Maintenance Decision Intelligence

EFFECTIVE MAINTENANCE OPERATIONS NEED A TRULY HOLISTIC STRATEGY

Disconnected data systems leave teams with unanswered questions, preventing them from taking the right actions to minimize disruptions and optimize performance. To streamline critical maintenance decisions teams must consider pre–existing maintenance activities, simulate future asset usage, predict failures, optimize inventory and prioritize your facilities and manpower, and more.

Virtualitics' comprehensive Maintenance Decision Intelligence application delivers answers driven by AI to guide teams as they respond to events and improve availability. This groundbreaking AI application combines all the pieces of the puzzle, so teams always know the next right move to manage valuable assets.
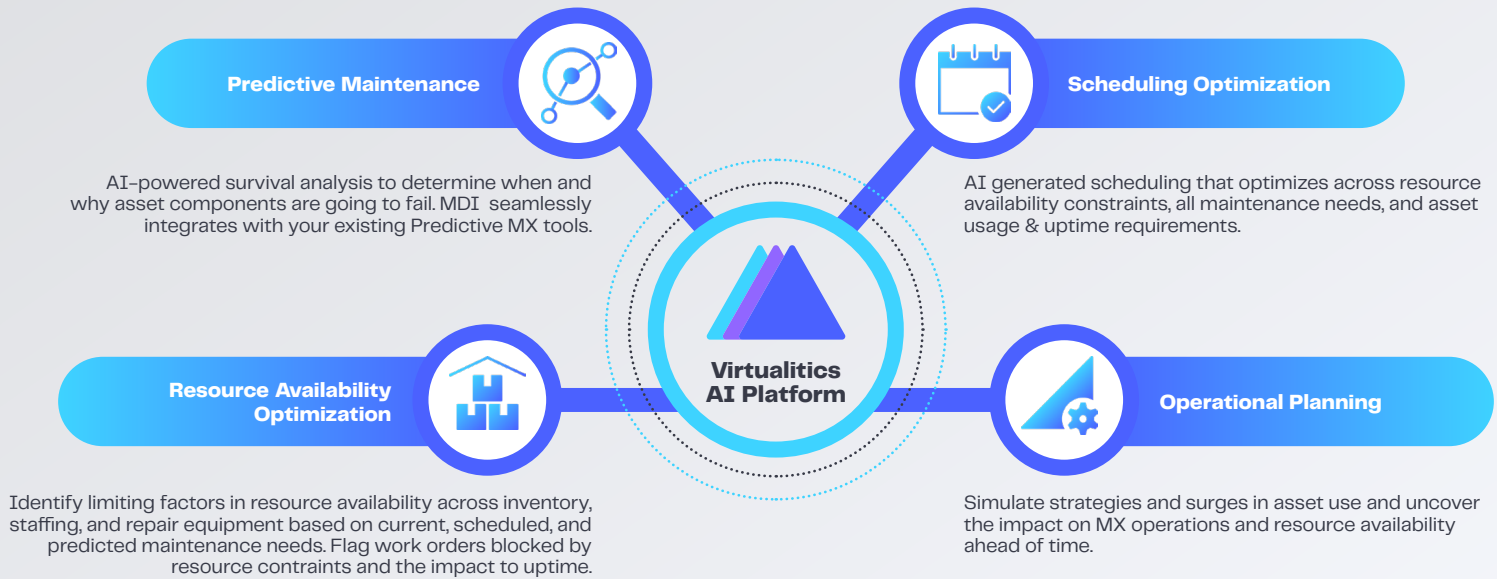

AI–Powered Decision Intelligence

Virtualitics uses powerful AI methodologies to fuel MDI and deliver answers to the most critical questions.

▶ **AI-Boosted Survival Models**
Combine machine learning and survival analysis to explain risk and remaining useful life predictions.

▶ **Lookahead Simulations**
Simulate asset usage over time and plan how and when you can best address maintenance needs.

▶ **Resource Constraint Modeling**
AI-generated labels show which activities are blocked by resourcing, projections of demand and contention for resources.

▶ **AI-Generated Scheduling**
Sophisticated scheduling optimization using constraint-solving AI.

Maintenance Decision Intelligence Core Applications

Predictive Maintenance

AI-powered survival analysis to determine when and why asset components are going to fail. MDI seamlessly integrates with your existing Predictive MX tools.

Scheduling Optimization

AI generated scheduling that optimizes across resource availability constraints, all maintenance needs, and asset usage & uptime requirements.

Virtualitics AI Platform

Resource Availability Optimization

Identify limiting factors in resource availability across inventory, staffing, and repair equipment based on current, scheduled, and predicted maintenance needs. Flag work orders blocked by resource contraints and the impact to uptime.

Operational Planning

Simulate strategies and surges in asset use and uncover the impact on MX operations and resource availability ahead of time.

MDI leads teams to the knowledge of what is about to fail, what the right response is, and helps them consider additional scenarios. The combined knowledge gained helps operators leverage insight and confidently make decisions that minimize risk, optimize resources, and increase productivity.

3000+
Components with AI-generated key insights

1k+
AI models re-trained on data updates

30%+
Improvement in scheduling efficiency

11
Sources of data with millions of records analyzed

24%
MX flagged as resource blocked with actionable lead time

95%
Precision for components predicted to have low-risk

Based on existing deployments of MDI

Informed Decision–Making Leads to Strategic Wins

Virtualitics' Maintenance Decision Intelligence guides teams to answer their most critical questions:

▶ What is about to fail?

▶ How should we respond?

▶ What action would reduce risk?

▶ How can we prepare for the future?

MDI brings teams the power to leverage insight and confidently make decisions that minimize risk, optimize resources, and increase productivity while accounting for real–world constraints.