HONEYWELL FORGE
Performance+ for Buildings

Predictive Maintenance

ASSET RELIABILITY

The Asset Reliability functionality, part of Honeywell Forge Performance+ for Buildings | Predictive Maintenance application is designed to empower maintenance managers to minimize downtime and maintain business continuity for critical facilities

By utilizing rapidly deployable wireless sensors to continuously monitor the health of critical rotating assets like motors, pumps, compressors, and gear boxes, and aggregate and analyze the data, you can proactively identify inefficiencies or impending issues, perform root cause analysis, raise alerts and service cases, and take timely maintenance measures to maximize the life of your assets and mitigate the risk of catastrophic breakdowns and failures.

SOME OF THE CHALLENGES WITH TRADITIONAL ASSET RELIABILITY PROGRAMS

Reliability programs for assets in facilities typically involve the setup of costly sensors, cabling, and time-consuming configuration processes.

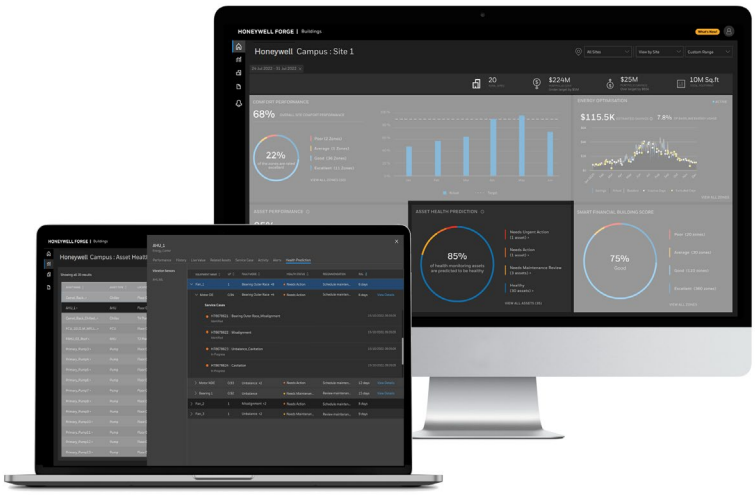
WHY CHOOSE WIRELESS INSTRUMENTATION?

Wireless instrumentation allows for a larger volume of sensor deployments by leveraging existing standard IT infrastructure and cloud services without the need for costly installation and setup of wired networks throughout the facility.

Using battery power with wireless instrumentation and existing wi-fi or cellular network further reduces the setup requirements. This plug-and-play approach allows the setup and connection of new sensors on demand, facilitating the expansion of reliability programs and the effective use of data to keep operations up and running.

