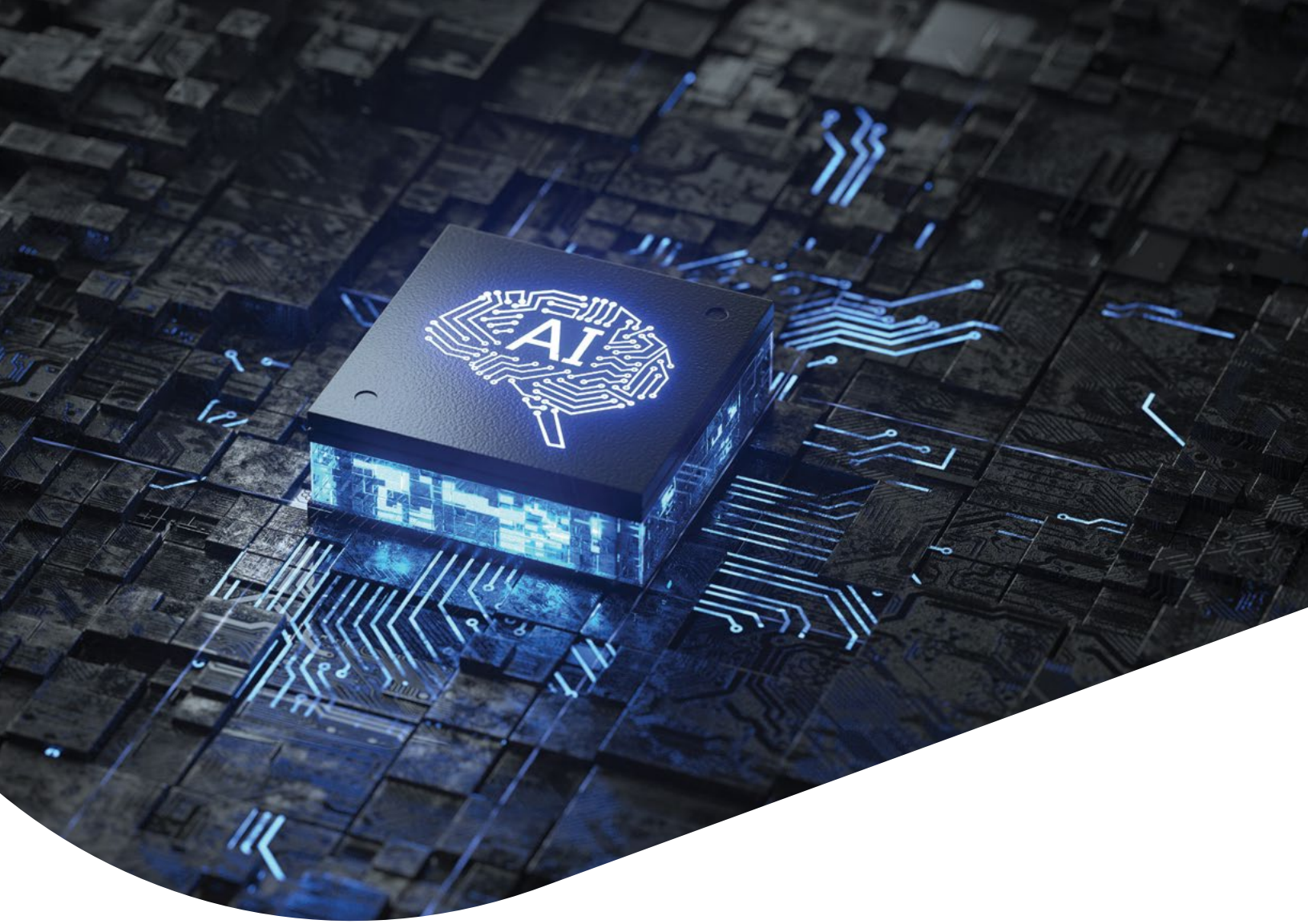
