



# Preventive Maintenance Optimization Checklist

## Asset Identification & Prioritization

Focuses on accurately identifying critical assets and prioritizing them for optimization based on risk and impact.

### Asset Count (Total)

### Asset Count (Critical - High Risk)

### Asset Count (Critical - Medium Risk)

### Asset Count (Non-Critical)

### Risk Assessment Methodology Used

- ☐ FMEA
- ☐ HAZOP
- ☐ Bowtie Analysis
- ☐ Other (Specify)

### Justification for Critical Asset Designation (For Top 5)

Write something...

### Criteria Used for Asset Prioritization

- ☐ Safety
- ☐ Production Downtime Impact
- ☐ Repair Cost
- ☐ Environmental Impact
- ☐ Regulatory Compliance

### Asset Register / Inventory List

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### Date of Last Asset Prioritization Review

Enter date...

## Current PM Program Review

Analyzes existing PM tasks, frequencies, and procedures to identify inefficiencies and opportunities for improvement.

### Overall Description of Current PM Program

Write something...

### Total Number of PM Tasks Scheduled

Enter a number...

### PM Scheduling Method (Time-Based, Meter-Based, etc.)

- ☐ Time-Based
- ☐ Meter-Based
- ☐ Manufacturer Recommendations
- ☐ Other (Specify)

### Types of PM Tasks Currently Performed (Select all that apply)

- ☐ Lubrication
- ☐ Inspection
- ☐ Cleaning
- ☐ Calibration
- ☐ Replacement of Consumables
- ☐ Testing
- ☐ Other (Specify)

### Average Downtime per Equipment Failure (Hours)

Enter a number...

### Method for tracking PM Completion

- ☐ CMMS
- ☐ Spreadsheet
- ☐ Paper Records
- ☐ Other (Specify)

### List equipment with PM frequency exceeding manufacturer recommendations and reason

Write something...

## Data Collection & Analysis

Gathers data on equipment performance, failure rates, repair costs, and downtime to inform optimization decisions.

### Average MTBF (Mean Time Between Failures) for Critical Assets

Enter a number...

### Average MTTR (Mean Time To Repair) for Critical Assets

Enter a number...

### Total Maintenance Costs (Labor + Materials) per Year

Enter a number...

### Summary of Recent Failure Analysis Reports

Write something...

### Condition Monitoring Technologies Currently Used (e.g., Vibration Analysis, Infrared Thermography)

- ☐ Vibration Analysis
- ☐ Infrared Thermography
- ☐ Oil Analysis
- ☐ Ultrasonic Testing
- ☐ None


### Date of Last Comprehensive Equipment Performance Review

Enter date...

### Data Sources Currently Used for Maintenance Information

- ☐ CMMS (Computerized Maintenance Management System)
- ☐ Work Order Records
- ☐ Equipment Logs
- ☐ Operator Reports
- ☐ External Supplier Data

### Upload Historical Work Order Data (CSV or Excel)

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## Task Optimization & Modification

Re-evaluates specific PM tasks, including their necessity, frequency, and procedures, based on data and industry best practices.

**Is the current PM task truly preventative, or mostly reactive?**

- ☐ Preventative
- ☐ Reactive
- ☐ Unsure

**Current PM Frequency (e.g., days, weeks, months)**

Enter a number...

**Recommended PM Frequency (based on analysis)**

Enter a number...

**Justification for frequency change (if applicable)**

Write something...

**Does the current PM task require a specialized tool or skill?**

- ☐ Yes
- ☐ No
- ☐ Unsure

### Which components are inspected during this PM task?

- ☐ Lubrication
- ☐ Filters
- ☐ Belts/Chains
- ☐ Electrical Connections
- ☐ Sensors
- ☐ Hydraulic Lines
- ☐ Other (specify in LONG\_TEXT)

### If 'Other' selected for components, please specify:

Write something...

