

VIBRATION, TEMPERATURE AND ACOUSTICS SENSOR

PATENTED EDGE TECHNOLOGY FOR EQUIPMENT MONITORING AND
REALITY

- We are Eureka International. We are experts in the field environmental footprint reduction technologies and equipment monitoring and can be your perfect partners in your journey towards sustainability
- We are certified by the Bureau of Energy Efficiency
- We have been working with almost all the sectors in the industry
- We have more than 100+ major clients from across the world

OUR OFFICES



OUR KEY CLIENTS



OUR SERVICES AND PRODUCTS



Electrical Safety Audit



Arc Flash Study



Thermography



Equipment Balancing



Condition Monitoring



Thickness Testing



Ammonia Integrity Survey



Sound Integrity Survey



ETP Integrity Inspection



Energy Audits

OUR SERVICES

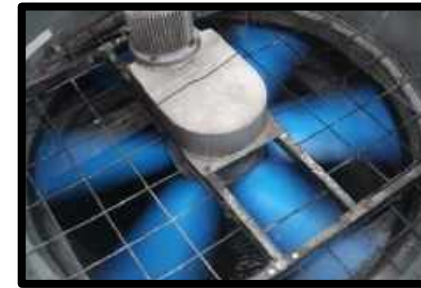
OUR PRODUCTS



Online Vibration Monitoring equipment



HRU for Air Compressor (Premium Product)