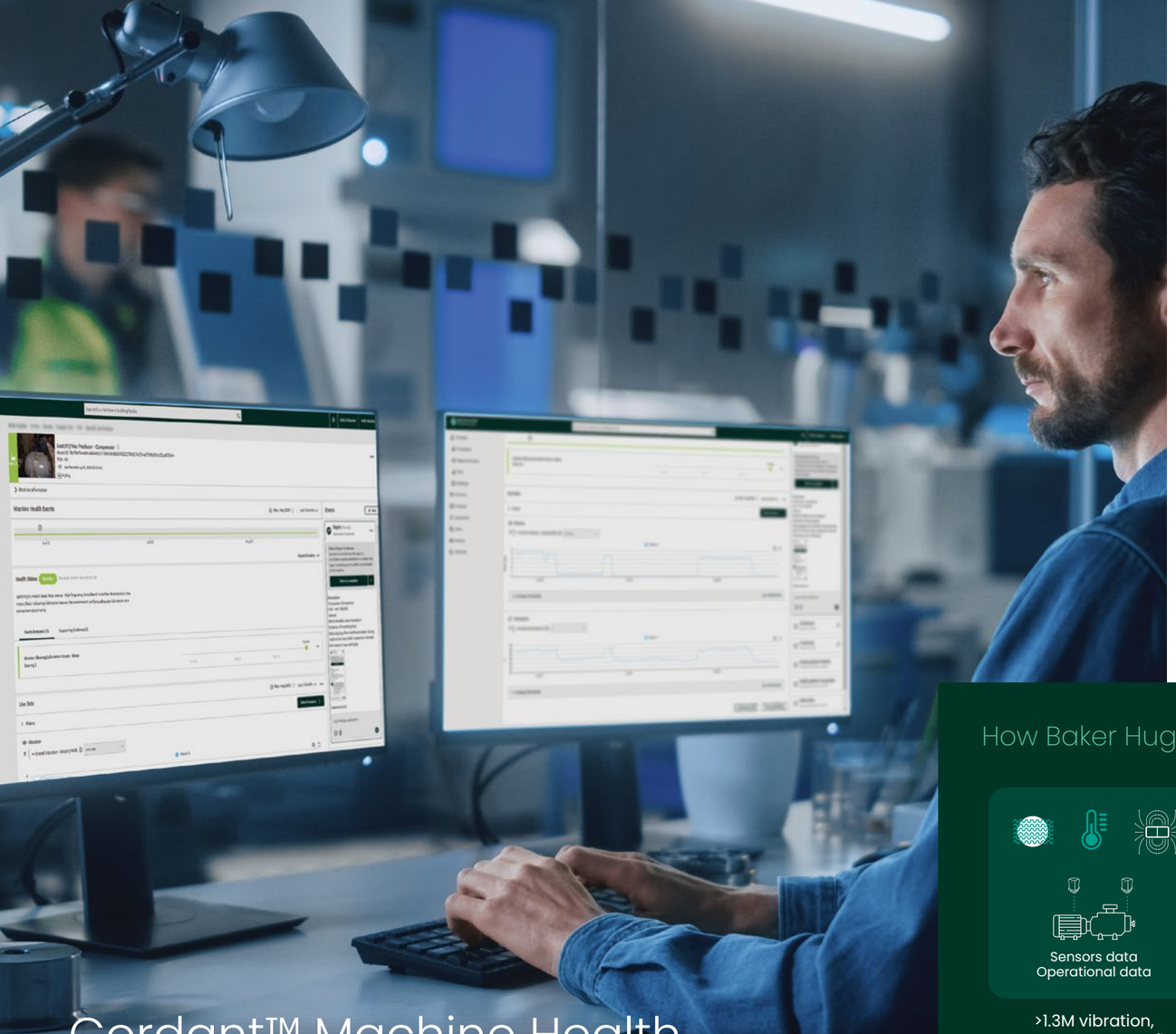


