

# PRODUCTION FLOOR EFFICIENCY OPTIMISATION

New Strategic Solution Significant  
Improves Performance of the Production

## CHALLENGES

The company needs to increase production efficiency. Machines from the production line must be monitored and metered so that, the most common causes of downtime can be identified and eliminated. Additionally, it is necessary to automatically identify the wear and tear of machines that threaten to break them down. All possible breakdowns must be eliminated before they occur.

## SOLUTIONS

The solution is based on monitoring machines by placing sensors on them that read machine parameters, such as vibrations, temperature, rotations, etc. Sensors are elements of the IoT infrastructure and send data to the cloud, where it is processed.

Based on the data, their standard deviation is calculated and the condition of the machines is monitored on this basis. The PARETO distribution allows for the elimination of the most common causes of downtime. In addition, the identification of worn-out elements allows you to prevent failures.

## BENEFITS

### Production Performance

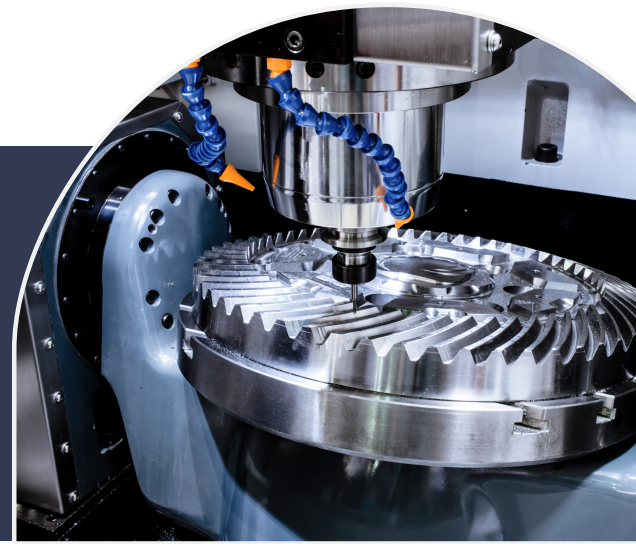
According to PARETO principle, the most frequent reasons of breakdown are identified and reduced to minimum.

### Failure prevention

Measurement standard deviation of machines vibrations allows to identify machines wear and eliminate potential failures that may occur in nearest future.

### Cost optimisation

Maintenance is performed at the right time and scope.



## AT A GLANCE

### Objectives:



- Machine health monitoring
- Production performance improvement
- Failure prevention
- Predictable maintenance

### Solution:



- IoT hardware components
- Cloud service
- Employee dashboard
- Background processes

## PROJECT DETAILS



### Client

A company that produces parts for industrial production lines.  
Employees: 250 - 500



### Solution

IoT, Cloud service



### Technology

IoT: MQTT, NodeRed, noSQL

Cloud Service: AWS Cloud, Java Spring Boot, Kafka, Angular



### Tools

GitLab CI/CD, AWS DevOps, Terraform