TACHYONIC INTELLIGENCE

PyXis

Where Machines Gain Intelligence

Real-time Motor Health + Energy Monitoring

Transcend Dimensions | Create Intelligence

3-axis

Triaxial MEMS

FFT

FFT analytics

SCADA

Integration

PYXIS REAL-TIME MOTOR HEALTH MONITORING

Intelligence Begins With Curiosity

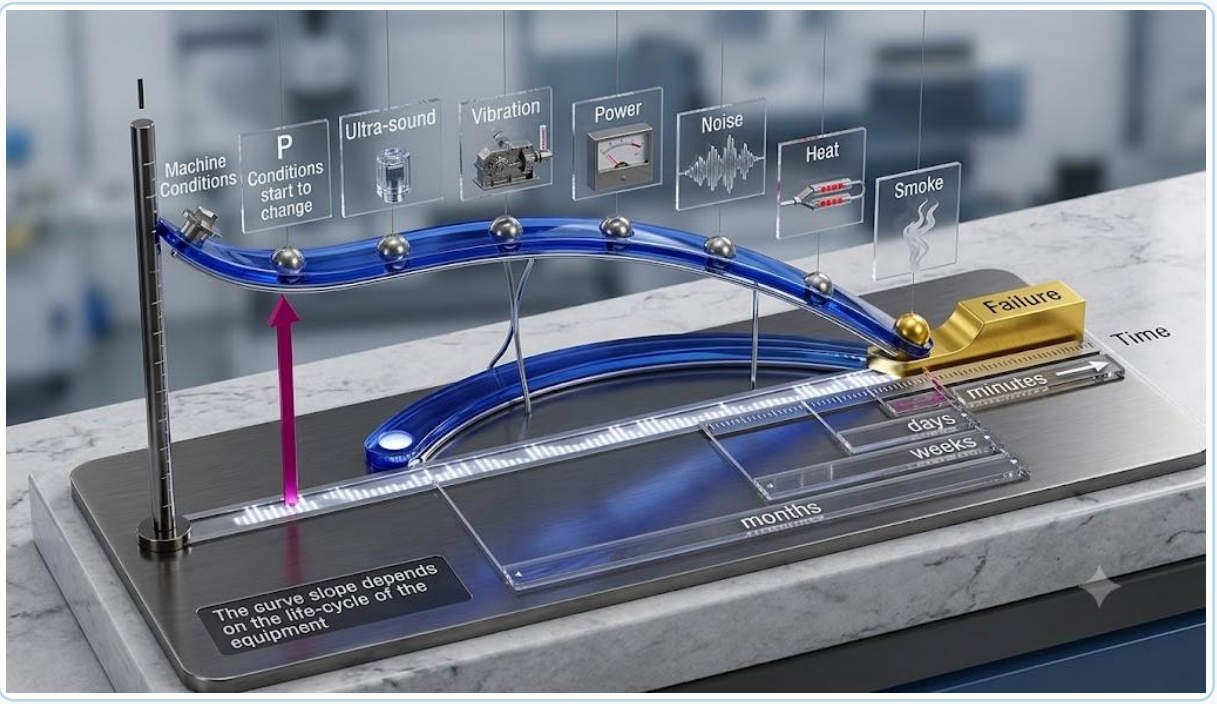
“Be less curious about people and more curious about ideas.”

— Marie Curie

PyXis turns machine vibration into actionable intelligence before failures become production losses.

PYXIS REAL-TIME MOTOR HEALTH MONITORING

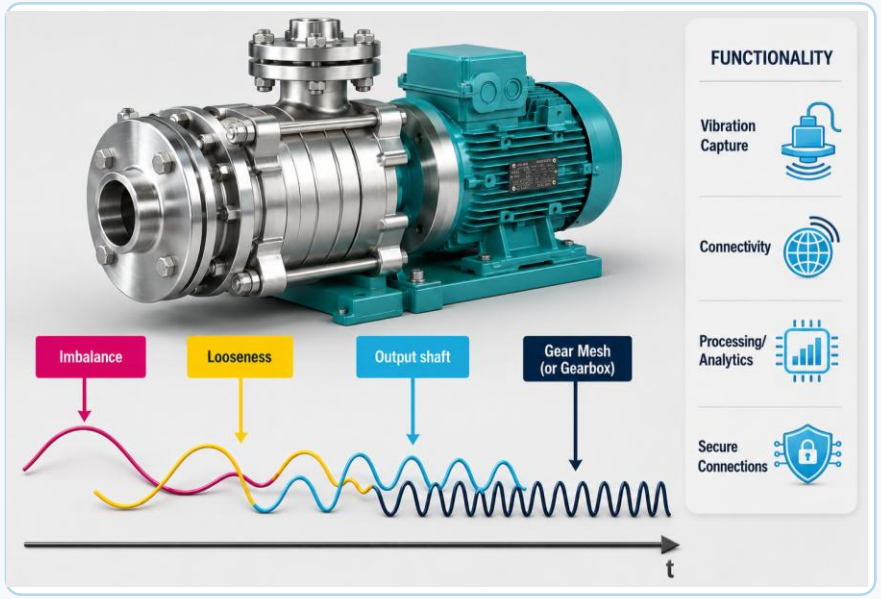
Typical Machine Conditions vs Lifespan



Small changes in vibration happen early in the failure curve.
PyXis helps identify abnormal trends while intervention is still low-cost.
Condition-based maintenance extends asset lifespan and reduces unplanned downtime.