25% Reduction in CT Fan energy



100% elimination of CT Blowdown Water



20% Reduction in Chiller Energy

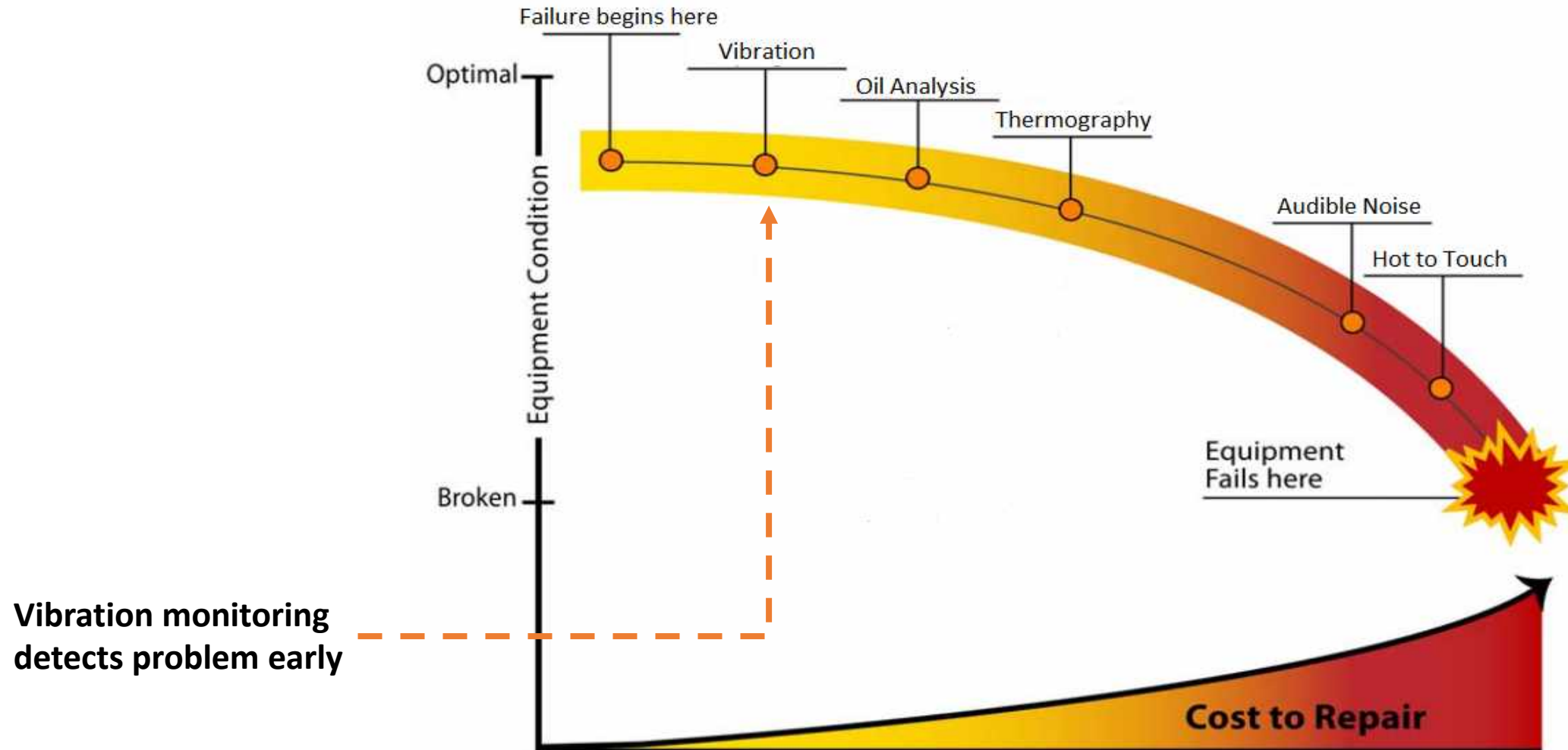


40% Reduction in AHU Energy

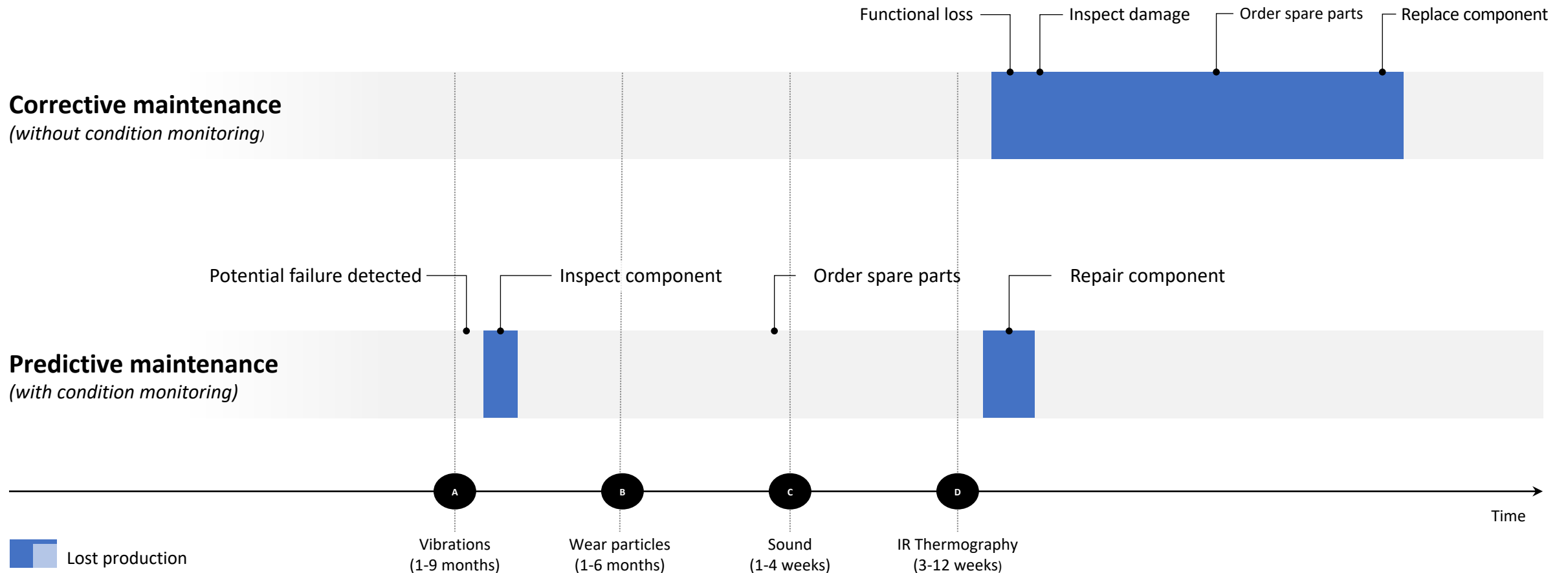
- NEED FOR CONDITION MONITORING
- CONDITION MONITORING – PROCESS
