The Metrics

"MachineMetrics makes us look good; it shows that we are on top of our game, know what's going on, and have our act together. The data speaks for itself."

—Austin Peterson, CEO, Carlson Products

24%
IMPROVEMENT IN MACHINE UTILIZATION

14,400
IN ADDITIONAL MACHINE HOURS PER YEAR

10%
INCREASE IN TOTAL EFFICIENCY

$288K
INCREASE IN BILLINGS PER YEAR

1,200
IN ADDITIONAL MACHINE HOURS PER MONTH

30
DAYS TO REACH ROI

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Revealing Hidden Capacity

An interview case study with Austin Peterson, CEO of Carlson Products

CLIENT
Carlson Products

TYPE OF SHOP
Founded in 1956, Carlson Products originally manufactured wall ties, window and door frames, aluminum stockroom doors, grain traps and tool boxes. Now Carlson is a major supplier of formed and fabricated component parts as well as finished aluminum products for commercial bakeware, industrial, doors, and restaurant leaders throughout the United States and abroad. Products are stamped from aluminum, stainless steel, galvanized steel, and other metals. One of Carlson's unique specialties is design assistance for component parts or original product concepts and designs, including production of prototypes.

PRIMARY INDUSTRIES SERVED
Restaurant Equipment, HVAC
Transportation, Power Equipment

PRIMARY EQUIPMENT
Eight Stamping Presses,
Ten Welders, Two Lasers
with Automation Capabilities

PRODUCTION FACILITY
100,000 square feet

INDUSTRIES SERVED

Metal Stamping

Fabrication

The Challenge

What challenges were you trying to solve by implementing a machine monitoring system?

We really did this on the heels of an ERP system integration. I knew from the get go even when we started that while it was critical to our business, there's always a sort of lag in the information we get from the ERP. It's not real time, its not updated every second. We were able to see what happened yesterday, what happened last week but not what was happening right now, and we would always have to somehow fill that gap. Also, to get data into our ERP we were relying on a human being to accurately define and manually input the information to enter it into our database.

Where this really started though was when I saw a machine monitoring system in action in a local facility. I thought it was so cool but I had never found one that worked for the sheet metal industry. All of the real-time monitoring systems that I had seen were only dedicated to machining. I had chats with some of my equipment providers and the solutions they attempted to provide us with were not visually appealing, not web based and felt quite rudimentary. It wasn't going to work for us. Then I reached out to MachineMetrics and I asked if they wanted to do something outside of the box and work with our world, and the rest is history.

We did attempt to do manual tracking before MachineMetrics, and we got so much junk data that we just stopped trying. We kept a Microsoft access database where employees would track this information themselves but with all the huge outliers, data it went to hell and a handbasket.

The most important thing we wanted was to look at was historical labor data information: whether or not the jobs were on target. Tracking down the supervisors and operators to understand why we weren't on target was quite time consuming, not to mention most of our employees had difficulty remembering why problems had occurred when reviewing the issues reactively. There was no ability to identify systematic issues vs singular issues. Also, the lack of historical data made it difficult for us to calculate our utilization as well as our potential capacity.

The Solution

How did MachineMetrics address these challenges?

MachineMetrics was our solution. Tablets were mounted to 15 individual machines to display job performance and provide operators with an interface that categorized downtime, setups, part rejections, and tool changes. Real-time dashboards were installed on large screen monitors across the facility to display the performance of jobs against the company's production goals. Instant text notifications were set up so Production Managers could identify underperforming machines immediately and quickly address issues in real-time.

The Results

What impact has MachineMetrics had on Carlson Products?

Firstly, upon installing MachineMetrics we found an instant bump in our efficiency. We've been able to take on more jobs than we ever had before because I'm able to forecast our capacity much better. We actually turned down a job that we would have previously taken on before and failed at because we wouldn't have had the information to know whether we would have succeeded or not. That would have hurt my relationship with this client. It's very helpful for planning purposes. It allows us to run "what if" scenarios more easily.

Also, it's an incredibly complimentary tool for an ERP System (we use EPICOR). They overlap in some areas that are extremely helpful to us. The integration was simple and it was easy to get data into our ERP. We use MachineMetrics as a tool to verify and change some of the bad data that gets entered into our ERP. MachineMetrics acts as a check and balance for our ERP data.

On the employee side, I think it's just given us a much greater level of accountability. One thing we do is we use the job reports from MachineMetrics and review them every morning with my team. Everybody knows it's coming and everyone is held accountable for their data. It's important for us to see who's performing well and who's struggling in the moment. As an owner, if someone is doing a great job I will go find that person on the floor and tell them how impressed I am with their work. We have 100 employees here. Naturally, some employees were reticent at first. However, I just got another employee review for an operator who uses the system to their advantage. We are now able to review the historical performance of specific shifts, employees are able to prove themselves, and we can incentivize their productivity. I would never have been able to prove or implement that type of incentivization without MachineMetrics.

We've also had the information necessary to make some of the harder decisions. There are some folks who have been here for a long time who we discovered were just going through the motions and not giving us the effort we expected. But the truth is it's fair.

Lastly, it's a great selling point for us and potential customers are always impressed by it. MachineMetrics makes us look good; it shows that we are on top of our game, we know what's going on, and have our act together. We're in Wichita Kansas, and there's a lot of manufacturing competition here. Thanks to our implementation of MachineMetrics we've recently received an award for Innovation in the Manufacturing Sector for our embrace of IIoT technology.

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