PYXIS REAL-TIME MOTOR HEALTH, ENERGY MONITORING

System Overview

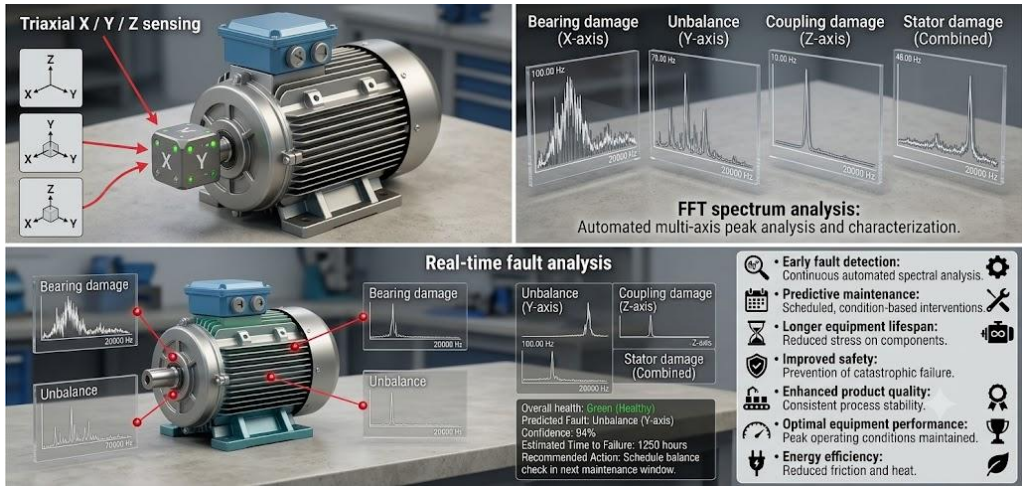


Sensor captures triaxial vibration and motor condition data.
Analytics layer converts raw waveforms into FFT and fault signatures.
Dashboard and SCADA integration deliver alarms, trends and maintenance priorities.

