

# Shell Predictive Maintenance Rotating Equipment

**Detect Rotating Equipment Anomalies Early to Improve Availability and Reduce Maintenance Cost of Rotating Equipment**



**Open AI Energy Initiative**

**Shell Predictive Maintenance Rotating Equipment** uses advanced data analytics to support operators with early detection of rotating equipment anomalies against expected performance baselines and make timely interventions before anomalies turn into events that cause unscheduled deferment or unplanned downtime. Insights from **Shell Predictive Maintenance Rotating Equipment** can help support engineers to increase asset availability by providing timely insights on the state of the equipment that could be used to support equipment care strategies and reduce preventive maintenance costs. By providing an application designed specifically for monitoring rotating equipment, **Shell Predictive Maintenance Rotating Equipment** augments BHC3.ai Reliability's monitoring capabilities where Centrifugal Compressors, Centrifugal Pumps or turbines are critical to reliability.

## Shell Predictive Maintenance Rotating Equipment Features

- **Self-serve insights** – Access AI insights and set up alerts through a simple, easy to use self-service interface
- **Data evaluation** – Use advanced visualization functions to explore and evaluate the performance of rotating equipment and models
- **Model performance monitoring** – Review tag data, training and test periods, predictions and monitor model performance over time
- **Results visualization** – Visualize the relationship between predictions from the model, and the true values and how models are performing
- **Built on the BHC3 AI Suite** – to enable rapid deployment at enterprise scale

## With Shell Predictive Maintenance Rotating Equipment, operators can:

- **Monitor the health of key rotating equipment classes including centrifugal pumps, centrifugal compressors, dry gas seals and turbines** and mitigate their failure risk in advance through AI-driven alerts.
- **Leverage specialist knowledge** by using codified rotating equipment expert insights to detect anomaly events in the process, equipment and auxiliary systems, assess possible causes and recommend preventative measures.
- **Detect deviations from the baseline** through AI alerts that indicate a potential fault in rotating equipment.
- **Deploy proven machine learning models tailored for rotating equipment** with preconfigured algorithms, hyper-parameters and thresholds to enable early detection and reduce false positives.
- **Understand rotating equipment health at enterprise scale**, with a simple and extensible rotating equipment onboarding process, asset templates, documentation and monitoring tools.
- **Enable engineers to intervene** before issues become uptime problems.
- **Improve turnaround efficiency and focus areas** by using a data-driven approach that highlights deviations between target and actual behaviors to prioritize equipment and maintenance tasks.
- **Seamlessly embed insights** on rotating equipment performance into BHC3.ai Reliability and exception based surveillance workflows.

## Shell Predictive Maintenance Rotating Equipment Enhances Rotating Equipment Performance

- **Enable early detection of anomalies** to reduce unscheduled deferment and unplanned downtime, increasing availability.
- **Reduce maintenance costs** through timely intervention.
- **Provide assurance on the state of the equipment** by generating a target behavior profile to enable equipment care strategies and reduce preventive maintenance cost.
- **Improve productivity, availability** and performance of rotating equipment.