- OUR SOLUTION AND ITS BENEFITS

NEED FOR CONDITION MONITORING

- Condition monitoring is developed to detect potential failures early and allow efficient planning of preventive maintenance

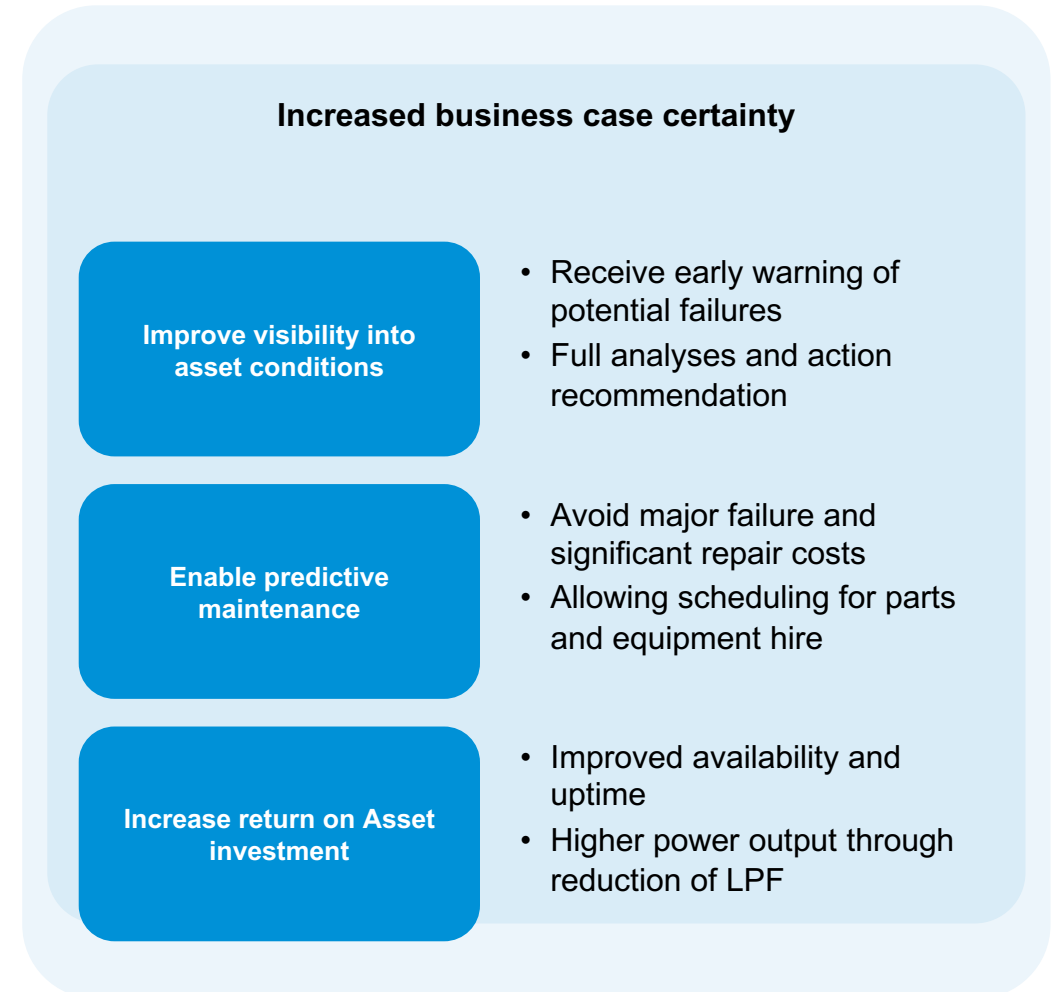
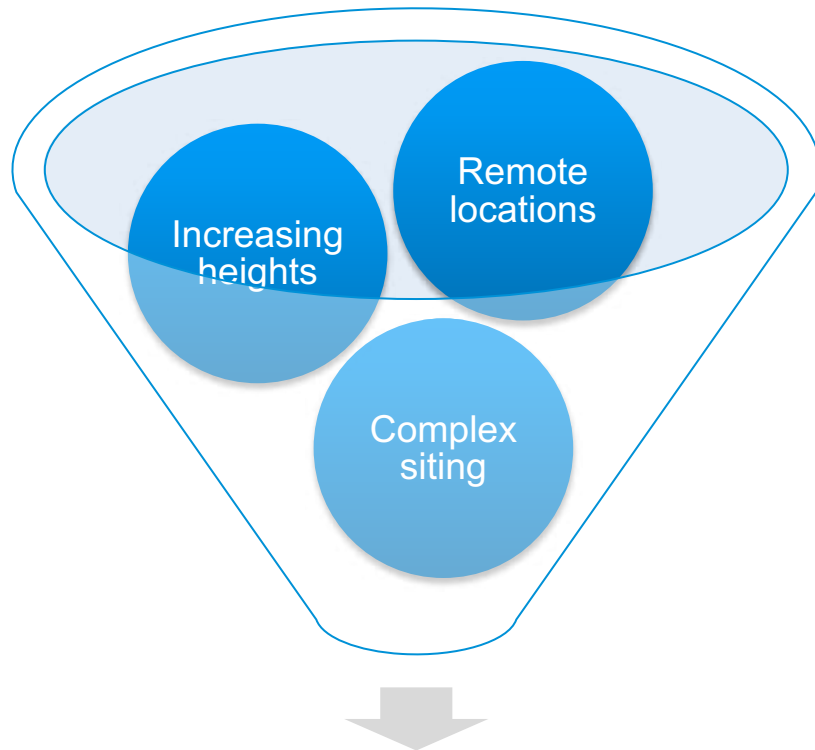