PYXIS REAL-TIME MOTOR HEALTH MONITORING

Professional Real-time Motor Health Monitoring System

Triaxial X / Y / Z sensing
FFT spectrum analysis
Real-time fault analysis

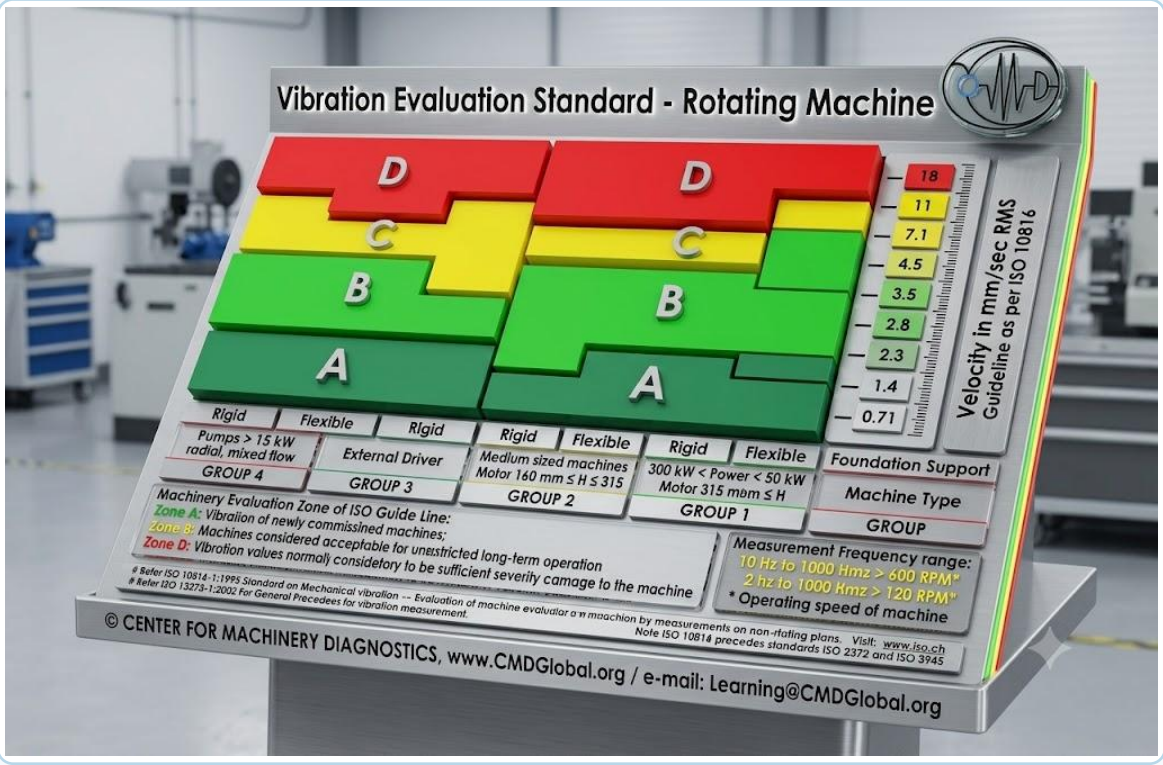


Early fault detection
Predictive maintenance
Longer equipment lifespan
Improved safety
Enhanced product quality
Optimal equipment performance
Energy efficiency

Machine intelligence that is rugged enough for industrial floors and precise enough for predictive decisions.

PYXIS REAL-TIME MOTOR HEALTH MONITORING

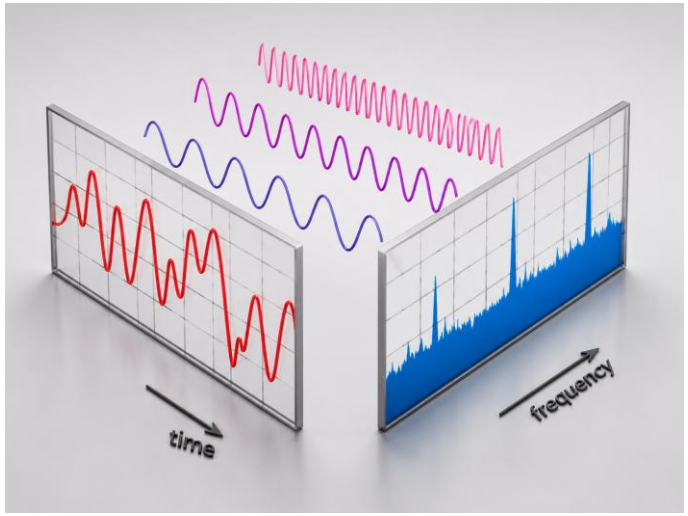
Professional Motor Health Analytics — ISO 10816

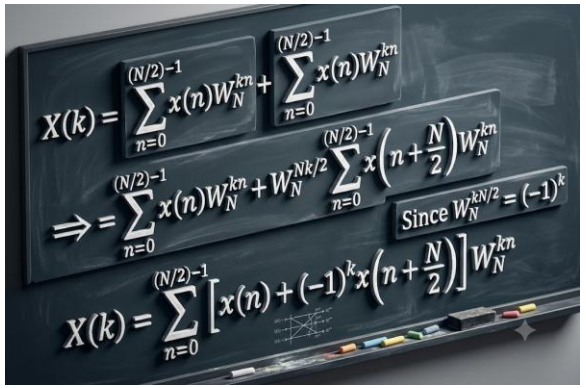


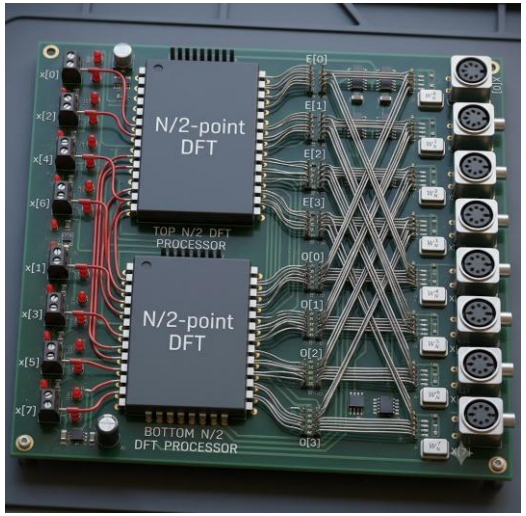
Clear severity zones for rotating machines.
Fast prioritization: normal, warning and critical bands.
Transforms vibration numbers into maintenance actions.

