



# HONEYWELL FORGE PERFORMANCE+ FOR INDUSTRIALS | PRODUCTION INTELLIGENCE

Drive Performance with  
Advanced Analytics

Connected Industrials

Honeywell



# THE FUTURE OF ANALYTICS REQUIRES A NEW APPROACH

Operations leaders face several time-consuming challenges that result in production stalls and process inefficiencies across industrial operations. There is a strong need for a single source of truth to monitor process conditions as manual data gathering detracts from time that could be spent optimizing production. Identifying process issues is consistent but preventing the same issues from reoccurring isn't. Plus, tracking back to bad actors is difficult. Diagnosing the root cause of problems needs a faster, all-encompassing solution to enhance efficiency.



## ADVANCED ANALYTICS HELP OVERCOME INDUSTRIAL DATA CHALLENGES THAT PREVENT PRODUCTION MAXIMIZATION

- Real-time cross-application process kpis from unit to site to enterprise
- Contextualized cross-application data relationships
- Process deviation tracking to operating limits for correlating elusive data
- Knowledge capture and guided analytics to capture over 50% of stranded data
- Scalable, enterprise-wide integration to core processes

The future of industrial operations is dependent on harnessing the power of data to solve the current challenges in facilities. Enterprises need a decision support tool that sees full pictures and optimizes across one dimension. Leveraging our history of driving process automation and control innovation, the new Honeywell Forge Performance+ solutions contain the next-level production insights needed to maximize efficiency across industrial organizations.

# GET ENTERPRISE-WIDE PRODUCTION INSIGHTS

Honeywell Forge Performance+ for Industrials | Production Intelligence is a cloud-based subscription offering that collects cross-functional, multidimensional data from process control, assets, alarms and operations to enable operational performance optimization.

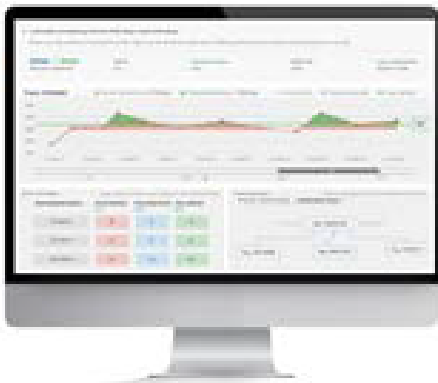
Through outcome-based insights and persona-driven dashboards, industrial users can spend less time sorting through operational data and more time optimizing performance across the board.

## HOW DOES IT WORK?

This real-time operational monitoring application unifies OT and IT Data to deliver actionable insights at the enterprise level down to the individual process unit.

Our solution enhances production performance and reduces the cost of operations associated with unplanned downtimes and inefficient energy use.

For industrial end users, we provide insights for process engineers using process data and analytics solutions to visualize, analyze, predict, and maintain production processes for maximum performance and long-term growth.



- Customers can leverage their investments across multiple personas and their enterprise from engineers up to C-level executives

An advanced dashboard contextualizes data across multiple systems to drive actionable insights and analytics-driven recommendations.

## Harnessing The Power Of Data To Enable Enterprises To Maximize Production Operations



Real-time Performance Management



Guided Diagnostics with Root Cause Analysis



Limits and Deviations Optimization



Predictive Analytics for Process Deviations



Intelligent Search & Exploratory Analysis

## EXPECTED BENEFITS

### Improved Plant Throughput

Real-time performance and guided orientation to problem areas

### Increased Utilization & Availability

By early anomaly detection & predicting abnormal situations

### Reduction in Integrity Operating Window Deviations

By optimizing operating limits and predicting bad actors

### Improved Worker Productivity

Through intelligent search & exploratory analysis, improving knowledge & retention

# INTRODUCING THE MODULES

Honeywell Forge Performance+ for Industrials | Production Intelligence delivers curated, unified data and actionable insights for a coherent view into production maximization. It features a modular approach that allows organizations to gradually scale their application according to their needs through a variation of 3 versions.



## CORE

Analytical data that answers the fundamental question:  
**WHAT HAPPENED?**

The **Core** module provides users with real-time operational monitoring capabilities through an extensive catalog of standardized connectors, built-in persona-driven dashboards, and operational insights.



## DIAGNOSE

Process tools that allow users to discover:  
**WHY DID IT HAPPEN?**

The **Diagnose** module builds on the capabilities of Core to provide users with robust process visualization and industry-driven analytics to understand likely causes and deviation resolution



## PREDICT

AI/ML analysis to uncover the elusive question of:  
**WHAT'S LIKELY TO HAPPEN?**

The **Predict** module expands on the capabilities of the previous modules by providing users with enhanced predictive capabilities to better identify, address and prevent future production issues.

