

# AI Driven Predictive Maintenance

## Business Impact numbers

**~10% improvement**

Equipment uptime

**~4% reduction**

Total cost of production

## Time to execution

**8**

Weeks to Pilot

**12**

Weeks for MVP Execution

## Problem Overview

Manufacturing teams spend 10-15% of their operations budget on maintenance activities, while still experiencing unexpected, unnecessary stoppages of critical primary & auxiliary equipment

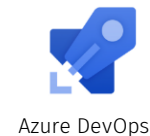
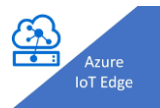
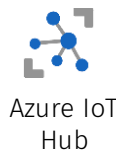
## High level approach/solution framework

Combine data from multiple sources including energy consumption & sensor data to build a clear picture of current health of equipment and provide pre-emptive signals to plant stakeholders to enable part/ machine replacement or maintenance activities needed.

Key components of the solution include :

- AI models – Deep learning algorithms built to identify anomalous patterns
- Root-Cause Analysis – To automatically highlight the problem areas & priority actions needed
- Feedback Loop – Solution deployment on IoT-Edge, enabling real-time prescriptive insights

## Azure architecture or Azure components used



## Key Highlights

**1000+**

parameters captured every second

**4**

Data sources leveraged to generate composite signals

**Responsive IoT-Edge**

High speed docker based model pipelines