- Condition monitoring is enabling predictive maintenance and can thereby result in significant O&M savings for Industry owners

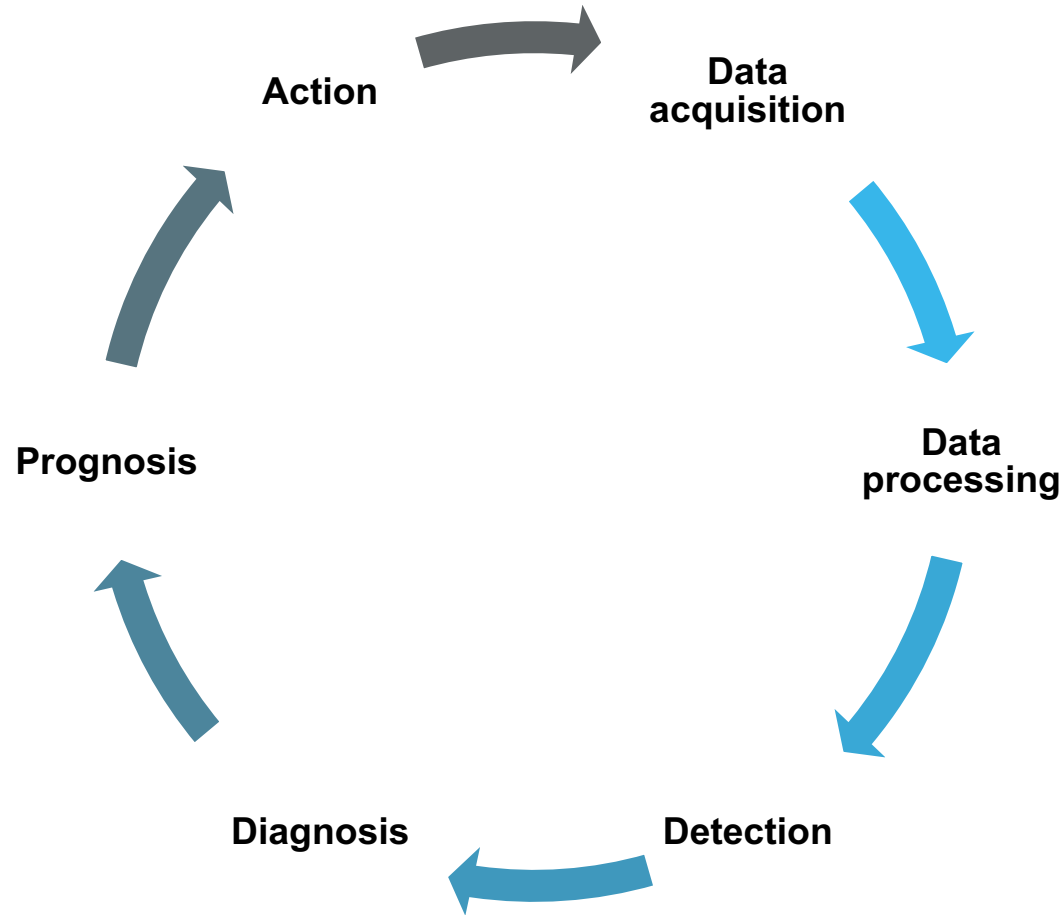


CURRENT CONDITIONING MONITORING PROCESS

- The contributions of condition monitoring to O&M cost reductions are widely recognized throughout the all industry



- Condition monitoring is developed to detect potential failures early and allow efficient planning of preventive maintenance



- Vibration-based condition monitoring systems are most used for monitoring the drivetrain of Equipment's.
- Condition monitoring is based on the fact that most damages in rotating machinery (like the drivetrain) lead to excessive vibration and that each mechanical unbalance or defect generates a unique vibration pattern.
- Sensors measure vibrations in the equipment and relay information to a Edge Computing device itself (vEdge).
- Vibration sensors can detect faults at an earlier stage than other sensors that equipment are equipped with (such as process parameter sensors, like temp).