PYXIS REAL-TIME MOTOR HEALTH MONITORING

Advanced Fast Fourier Transformation Algorithm



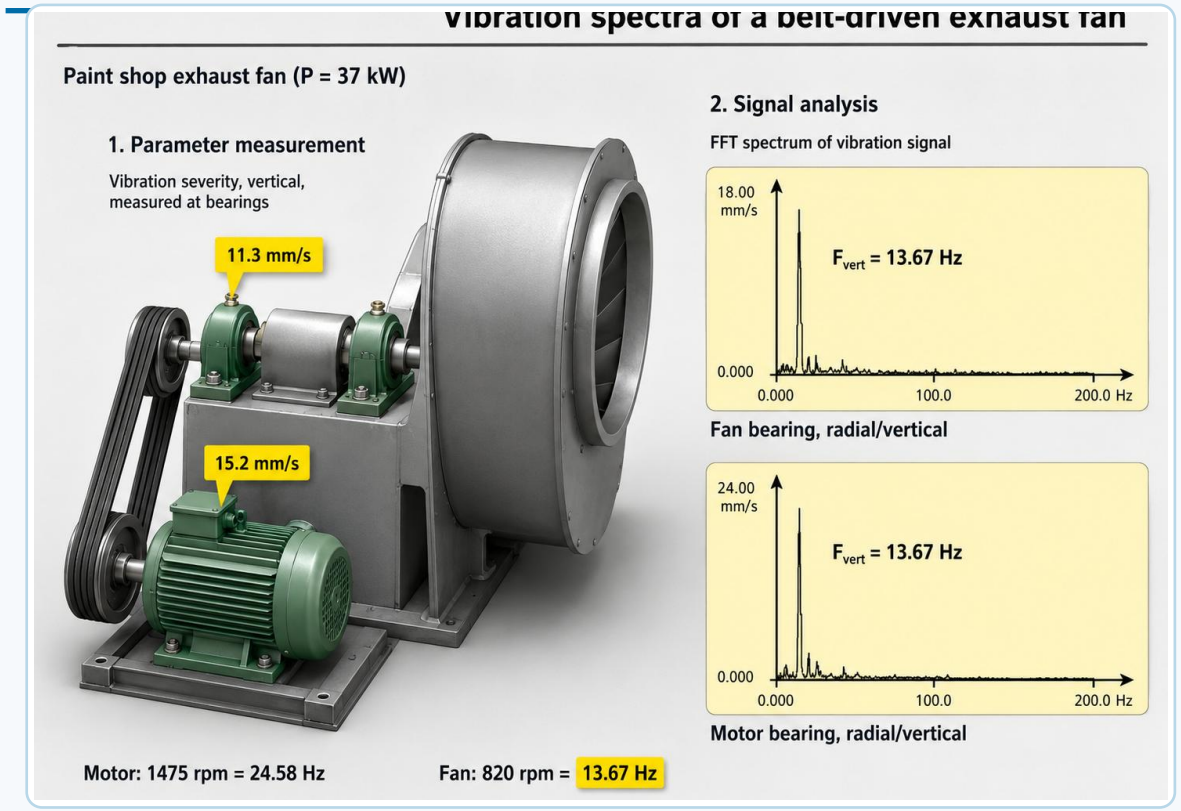




Waveform → frequency spectrum → fault signature.
Detects unbalance, looseness, misalignment, belt issues and bearing-related patterns.
Provides explainable insights for maintenance teams and SCADA alarm logic.

PYXIS REAL-TIME MOTOR HEALTH MONITORING

Professional RT Motor Health Analytics — Exhaust Fan



Correlate vibration spectrum with fan speed and mounting location.
Find dominant frequency peaks before vibration exceeds safe limits.

