

OPTIMIZING

EQUIPMENT

UTILIZATION

### A CASE STUDY INTERVIEW

WITH WISCON PRODUCTS

by **GRAHAM IMMERMAN** Director of Marketing, MachineMetrics

### CLIENT



**TYPE OF COMPANY** Advanced CNC precision turned parts manufacturer

### PRIMARY INDUSTRIES SERVED

Aerospace, medical, energy, automotive, construction, power and hand tool

### PRIMARY EQUIPMENT

Horizontal lathes, horizontal mills, grinders



Precision Metalworking



Advanced CNC

## THE COMPANY

PROFILE



INTERVIEWEES

**Torben Christensen** President/CEO, Wiscon Products

### OVERVIEW

Since 1945, Wiscon Products of Racine, WI has produced quality precision parts for the aerospace, medical, energy, automotive, construction and power industries as well as many others. Along the way, Wiscon's innovation and commitment to quality has resulted in awards such as the 2014 Manufacturer of the Year and twice as the Future 50 winner for recognizing local, fast-growing entrepreneurs.

With three generations of family leadership, Wiscon continues to innovate and improve their operation while providing an environment for their staff to grow and take on new challenges as they present themselves.

Since 2018, Wiscon has utilized MachineMetrics at their facility in Racine to further improve their efficiency and Overall Equipment Effectiveness. The objective with MachineMetrics was to closely align with core goals of process improvement, reduced downtime and increased equipment utilization to better service their growing client base and gain full control of the data available to them.

### THE CHALLENGE

### WHAT WERE THE SPECIFIC GOALS IN IMPLEMENTING MACHINEMETRICS IN YOUR OPERATION?

One of our primary goals was data accuracy. Before the implementation, we could look at data, but it was anywhere from a few days to a week old. We were looking for something to provide real-time data, so we could accurately know where our production and utilization was. We also wanted to find out the leading reasons for our downtime. One of the biggest things was equipment utilization versus parts goals. How often were our spindles spinning versus how many parts we were actually producing? This is incredibly valuable to us in understanding cycle time.



WHY DID YOU CHOOSE MACHINEMETRICS? WERE YOU CONSIDERING OTHER MONITORING COMPANIES, AS WELL?

Machine monitoring was already on our radar, but when we discovered MachineMetrics, things got really serious. We liked the flexibility of the pricing structure and the fact that data is accessible from anywhere—home, office, etc. It became clear that MachineMetrics stood out from the rest from a quality perspective. We met at a trade show and the face-to-face contact was important.

# THE SOLUTION



### **REAL-TIME DASHBOARDS**

Real-Time Dashboards provide an at-a-glance overview of shop floor performance.

The Operator View (L) allows operators to add human context to machine data.

### HOW HAS MACHINEMETRICS CHANGED YOUR DAY TO DAY OPERATIONS?

The biggest change has been in efficiency. Specifically, being able to visualize the data and act upon it in real-time. We didn't have a lot of historical data and what we did have could only be addressed reactively. And planning and scheduling was a top priority. Without accurate data, planning and scheduling were difficult. We had spent over \$16 million on equipment but still felt like we were running at capacity. Our production department was always "busy"; there were gaps in the data and not being visible in real-time caused a lag.

The benchmarking information MachineMetrics provided was eye-opening. It was staggering to realize how bad we were. We didn't have a reasonable expectation of how well we should be doing, making it difficult to gauge where we should be.

One of the biggest benefits since implementation has been equipment utilization-

knowing when the spindles are spinning. Previously, we had to rely on operator perspective that wasn't tied to actual data. Now, with measured and categorized downtime, we can see when the production of a specific part isn't lining up to standard—and understand why it's happening. For example, if the parts goal isn't meeting up and the utilization is at 99%, engineering knows it's because of cycle count time.

### WHAT IS THE VALUE OF REALLY UNDERSTANDING WHAT YOUR C

UNDERSTANDING WHAT YOUR CYCLE COUNTS ARE?

The value comes in increased efficiency, real-time data and actionable decision-making. It isn't about just finding the parts that are not performing to standard, and underdstanding why it's happening. It's about finding which parts *are* performing to standard. With the data from MachineMetrics, we are able to see when we are above standard on some and below on others. The data helps us distinguish between the two, allowing us to focus on those that need attention.

### THE RESULTS

### DOWNTIME & QUALITY

Downtime Pareto charts provide the insights needed to help reduce downtime, displaying categorized events and highlighting production bottlenecks.



Without that understanding, we were faced with two challenges. One, for parts where we exceeded the parts goal based on cycle time we realized we could have been more competitive. We may have quoted a minute of cycle time per unit when it only took thirty seconds. And the opposite is true, as well. If parts produced exceeded cycle time, we knew that either the quote was wrong, or the process was wrong but we didn't have a way of knowing which of the two it was. Now, with MachineMetrics, the data helps us narrow down the problems to focus on where we need to improve.