Cordant™ Machine Health's industrial, purpose-built AI

The future of reliability

Baker Hughes



Cordant™ Machine Health detects, diagnoses, and prescribes fixes for machine issues by leveraging over 3 million hours of monitoring on 120,000+ machines, custom sensors, and a decade of analyst feedback.

Essentially, our purpose-built AI understands your machine quickly, like a co-pilot.

Why is Machine Health better?

- Which of my machines have issues?
- What exactly is wrong?
- How and when should we act?

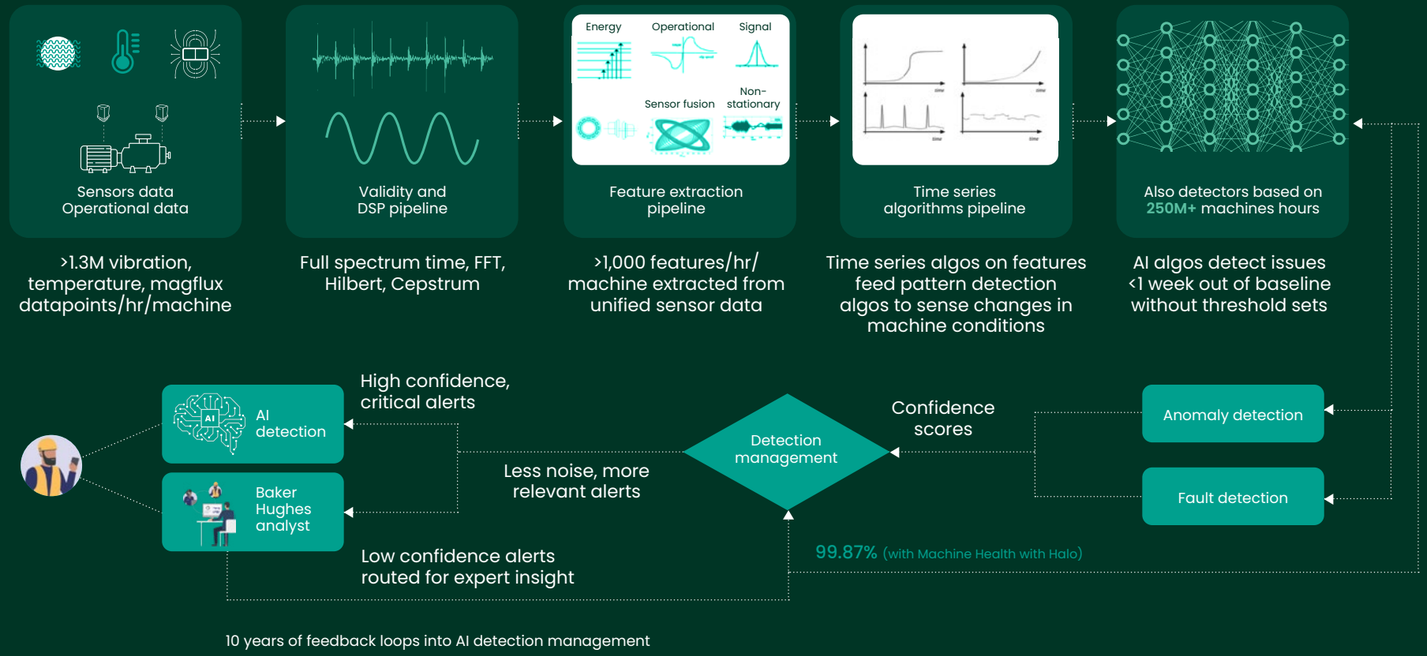
<3 weeks
Start detecting issues out of baseline

