

# Equipment maintenance scheduling

This workflow automatically schedules equipment maintenance based on real-time performance data, predictive analytics, and operational conditions to minimize downtime and ensure water quality compliance.

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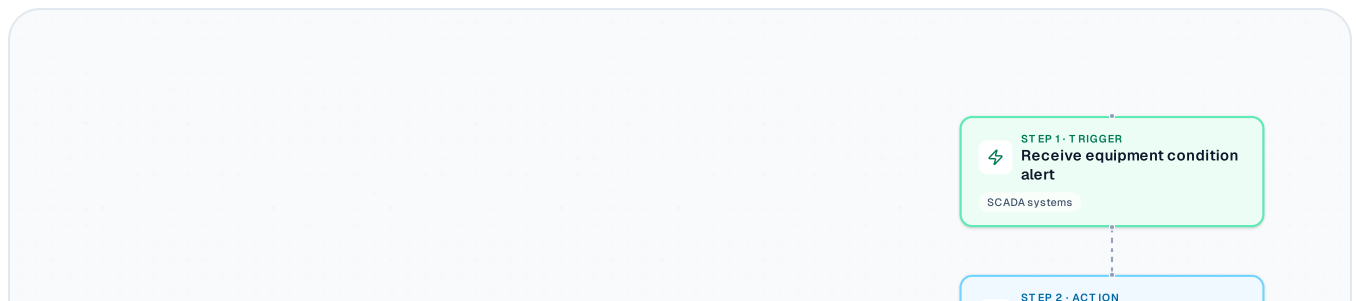
## WORKFLOW TRIGGER



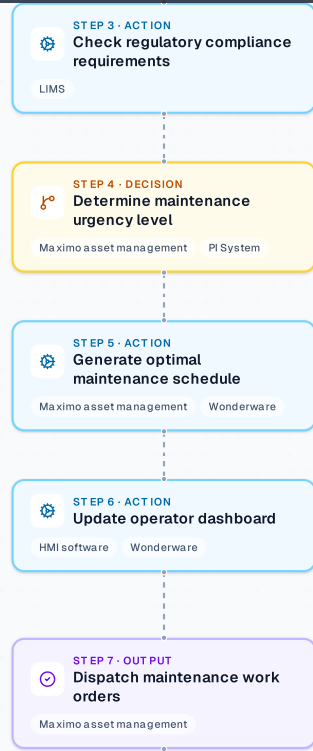
Equipment performance threshold alert or scheduled condition assessment triggers maintenance evaluation

## Visual Flow

Each node represents an automated step. Connections show how data and decisions move through the workflow.



Analyze equipment performance data  
PI System SCADA systems



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## Step-by-Step Breakdown

Detailed explanation of each automated stage in the workflow.

1

⚡ TRIGGER

### Receive equipment condition alert

SCADA system detects equipment performance deviation or scheduled assessment interval is reached. Real-time monitoring data indicates potential maintenance need.

2

 ACTION

### Analyze equipment performance data

PI System retrieves historical performance trends, vibration data, and operational metrics. System calculates equipment health score and failure probability.

PI System

SCADA systems

3

 ACTION

### Check regulatory compliance requirements

LIMS validates current water quality status and determines if equipment downtime would impact compliance obligations. System reviews maintenance windows based on treatment capacity.

LIMS

4

 DECISION

### Determine maintenance urgency level

System evaluates equipment criticality, failure risk, and compliance impact to classify as emergency, preventive, or routine maintenance. Workflow branches based on urgency classification.

Maximo asset management

PI System

5

 ACTION

### Generate optimal maintenance schedule

## AI Business OS

Maximo creates work orders with optimal timing based on equipment availability, technician schedules, and parts inventory. System coordinates with treatment operations to minimize impact.

Maximo asset management

Wonderware

6

 ACTION

### Update operator dashboard

HMI software displays scheduled maintenance activities and adjusted operational parameters. Operators receive notifications about upcoming equipment downtime and backup procedures.

HMI software

Wonderware

7

 OUTPUT

### Dispatch maintenance work orders

System automatically assigns technicians, reserves required parts, and sends detailed work instructions. Maintenance schedule is integrated with facility operations calendar.

Maximo asset management



### Outputs

- Prioritized maintenance work orders

- Updated equipment maintenance schedule
- Operator notifications and procedure updates

## AI Business OS



### Key Metrics

- Equipment uptime percentage
- Mean time between failures (MTBF)
- Maintenance cost per treatment volume



### Tools & Integrations

- SCADA systems
- PI System
- LIMS
- Maximo asset management
- Wonderware
- HMI software

## AI Business OS

Actionable AI implementation strategies for business leaders ready to transform their operations.

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