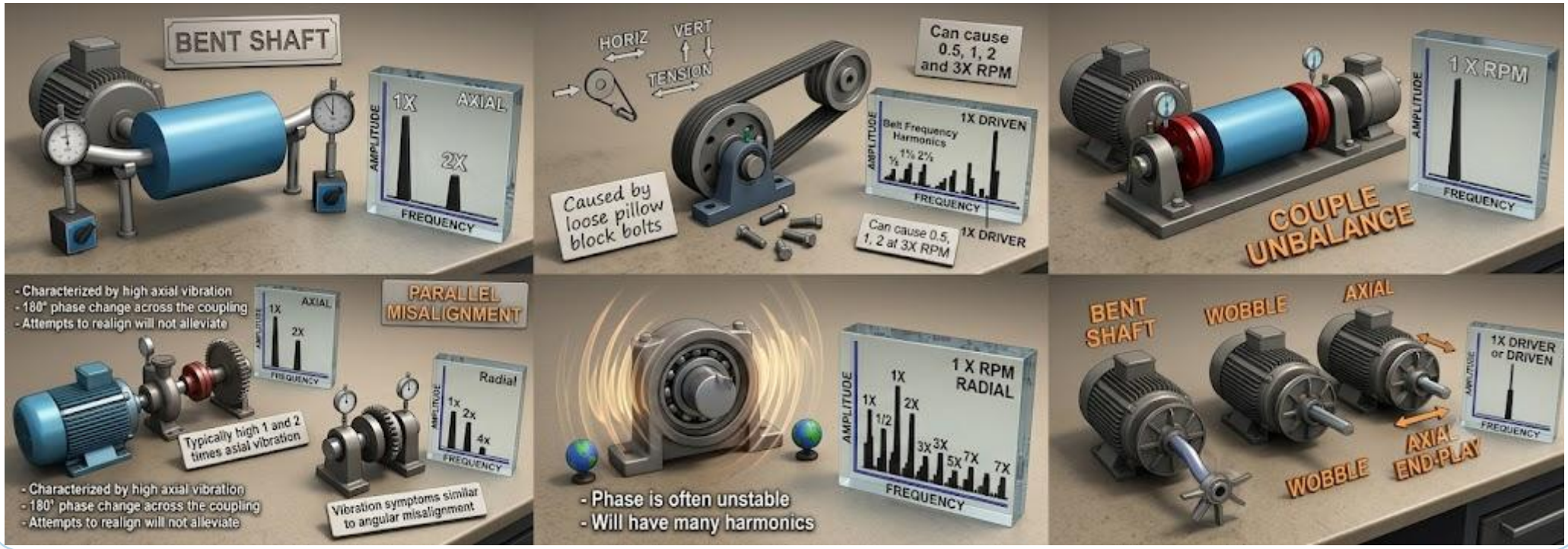
PYXIS REAL-TIME MOTOR HEALTH MONITORING

Professional RT Motor Health Analytics — Sensor Location

Recommended sensor placement improves trend consistency.
Measure near bearing points and transmission path for better diagnostic quality.
Wireless or wired deployment can align to the machine layout and safety access.

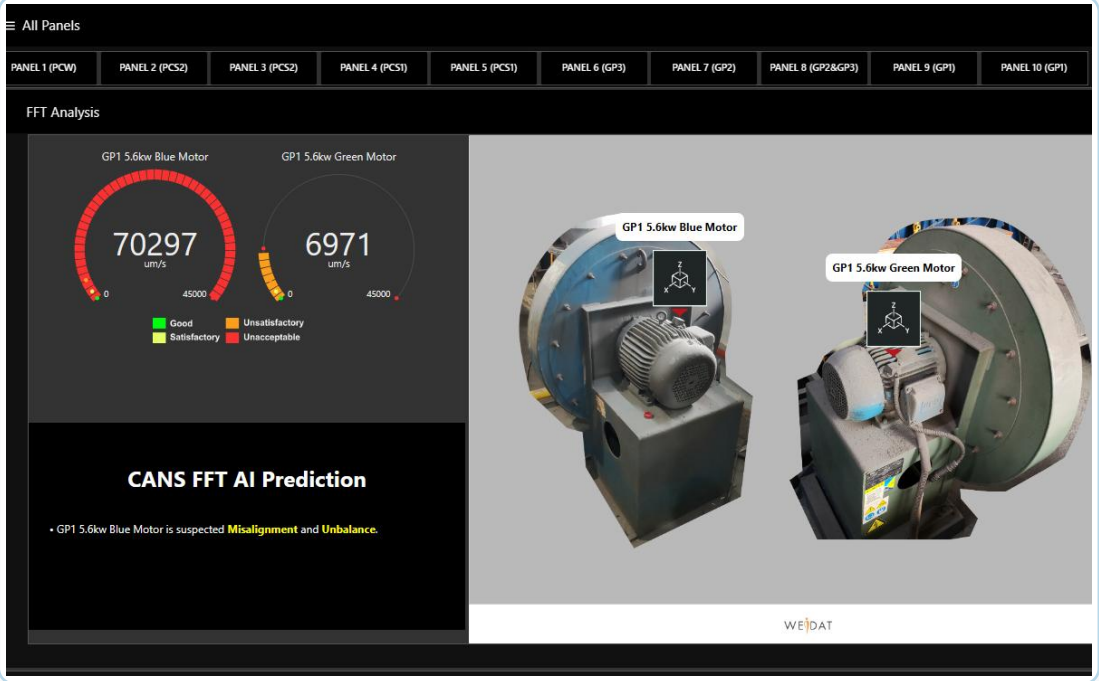
PYXIS REAL-TIME MOTOR HEALTH MONITORING

Typical Motor Faults Identified by PyXis Analytics



PYXIS REAL-TIME MOTOR HEALTH MONITORING

Application Snapshot — 250kW Motor



Live dashboard view with condition scoring, equipment photo context and fault prediction insights.

