



CASE STUDY 06

Predictive Maintenance for a Multi-Plant Manufacturer

Steel / Automotive / Heavy Manufacturing

IoT + Predictive AI

Business Challenge

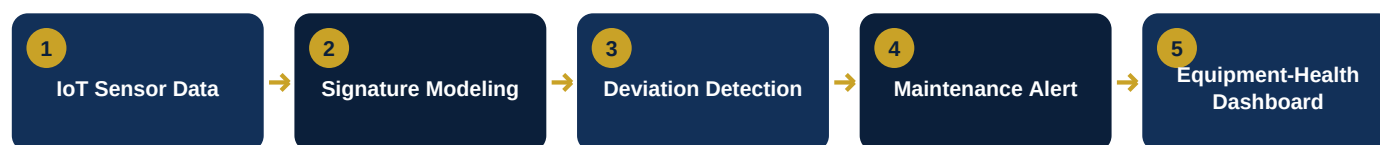
Unexpected breakdown of motors, bearings, pumps and production equipment causes production disruption and expensive emergency maintenance.

Solution

IoT sensors continuously collect vibration, temperature, motor current, pressure, RPM and operating hours. Machine-learning models establish the normal operating signature of each machine and identify deviations before conventional alarm thresholds are reached.

- Early warning of equipment deterioration
- Condition-based maintenance
- Reduced emergency maintenance
- Better spare-parts planning
- Improved equipment availability
- Equipment-health dashboard for maintenance teams

Solution Flow



Business Value

This is presented as an illustrative use case demonstrating how predictive maintenance can reduce unplanned downtime across a multi-plant manufacturing environment.

TECHNOLOGY

IoT Sensors, Machine Learning, Time-Series Analytics, Equipment-Health Dashboard