OUR SOLUTION AND ITS BENEFITS

- We offer our users a complete condition monitoring solution that combines Integrated vibration + Temperature + Acoustic data



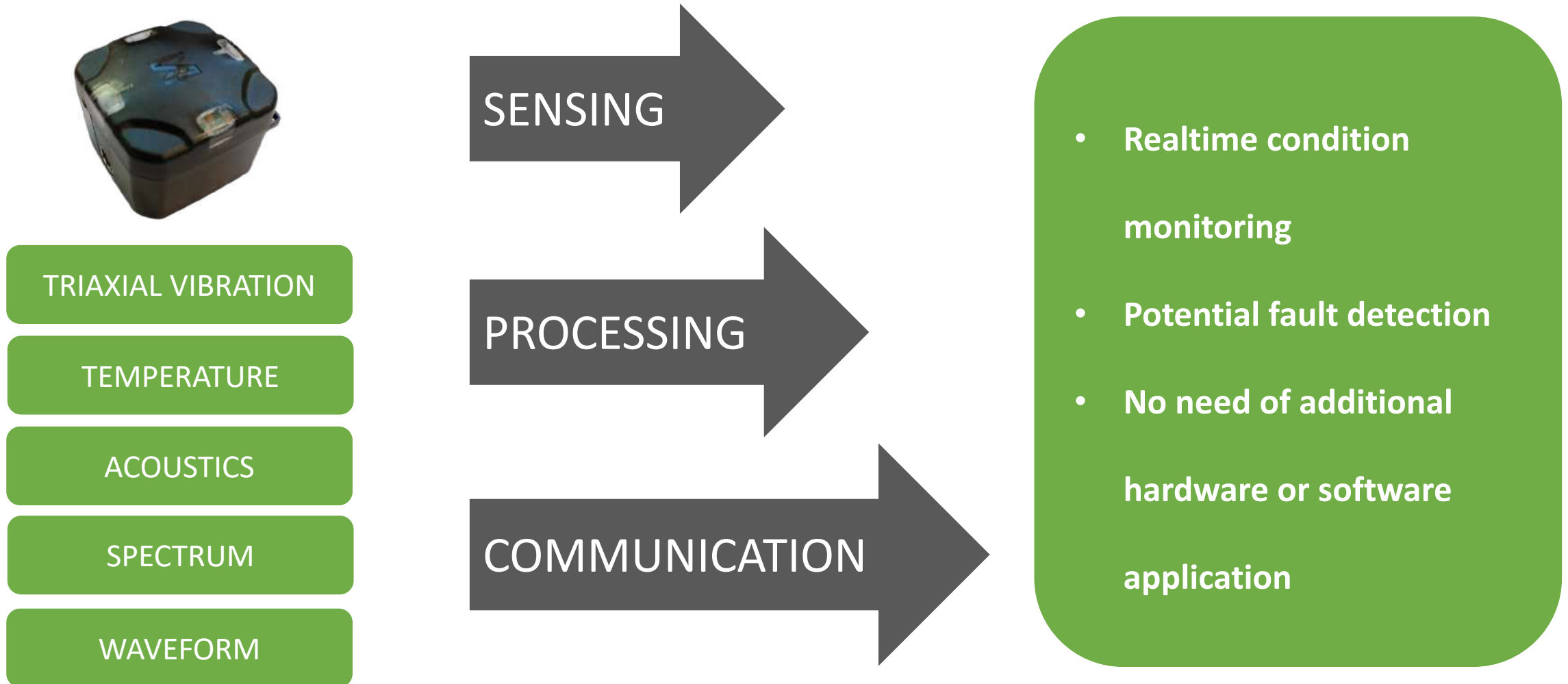
Legacy Systems



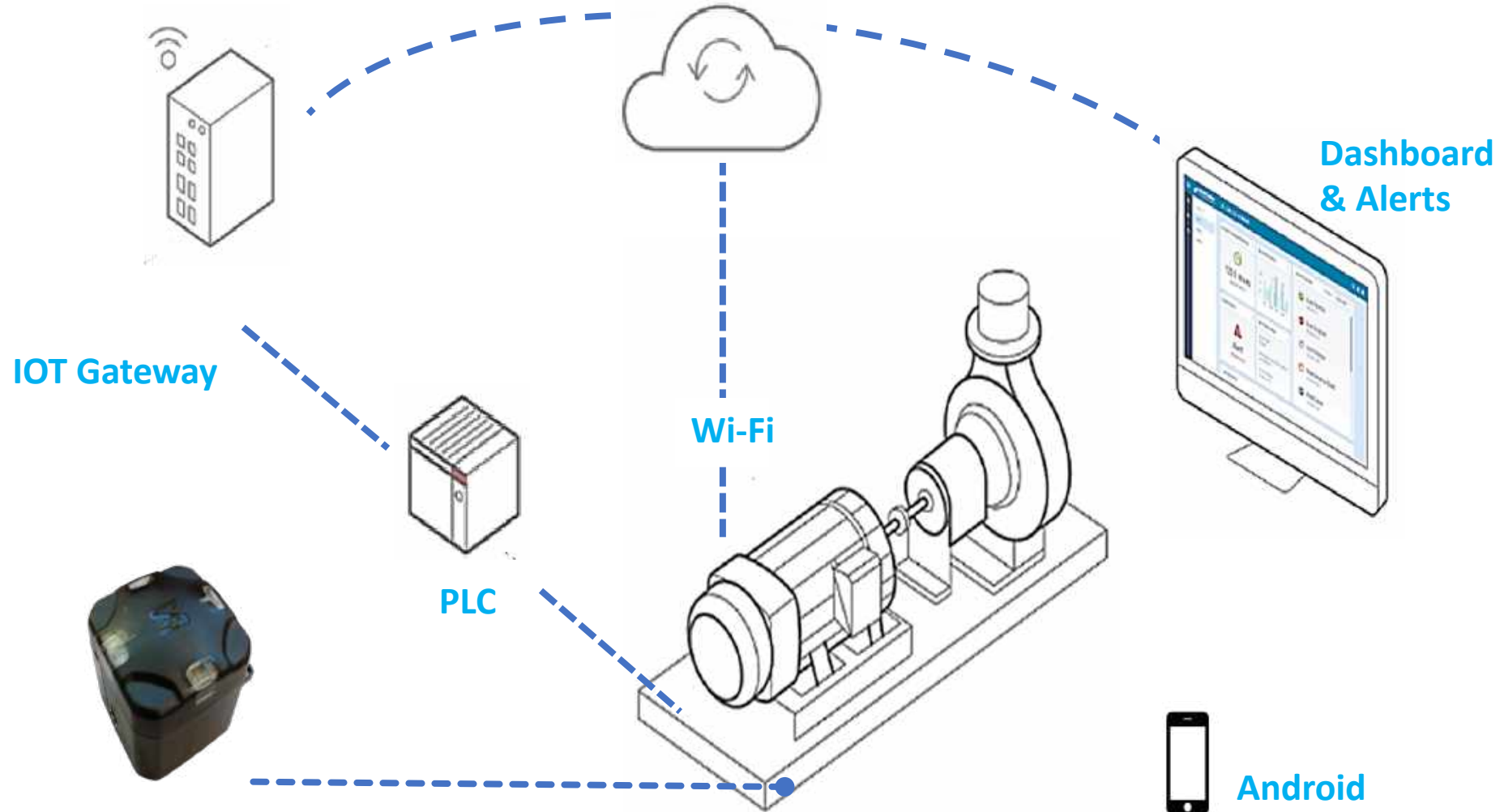
vEdge

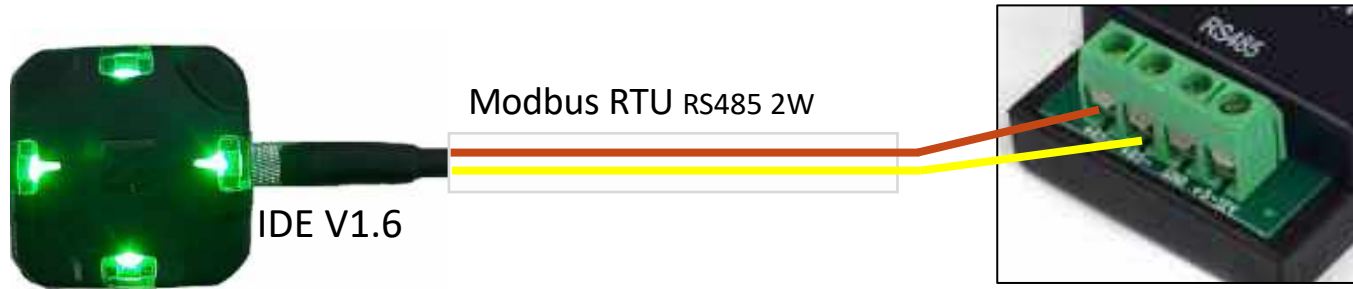


- 80% potential failures can now be identified at 20% of the cost



- Our sensor offers seamless cloud and PLC / DCS integration



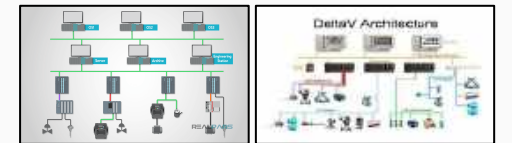


- RS 485 Specifications:
- Protocol: Modbus RTU
- Physical layer : RS485 2wire
- Baud support: 1.2 kbit/s to 115.2 kbit/s
- Parity: 0/1
- Stop bit: 1 / 2