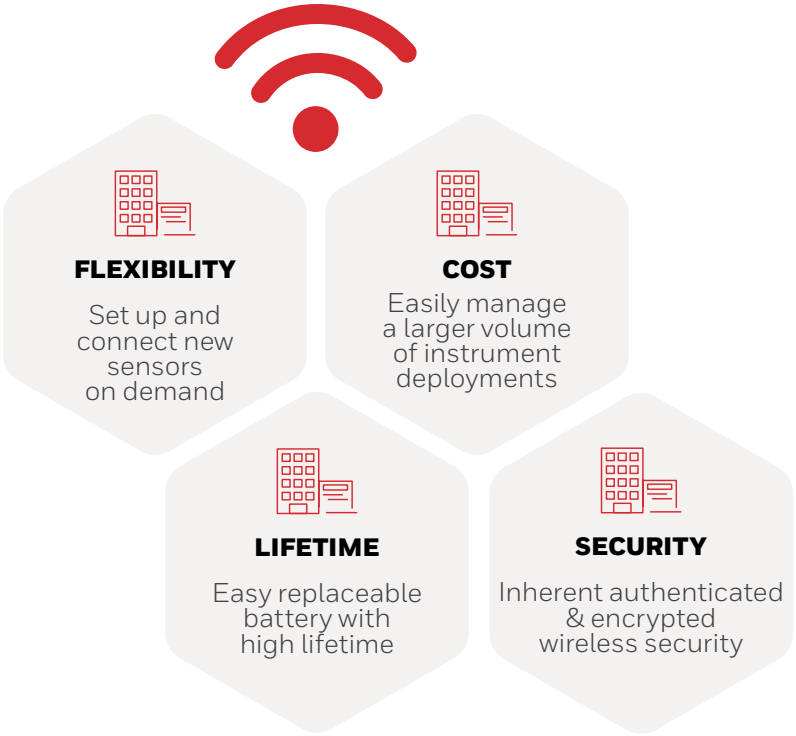
HOW IT WORKS

6-in-1 sensors paired with cloud-based, AI-powered analytics and dashboards create an always-on asset health monitoring solution aimed at minimizing downtime, reducing repair costs, and improving overall equipment effectiveness (OEE) without steep upfront installation costs and cumbersome technology integrations.



The 6-in-1 sensor utilizes advanced edge analytics that allows for continuous monitoring without always needing to be connected to the network. Other key benefits include:

- Avoid missing key events with time-based data collection
- Detect any equipment anomalies or incessant issues
- Long sensor life by combining edge technology with cloud framework for monitoring of critical assets
- Identify and pinpoint fault modes for rotating equipment
- Predict remaining useful life of the machine using advance AI analytics
- Plan maintenance activities in advance to fix identified issues



HOW DOES IT INTEGRATE WITH EXISTING SYSTEMS?

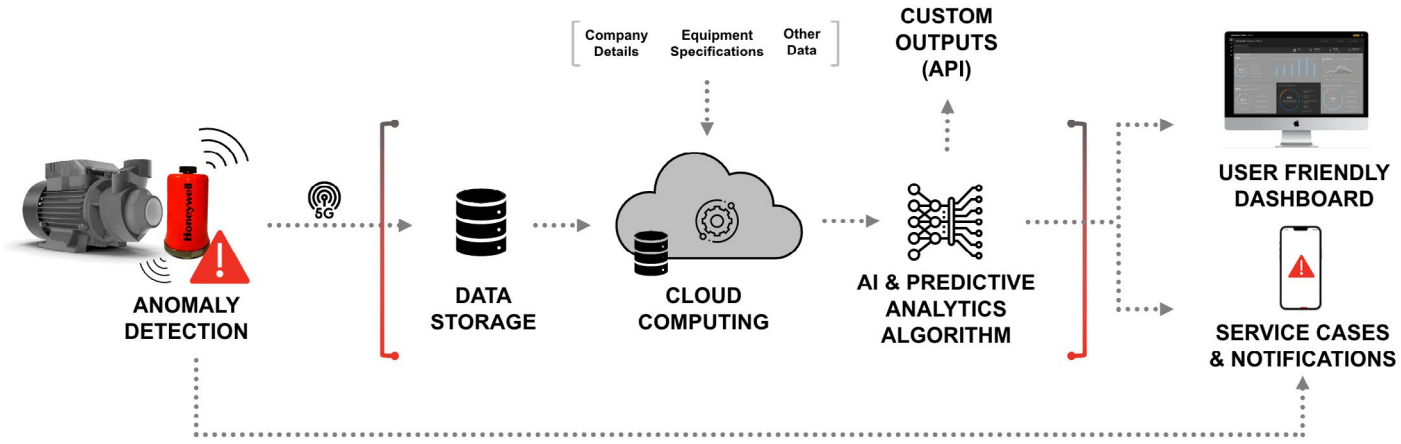
The Honeywell Forge for Buildings allows the integration of data streams with commercial CMMS, EAM, ERP, and historians to correlate new insights.

Standard connectors for specific platforms allow the dissemination of sensor aggregated data and analytics to enable multiple use cases across operations.

Wireless connectivity helps reduce costs, improve flexibility, and facilitate the rapid expansion of reliability and maintenance programs

NEXT GENERATION WIRELESS INSTRUMENTATION

The wireless vibration sensors are a plug-and-play solution to rapidly instrument stranded assets. They can be directly mounted on the body of the asset and communicate data to a cloud.



