



DRIVING INDUSTRY *FORWARD*



**machine**metrics

# MachineMetrics Production

MAKE FASTER, SMARTER DECISIONS WITH REAL-TIME DATA.

INDUSTRIAL IoT FOR PRODUCTION MANAGERS AND EXECUTIVES



## — THE PROBLEM

# Poor production visibility and manual data entry lead to inefficiency and delays.

MachineMetrics has identified huge gaps in current manufacturing processes: a lack of real-time production visibility and a lack of communication between machine operators and their managers. Previously, no machine monitoring solution truly solved this problem. We spoke with 100+ manufacturers to gather their feedback on why their previous machine monitoring solutions did not fit their needs and how it could be designed better

## THE SOLUTION

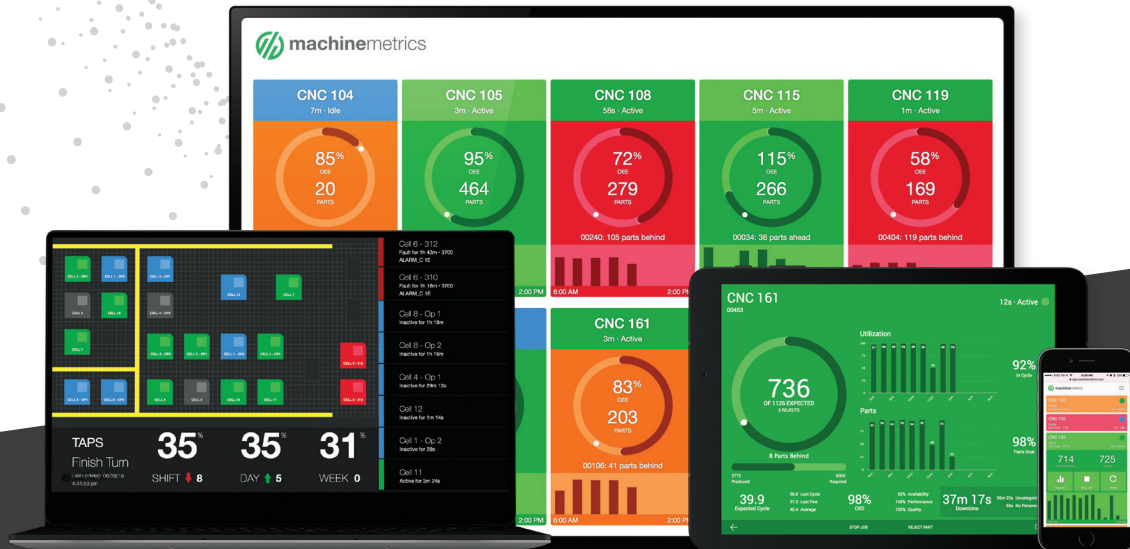
# Real-time visibility improves efficiency by 20%

Visualize production with customizable real-time dashboards that empower factory floor workers to meet production goals. Real-time machine condition monitoring helps diagnose recurring problems. Historical performance and production analytics help determine if jobs will be delivered on-time. Predictive notifications allow the right person to take immediate action.



# MachineMetrics Production

FOR PRODUCTION MANAGERS AND EXECUTIVES



# Make faster, smarter decisions with real-time data.

## MACHINE MONITORING & OEE

MachineMetrics Production brings Industrial IoT to your shop floor: featuring simple “self-install” IIoT connectivity, our fully automated cloud machine monitoring & OEE software connects to all machine types to provide visualizations of real-time manufacturing production data.

## EMPOWER YOUR SHOP FLOOR



Track OEE and manufacturing efficiency



Identify production bottlenecks



Take action with real-time notifications



Measure process improvements



Enhance shop floor communication



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**THE PLATFORM**

# **Industrial IoT, Simplified**

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## **MONITOR AND VISUALIZE DATA FROM ANY MANUFACTURING ASSET**

MachineMetrics is a manufacturing analytics platform that increases productivity through real-time visibility, deep analytics, and AI driven predictive notifications. Complete with edge self-install connectivity and vertical applications that work out-of-the-box. Digitize your factory and increase productivity by keeping your equipment running.



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## HOW IT WORKS

# Drive decisions with machine data.

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### CONNECT

Easily connect to any machine with MachineMetrics Edge.

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### VISUALIZE

Data visualizations give powerful insights to your shop floor in real-time.

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### ANALYZE

AI and Machine Learning diagnose and predict problems in real-time.

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### NOTIFY & TAKE ACTION

Predictive notifications enable your team to take immediate corrective action.





## THE MACHINOMETRICS 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 real-time 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.





 EMPOWER YOUR SHOP FLOOR



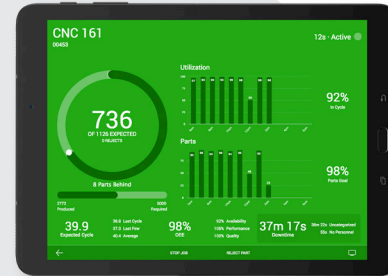
# Key Features

## VISUALIZE PRODUCTION



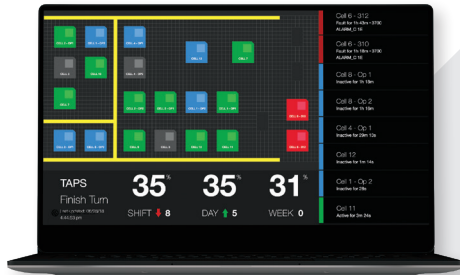
### KPI DASHBOARDS

Visualize machine status and production efficiency in real-time with dashboards that include simple color-coded tiles. Provides transparency across the factory floor that empowers works to meet goals. Typically viewed on large screen TVs mounted above each manufacturing cell.