7x
ROI in first 12 months

>90%
User engagement in platform

<1%
Alarm noise and false alerts

How Baker Hughes' purpose-built AI works

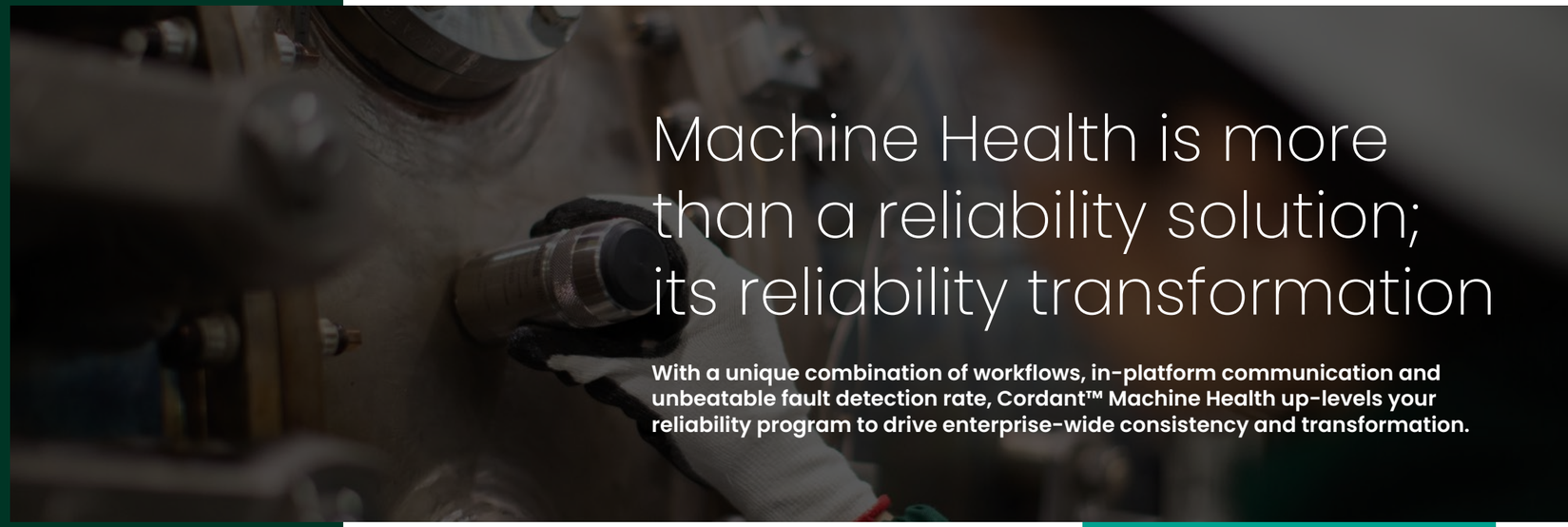


Forward shift from threshold-setting to Machine Health

Threshold-based solutions don't move the needle on reliability. With false alarms, poor accuracy and requiring immense domain knowledge to manage, threshold-based systems might get you early wins, but struggle to scale across your organization.

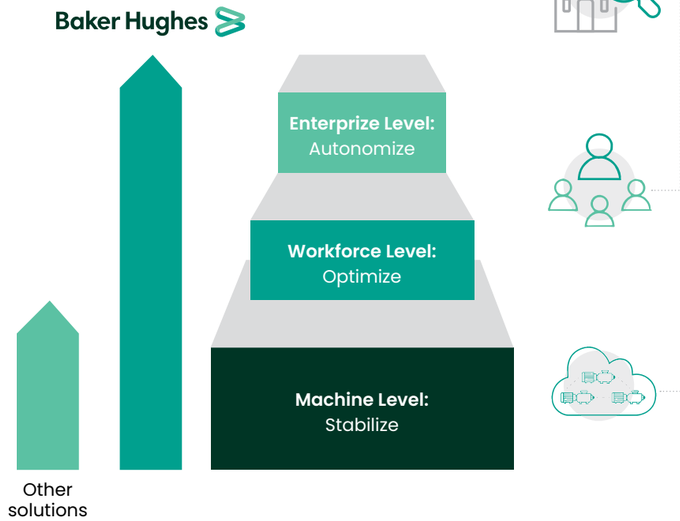
Threshold-based condition monitoring solutions

	Baker Hughes
"Waits" for a met threshold condition to trigger alerts—requires "Goldilocks" tuning to avoid too much noise or missing hundreds of faults	Purpose-built AI actively "listens" to vibrations, IDs patterns corresponding to faults → earlier, accurate detection / diagnosis without thresholds
70% more false alarms and poor accuracy, causing alarm fatigue, fault misses. **No guarantees.**	Prescriptive diagnostics so accurate that many assets can be upgraded and underwritten by HSB
Highly dependent on internal or 3rd party Vibration Analyst expertise for diagnostics	AI provides fault detection and diagnostics, with CAT III and IV VAs providing expert insight
Threshold set-up is heavily reliant on significant in-house domain knowledge/ experience	Baselines your machine quickly using >250 million hours of data, requiring less domain expertise to manage
Can't adapt to diverse changing conditions, struggles to detect complex anomalies	Automatically adjusts detection models using new data to adapt to changing conditions
Per-sensor pricing Incentivizes hardware sales	Outcomes-focused with hardware, deployment, and service included.



Machine Health is more than a reliability solution; its reliability transformation

With a unique combination of workflows, in-platform communication and unbeatable fault detection rate, Cordant™ Machine Health up-levels your reliability program to drive enterprise-wide consistency and transformation.



