quantiphi
Solving What Matters

Predictive Maintenance

Predictive maintenance facilitates real-time tracking of the machine's health and availability, thereby allowing optimum utilization of resources, increases equipment uptime, and availability by 10-20% and decreases material costs by 5-10%. Our solution for a global leader in the oil and gas industry generated ~USD 20M in annual savings

Maintenance challenges faced

Reactive methods

The traditional ways of maintaining machines involve unplanned repairs leading to unforeseen costs

Unoptimized Use of Resources

With traditional mainte-nance methods, managing spares & resources opti-mally is difficult

Huge Manual Effort

Perpetual manual inter-vention is required for monitoring the processes

Delayed break-down reports

Defects in the machine go unnoticed until they cause breakdowns

Predictive Maintenance applies to various industries

Hydraulic Press, Shot Blasters, Welding Bots, Packers

Engines, Gensets, Turbines, Compressors

Tractors, Harvesters, Sprayers, Forklifts, Cranes, Elevators

Mixers, Boilers, Fermenters, Washers, Coolers, Ovens

Millers, Grinders, Drills, Lathe

Or **any equipment** data with **numeric time-series** distribution!

Oil, Gas, Energy & Utilities

Mining & Construction

Automotives

Manufacturing

Our Predictive Maintenance Platform

Machine Learning Predictive Capability

Identify anomalous machine parameters (vibrations, noise) to identify forthcoming failures and reduce unplanned downtime.

Security and Scalability

Supports SSO authentication, and gives the ability to limit user access rights and editing privileges at a granular level.
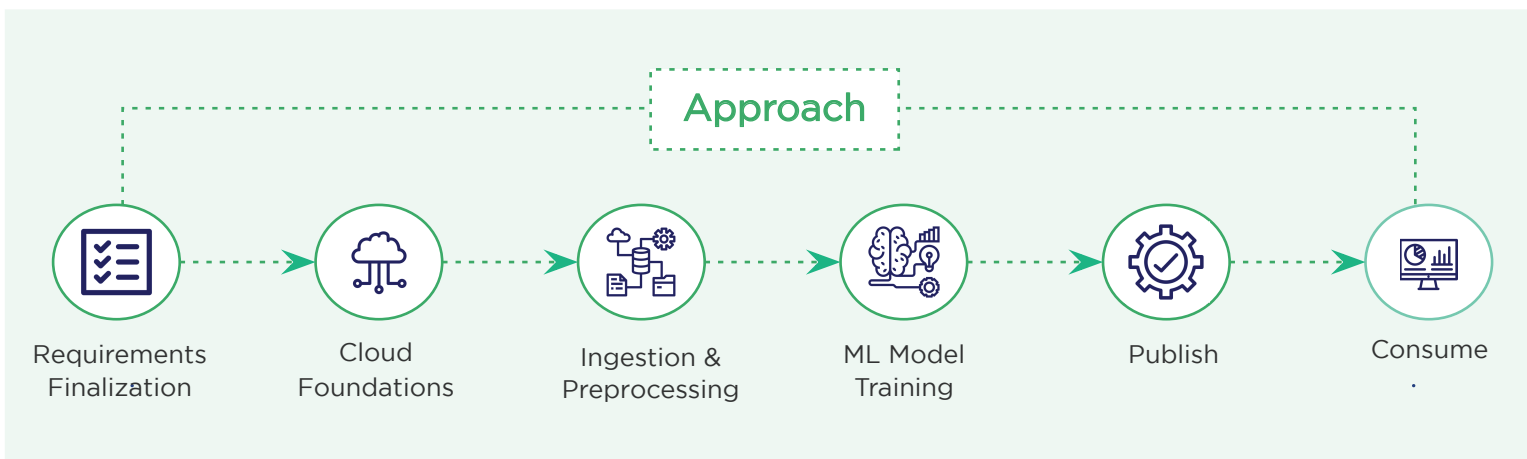
Real Time Monitoring

Track and monitor machine process parameters in real time. Capture machine availability and performance automatically.

Interactive Dashboard

Managers can track, analyze and diagnose the performance of the plant and set alerts for maintenance

POC Package

Approach

Requirements Finalization → Cloud Foundations → Ingestion & Preprocessing → ML Model Training → Publish → Consume

OUTCOMES

- Personnel & Repair Cost Savings
- Reduced Down Time & Mitigated
- Improved OEE
- High Performance Accuracy

DELIVERABLES

- Terraform Deployment
- Robust & Scalable GCP Solution for Predictive Maintenance
- Monitoring Dashboards in Looker & PI Vision

TIMELINE (POC)

8 weeks

Single subsystem, single model, limited # of dashboards