



# Predictive Maintenance IP Solution

[concurrency.com](http://concurrency.com)

# About Concurrency

- Concurrency is an organization of Change Agents. Inspired technologists who create value, challenge the status quo and deliver business outcomes.
- Concurrency helps you find better ways to leverage technology to fulfill your strategies and improve your business. It specializes in Cloud, Data & AI, Modern Apps and Secure Modern Workplace.
- Concurrency is a Microsoft Gold Partner, multiple-time Microsoft Partner of the Year winner, ServiceNow Elite Partner and was recently recognized with four 2020 Microsoft Partner Awards for success helping organizations leverage Azure, AI and machine learning to drive business results.
- Founded in 1989, Concurrency is headquartered in Brookfield, WI with additional offices in Chicago, IL and Minneapolis, MN. It was recently named to Inc. 5000's Fastest Growing Private Companies in America list for the fifth time.



# How Concurrency Helps You Leverage Technology to Drive Business Outcomes



# Improve Operational Efficiency & Customer Service Levels with Predictive Maintenance

## Goals

- Improve business operations
- Improve customer service levels
- Improve product quality
- Reduce cost of production
- Meet supply demands

## Solution

- Leverage Azure cognitive services, IoT, machine learning and supporting technologies to create capability to read, write, and collect data in real-time to proactively identify and/or predict maintenance issues, monitor machine performance and/or product quality to proactively mitigate risk and reduce costly production downtime.

## Outcomes

- Improved operational efficiency
- Reduced production downtime
- Improved customer service levels
- Reduced manufacturing costs

# IP Solution: Predictive Maintenance



Predictive Maintenance  
Manufacturing IP Solution



Microsoft Azure ML, AKS,  
Databricks and Power BI

- Improve business operations, customer service levels and product quality.
- Reduce cost of production while meeting supply demands through instantaneous data.

# Project Showcase: Leading International Technology Company Leverages Azure, IoT and Predictive Analytics to Support Real-Time Decision-Making and Improve Client Outcomes

## Challenge

- Leading international technology company sought to improve business operations and client service levels by increasing the speed and frequency at which it can process and interpret machinery and product quality data.
- Current technology allows for the manual reporting and collection of critical monitoring data every approx. 2 to 3 hours.

## Concurrency Manufacturing IP Solution

- Concurrency leveraged Azure services, Custom ML, and Windows IoT Core (Edge) to create a capability to read, write, and collect sensor data in real-time to support intelligent decision-making.
- The resulting technology solution equips the company to monitor product quality and machine performance issues to proactively mitigate risk and reduce costly production downtime.
- Concurrency also developed the end-to-end security for this solution to protect it from outside security threats.

## Microsoft Technologies

- Azure
- IoT Hub
- Stream Analytics
- Notification Services
- CosmosDB
- API Management
- Windows IoT Core / Edge
- Azure Cognitive Services
  - Custom Vision
  - Computer Vision
  - Knowledge/QnA
- Azure ML Services

## Return on Investment

- The international technology company has significantly increased its data availability, reducing from having data every 2 to 3 hours to a system that provides it instantaneously.
- The company has improved its ability to better serve its clients' needs by now being able to monitor product quality and identify variations in real-time.
- Resulting model also directly supports the company's need to proactively identify machine maintenance issues and failures, minimizing costs and production downtime.





# Call to Action

- [contactsales@concurrency.com](mailto:contactsales@concurrency.com)
- Learn more: [Concurrency Manufacturing IP Solutions webinar](#)
- [www.concurrency.com](http://www.concurrency.com)



*Concurrency*

**Thank You**