PLC's



DCS



SCADA



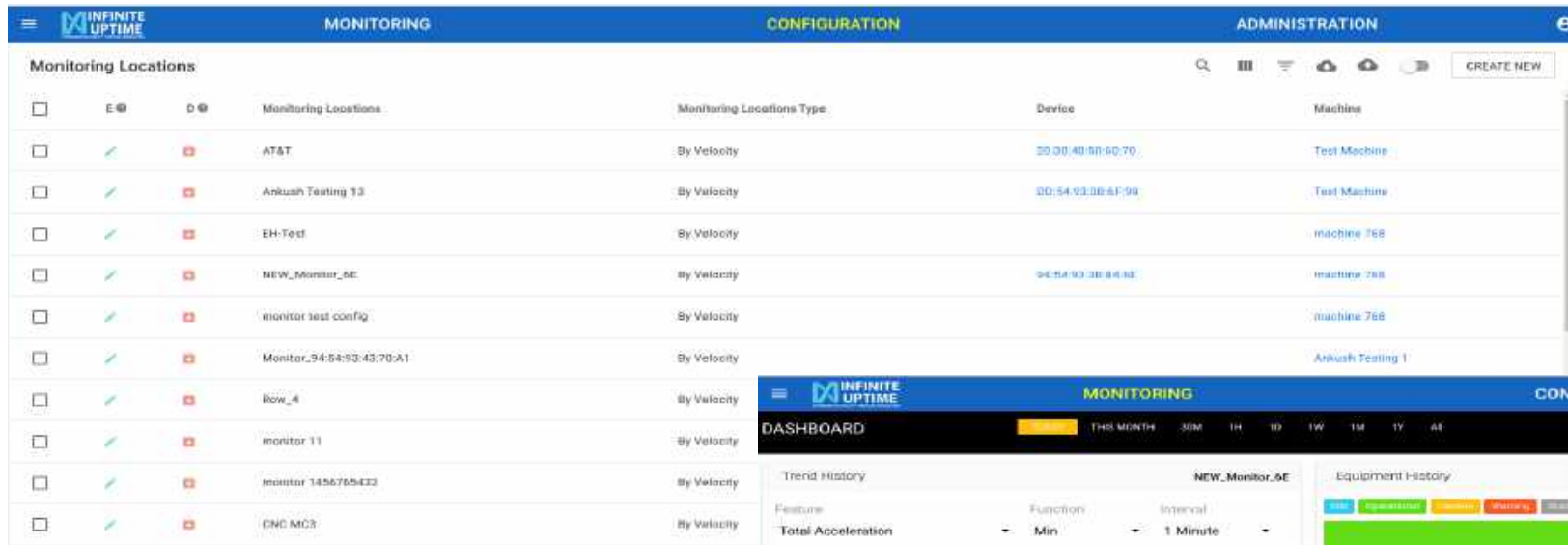
IOT GW



ADVANTAGES OVER OFFLINE AND ONLINE SYSTEMS

Data Capturing Mechanism	Offline	Online	On-Edge
Data Monitoring in No Load Condition	✓	✓	✓
Data Monitoring in Load Condition	✗	✓	✓
24 x 7 Equipment Condition Monitoring	✗	✓	✓
Event & Alert Capturing	✗	✓	✓
Trend Visualization	✗	✓	✓
Spectrum Analysis 24x7	✗	✗	✓
Real-time local diagnostic indication	✗	✗	✓
Local Alarms & Visual Alerts	✗	✗	✓
FFT Spectrum for fault isolation on Mobile	✗	✗	✓

