



MachineMetrics is an AWS Industrial  
Software Competency Partner



# REINVENTING THE INDUSTRIAL IOT PLATFORM FOR MANUFACTURING



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# THE COMPANY


## PROFILE




## OVERVIEW

MachineMetrics is the industry's first Industrial IoT Platform designed for discrete manufacturing analytics. We are the machine data component of the Digital Factory. Combining the innovation enablement of a IoT platform with the rapid value creation of packaged SaaS service, MachineMetrics' optimal hybrid approach automates the collection and transformation of real-time machine data to provide descriptive, diagnostic, predictive, and prescriptive analytics through packaged SaaS services that provide immediate and continuous value for manufacturers.


## AWARDS




**Smart Manufacturing Product of the Year, 2018**  
IoT Breakthrough Committee




**Top 10 Manufacturing Intelligence Solution Provider, 2017**  
Manufacturing Technology Insights



**Massachusetts Techhub's Nextgen Technology Award**



**New England Innovation Awards Nominee, 2018**  
New England Business Association

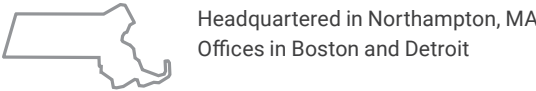


**Forbes Top 25 IoT Start-up**

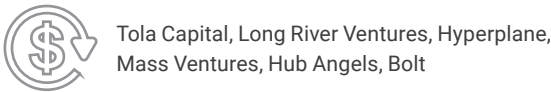
## CUSTOMERS



## FOUNDED IN MASSACHUSETTS



## INVESTORS



# THE PROBLEM

28.7%  
AVG MACHINE UTILIZATION  
RATE OF MACHINES IN 2018

## MACHINEMETRICS WAS STARTED TO SOLVE A PROBLEM:

- Most manufacturers are unable to use the data from their shop floor to drive continuous improvement.
- A lack of data-driven decision-making leads to massive inefficiencies that affect every component of a company's operations, from shop floor to the C-Suite.

## THE DISCRETE CHALLENGE

- Most plants have machines built by different manufacturers, each with a unique control system and communication protocol.
- Discrete manufacturing is a particularly challenging environment for generic IoT platforms.
- Machines range in age, from new with modern controls, to 20 or 30 years old with limited control capability.
- Standard software solutions are too limited to provide ongoing value to the manufacturer.

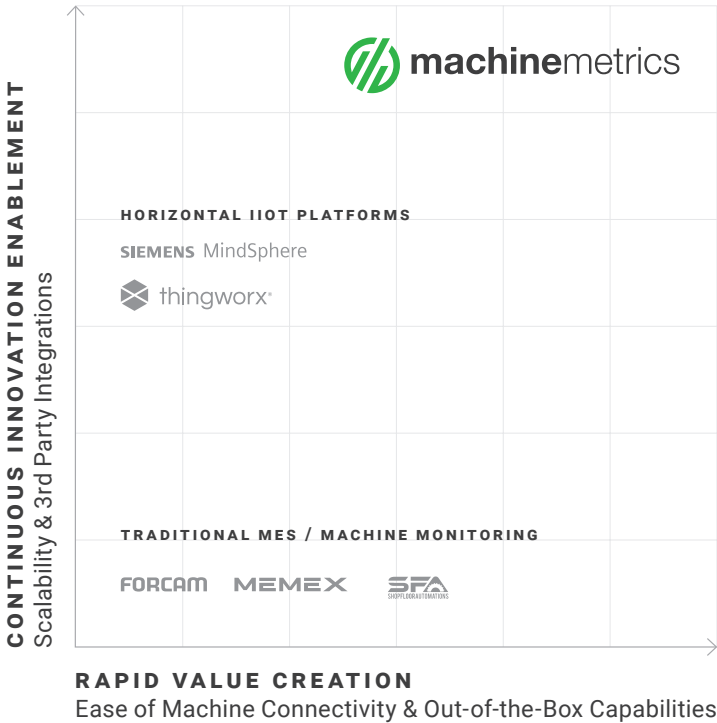
# THE IDEAL SOLUTION FOR MANUFACTURERS

MACHINEMETRICS HAS DEVELOPED THE IDEAL SOLUTION FOR MANUFACTURERS, COMBINING THE INNOVATION ENABLEMENT OF AN IOT PLATFORM WITH THE RAPID VALUE CREATION OF A PACKAGED SAAS SERVICE.

MachineMetrics’ optimal hybrid approach automates the collection and transformation of real-time machine data, augmented with data from people, other devices, and systems, to provide descriptive, diagnostic, predictive, and prescriptive analytics through packaged SaaS services that provide immediate and continuous value for manufacturers.

### RAPID VALUE CREATION

- ✓ Universal machine connectivity
- ✓ Out-of-the-box analytics that identify manufacturing-specific problems
- ✓ Data-driven notifications enable real-time decision making



### CONTINUOUS INNOVATION ENABLEMENT

- ✓ Connectivity to best of breed factory applications
- ✓ Extensible through API architecture
- ✓ Multi-tenant Cloud provides scalability and continuous enhancement

# HOW IT WORKS



MACHINEMETRICS PROVIDES AN EASY TO IMPLEMENT PLATFORM FOR CONNECTING TO, AND CAPTURING DATA FROM, ANY MACHINE REGARDLESS OF BRAND OR AGE.

MachineMetrics connects, captures, and transforms data to a standard format, through an edge device, shown here, that’s plug and play with any modern machine type. Our customers have the option of secure Ethernet, WIFI, and cellular communication for enabling the cloud connection.