6-in-1 wireless sensor for continuous asset monitoring

6 MEASUREMENTS IN 1
Measure 6 different parameters for reliable asset monitoring including vibration, acoustic emissions, temperature, RPM, humidity, and magnetic flux.

CELLULAR ENABLED
Monitor the health of critical assets from anywhere and on any deviceintegration with existing infrastructure.

STREAMLINED INSTALLATION
Simply mount on rotating equipment with epoxy or stud mounting and connect within minutes.

ONBOARD STORAGE
Data gets automatically transmitted once connection is re-stablished.

EDGE ANALYTICS
Process data at the edge to detect anomalies. Near-real time monitoring without always needing to be connected to the network.

INDUSTRIAL CERTIFICATIONS
IP 68 Enclosure, Class I Division 2 sensor operational in a wide range of hazardous environments.

CONNECTIVITY OPTIONS

Sensors are available in a variety of options to suit the exact needs of the facility or application. Sensors can be installed using either Wi-Fi or cellular connectivity to the cloud. Available connectivity and power options include:

PLUG AND PLAY CONVENIENCE

The wireless sensors allow for simple plug and play and hassle-free deployment, without worrying about extra IT infrastructure. It is easy to configure and enables fast installation and startup. Data measured by the sensors feeds into Honeywell Forge Performance+ for Buildings | Predictive Maintenance portal for near real-time monitoring and predictive analytics.

MACHINE HEALTH DIAGNOSTICS

Enhance the life of your assets with 24/7 monitoring and real-time alerts. This solution provides insights and diagnosis to facilitate early detection of equipment issues to maximize asset life and help optimize maintenance budgets.

Anomaly Detection → **Fault Diagnosis** → **Time to Maintenance Prediction** → **Action**

Vibration sensing along with acoustic emissions signal early-stage faults. Advanced signal processing and filtration techniques separate fault signals from varying process.

Quickly understand the root cause of the issue with insights into the cause of faults.

Time to failure predictions allow for proactive planning of downtime and maintenance actions before an actual equipment failure occurs.

Service cases with prescriptive analytics created in Honeywell Forge with push notifications provide early warnings of equipment issues and allow users to take actions to quickly resolve pending issues.

THE HONEYWELL ADVANTAGE

Honeywell provides the data and analytic foundation needed to enable operational excellence. Honeywell is an industry leader in integrated solutions aimed at minimizing downtime, reducing repair costs, and improving overall equipment effectiveness enabling facility staff to work more effectively and make better decisions.

Continuous awareness of entire operation helps avid catastrophic faults that cause costly unplanned downtime.

IMPROVE UPTIME & RELIABILITY

Near real-time visibility helps direct when and where to deploy personnel to optimize limited maintenance resources.

REDUCE MAINTENANCE COSTS

Honeywell

HONEYWELL FORGE ASSET RELIABILITY

Intervening as faults occur ensures that machinery runs at peak efficiency, avoiding the degradation from normal wear and tear.

ENHANCE MACHINE EFFICIENCY

ABOUT HONEYWELL FORGE PERFORMANCE+ FOR BUILDINGS | PREDICTIVE MAINTENANCE

Honeywell Forge Performance+ for Buildings | Predictive Maintenance encodes decades of Honeywell Building expertise to help digitally transform the maintenance of building systems. Using real time analytics, equipment models and dashboards, it shows you how the building is performing, identifies what needs to be done to improve it and helps you and your service team track corrective actions to conclusion.

Users can remotely see near real-time values and trends of asset properties and look at issues across related assets to pinpoint root causes. The solution allows the remote control of equipment setpoints and configurations to resolve issues and the assignment of service cases to relevant teams as required. It is the new foundation for maintenance service contracts and brings significant enhancements to the analysis of building performance.

For More Information

Learn more about how Honeywell can improve your asset reliability contact your Honeywell Account Manager today.

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THE FUTURE IS WHAT WE MAKE IT

Honeywell