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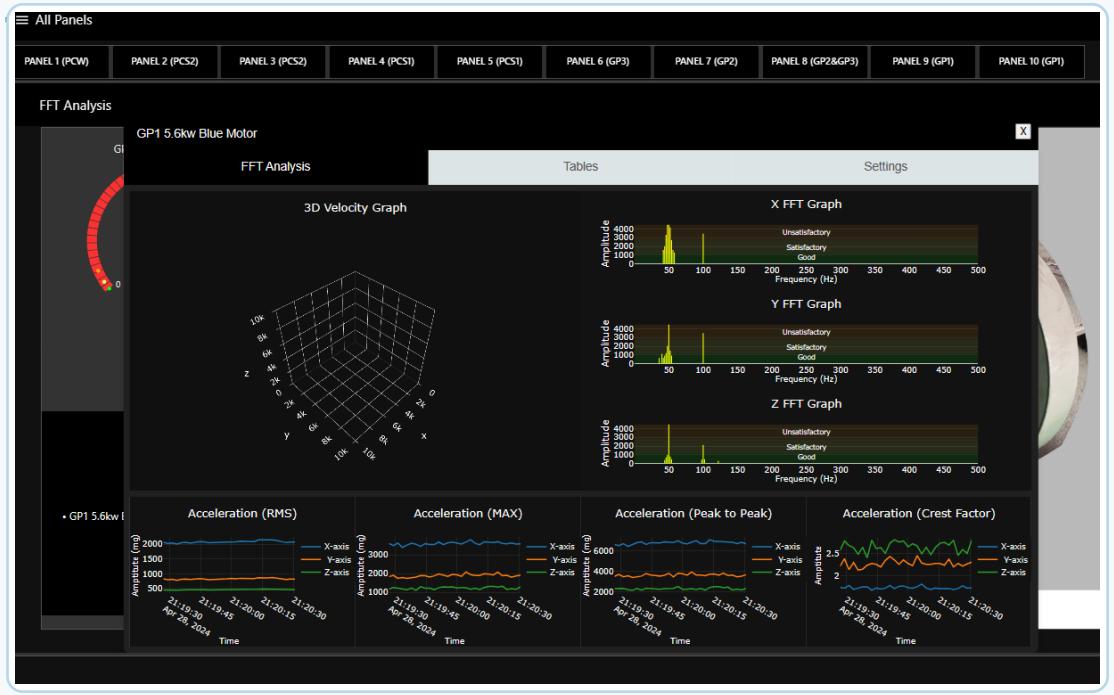
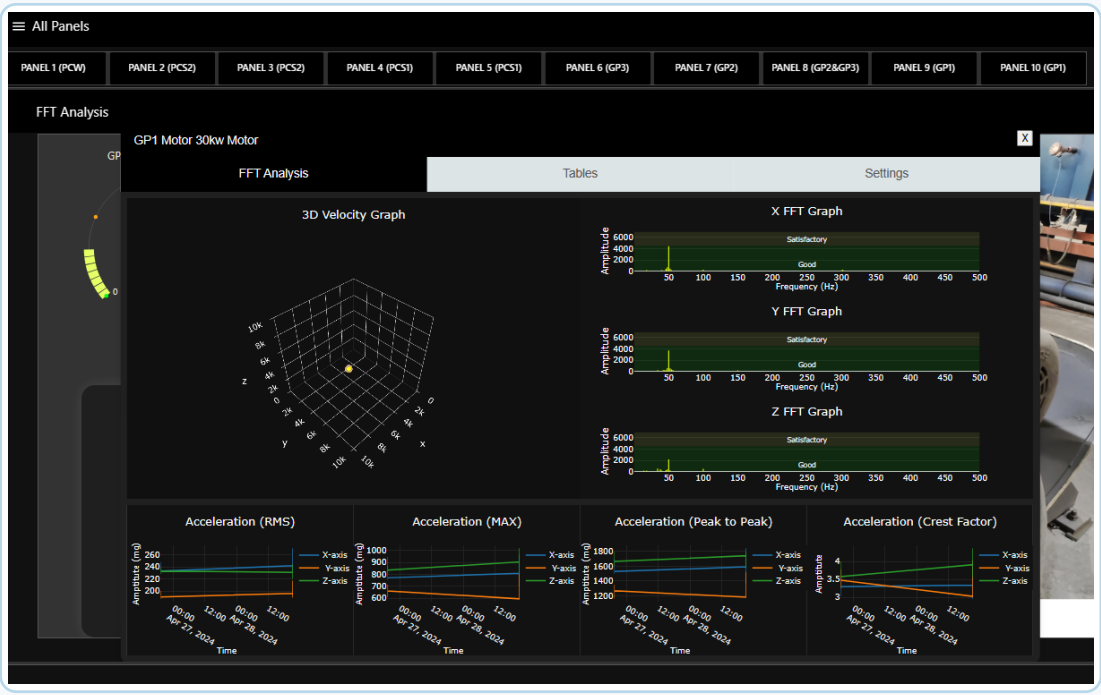
Application Snapshot — FFT + Health Trend

