

## **MachineMetrics Health**

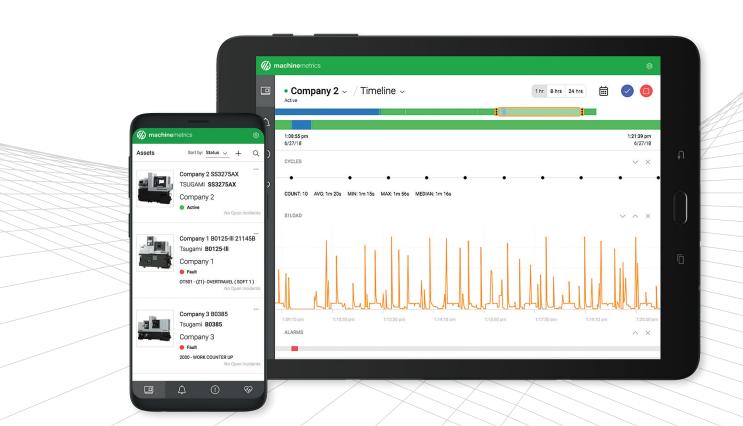
TRANSFORM YOUR APPROACH TO MACHINE MAINTENANCE.

# What if you could stop a machine before a catastrophic failure?

THE INDUSTRY FIRST AI-DRIVEN MACHINE MONITORING SOLUTION

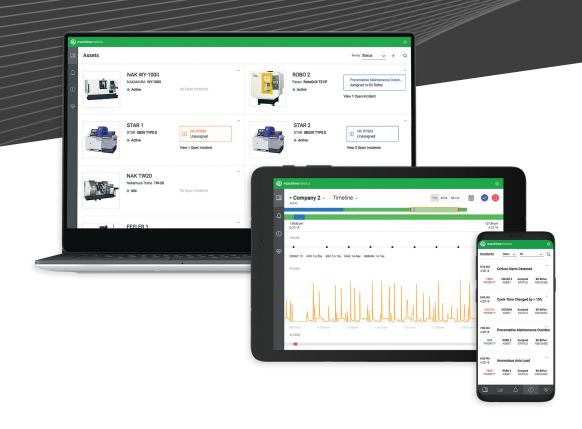
# Predict problems—before they cause downtime.

MachineMetrics Health continuously monitors equipment health in real-time to detect problems before causing downtime with patent-pending Al technology. Notify machine operators to change a tool before it breaks. Notify your maintenance manager when an anomaly is detected that could lead to a breakdown. This ability can prevent thousands of dollars of equipment replacement costs and days of downtime.



## **MachineMetrics Health**

FOR MAINTENANCE MANAGERS AND PROCESS ENGINEERS



MachineMetrics Health is a predictive analytics application on the MachineMetrics Industrial IoT platform that allows maintenance teams to monitor and manage equipment health in real-time. Improve CNC Machine Tool health with real-time diagnostics, condition monitoring, alerts, and preventative and predictive maintenance.

#### INDUSTRIAL IOT FOR MAINTENANCE TEAMS



Manage your machine assets and view real-time equipment status and conditions



Diagnose problems with deep alarm analytics and Al-driven predictive notifications



Manage preventative maintenance tasks based on usage or machine conditions



Track utilization of equipment over time to understand current and potential capacity



Predict equipment failures and prescribe solutions to prevent costly downtimes



#### THE MACHINEMETRICS ADVANTAGE

## Simple machine connectivity

Connect to any modern CNC Machine Tool by connecting the MachineMetrics Edge to the ethernet port of the control. Software on the edge processes data from the machine in realtime and streams the data securely to the MachineMetrics cloud.

Other machine types and older equipment can be connected directly to the cloud with the Digital and Analog IO module. Configure remotely using a simple scripting language that anyone can learn. No need to be a controls engineer to build advanced connection logic.

Data is securely streamed to the MachineMetrics cloud and automatically mapped to the MTConnect open communications protocol.



#### **IIOT PLATFORM CAPABILITIES**



#### ASSET MANAGEMENT

View and manage the status and health of your machine assets. Easily add new assets with the MachineMetrics wifi & cellular edge connected to sensors or the machine's PLC.



#### UTILIZATION REPORTING

View asset utilization by hour, shift, day, week or month to view trends and uncover opportunities for improvements.



#### **REAL-TIME MACHINE CONDITIONS**

View and export real-time machine data and alarms as time-series data and charts to help diagnose and resolve problems.



#### **ALERTS AND NOTIFICATIONS**

Alert the right person at the right time when action needs to be taken. Track incidents through a workflow with reassignment, resolution, and full audit tracking.

#### PREVENTATIVE & PREDICTIVE MAINTENANCE



#### **TOOL & MACHINE FAILURE PREDICTION**

Predict machine tool failure up to an hour before it occurs with MachineMetrics patent pending anomaly detection Al. An alert is sent or incident created so that your machine operator can take preventative action. Prevents downtime caused by tool failure and machine crashes.



#### PREDICTIVE MAINTENANCE

Initiate a maintenance request when a machine condition has exceeded a limit or when our AI predicts a likely failure.



#### PREVENTATIVE MAINTENANCE

Create and manage preventative maintenance schedules that are tied to calendar time, usage time, or initiated from machine conditions. Assign maintenance tasks through a workflow.



#### SHARE DATA WITH SERVICE PROVIDER

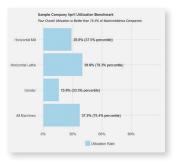
Instantly share machine data with your service provider so they can give you remote service and help bring your machines online quicker.

#### ADVANCED ANALYTICS



#### **ALARM ANALYTICS**

View full history of alarms for each machine, and a summary of alarms across your entire shop floor. Find out what alarms are causing the most amount of downtime, and create monitors that will alert maintenance when specific alarms occur.



#### BENCHMARKING

Understand how your machine performance / utilization compares to the rest of the industry, segmented by industry and machine type. If your factory falls in the top 20th percentile, use this information to prove to customers that your factory is world class.

### **Predictive maintenance benefits**

#### PREVENT

#### PREDICT

Prevent unplanned downtime, increase utilization

Detect and diagnose asset performance issues to help prevent unplanned downtime and increase asset



Understand equipement utilization rates and overall install base health



Capture and scale technical service expertise of workforce



Gain insight into asset and service model through visibility of pervasive issues



Improve equipment uptime and field service productivity

### "MachineMetrics enabled CPM to increase capacity by \$1.5 million in 2016 with no additional machines!"

- Gary Bruner, President of Carolina Precision Manufacturing