




MachineMetrics Service

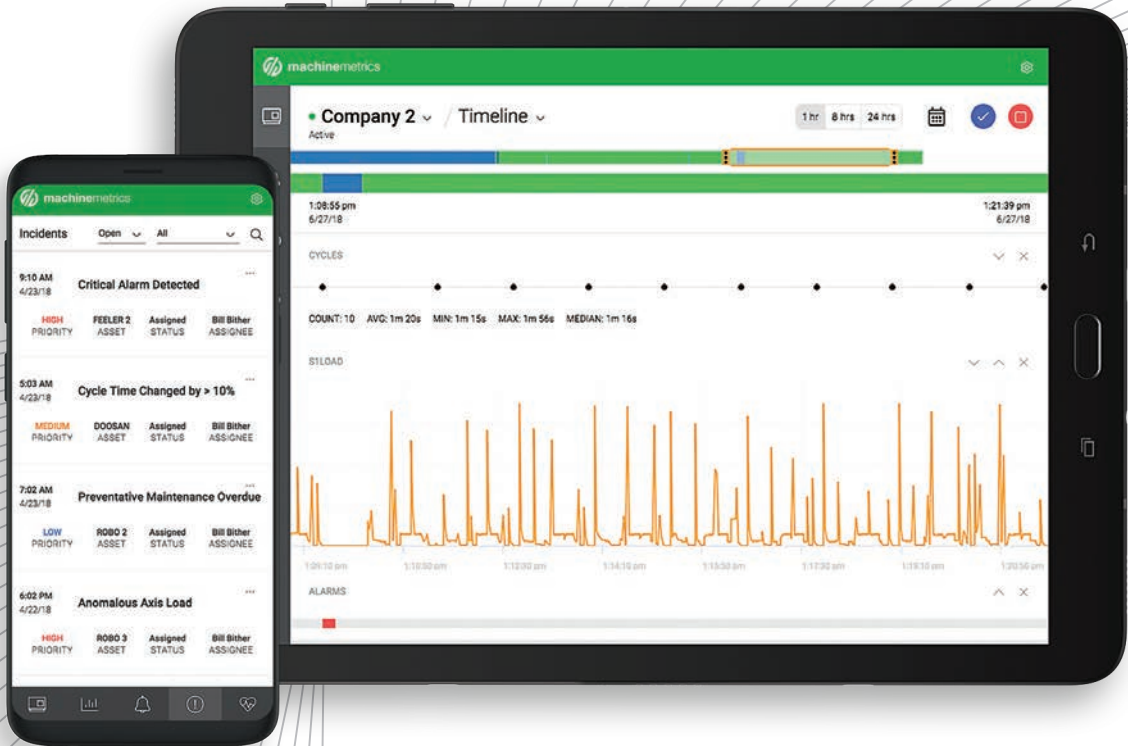
TRANSFORM YOUR APPROACH TO CUSTOMER SERVICE.

INDUSTRIAL IoT FOR MACHINE BUILDERS AND DISTRIBUTERS



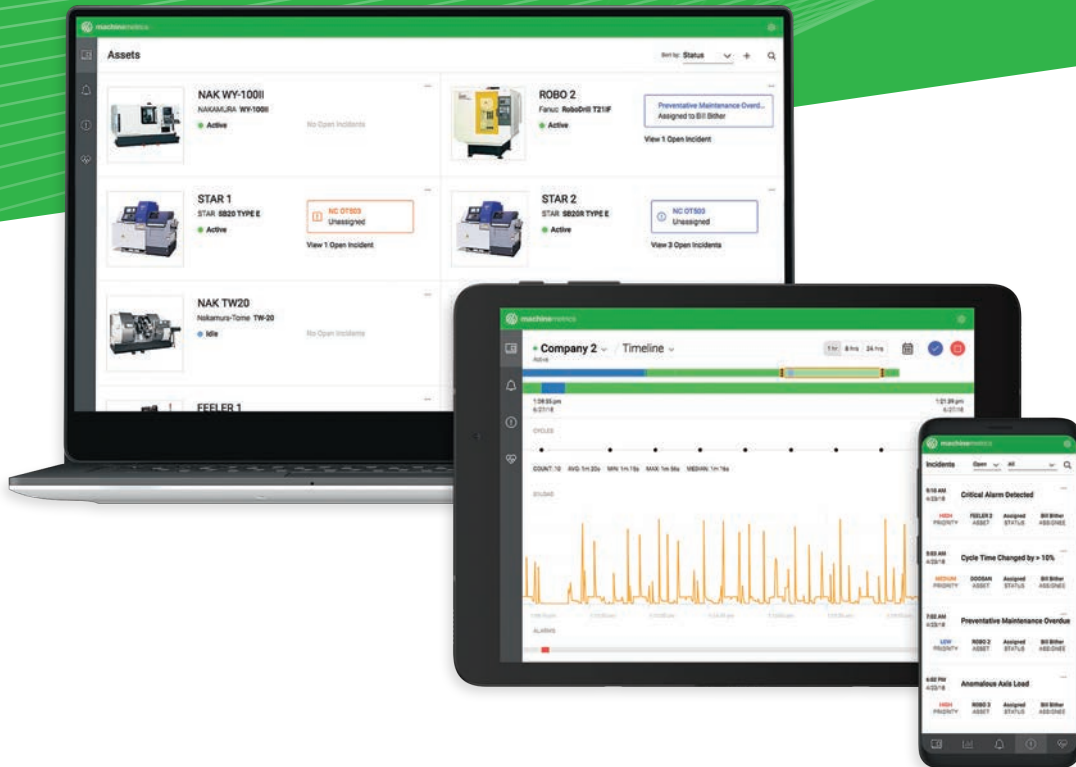
What if you could diagnose and resolve problems for your customers without ever leaving your office?

