



Thinaer Use Case Manufacturing Equipment Health

Proactive machine maintenance generates 15% reduction in equipment downtime

CHALLENGE

Unexpected Machine Failures and Unnecessary Downtime

Beyond the high cost of updating and replacing manufacturing equipment, a failing machine stops the entire downstream process without notice. This unplanned downtime causes prolonged productivity loss and can trigger costly contractual penalties and fines.

Challenges

- Unplanned downtime due to failing machinery
- Unpredictable machine repairs and replacement

SOLUTION

Real-Time Monitoring of Material Properties and Environmental Factors

Thinaer IoT sensors monitor machine health by continuously sensing pressure, vibration, voltage, current, temperature, and environmental factors such as temperature and humidity.

The Thinaer platform trains machine learning models to assess equipment health and schedule maintenance based on a continuous accumulation of sensor data. Then, an artificial intelligence (AI)-based health and usage monitoring system (HUMS) detects and predicts anomalies based on actual conditions before failure

occurs. Thinaer employee feedback technology incorporates real-time, human feedback to ensure line workers can provide qualitative input which speeds troubleshooting and employee adoption.

OUTCOME

Aerospace Manufacturer Adds \$1.8M/year in Productivity while Lowering Costs with Thinaer HUMS Kits

Manufacturers can produce more with the machines they already have by reducing downtime by 15% based on Thinaer AI-generated insights. This machine learning feedback loop predicts and schedules machine maintenance by anticipating problems before failure. With more predictable downtime, asset managers can schedule preventative maintenance around production requirements to optimize workflows while extending machine life to reduce capital expenditures.

Operations managers accelerate the reduction in downtime by incorporating the Thinaer human feedback module to facilitate broad employee adoption, which contributes even more to process improvement.

From machine health to corporate health

After deploying the Thinaer platform, a Fortune 100 aerospace manufacturing company reduced unscheduled equipment downtime by 15% and realized \$1.8 Million/year in increased productivity.



To find out how to boost your productivity using the Thinaer platform, get in touch with one of our experts!

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