

RELIABILITY SIMULATION

OVERVIEW

This action-based, team-driven simulation immerses participants in a maintenance organization evolving from a highly reactive state to a planned and scheduled operation. Using industry-recognized best practices and constraint management logic, teams experience firsthand how planning, scheduling, PM optimization, and spare parts management directly impact maintenance productivity, equipment uptime, and OEE performance.

Why This Training Matters

- ✓ Typical maintenance productivity is only 20–30% without planning
- ✓ Planning and scheduling alone can raise productivity to 45%
- ✓ Demonstrates the real cost of reactive maintenance behaviors
- ✓ Builds cross-functional alignment between maintenance and operations

Program Structure

- ✓ 26 hours of video instruction & 10+ hours of field activities
- ✓ Self-paced delivery through Reliability Solutions LMS
- ✓ Practical assignments verified by facility mentor
- ✓ 1-year subscription, renewable annually
- ✓ Available for entire facility use

Who Should Attend?

- ✓ Maintenance Supervisors and Planners
- ✓ Reliability Engineers and Technicians
- ✓ Operations Supervisors and Team Leaders
- ✓ Plant Leadership

Subject

- 1. Reactive vs. Proactive Maintenance**
Work trending, failure prevention, PM/PdM impact
- 2. Planning Best Practices**
Job plans, parts kitting, pre-job preparation
- 3. Scheduling Best Practices**
Priority management, backlog control, P-F interval
- 4. Spare Parts & Tool Management**
Central stores, min/max levels, vendor coordination
- 5. Equipment History & Measurement**
CMMS utilization, OEE tracking, productivity metrics
- 6. Constraint Management**
Protecting critical work centers and production throughput

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SIMULATION PROGRESSION

Round 1

Reactive State

- > Teams operate in a highly reactive environment
- > Reactive, corrective, and preventive work execution
- > No formal planning or scheduling in place
- > Parts and tools acquired on-the-fly
- > Downtime and productivity losses tracked
- > PM coverage and failure trumping
- > introduced Equipment history and documentation capture

Round 3

Scheduling & Optimization

- > Planner moves to 100% planning
- > Supervisor actively scheduling jobs
- > Work priority system introduced (urgency vs. importance)
- > Job screening for false emergencies
- > One technician becomes PdM tech
- > P-F interval management for corrective work
- > PM coverage and proactivity wheel updated



Round 2

Planning Introduction

- > One technician assigned as planner (50% of time)
- > CMMS history used to create job plans
- > Parts reserved and kitted ahead of execution
- > Central stores organized with min/max levels
- > Pre-job and in-job challenges reduced through planning
- > Simulation dashboard metrics introduced
- > Corrective backlog built from identified work

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LEARNING OBJECTIVES & EXPECTED POST-TRAINING CAPABILITIES

Upon successful completion, participants will be capable of:

Work Management Fundamentals

- Understanding the reactive-to-proactive maintenance progression
- Recognizing how planning and scheduling impact productivity and uptime
- Applying constraint management principles to protect critical assets

Planning & Scheduling Practices

- Identifying the elements of an effective job plan
- Understanding priority management based on urgency and importance
- Managing corrective backlog within the P-F interval

Cross-Functional Alignment

- Strengthening partnerships between maintenance, operations, and engineering
- Using OEE and productivity metrics to drive improvement decisions

Participants are expected to:

- ✓ Actively participate in all three simulation rounds
- ✓ Fill assigned roles: supervisor, technician, planner, or operations
- ✓ Track and report productivity, downtime, and work order data
- ✓ Apply work management principles back at their facility