, Client Technical Resource, CMMS Key Operator, Planner or Maintenance Supervisor, as required to acquire and prepare data.
Day 1 (Monday)	On site data preparation and validation.	Marshall Institute, Client Planner, CMMS key operator
Day 1 (Monday)	PM Optimization (PMO2000®) Overview Training for all PMO workshop team members [RCM/PMO Concepts; PMO Process Steps]	Up to 16 Operators and maintenance staff (must include workshop team staff); Marshall Institute instructing
Days 2 to 5 (T-F) Workshop	PMO2000® Workshop, 4 days	Workshop Team; Marshall Institute facilitating
Last day of workshop Day 5 (F)	PMO2000® Workshop Management presentation (3 hour preparation; 1 hour presentation to management)	Workshop Team and Management

## Summary

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Either the 2-3 Day Training/Workshop or the Pilot Workshop will demonstrate the value that can be attained through implementing PM Optimization as an integral component of an ongoing continuous reliability improvement program.

The **2-3 Day Training/Workshop** introduces a participant to the PM Optimization methodology, teaches how to apply the methodology, and provides a basis by which a participant will be able to evaluate the suitability of the process for further application or “roll-out” in their plant(s). This option is primarily *training*.

The **Pilot Workshop** approach is an ideal way to introduce an organization to the PM Optimization methodology, while providing tangible results with real dollar payback from the workshop itself. It is an ideal way to achieve tangible benefits, learn how to apply the methodology, and evaluate the suitability of the process for further application or “roll-out”, all at the same time. This option is *application and training*.

## Contact

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For more information, please contact Dale Blann, Principal/CEO, at 919-834-3722 or 919-815-5658, or Greg Folts, President, at 919-834-3722 or 919-815-8600.