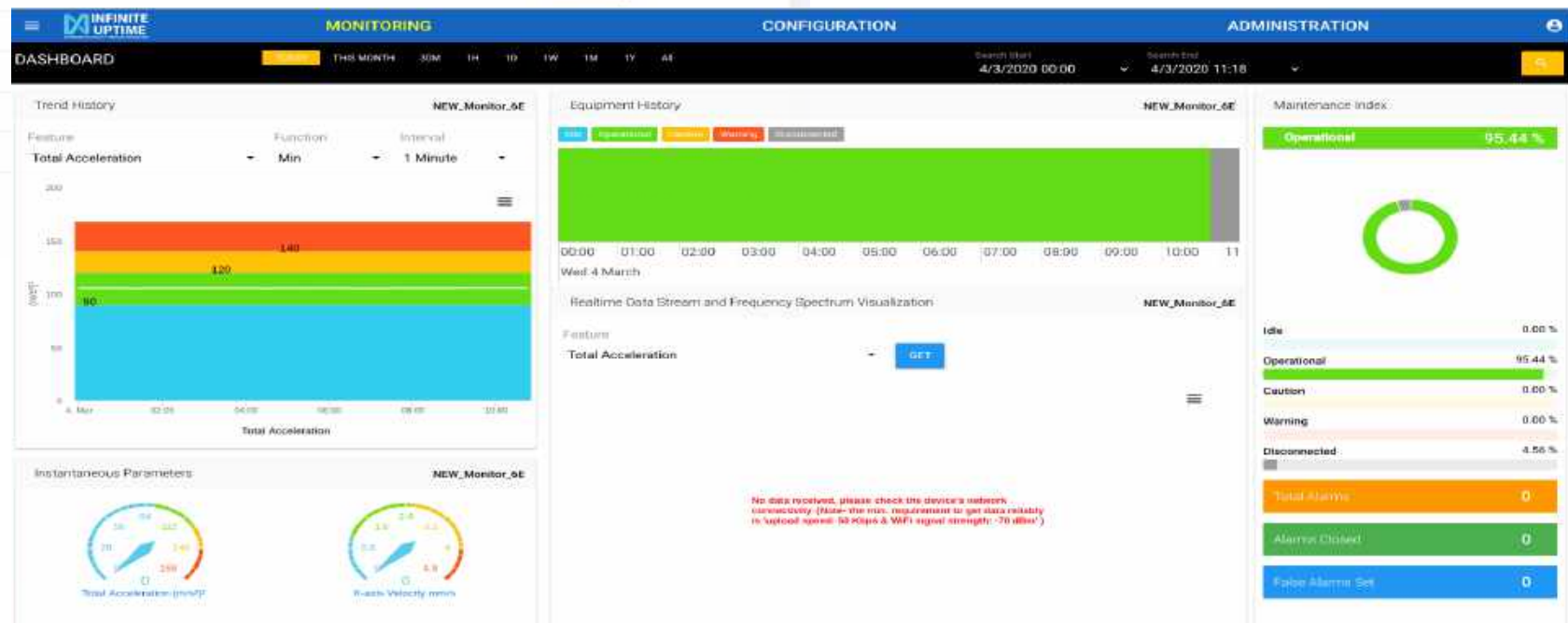




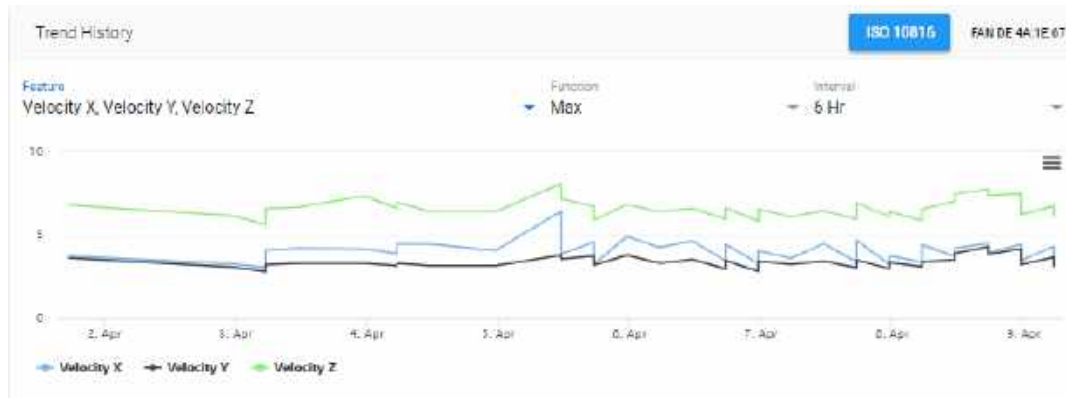
Monitoring Locations	Monitoring Locations Type	Device	Machine
AT&T	By Velocity	20:00:40:58:60:70	Test Machine
Ankush Testing 13	By Velocity	00:54:93:08:61:98	Test Machine
EH-Test	By Velocity		machine 768
NEW_Monitor_6E	By Velocity	94:54:93:3B:84:6E	machine 768
monitor test config	By Velocity		machine 768
Monitor_94:54:93:43:70:A1	By Velocity		Ankush Testing 1
Row_4	By Velocity		
monitor 11	By Velocity		
monitor 1456785432	By Velocity		
END MG3	By Velocity		

- Quicker deployment
- Scalable up to 10,00,000 IDEs
- Rapid biweekly upgrades
- Auto-threshold setting
- APIs for software integration

- Single screen toggle between customer creation, machine creation and data visualization
- Visualization of FFTs faster, reliably and with diagnostics
- Configurable low frequency cut-off and windowing of FFT
- On-premise deployment