When customers require after-sales service, they expect their problem to be solved with minimum delay. Too many service calls require expensive and time consuming on-site visits. Thus, equipment providers require remote access to monitor and assist with user operations to troubleshoot problems, resolve service events and monitor preventative maintenance tasks, all without leaving their office.



MachineMetrics Service

FOR EQUIPMENT DISTRIBUTERS AND OEMS



MachineMetrics Service is an Industrial IoT application that remotely monitors machine assets in the field and at customer sites in real-time. By providing AI and predictive maintenance that is designed specifically for your equipment, you can improve equipment uptime and reduce service costs.

INDUSTRIAL IoT FOR EQUIPMENT PROVIDERS



Allows remote monitoring and improved service for all your machines in the field



Enables your service team to diagnose and resolve equipment problems in real time



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



Work with customers to predict equipment failures and prescribe solutions before they occur



No need to install on customer's internal IT infrastructure with included cellular support



THE SOLUTION: MACHINEMETRICS SERVICE

IIoT-Enable your Equipment

MachineMetrics Service provides service teams a chance to diagnose and resolve machine problems without the necessity of an on-site visit. Gain insight into customers' equipment health and condition with historical machine data. Identify new service opportunities with analytics and reporting. Predict and deliver early warning of potential equipment failures and highlight elevated risk areas that lead to machine downtime. Determine and take preventative action before it impacts a customer's machine performance. Give your customers the same remote monitoring benefits and improve customer satisfaction.