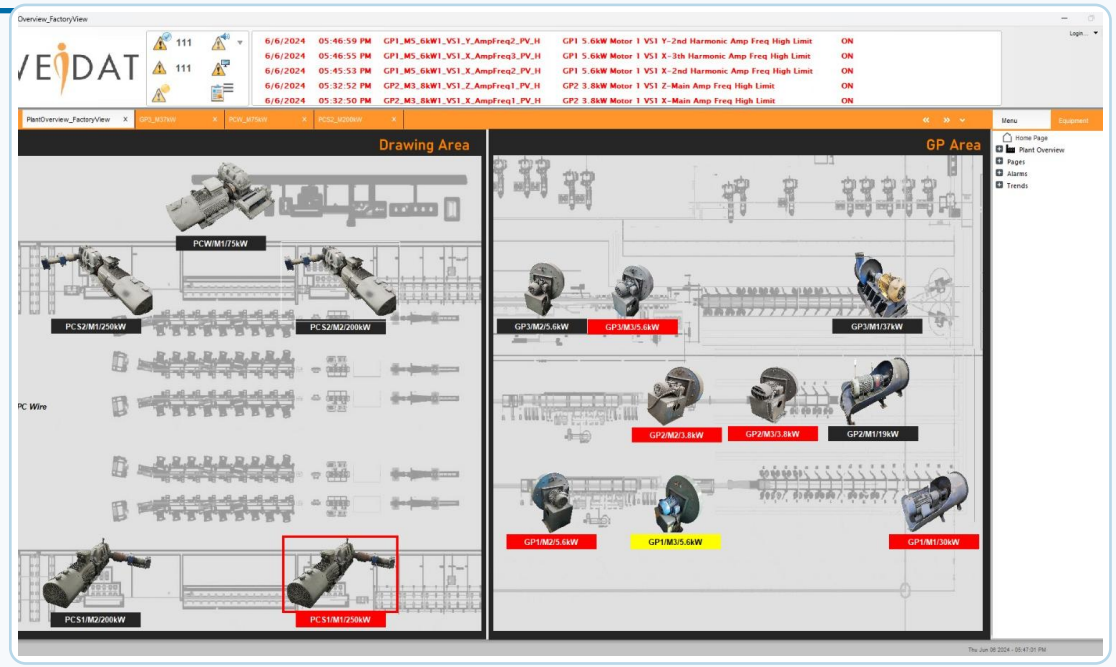


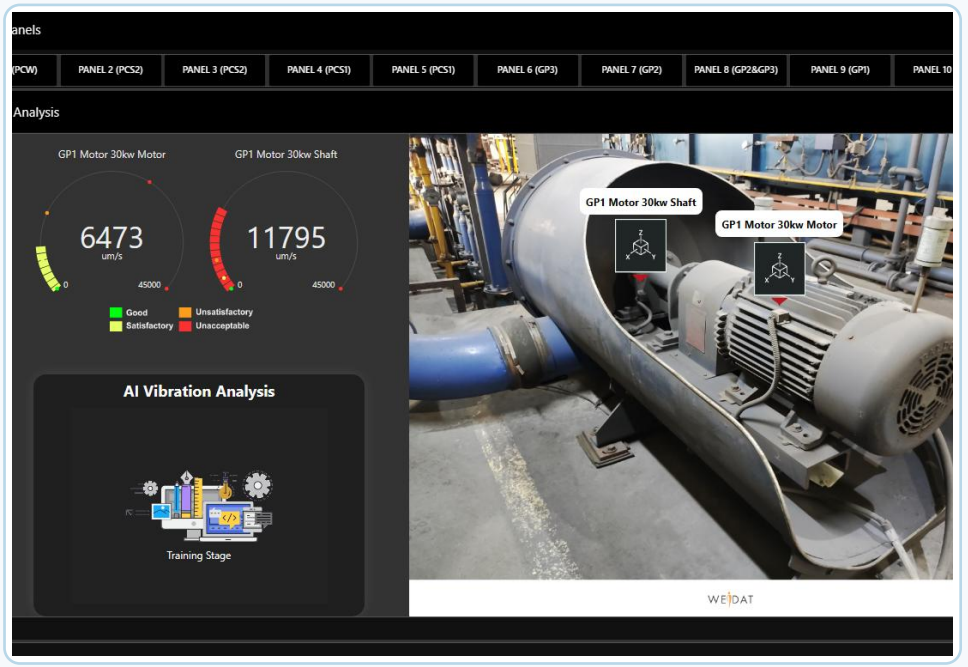


FFT spectrum and trend panels support rapid investigation from plant-floor anomalies to root-cause hypothesis.

PYXIS REAL-TIME MOTOR HEALTH MONITORING

Application Snapshot — Healthy Exhaust Fans





Healthy assets stay visible in the same interface, making deviation from normal easier to detect.