### Is the current inspection method adequate?

- ☐ Yes
- ☐ No
- ☐ Unsure

### Recommendations for improving the PM task:

Write something...

## Condition Monitoring Implementation

Explores and implements condition-based monitoring techniques to predict failures and optimize maintenance schedules.

### Identify Initial Equipment for Condition Monitoring

- ☐ Critical Equipment with High Failure Rates
- ☐ Equipment with High Downtime Impact
- ☐ Equipment with Limited Accessibility
- ☐ Equipment with Complex Systems

### Select Condition Monitoring Technologies

- ☐ Vibration Analysis
- ☐ Infrared Thermography
- ☐ Oil Analysis
- ☐ Ultrasonic Testing
- ☐ Motor Current Signature Analysis (MCSA)
- ☐ Pressure Monitoring
- ☐ Temperature Monitoring

### Initial Sensor Placement Count

Enter a number...

### Target Implementation Date for Sensors

Enter date...

### Justification for Sensor Selection

Write something...



### Data Collection Frequency

- ☐ Continuous
- ☐ Daily
- ☐ Weekly
- ☐ Monthly

### Equipment Layout/Schematic

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### Acceptable Threshold for Early Warning

Enter a number...

## Resource Allocation & Training

Assesses and optimizes the allocation of personnel, tools, and spare parts to support the optimized PM program.

### Number of Maintenance Technicians Currently Assigned

Enter a number...

### Average Maintenance Technician Skill Level (1-5, 1=Entry, 5=Expert)

Enter a number...

### Current Allocation of Maintenance Technicians by Equipment Type

- ☐ Machinery
- ☐ Electrical
- ☐ Pneumatics
- ☐ Hydraulics
- ☐ Utilities
- ☐ Other (Specify)

### Description of Current Training Programs for Maintenance Staff

Write something...

### What areas of training are needed to improve efficiency and effectiveness?

- ☐ PLC Programming
- ☐ Hydraulic Systems
- ☐ Electrical Troubleshooting
- ☐ Predictive Maintenance Technologies
- ☐ Root Cause Analysis
- ☐ Other (Specify)

### Date of Last Maintenance Staff Skills Assessment

Enter date...

### Budget Allocation for Maintenance Training (Annual)

Enter a number...

### Notes on resource constraints impacting PM optimization (e.g., staffing shortages, budget limitations)

Write something...

## Documentation & Reporting

Ensures accurate documentation of the optimized PM program and establishes reporting mechanisms to track performance.

### Summary of Optimization Changes

Write something...

### Estimated Cost Savings (Annual)

Enter a number...

### Reduction in Downtime (Hours/Year)

Enter a number...

### Reporting Frequency (PM Optimization Review)

- ☐ Monthly
- ☐ Quarterly
- ☐ Annually

### Date of Last PM Program Review

Enter date...

### Supporting Data (e.g., Failure Analysis Reports)

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### Key Performance Indicators (KPIs) Tracked

Write something...

### Document Control Status

- ☐ Draft
- ☐ Approved
- ☐ Revised

### Document Version Number

Write something...

## Continuous Improvement & Review

Establishes a process for ongoing monitoring, evaluation, and refinement of the PM optimization checklist and associated procedures.

### Last Review Date

Enter date...

### Frequency of Review (in months)

Enter a number...

### Summary of Review Findings

Write something...

### Areas of PM Program needing further investigation/improvement

- ☐ Task Frequency
- ☐ Task Procedures
- ☐ Spare Parts Management
- ☐ Condition Monitoring Techniques
- ☐ Training Requirements
- ☐ Documentation Accuracy

### Action Items Identified during Review

Write something...

### Target Completion Date for Action Items

Enter date...

**Overall PM Program Health (Post-Review)**

- ☐ Excellent
- ☐ Good
- ☐ Fair
- ☐ Needs Improvement

**Reviewer Name**

Write something...

**Reviewer Signature**