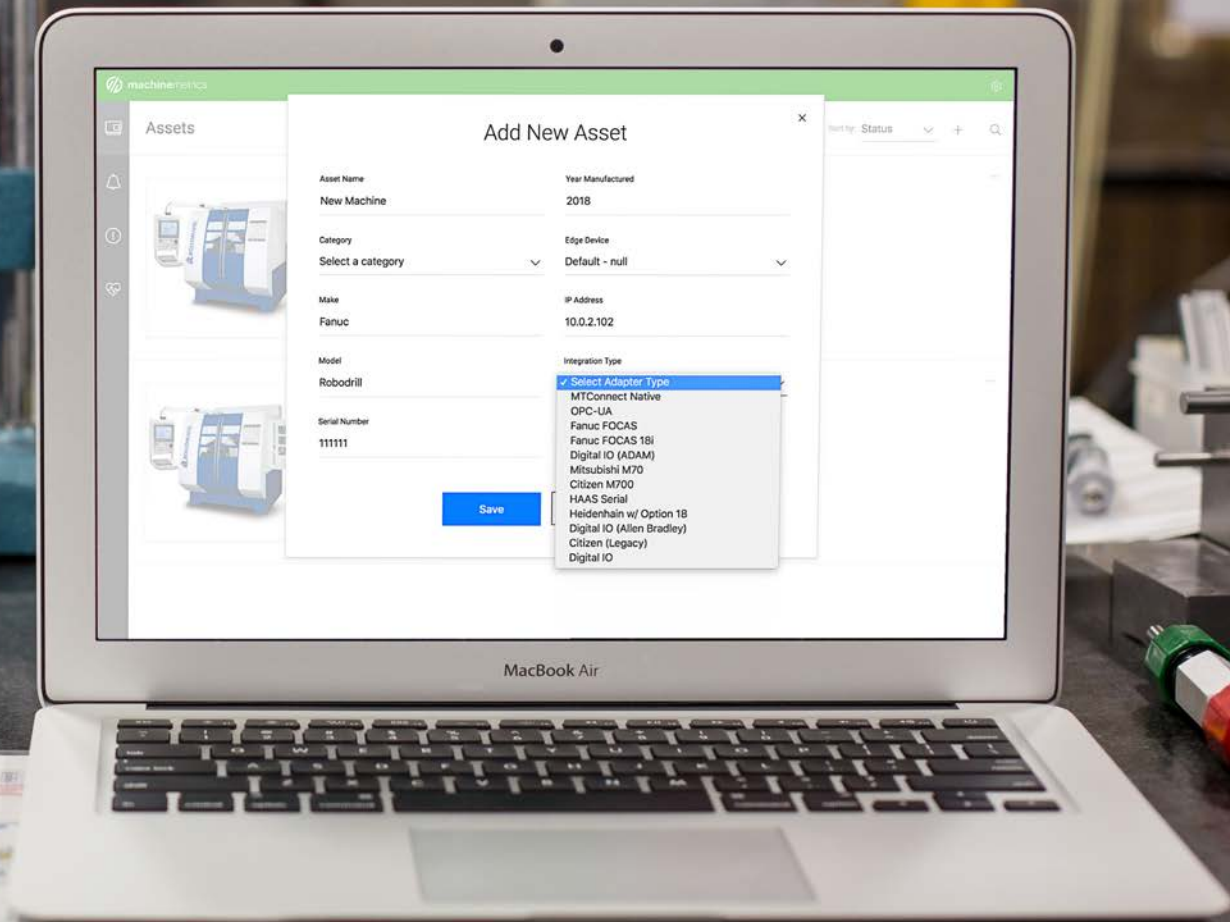


THE MACHINOMETRICS ADVANTAGE

How it works

Install the small MachineMetrics edge device that connects to the machine's PLC and any additional sensors into the electrical cabinet of your machine. Simply add the device to your list of machine assets, with the location being your customer. Once the customer receives the machine, and powers it on, it will show on your list of assets. Clicking on the asset allows you to assign the machine to the customer, giving them the same powerful benefits of remote monitoring.

So while service teams are focusing on addressing issues that may immediately impact the customer, MachineMetrics is keeping an eye on big picture issues that benefit everyone. We're helping your company develop standards to apply to every specific machine type sold.



machinerx

Assets

Add New Asset

Asset Name	Year Manufactured
New Machine	2018
Category	Edge Device
Select a category	Default - null
Make	IP Address
Fanuc	10.0.2.102
Model	Integration Type
Robodrill	<input checked="" type="checkbox"/> Select Adapter Type <input type="checkbox"/> MTConnect Native <input type="checkbox"/> OPC-UA <input type="checkbox"/> Fanuc FOCAS <input type="checkbox"/> Fanuc FOCAS 18i <input type="checkbox"/> Digital IO (ADAM) <input type="checkbox"/> Mitsubishi M70 <input type="checkbox"/> Citizen M700 <input type="checkbox"/> HAAS Serial <input type="checkbox"/> Heidenhain w/ Option 18 <input type="checkbox"/> Digital IO (Allen Bradley) <input type="checkbox"/> Citizen (Legacy) <input type="checkbox"/> Digital IO
Serial Number	
111111	

Save

MacBook Air

IIoT PLATFORM CAPABILITIES



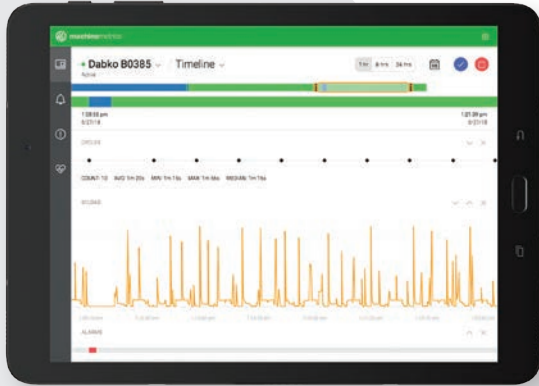
ASSET MANAGEMENT

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

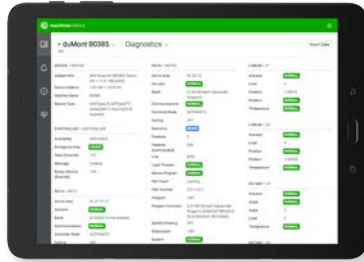
View and export real-time machine data and alarms as time-series data and charts to help diagnose and resolve problems.