Optimize and autonomize

With bandwidth unlocked, teams utilize Machine Health to address widespread inefficiencies and risks throughout the organization:

- Optimize your workforce by shifting from preventive to predictive and insight-driven maintenance planning
- Build autonomy and collaboration between teams and sites with access to insights without siloes

Stabilize your reliability program

- Focus is primarily on predicting and preventing machine failure:
- Reduce catastrophic failures and unplanned downtime
- Reduce reactive maintenance and repair costs
- Establish trust in reliability programs

Collaboration and knowledge sharing tools

Scan the QR code to view a self-guided demo of our collaboration tools and capabilities

Or click here

Accurate AI vs. manual/adjusted thresholds

Negative impact of 400-700 false alarms per month and 60-150 true fault misses

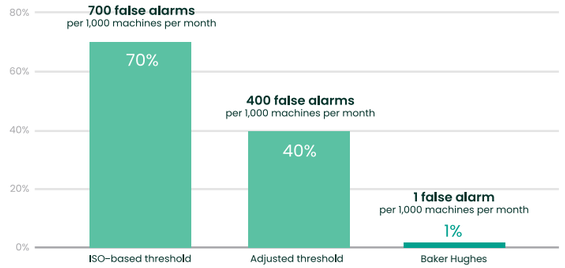
- Perception that the system always “cries wolf”—resulting in loss of faith in the detections
- Requires constant fine-tuning and adjustments to changing conditions and new machines—requires immense domain knowledge and dedicated resources
- Poor engagement with the solution—if the team doesn’t use it, you can’t show ROI
- Inability to scale—the more machines you monitor, the more false alarms you get

The power of accurate AI at scale

What happens when we monitor 1,000 machines?

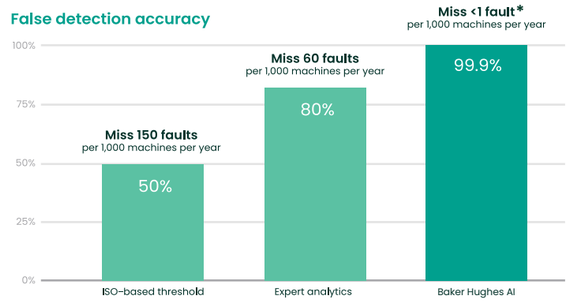
No Noise

False positive rates



High accuracy

False detection accuracy



Baker Hughes data avg. 30 actions taken per 100 MH CR machines monitored per year, based on 100k+ machines in database.
* With Machine Health with Halo

Dig into the results

Rapid time to value

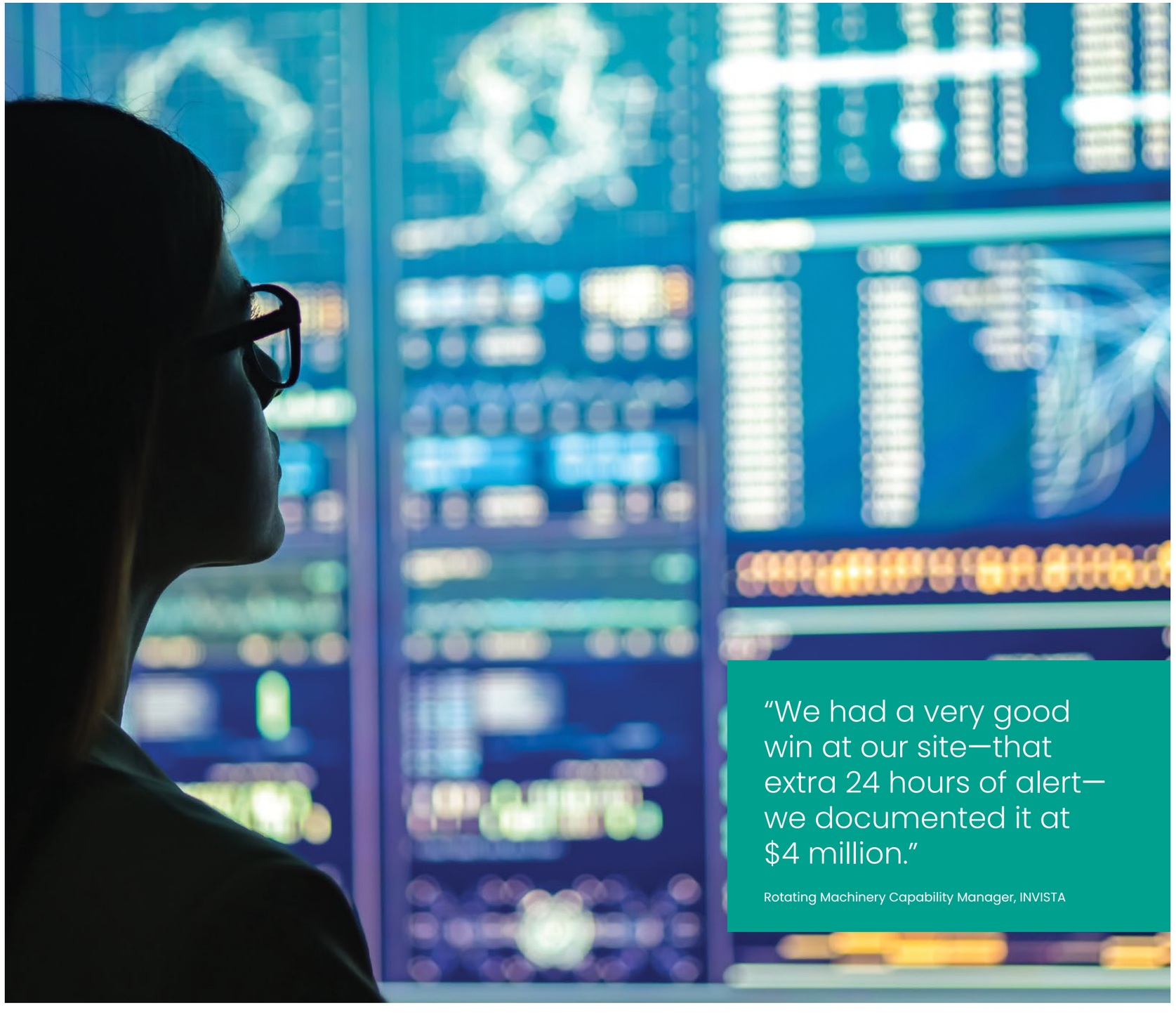
Scan the QR code to view a self-guided demo of a recent customer save that paid for the entire program cost, **less than 3 months since deploying.**

