SPARROW

WIRELESS DIAGNOSTIC SOLUTION FOR PLANT DIGITALIZATION



acoem

CREATING ENVIRONMENTS OF POSSIBILITY





Say hello to
Sparrow

Every asset counts, **Every insight matters**

In a rapidly digitalizing industry, predictive maintenance is evolving. Safety, profitability, energy efficiency: requirements are intensifying. Conventional vibration monitoring methods are no longer sufficient.

Introducing Sparrow

Designed by Acoem, Sparrow automates the collection of vibration and temperature data on your rotating machinery. Thanks to wireless IoT technology, it offers you continuous, reliable and secure monitoring.

Sparrow's compact size, continuous diagnostics capability and integration with the Nest platform make it the most powerful remote diagnostic solution for efficient asset management.

> *Sparrow is the missing cornerstone that completes your monitoring strategy, ensuring full coverage across your entire plant.*

Sparrow sets you free

Fully integrated with Nest predictive maintenance platform, Sparrow delivers real-time wireless monitoring of your assets, eliminating limited visibility and the need for reactive maintenance.

Integrated with Nest predictive maintenance software platform. The integration of Sparrow with the Nest platform delivers immediate and tangible results, enabling you to:

- Obtain reliable and automatic measurements
- Increase Safety
- Focus maintenance resources on key actions
- Detect failures as soon as they appear
- Increase profitability



Assess and monitor a large number of rotating assets

- Detect all types of defects (including bearing and high frequency defects).
- Affordable with excellent metrological performance
- The most powerful IoT sensor for remote diagnostic coupled to NEST post processing capabilities

Durable solution

- Materials resistant to dust, water and common solvents
- Powered by replaceable standard battery
- Operating Ambient temperature -40 to 80°C”

High software flexibility

- Cloud and/or on premise software solution available (Nest)
- You can easily connect our solution to your data lake : OPC UA (NESTI4), Modbus TCP (Gateway), MQTT (Gateway)
- All-in-one software : Connect all your data collecting tool in one and same place
- Access to in-house data analysis or reports from Acoem experts

AI-powered IoT with Accurex

- Smart Anomaly detection
- Automatic ON/OFF evaluation
- Prescriptive AI: Diagnostics and recommendations for maintenance actions



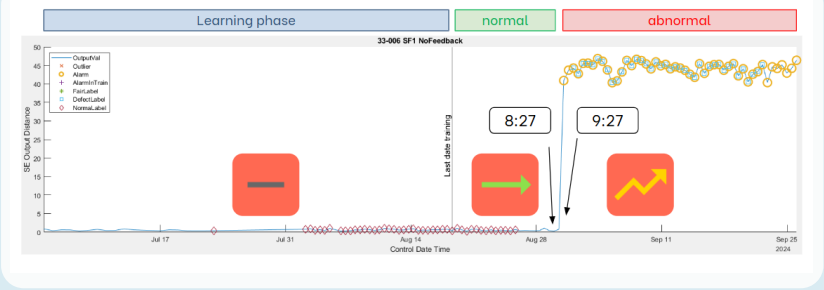


AI capabilities

SE (Smart Exception): Anomaly detection using machine learning

- Provide reliable fault detection based on machine behavior
- No false alarms due to bad thresholds values
- Deliver a smart ON /OFF information on machine
- Simplify the monitoring of critical assets





Accurex ™

Prescriptive AI: AI-based diagnostics and recommendations in Edge*

AI automates maintenance diagnostics and recommendations through a user experience that is accessible to everyone

- Automatic Setup
- Instant Detection
- Reliable Results, clear Defect Matrix
- Integrated Confidence Rating
- First level automatic prescription

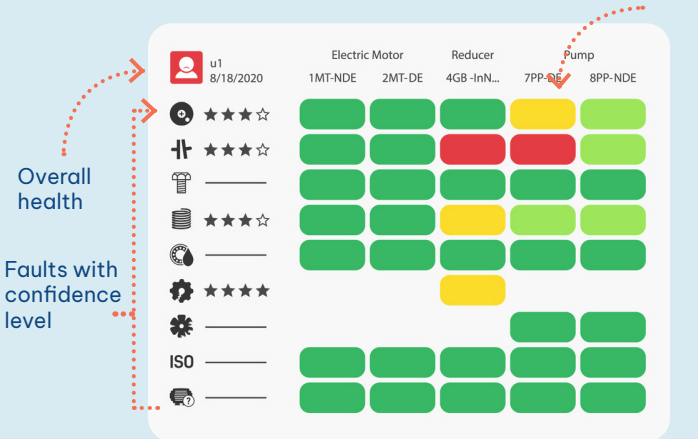
Example of an Accurex prescription

Bearing defect: wear/Lubrication

Bearing wear to be corrected: lubricate the component and measure again. If lubrication is not the cause, replace the bearing component pump as soon as possible.