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.

			Open	All	
6:10 AM 6/27/18	Critical Alarm Detected	HIGH PRIORITY	FELDER 2 ASSIST	Assigned	Bill Bither ASSIGNMENT
6:43 AM 6/27/18	Cycle Time Changed by + 10%	MEDIUM PRIORITY	DOOSAN ASSIST	Assigned	Bill Bither ASSIGNMENT
7:02 AM 6/27/18	Preventative Maintenance Overdue	LOW PRIORITY	ROBO 2 ASSIST	Assigned	Bill Bither ASSIGNMENT
6:02 AM 6/27/18	Anomalous Axis Load	HIGH PRIORITY	ROBO 3 ASSIST	Assigned	Bill Bither ASSIGNMENT
7:19 AM 6/27/18	NC OT563	MEDIUM PRIORITY	STAR 1 ASSIST	Assigned	Unassigned ASSIGNMENT
2:39 PM 6/27/18	NC OT563	LOW PRIORITY	STAR 2 ASSIST	Triggered	Unassigned ASSIGNMENT
9:17 AM 6/27/18	NC OT563	MEDIUM PRIORITY	STAR 2 ASSIST	Assigned	Graham Imma... ASSIGNMENT
2:09 AM 6/27/18	NC EX1121	LOW PRIORITY	STAR 2 ASSIST	Triggered	Unassigned ASSIGNMENT

ADVANCED SERVICE CAPABILITIES



CUSTOMER ACCESS

Customers can choose which data items are viewable by your service teams offering comfort and security. This historical data can be accessed and exported at any time. Real-time data enables your service staff to provide remote support, reducing warranty costs.

DISTRIBUTOR ACCESS

Share data from equipment assets with your distributors as well as your customers, all managed in one central location. Distributors receive the same improved service capabilities.



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.

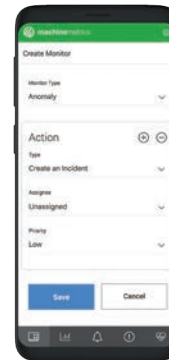


PREVENTATIVE MAINTENANCE

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.

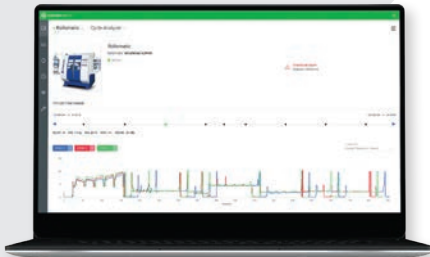
ANOMALY DETECTION

A rules engine is provided for deploying monitors based on machine condition data and patent pending advanced machine learning algorithms can be deployed for detecting anomalous behavior.



CYCLE ANALYZER

Monitor spindle load or any other analog metric over the course of a part cycle. Multiple cycles from any point in time can be overlaid over each other to analyze discrepancies or changes over time.



ADVANCED SERVICE CAPABILITIES

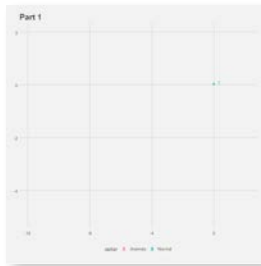
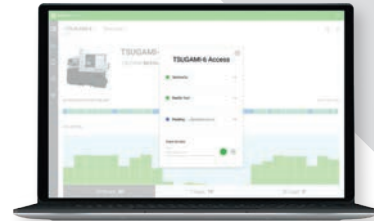


PREDICTIVE MAINTENANCE

Predictive maintenance algorithms help determine the condition of in-service machines in order to predict when maintenance should be performed. Alerts are sent to the right person at the right time so corrective action can be taken.

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.

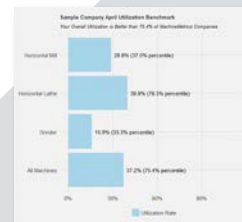


TOOL & MACHINE FAILURE PREDICTION

Identify anomalous behavior that could result in machine or tool failures up to an hour before it occurs with MachineMetrics patent pending anomaly detection AI. An alert is sent or incident created so that your machine operator can take preventative action.

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.



Remote equipment visibility

EMPOWER

Empower your service team by eliminating the necessity for on-site machine service and maintenance.

DETECT

Detect new service opportunities and diagnose asset performance issues remotely.



Understand equipment 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



Reduce unscheduled downtime with real-time machine condition alerts

“The addition of MachineMetrics Service to our Swiss-turn machines is a game changer for our customers and has transformed our service capabilities for future success.”

– **Mike Mugno**, Vice President, Tsugami/Rem Sales