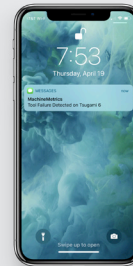
### OPERATOR VIEWS

Allow operators to add human-context to machine data with a touch screen interface mounted right at the machine tool. Categorize downtime, reject a part, and start/stop jobs right from the machine to manage and record quality data.



### CUSTOM DASHBOARDS

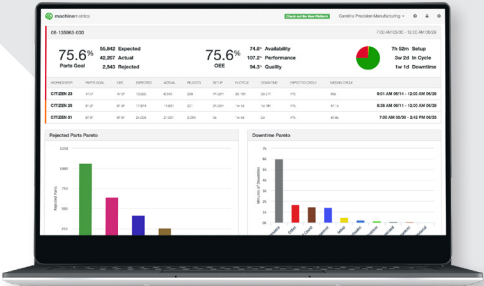
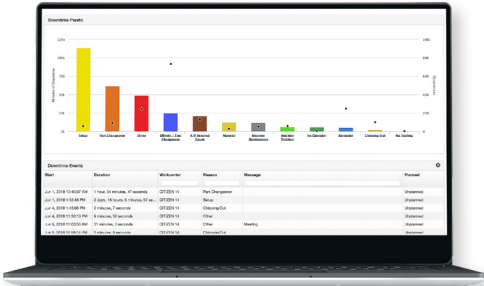
Build custom dashboards that display machine status, alarms, performance and other KPIs with MachineMetrics open APIs.



### NOTIFICATIONS

When a monitor triggers an alert, a text or email message is sent to the appropriate person to take immediate action. MachineMetrics includes many monitors that trigger alerts including downtime, alarms, OEE Performance, and tool failure prediction. Incidents can be created that can track an issue through a workflow.

# POWERFUL ANALYTICS

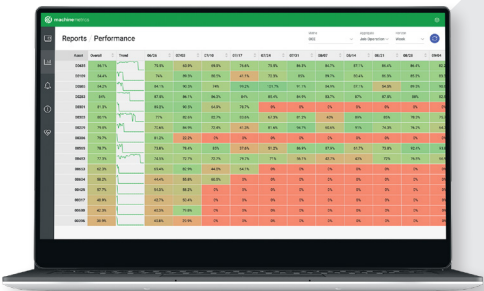


## DOWNTIME & QUALITY

Track downtime from alarms or from the operator view and display a Pareto chart for any period of time that highlights the bottlenecks that are generating the most downtime.

## JOB / PART / OPERATOR REPORTING

Track the performance of each job that is running on your equipment with job, part number, and operator analytics. Understand actual cycle times, performance between shifts, actual OEE metrics, operator performance, setup times, etc.



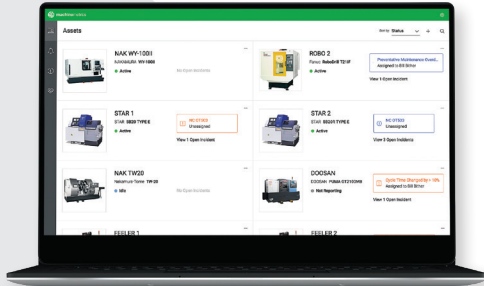
## SETUP/CHANGEOVER

Shops will often changeover jobs frequently, and this can be the biggest source of lost production time for a business. Setup times for the same job can vary wildly by operator, or by shift. Only by tracking setup time can this be improved. Operator View will display the remaining setup time, encouraging operators to complete on time.

## OEE PERFORMANCE

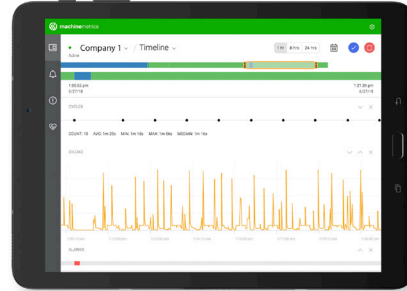
Real-time automated OEE reporting is available in various reports including the real-time dashboard, historical reports that can be compared by shift, and when viewing individual job/part reports. Integrates with any ERP to eliminate double entry.

## IIOT PLATFORM CAPABILITIES



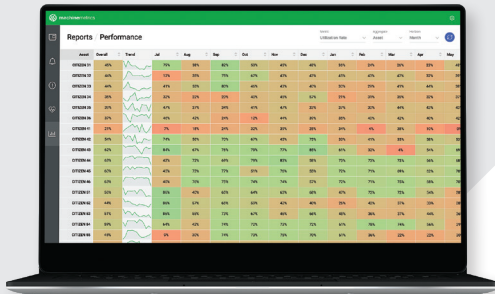
### ASSET MANAGEMENT

View and manage the status and health of your machine assets. Easily add new assets.



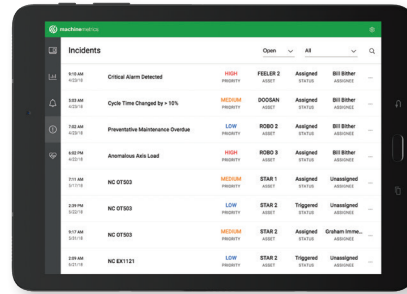
### REAL-TIME MACHINE CONDITIONS

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



### UTILIZATION REPORTING

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



### 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.



## KEY BENEFITS

# Machine monitoring benefits

### EMPOWER

Factory floor workers to meet and exceed production goals with real-time visibility of machine and job information.

### DETECT

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



Improve manufacturing efficiency

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Reduce production waste for increased profits

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Gain real-time shop floor visibility

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Alert shop floor workers with instant notifications

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Improve operator engagement and overall company communication

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Increase overall equipment efficiency



**Contact Synergy Resources**

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