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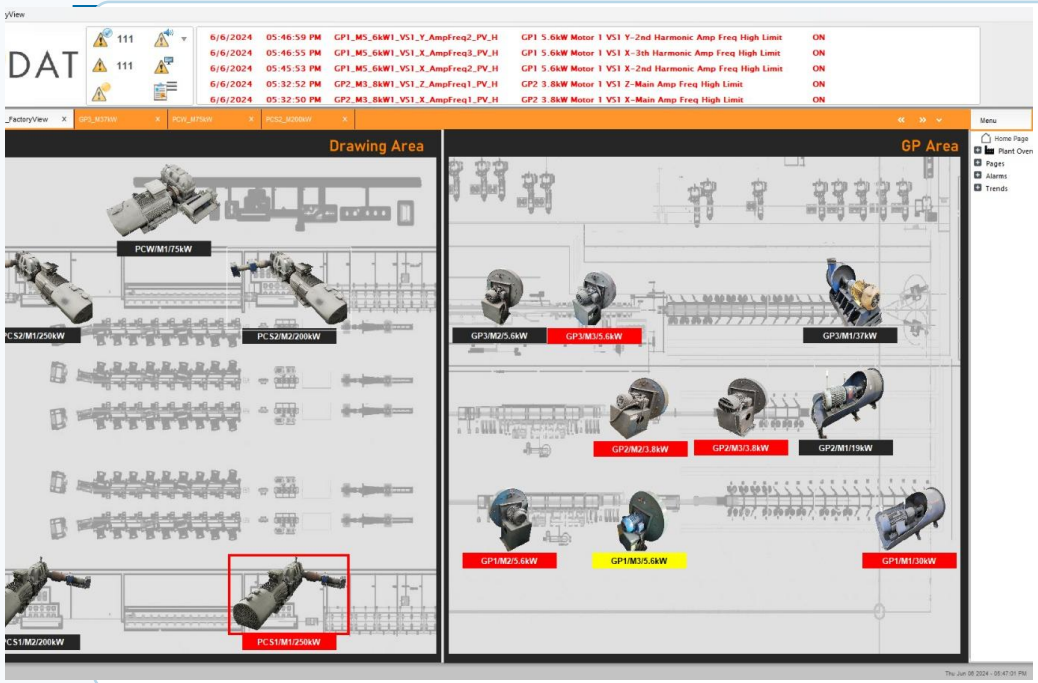
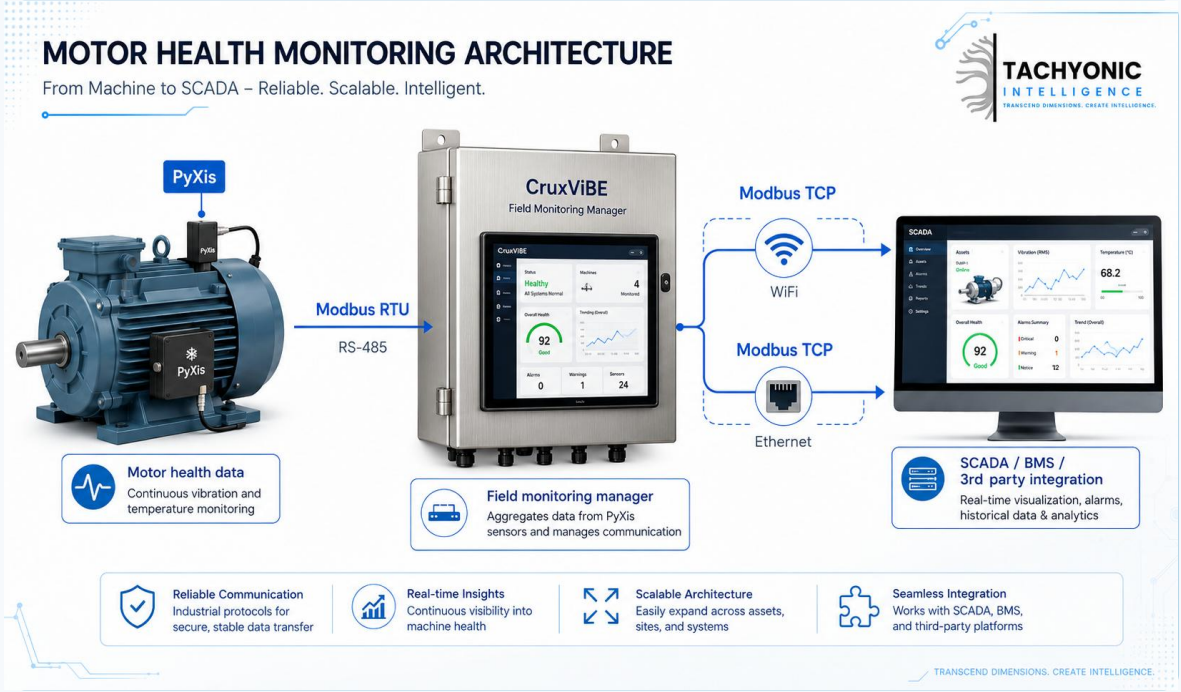
SCADA Integration





Modbus / gateway-ready architecture
Alarm points for health condition and energy efficiency
Compatible with BMS, SCADA and third-party reporting layers