Or click here

Hear from INVISTA

Scan the QR code to hear how Cordant™ Machine Health is helping INVISTA (a subsidiary of Koch Industries) innovate its operations, realize rapid value and high ROI, and reduce downtime while boosting production.

Or click here



> "We had a very good win at our site—that extra 24 hours of alert—we documented it at $4 million."
>
> Rotating Machinery Capability Manager, INVISTA

Questions you can ask to evaluate the robustness of a condition monitoring solution

Are you buying a sensor or are you buying an outcomes-focused solution?

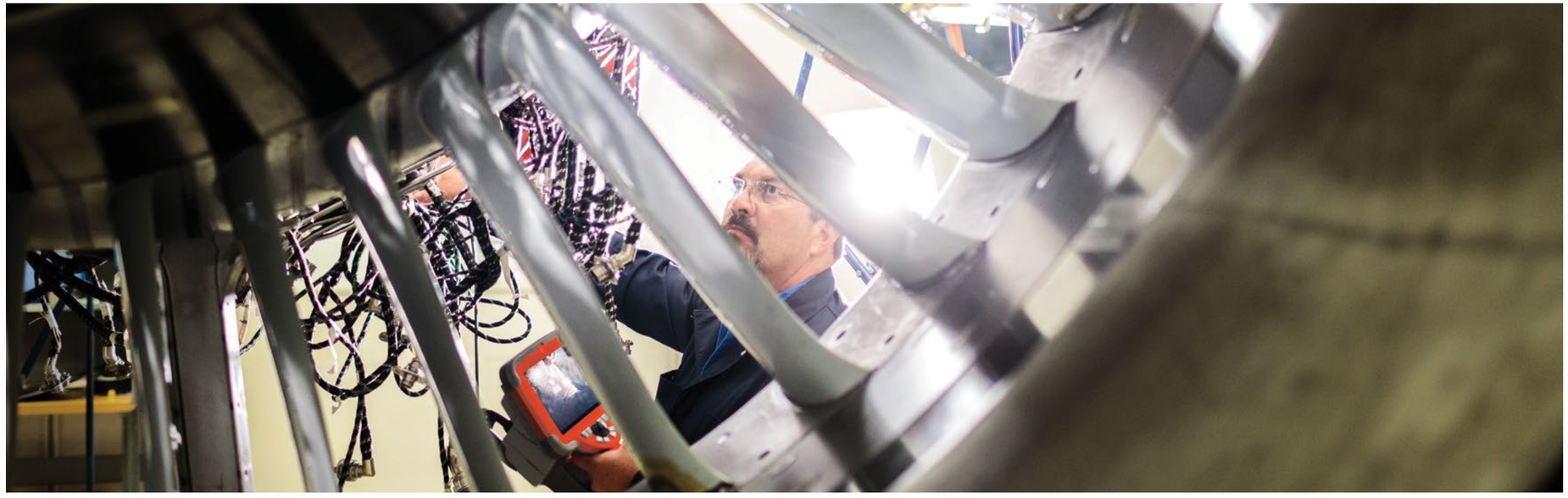
Cordant™ Machine Health is a full-stack, outcomes-focused IOT and purpose-built AI solution that uses a multi-layered algorithm covering a wide range of fault types and asset types with deep insights and specificity—combining four unique approaches to provide the most accurate and actionable machine diagnostics in the world:

- **Anomaly detection—where is the issue and when did it happen:** learns the specific machine behavior and detects when a machine is not behaving as it normally should by checking diagnostics against the machine's unique operating conditions
- **Fault detection**—what is the issue, what is causing it and how to fix it: identifies component-specific issues based on a database of over 250M machine hours
- **Severity analysis—how urgently do I need to address the problem and how bad is it going to be:** provides the insight needed to decide when and how urgently to take action on the machine
- **Expert intelligence:** our team of vibration analysts and reliability engineers provide an additional layer of support to customers

Cordant™ Machine Health processes over a **million data points per machine per hour** so your team doesn't have to—intelligently selecting only the insights that matter, are actionable, and are guaranteed to be delivered to the customer as quickly as possible and without needing any setup from your end.

The subscription includes all the components needed to monitor machines accurately and reliably; and **it's our responsibility to ensure the right sensor placement, data integrity, and servicing.** Batteries last 3-5 years, and we proactively service them at no additional cost.

Combined with all of these features, Cordant™ Machine Health provides diagnostics so precise that most machines can be upgraded and guaranteed by industry-leading insurer HSB.



How much of the diagnostics is just based on manual thresholds?

Most monitoring systems that claim to use AI or offer prescriptive diagnostics are actually using manual thresholds (they either require you to set them up or they set them up). The end result is a high number of nuisance alarms and, potentially, false alarms.

Baker Hughes' AI is different because it uses machine learning trained on over 250 million hours of machine recordings to intelligently understand when something is wrong with an asset, diagnose the issue, and prescribe a fix—**all with no set up.**

The end result? Your team will have significantly higher visibility on potential machine failures, and significantly fewer nuisance alarms to deal with.

Who is responsible for managing your IOT network infrastructure? Will you be the one setting it up, or will we?

Cordant™ Machine Health deploys, services, and manages the hardware and IoT for you—which means you never have to figure out what type of wireless network to use, how to place sensors in the right spot on your machine to capture accurate readings, or try to figure out why one of your machines is offline. **We take care of it, so you don't have to.**

Can we provide accurate diagnostics immediately after deployment or do we need to custom-build a threshold model for you after the first failure?

Unlike some competitors, **we don't need your machine to fail in order to create an algorithm. Our Machine Health solution** draws on over 250 million hours of recorded machine data across hundreds of asset types and failure modes—**which is why 4% of machines we install have significant wins during the baseline period.** Be sure to understand what it means to "set the baseline" before you deploy.

How do we plan to scale from pilot to 1000s of machines? Can we prove it over numerous customers over a long period of time?

Today, Cordant™ Machine Health is installed on thousands of machines for hundreds of customers—and has proven time and again that we can help you scale. Cordant™ Machine Health enables our Vibration Analysts to diagnose over 2,000 machines to truly support scale. With Cordant™ Machine Health, one Vibration Analyst can do it all, if they have the right AI to back them up.

"Machine Health laid the foundation for digital transformation within our production sites."

VP of Operational Excellence & Innovation, ICL

What is the quality of data and level of insights that can be generated? Can we detect gradually failing faults consistently?

Cordant™ Machine Health uses a combination of high bandwidth wireless protocols, hourly sampling and purpose-built Industrial AI to detect and diagnose a wide range of faults both acute and gradual. Other solutions typically collect and send much lower quality data, which severely limits their ability to provide timely and accurate diagnostics. Additionally, other algorithmic approaches like ISO and adaptive-thresholds result in high false alarms (70%) and misses (15%) which puts you at risk of unplanned downtime.

Baker Hughes™

bakerhughes.com/cordant