### MACHINE CONNECTIVITY

For older machines that don’t possess modern controls and protocols, we connect through digital and analog I/O using a simple labjack device and sensors

With a simple scripting language that’s configurable in the web or mobile application, sophisticated logic can be used to integrate even the most challenging equipment. Consult with our documentation or integration specialists to connect to older equipment yourself, or our field integrators can come on-site for installation.

### PROTOCOLS

Connect to any PLC supporting these protocols:



### CUSTOM ADAPTERS

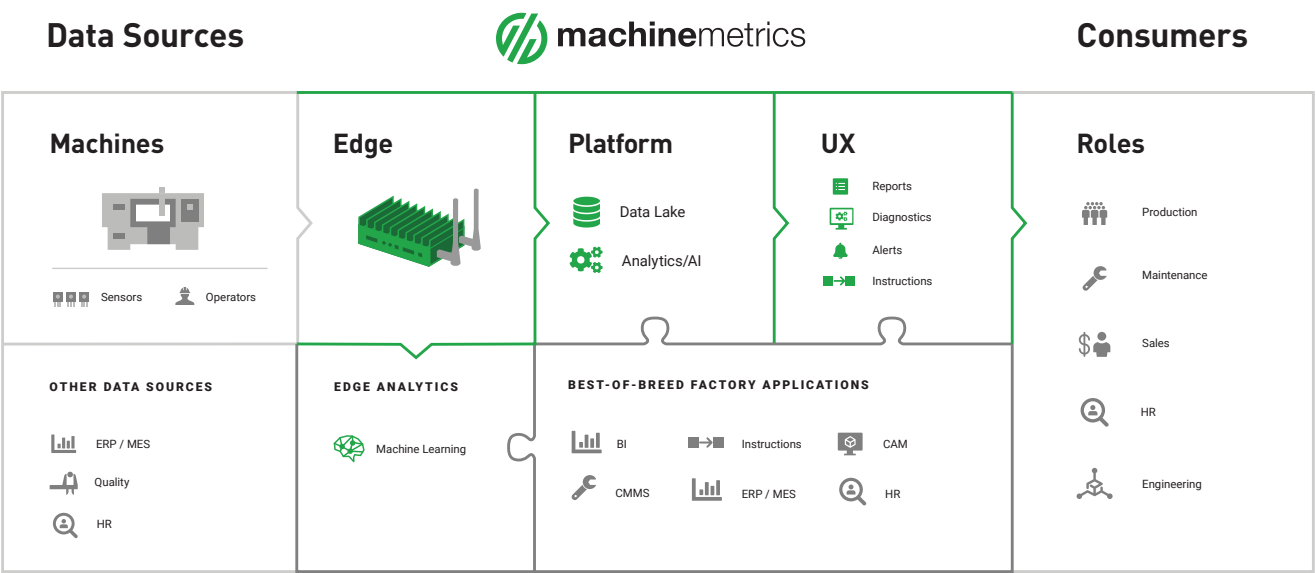
Built-in adapters for the following PLCs:



### DIGITAL AND ANALOG I/O

Connect to any machine input or additional sensor with commodity hardware and a simple configuration script that can be added online.

# ARCHITECTURE & ECOSYSTEM



## ARCHITECTURE

Data is pushed in a secure manner to our cloud infrastructure, which resides in AWS. Analytics, including ML and AI algorithms, can be applied both at the edge and in the cloud, creating an opportunity for continuous value add and innovation for MM, our customers, and our partner ecosystem.

With this data, our platform then feeds it back to manufacturers and other consumers within the manufacturing lifecycle in ways that drive value all the way from the shop floor, to the C-suite enabling digital transformation.

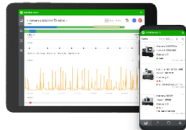
## USE CASES



**MachineMetrics Production** 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.



**MachineMetrics Health** allows maintenance managers and process engineers to keep machines running with real-time condition monitoring. Manage your machine assets and view real-time equipment status and conditions



**MachineMetrics Service** transforms an OEM or equipment provider’s ability to service their customers by remotely monitoring machines, reducing on-site service calls and providing preventative and predictive maintenance.

# MACHINEMETRICS & AWS

**AWS INDUSTRIAL SOFTWARE  
COMPETENCY PARTNER**



## OVERVIEW

Leveraging the scalability, flexibility, reliability, security, and cost-effectiveness of the AWS technology Stack and Empowered by the AWS virtual private multi-tenant cloud, MachineMetrics has become the Machine Data component of the AWS Digital Factory.

**AWS TECHNOLOGIES LEVERAGED**



**AWS KINESIS**  
Easily collect, process, and analyze video and data streams in real time.



**AWS ATHENA**  
Start querying data instantly. Get results in seconds.



**AWS LAMDA**  
Run code without thinking about servers. Pay only for the compute time you consume.



**AWS CLOUDFORMATION**  
Model and provision all your cloud infrastructure resources

## A CASE STUDY ON NATIONAL OILWELL VARCO



**NOV discovers huge gains  
with AWS Partner MachineMetrics**

NOV wanted to improve its operational efficiency using machine data. Using the MachineMetrics platform running on AWS, NOV improved its machine utilization 20 percent in three months.



**DOWNLOAD THE FULL CASE STUDY**  
[machinemetrics.com/hubfs/NOVCaseStudy.pdf](https://machinemetrics.com/hubfs/NOVCaseStudy.pdf)