

# Your machines talk. Vexron listens.

Vexron reads your existing PLCs, SCADA and sensors, and warns your team when a fault starts, often days to weeks before failure. So the repair goes on a planned stop, not a night-shift breakdown.



## 01 · SENSE

Vibration, heat and power data

## 02 · CONNECT

Your PLCs and SCADA

## 03 · PREDICT

AI fault detection

## 04 · ACT

Alerts and work orders

# The cost of guessing vs. watching the machine.

Think of Vexron as a heart monitor for your critical machines. Instead of waiting for a bearing to fail on a busy night shift, it notices the early change in vibration and temperature, so your team can plan a routine repair.

△ WITHOUT VEXRON • RUN TO FAILURE

**Week 1 • Bearing wear begins**  
Too small to hear on a noisy floor. The next manual route check is days away.

**Week 2 • Heat and vibration rise**  
A simple high-limit alarm stays quiet until the reading is already high.

**Night shift • The machine fails**  
The bearing seizes, the drive trips, the line stops. Damage can spread to the shaft or gearbox.

**Next days • Emergency repair**  
Overtime, rush freight and lost output while the line waits.

✓ WITH VEXRON • THE REPAIR IS PLANNED

**Week 1 • The trend changes**  
VMI-1 sees the bearing signature rise and sends an SMS or WhatsApp alert with the signal behind it.

**Week 1 • An engineer checks it**  
They read the trend and the ISO zone, then confirm or reject. The models learn from that.

**Week 2 • Spares ordered on time**  
The bearing comes through your usual supplier, without rush freight.

**Planned stop • Repair done**  
Changed during a stop you planned, not in the middle of a night shift.

SIDE BY SIDE

| FACTOR                 | RUN TO FAILURE                       | WITH VEXRON                         |
|------------------------|--------------------------------------|-------------------------------------|
| When the machine stops | When it fails, often without warning | On a stop you planned               |
| Repair and freight     | Overtime and rush freight            | Normal parts, ordered in time       |
| Spare parts            | Extra spares held just in case       | Ordered when the trend shows a need |
| Downtime cost          | Worked out after the event           | Shown in rupees as it happens       |

# Start with the data you have.

## Add sensors only where needed.



### 1. Sense

Vexron reads vibration, temperature and power or current data from the PLC tags, SCADA tags and sensors already on your machines. Where a critical machine has no vibration sensor, one can be added.



### 2. Connect

A small edge gateway in your electrical or control panel polls your PLCs and sensors. No third-party middleware. It works out vibration metrics right at the edge.



### 3. Predict

Our VMI-1 model learns how each machine normally runs and flags bearing wear, misalignment, imbalance and looseness. Forecasting models trend slow wear and estimate remaining life.



### 4. Act

Rules send SMS or WhatsApp alerts to your technicians and pass events to SAP S/4HANA, your MES or MQTT. A warning turns into a planned job.

WORKS WITH THE PLCs YOU ALREADY HAVE

## No new control system. No middleware.

Modbus TCP

Modbus RTU (RS-485)

Siemens S7-300 to S7-1500

OPC-UA with encryption

Rockwell ControlLogix

CompactLogix (EtherNet/IP)

The gateway runs on

Industrial PC

Single-board computer

NVIDIA Jetson

ESP32

#### STORE AND FORWARD

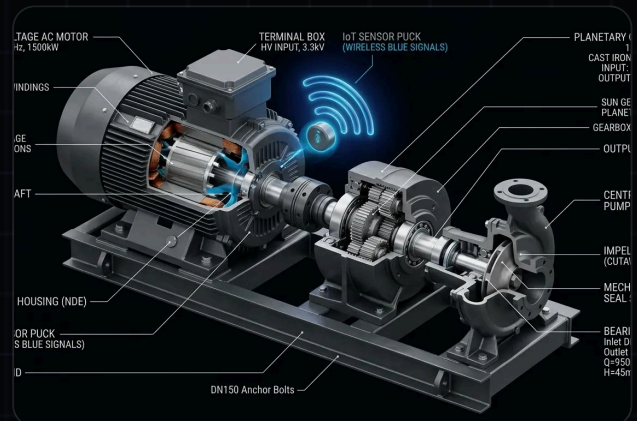
When the plant network drops, the gateway keeps collecting, stores 100,000+ readings and sends them in time order later.