## OUT-OF-THE-BOX CAPABILITIES

- |   |   |   |
|---|---|---|
| <ul style="list-style-type: none"> <li>• Catalog of standard connectors</li> <li>• Persona dashboards</li> <li>• Customizable KPIs plus widget library</li> <li>• Data contextualization</li> <li>• Alerts and notifications</li> </ul> | <ul style="list-style-type: none"> <li>• Automated resolution tools</li> <li>• Bi-process blend analysis</li> <li>• Multiple levels of smart search</li> <li>• Data lineage exploration</li> <li>• Collaboration</li> </ul> | <ul style="list-style-type: none"> <li>• Root cause analysis and insights</li> <li>• RCA with recommendations</li> <li>• Customizable AI/ML models</li> <li>• Predictive knowledge graph</li> </ul> |
|---|---|---|

# OUTCOME-ORIENTED SMART SOFTWARE

## Solutions across industries and assets:

### SENSOR DEVIATION PREDICTION

- Helps to predict sensor issues, for example, drift, to enable faster calibration and resolution.
- Contains the optimal parameters for specific prediction models including model training and model testing.
- Identifies multiple events to determine changes needed to bring a sensor back within the optimal range

### PERSONA-BASED DASHBOARDS

- Standardized KPI library and calculations across industry verticals and linked to functional groups.
- Dashboard persona options across maintenance, operations, supply chain, process engineering, control, and others.

### ACCELERATED ROOT CAUSE ANALYSIS

- Uses knowledge graphs and data contextualization to determine relationships of asset performance to identify triggers to process deviations and failures.
- Ranks probable causes and guides the customer on a path to the source.

### ENVELOPE OPTIMIZATION

- Recommends tuned operating envelopes that remove risk or slack.
- Provides boundary management and integrity operating windows.
- Allows more sensitive limits to monitor production operations.
- Brings the current operating condition into play for dynamic operating limits.

### INTELLIGENT SEARCH & EXPLORATORY ANALYSIS

- Recognizes objects and context of interest and details with the OT system landscape for analysis purposes.
- Searches for objects such as points or assets by name, description, or other fields.
- Helps visualize object relationships, including assets, events, and other data automatically.
- Analyzes the upstream and downstream connections of an object by following calculations, data sources and other relationships.

### QUALITY DEVIATION PREDICTION

- Predicts intermediate and final product quality variations for real-time control.
- Allows users to schedule the interval of prediction reports and alerts.
- Provides lead time to resolve issues.

### ABNORMAL SITUATION PREDICTION

- Uses historical data to connect unit performance to alarm triggers that have occurred.
- Identifies complex abnormal situations and helps provide guidance to fix before a deviation occurs.
- Updates model to comply with new hardware specifications when an asset is upgraded or added to the process.

# ACCELERATING INSIGHTS FOR PRODUCTION OPERATIONS TEAMS

Production engineers are responsible for monitoring, troubleshooting and optimizing process unit performance to ensure that production plans are met under constantly changing conditions, all while ensuring compliance to safety and environmental requirements.

**“HOW CAN I SPEND LESS TIME GATHERING, PREPARING AND ANALYZING MY DATA, AND MORE TIME OPTIMIZING MY PROCESS?”**

**- PROCESS ENGINEER**



Day in the Life of a Process Engineer

## OUR SOLUTION

Honeywell Forge Performance<sup>+</sup> for Industrials | Production Intelligence is designed to support engineering, operations and business management functions across the organization. Product engineers can realize material time savings.

- Directly alert team members when issues arise.
- Automatically collect OT application data and insights to prepare for validation in advance.
- Curated datasets and insights help perform a fast, guided investigation with an increased likelihood of detecting potential root causes.
- Actionable insights enable the right team to solve the problem with the right data before production is impacted.
- Captured learnings on each potential performance issue prevent the same problem from happening in the future.



# HOW HONEYWELL CAN HELP

Honeywell Forge Production Insights provides actionable insights by leveraging HON domain knowledge through extensive process analytics. Improve user productivity, increase sustainability, reduce operational costs, and enhance safety optimization through the delivery of this scalable, enterprise-ready SaaS subscription application. Executives, site managers and process engineers can view the health of their operations through a lens of true end-to-end visibility.



**Purpose-Built for Process Engineers**



**Packaged with Pre-Built Models and Scalable Analytics**



**Insights Do Not Require Data Science Expertise**



**Built with Honeywell's Industrial Heritage in Our Own Facilities**



**Pre-Built with OT Specific Data Connectors for Multiple Applications**



**Vendor Agnostic, Open, Interoperable**



### **For More Information**

To learn more about Honeywell Forge Production Insights or contact your Honeywell account manager.

### **Honeywell Connected Enterprise**

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