



## Case Study

# Decision Making and Process Improvements with Machine Monitoring



**MANES MACHINE  
& ENGINEERING COMPANY**

Client: Manes Machine and Engineering Company

Industry: Aerospace

Interviewee: Kyle Isker

Role: General Manager

Primary Equipment: Mazak, Makino, Okuma, and more

Specific Products: Complex 5-axis precision aerospace products including airframe structure, fuselage, and engine components.

# A solution was needed for Manes Machine and Engineering Company business problems. Those solutions were provided by



## About Manes Machine

**Manes Machine and Engineering Company**, located in Fort Collins, CO. was founded in 1983. Manes Machine manufactures complex 5-axis precision machined products for the aerospace industry. The company offers assembly and kitting and are specialists in machining Titanium and other exotic metals. Manes Machine has a robust assembly department that handles simple and complex assemblies.

## What Were the Problems?

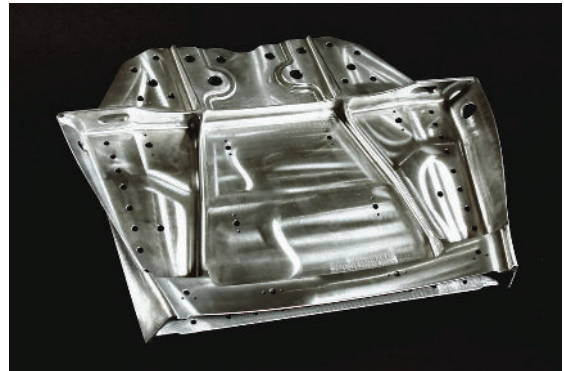
Manes Machine produces complex aerospace related industry parts on 5-Axis machines that range from 1"-160" work envelopes. Manes Machine was struggling to meet customer demand from the likes of Collins Aerospace, Lockheed Martin, Boeing, Goodrich, and many others. Manes Machine was not receiving clear data as to whether their Mazak, Makino, and Okuma machines were running or not running.

## What Were the Requirements?

Having a lack of clear data affected Manes Machine's ability to meet their client's needs. The simple goal for Manes Machine was to automatically collect and expose data regarding their machine's uptime. By exposing machine data Manes Machine knew problems would be identified and process changes would be implemented. Therefore, a flexible machine monitoring system was an absolute requirement. The system Manes Machine selected had to be able to grow with them as their needs changed over time.

## Success Summary

- Immediate increase in utilization by 10-20%
- Further utilization increase to 30% with DataXchange
- Increase in data-driven decision making
- Improved scheduling and teamwork



An engine cowling heat shield produced by Manes Machine



Manes Machine utilizes a diverse group of 5-Axis CNC machines including the Mazak Vortex e-1250V/8

## What Was the Solution?

The answer to Manes Machine business pains was the **Scytec DataXchange** machine monitoring platform. Manes Machine found the robust feature set of DataXchange including the **Real Time Viewer (RTV)** manufacturing dashboards to be exactly what they needed. RTV manufacturing dashboards can be customized based on any production environment's needs and can rotate to show specific views like real-time and daily equipment status, utilization, shop floor layout, downtime detail, alarms, and more. To implement better production processes using Smart Factory technologies, Scytec recommends that those starting out with machine monitoring begin simply by observing machine status and then grow with their exposed data.

## The Outcome

With the implementation of the Scytec DataXchange machine monitoring system, Manes Machine saw an **immediate increase in utilization of 10-20 percent**. Manes Machine utilization increase then went up to 30 percent with continued use and expandability of Scytec DataXchange. Manes Machine also reported less wasted resources and full data visibility and accuracy that limited the impact of problems using the real-time machine data provided by Scytec DataXchange. **Additionally, Manes Machine reported that with the help of Scytec DataXchange they witnessed improvements in their productivity and equipment efficiency, processes, scheduling, and teamwork.** Manes Machine's General Manager Kyle Isker states that...

## The Results

-  Productivity
-  Scheduling
-  Teamwork
-  Processes

**“We saw an immediate 10-20% increase in machine up time, just by displaying when machines were down. Since then, I would say we have seen a minimum of a 30% increase that can be attributed directly to DataXchange. Scytec DataXchange has provided us with the information we need to make ‘data-based’ decisions that have led to increased machine utilization and overall productivity.”**

## What Would Have Happened

Not implementing a machine monitoring platform like Scytec DataXchange would have had consequences as well. General Manager Kyle Isker states that...

**“Without DataXchange we would have continued to be in the dark. Our customers and our bottom line would have suffered.”We would have continued to struggle to meet customer demand, and not have clear data telling us why.”**

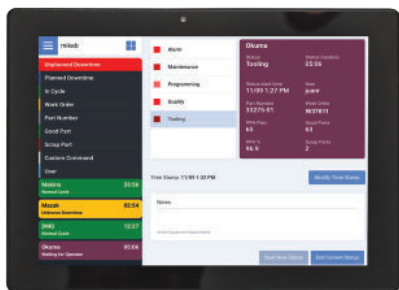
Scytec DataXchange has maintained its place as an essential tool that supports all employment levels at Manes Machine since 2013, proving its value as an essential part of running the business. Scytec DataXchange even helped Manes Machine win new business. According to General Manager, Kyle Isker...

**“Having good data is essential to making good business decisions and DataXchange has provided key data we need to move forward as a company.”**

## **The Daily Routine**

The Scytec DataXchange machine monitoring platform was designed to grow with the user. Planned downtimes between shifts, tracking program stops M0 and low overrides as well as displaying DataXchange on televisions throughout their production environment are examples of how Manes Machine continually improved their processes with Scytec DataXchange. Manes Machine has also utilized the ability to add downtimes with the **Operator Data Interface (ODI)**. Among DataXchange's many intentions, one is to create a new era of Smart Factory manufacturing technology enabled by changing the daily routine of the production environments that are using it. Kyle Isker states that...

**“Daily and weekly, we are constantly looking at the DataXchange data to tell us how we are doing, monitoring our processes, and guide us in making decisions for the future.”**



The Scytec DataXchange **Operator Data Interface (ODI)** and **Equipment Overlay** are both useful features that allow data such as downtimes and part numbers to be entered, and emails and text messages sent, along with a variety of other functionalities.

**Scytec DataXchange** is a Cloud and On-Premise OEE manufacturing machine monitoring system, and so much more. For more information as well as a free demonstration of the capabilities of Scytec DataXchange, please visit <https://scytec.com>

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