

THE PROBLEM:

CNC Machines are used in the manufacturing process to create various engine components. This is critical in the operations for the Powertrain lines.

When a CNC machine is damaged or fails an operation shutdown is imminent. Before shutdown, it is possible for quality issues in the machined production as well. It is critical to monitor this asset to stop unplanned downtime and to know which components are failing.



COST OF ASSET FAILURES

\$900,000/hour
Downtime Cost

1-2 hours
Downtime

Other
Safety and
environmental

INDUSTRY SAVINGS POTENTIAL

1 hour of downtime per
asset per year or
\$900,000

About 16 hours of
downtime per shop or
\$14,400,000

ASSET BLIND SPOTS:

There are several inherent challenges related to monitoring conveyor systems.



1. Route-Based Monitoring: leads to blind spots into the internal components and overall machine health



2. Reactive Maintenance: causes machine to be used to failure which causes downtime



3. Spindle Failure: often the root cause of the failure is unknown which causes subsequent failures

A NEW APPROACH TO CNC MACHINES



Above: IoT Hub with triggering capabilities

Typically, time-based maintenance is used. This results in maintenance being done on assets that don't need it and lack of visibility into the root cause of the failure.

Our solution, using IoT Hub and SmartDiagnostics, allows for continuous machine health monitoring. It gives the capabilities to trigger data samples when the asset begins its movement. This paves the way for automated callouts directly through Maximo using advanced analytics and create dashboards to increase visibility into the plant.



HARDWARE

- IoT Hub
- Base stations
- Repeaters



SOFTWARE

- Threshold Settings
- Indicators
- Sensor Configurations
- Dashboards
- Reporting



REAL-TIME DATA

- Integrated with your real time data and machine information:
- Schematics of systems/equipment
- Run speed
- VFD information
- Bearing types
- PLC integration/process data



TRAINING

- Sentry
 - Site visits
 - In-person training
- Academy
- Customer training/handbooks

CONTACT US!

Call **814-867-4097** or email sales@kcftech.com for information.