#### ENCRYPTED LINKS

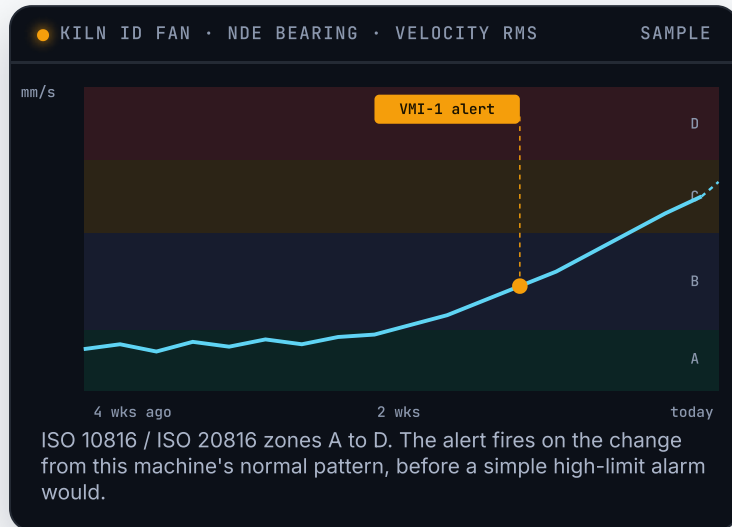
TLS 1.3 between parts, OPC-UA with Basic256Sha256, role-based access and an audit trail.

#### FIELD CONSOLE

A local page on the gateway shows its health, live PLC tags and buffered data, without internet.



# Catch bearing wear before it breaks.



## Early fault warning

VMI-1 learns each machine's normal signature and flags bearing wear, misalignment, imbalance and looseness, often days to weeks before failure. Every alert shows the signal behind it.

## Vibration you can check

The gateway works out RMS velocity, peak acceleration, crest factor and kurtosis, and places each reading in ISO zones A to D.

## Health score and remaining life

Each machine gets a health score. Forecasting estimates the remaining life of wearing parts, so spares are ordered before they are needed.

## ALERTS THAT TURN INTO JOBS

### A warning reaches the right person.

Build alert rules with drag and drop. When vibration or heat crosses a limit, a rule sends an SMS or WhatsApp to your technician and passes the event to SAP S/4HANA, your MES or MQTT.

WHATSAPP • VEXRON ALERT • SAMPLE

**Kiln ID fan 2:** NDE bearing vibration rising, zone C. Bearing wear signature. Please check on the next planned stop.

## MAINTENANCE AND FINANCE, ONE NUMBER

### Downtime cost in rupees.

See money lost to stops, idle running and micro-stoppages in INR, next to OEE (availability, performance and quality). A what-if calculator tests a maintenance plan before you spend on it.

LOSS AND OEE HUB

SAMPLE

STOPS

In ₹

IDLE POWER

In ₹

OEE

A • P • Q

ONE SCREEN FOR THE WHOLE PLANT

# See every machine, in 3D and 2D.

Live machine health, plant diagrams and a 3D model of the line, for the control room, the maintenance team and managers. Use it as a web app or a Windows desktop app.



## Maintenance assistant

Engineers ask "Why is Pump 4 vibrating?" and get an answer drawn from your own OEM manuals, drawings and repair history.



## Cut power waste

Finds motors running idle, plans loads around time-of-day tariffs and controls peak demand.



## Carbon records

Keeps Scope 1 and 2 emissions records from plant energy data, for exporters who report to EU buyers.

### STRAIGHT TALK

Vexron predicts faults. It is not an API 670 machine protection system, so keep your existing protection relays and trip circuits in place. And we are the software layer, not a sensor maker.

# Built for hot, dusty plants. Where one stop can cost more than the repair.

| INDUSTRY                  | WHAT VEXRON WATCHES                                                                                    |
|---------------------------|--------------------------------------------------------------------------------------------------------|
| Steel and metals          | Casters, rolling mills, gearboxes, fans and pumps under heat and heavy load                            |
| Cement and mining         | Preheater ID fans, cooler fans, kiln drives and mill gearboxes: the machines whose stop is a kiln stop |
| Power plants              | Turbine vibration, boiler tube scaling, transformer health and emission stack data in one place        |
| Auto components           | Presses, CNC machines, compressors and chillers, with OEE tracking                                     |
| Chemical and fertilizer   | Compressors and centrifugal pumps                                                                      |
| Refractories and ceramics | Presses, pan mixers and tunnel kilns, including kiln temperature, draft pressure and ID fan balance    |

## Start small, then grow

Start with the few machines where an unplanned stop really hurts. Prove the alerts against a baseline, then expand.

## How pricing works

No fixed list price. We quote per plant after a short look at your machines, your data sources and any sensors you need to add.

READY TO PLAN REPAIRS BEFORE BREAKDOWNS?

## Stop guessing when machines will fail.

Get a quote for your plant, or try the live demo with sample data: the plant dashboard, AI forecasting and the edge gateway's field console.

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Scan to get a quote