### HOW HAS MACHINEMETRICS IMPACTED YOUR OPERATORS AND MANAGERS?

The volume and quality of data is significantly higher. We don't have to reply on an employee's memory of a problem to know what happened. And we don't have to manually track data. With data being collected up-front, managers can deal with problems as they arise instead of waiting until after the job has been run. There was a concern with implementation at first. The learning curve caused some apprehension, as our operators were not used to using tablets to record information. Initially, operators were nervous and a bit uncomfortable with having their performance being on display. It was also a bit scary for them to see production displayed in the shop for everyone to see. Most everyone is now comfortable with using the tablets—and even a bit competitive. Operators hurry back to their machines a bit faster now. There was also a learning curve associated with getting them to log out, so the next employee could log in. But they switch back and forth between MachineMetrics and Evernote now, and the data is being captured.

MachineMetrics gives managers greater visibility and the ability to impact what happens on the front end. With an understanding of cycle time and downtime, and operators doing everything they can, managers are freed up to focus on what is needed to be done to drive improvements. It may require engineering to step up and revise the process that leads to better performance. Being able to distinguish between operator versus process problems has been important.

## THE RESULTS (CONT'D)

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	00604	58.2%	1	44,4%	55.8%	60.5%	0%	0%	0%	0%	0%	0%	0%	01	
	00425	57.7%		54.3%	58.2%	0%	0%	0%	0%	0%	0%	0%	0%	01	
	00317	48.9%	1	42.7%	50.4%	0%	0%	0%	0%	0%	0%	0%	0%	0	
	00680	42.3%	1	40.3%	79.8%	0%	0%	0%	0%	0%	0%	0%	0%	0	
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### TREND REPORTS

View any performance metric across hour, day, week, month, and shift to visualize trends and uncover opportunities for continuous improvement.

### HOW DID MACHINEMETRICS AFFECT COMMUNICATION ACROSS MANUFACTURING?

Previously, we had problems with the number of meetings across manufacturing. With different groups, handling of manually-gathered data and feedback from employees tended to get out of whack. As information is passed from one group to another, important information is lost. This often caused communication challenges between manufacturing and quality, for example.

Now, we can tell within 30 seconds of looking at the board whether a machine ran well or not. The tablet interface has helped with this. The data is real-time and accurate, and using Evernote, you can add in notes and download the information to the system. That data-based communication has allowed us to move the business from being reactive in manufacturing to being proactive. "MachineMetrics was pivotal in our efforts to integrate with our JobBOSS ERP system. Now our operators can focus on quality, not administration and data entry. This has become a huge advantage in getting good, real-time information, as well as greatly improving operator efficiency.

TORBEN CHRISTENSEN President/CEO, Wiscon Products

MachineMetrics has also improved communication by integrating with important internal systems. MachineMetrics was pivotal in our efforts to integrate with our JobBOSS ERP system. Now our operators can focus on quality, not administration and data entry. This has become a huge advantage in getting good, realtime information, as well as greatly improving operator efficiency.

### THE FUTURE

### **REAL-TIME CONDITIONS**

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



### HAVE YOU FOUND VALUE IN THE REPORTING FEATURES?

Yes, we use the downtime report daily. It identifies why the downtime happened and allows us to adjust. For example, it could be excessive tool changes: are they being changed too much? Or, it could show downtime for tool changes every 150 parts. We may not be able to do anything at the moment, but we can approach it from a maintenance perspective and source tools that last longer. It could also indicate an inexperienced operator. Regardless of the reason, having the data at our fingertips gives us a starting point for improvement.

### HOW IMPORTANT IS MACHINEMETRICS TO YOUR OPERATION AT THIS POINT?

MachineMetrics is very important. To be honest, it would be a huge step backwards to move away from it. It saves time because the equipment monitoring is unified. Previously, I had to log into multiple computers and machines to get data. Now I can log into one and see the entire operation. It's user friendly as well.

Since adding MachineMetrics, part production is easier to monitor and more accurate. We save several hours a week by not having to do manual counts.

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### WHAT ARE YOUR FUTURE PLANS FOR UTILIZING MACHINEMETRICS?

We use uniPoint as our enterprise quality management software. One of the things we are really excited about is that it integrates with MachineMetrics and we are looking forward to the rollout of our QMS system.

## THE METRICS

"MachineMetrics was pivotal in our efforts to integrate with our JobBOSS ERP system. Now our operators can focus on quality, not administration and data entry. This has become a huge advantage in getting good, real-time information, as well as greatly improving operator efficiency."

**TORBEN CHRISTENSEN**, President/CEO, Wiscon Products

## 30 %

INCREASE IN AVERAGE MACHINE UTILIZATION

250%

AVERAGE INCREASE IN OPERATOR PRODUCTIVITY

48%

INCREASE IN OVERALL OPERATOR EFFICIENCY

### 7%

AVERAGE INCREASE

30%

INCREASE IN OVERALL CAPACITY

**\$84K** 

AVERAGE INCREASE IN SALES PER EMPLOYEE, PER YEAR

**CONTACT US** 413-341-5747 info@machinemetrics.com machinemetrics.com