**no internet connection needed*

- Bearing / Lubrication
- Unbalance
- Misalignment
- Structural Resonance
- Pump Cavitation
- Gear Wear
- Looseness
- Soft Foot / Belt Wear
- Suspicious Machine



Reliable by design, driven by intelligence

High-performance acquisition

- Real-time triaxial monitoring: comprehensive vibration and temperature data across three axes.
- High Resolution Spectra: Up to 25,600 lines
- Wide frequency range: High-frequency monitoring capabilities enabling the early detection of bearing faults.
- Shock Finder™ Filter: Automatically detects and displays mechanical shocks in the time waveform

Rugged & durable design

- Extreme Temperatures: Operating range from -40°C to +80°C (-40°F to +176°F).
- IP69

Wireless Connectivity

- Effortless Deployment
- Long-range IoT: communication up to 100 m using BLE 5.0.
- Scalable Architecture: Support for up to 100 nodes per Gateway.
- Average battery life: 2 years, replaceable (standard CR2477 battery)



Accurex™ AI

- Automatic diagnostic with fault detection, severity, confidence level and location on the machine
- Actionable insights with prescriptive AI: first level of maintenance recommendations
- Smart Anomaly Detection
- Automatic ON/OFF Detection

Remote expert support

- Get remote support from Acoem Advisor certified expert with just one click.
- Report available in 48h in NEST Vision lifeline

Seamless Integration

- NEST i4.0 Platform: Centralised data management for portable, wireless, continuous monitoring devices.
- Big Data compatible: Easy connection to data lakes via MQTT, OPC UA or Modbus TCP protocols.

Applications where you can find Sparrow from today:

Mining | Food & Beverage | Paper | Water Management | Biogas & Energy | Pharma | Agro-Food | Steel & Aluminium

Request a demo!



Integrated with Nest predictive maintenance software platform

Sparrow provides expert diagnostic information to industrial machinery maintenance staff in a clear, concise, and user-friendly format. The integration with Nest equips maintenance professionals with a comprehensive array of diagnostic tools, leading to significant time and resource savings.



Manage all your machines through a single platform, enhancing efficiency with customizable reports through Vision



Your data, your choice
Cloud or On Premise solution

- Equips maintenance teams with comprehensive diagnostic tools, saving time and resources.
- Simplifies the decision-making process by presenting all machine information in one place.
- 24/7 Access to Actionable Data
- Easy Machine Setup: Sparrow offers straightforward machine setup for hassle-free implementation
- Machine Health Matrix: Quickly assess the health of your machines using a single screen
- Shock Finder™ Filter : Automatically and display the shocks in the time waveform
- Seamless Big Data Integration: Easily link your machine health information with your Big Data ecosystem

Smart synergies for reliable monitoring

Sparrow can also be used in combination with our portable vibration analyzer-Falcon to offer optimized data collection and create new possibilities in your condition monitoring strategies

Pair Sparrow with Acoem Advisor diagnostic services for seamless access to remote support and advanced diagnostics, precisely tailored to your unique condition-based maintenance needs.

