

Thermal Power Plant [3* 660 MW] Improves
Asset Reliability & Performance to Achieve
\$10M in Annual Savings

Customer Profile

Plant Units

3* 660 MW

Number of Critical Assets Covered

110

Industry

Power Generation

Failure Modes & Recommendations

900+

Annual Production Capacity

2 GW

Implementation Timeline

4 Months

Annual Savings

\$10 M

Deployment Scope



Pilot Phase

120 Models



Phase 1

12 Boiler Tube Leak
Detection models,
3 Process Safety and
Integrity Models



Phase 2

Customized Plant
Performance
Dashboards

Objective

Enhance asset reliability and performance for critical assets across the 3 units.

→ Early Anomaly Detection

→ Root Cause Identification

→ Operations Led Continuous Learning

→ SME-Led Recommendations

→ False Alarm Mitigation & Effortless Model Maintenance

Operational Challenges

→ Anomaly Detection Without Context

Anomalies detected without considering domain knowledge.

→ Lack of Failure History

No record of equipment failures and corrective actions.

→ Inefficient Collaboration

Difficulty tracking real issues and collaborating across departments using multiple applications.

→ Data Quality Issues

Defunct sensors and tags cause data losses, impacting monitoring.

→ False Positives

Multiple false alerts from in-house applications obscure real issues.

→ Data Science and Model Training

Multiple models for the same equipment complicate real-time tracking. Also, significant time spent in maintaining, recreating, and tuning models for every false alert.

UptimeAI Solution Features



Reliable Alerts for Process Anomalies

Early warnings with time series data help process engineers to diagnose the severity of alert based on fractional scoring for both Reliability & Performance failure modes.



Advanced Tracking & Collaboration

Built-in messaging modules for interdepartmental collaboration and SAP Maintenance integration enabling process engineers to collaborate based on anomaly severity.



Integrated Alert Management & Collaboration

Track all process anomalies from a single dashboard, with intuitive time-series data to track failure timeline.



Unified System-Level Models

Reduce the number of models by tracking one comprehensive model for all sensors associated with heavy assets or unit.



Auto-scaling of Domain Knowledge

AI-Expert's failure mode library reduces false alerts considerably and provides relevant insights for operations team, while auto-scaling the SME recommendations across all sites.



Auto-training of AI Models

System models learn from user feedback to enhance anomaly diagnosis accuracy, ensuring minimal upkeep of models.



Rapid Deployment and Scaling

Deployment of AI Expert OEx platform is completed within 30 days for each phase of implementation.

Business Transformation with UptimeAI Expert



\$8M

Annual Reliability Savings



\$2M

Annual Performance Savings



70 Hours/ Month

Reduction in Maintenance Time