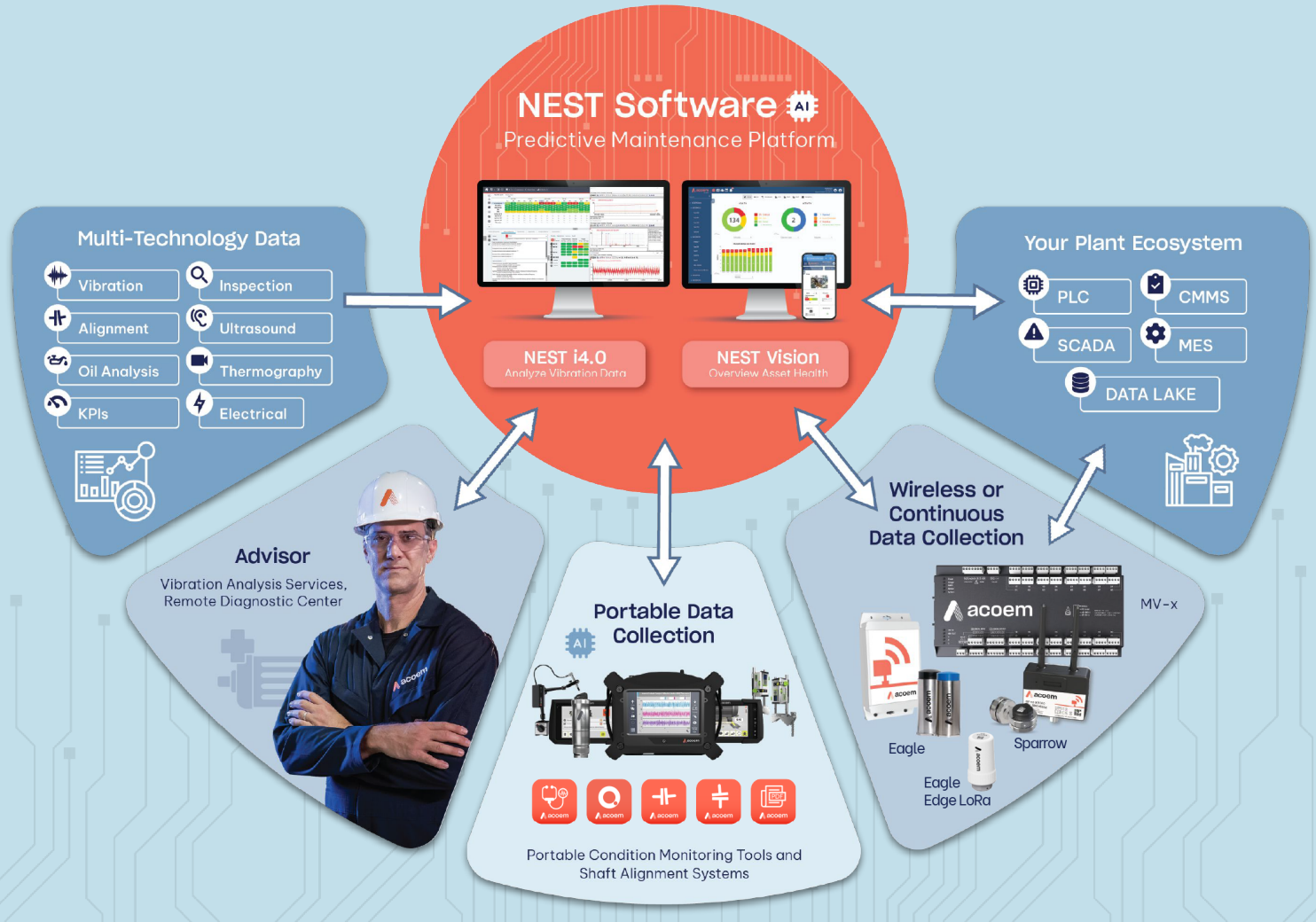


Keeping an eye on every asset with Acoem's reliability ecosystem

Our ecosystem, featuring various diagnostic tools such as portable, wireless, real-time devices, alignment solutions, multiple sensors, and more, consolidates all your asset information into a centralized platform.

Our integrated ecosystem streamlines asset monitoring, allowing you to adjust strategies based on priorities, ultimately saving time and increasing efficiency.

With a unified and user-friendly interface, you can easily identify maintenance requirements, empowering you to make smarter, more confident collective decisions.





About Acoem

At Acoem, we **create environments of possibility** – helping organisations find the right balance between progress and preservation – safeguarding businesses and assets, and maximising opportunities while conserving the planet's resources. We deliver unrivalled, interoperable AI-powered sensors and ecosystems that empower our customers to make enlightened decisions based on accurate information.

Together with 220 distributors, our 1000 employees work across 30 offices, 6 manufacturing facilities and 5 R&D centres in 10 countries, to provide trusted, holistic data solutions for customers worldwide.

Acoem links possibilities with protection.

For more information visit acoem.com

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