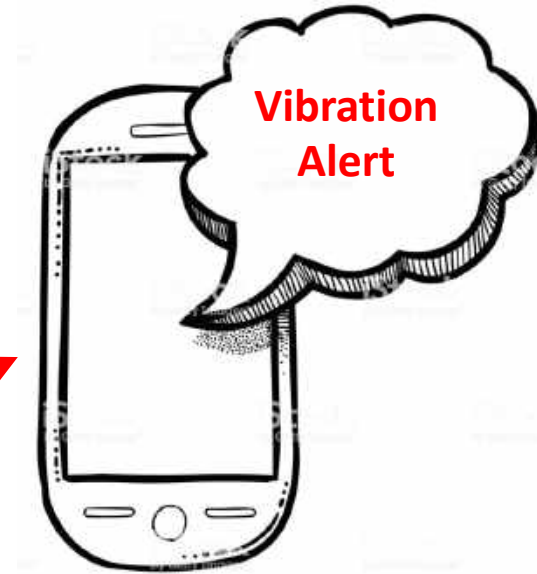


- Our dashboard gives you real-time trends of each equipment

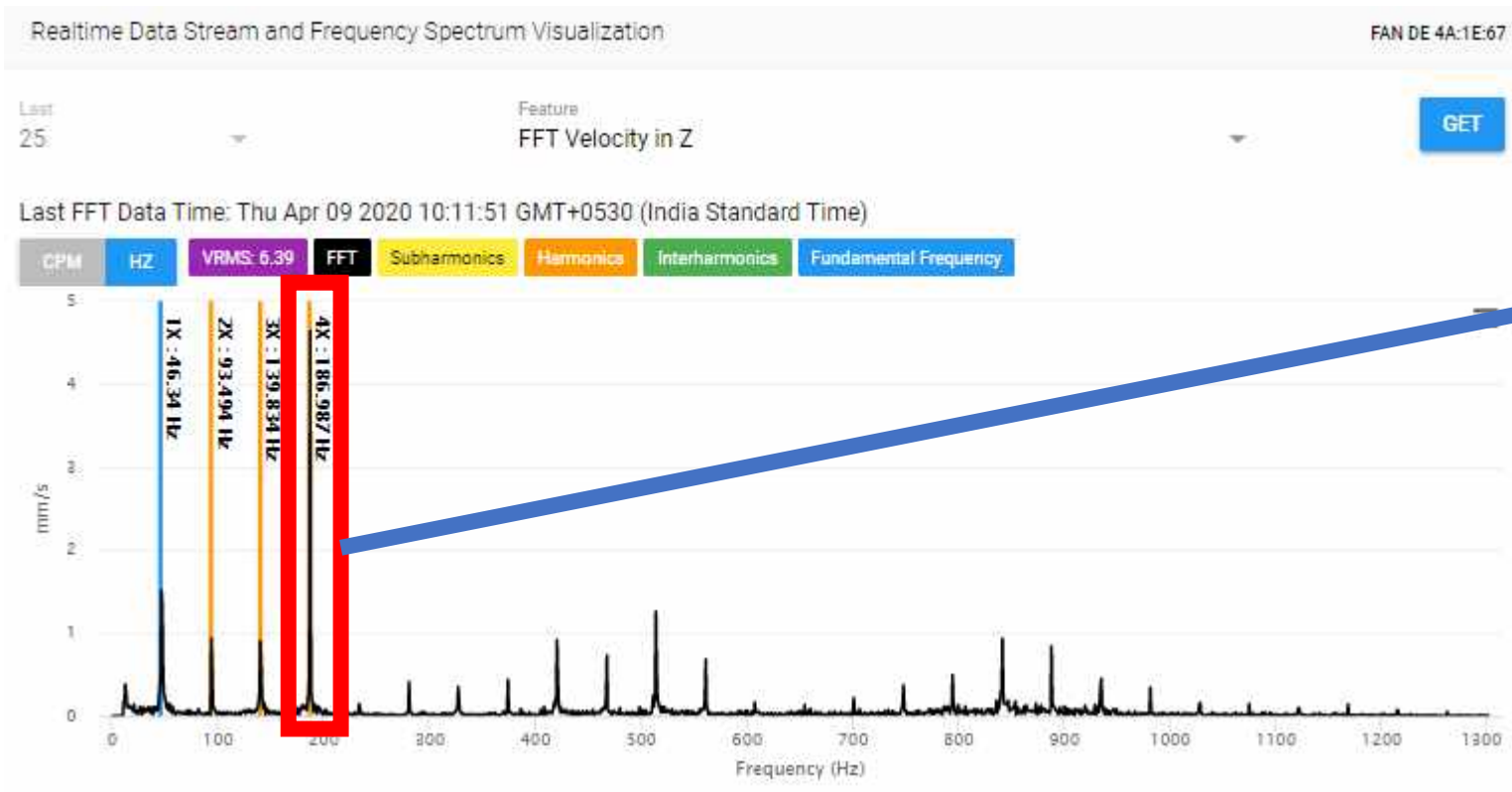


Catastrophic disaster averted

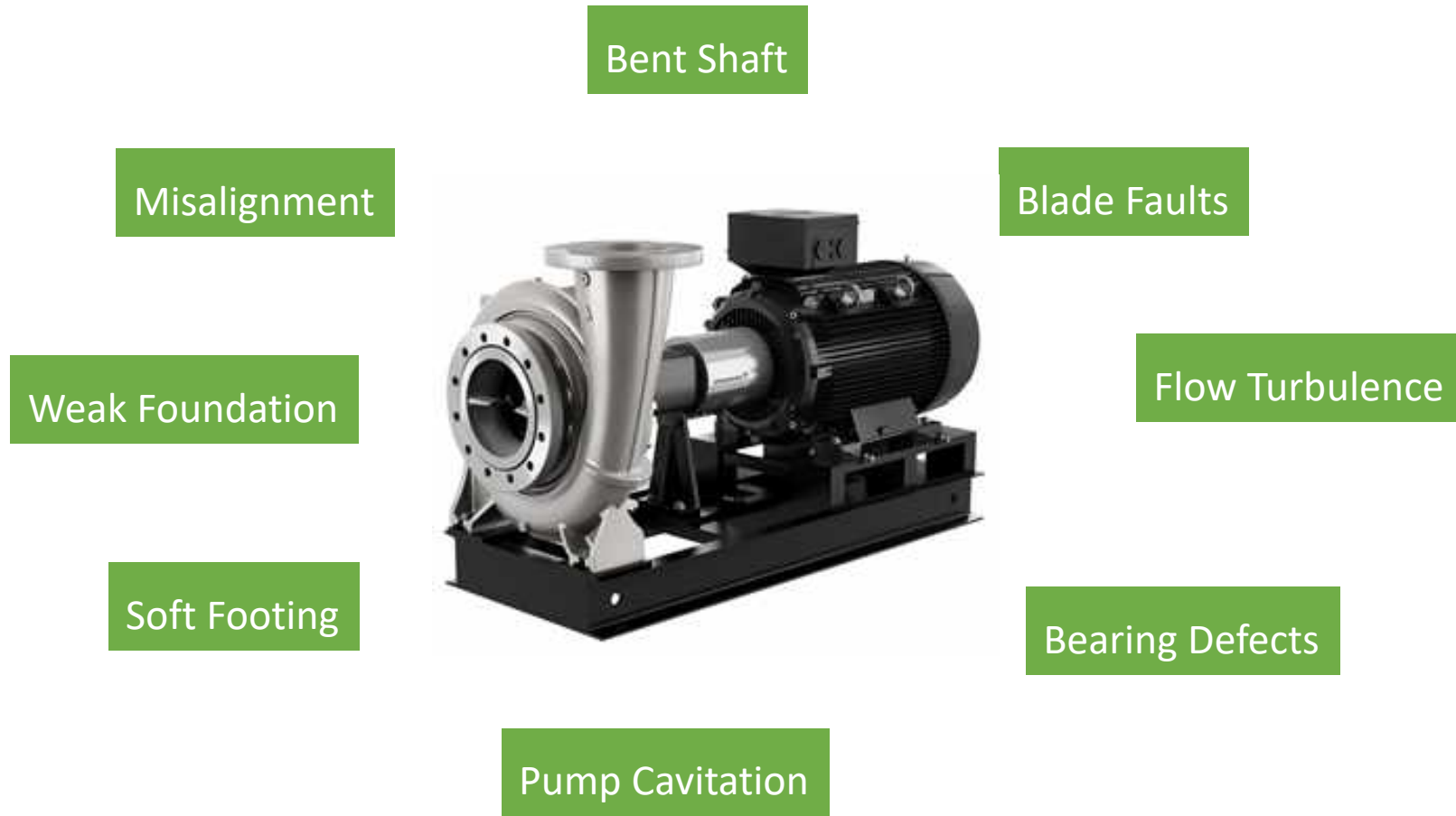
Our device alerted the operations team upon seeing a rising trend in vibration and corrective actions immediately followed. Foundation bolts of the motor had gone loose.



- We offer configurable diagnostics at a device level to enable in-system diagnosis and prognosis for you to take the right action at the right time



- Through configuration, you can predict the following faults:



vEdge

Smaller form factor of 44mm x 44mm – good for all equipments

OTA enabled and can be upgraded and diagnosed remotely

Stud-mounted option as well as magnetic mounting option

5V – 24V input which is readily available in most of the industry without using an SMPS

Connectorized design, with BNC connector

Better frequency response with 1.6 kHz linearity & 1600 LOR

More accurate frequency, vibration, temperature and acoustic data

More accurate diagnostic configuration on the edge



Reduction in Maintenance Fixed Costs

- Up to 20% reduction in maintenance fixed costs are possible with a deployment of vEdge sensors on all important rotating machines in a plant
- No need to send manual labour to each machine to measure its vibrations

10-15% Improvement in Uptime

- 10 – 15% improvement in uptime is achievable by moving from time-based maintenance to 24x7 predictive maintenance resulting in no surprises or sudden breakdowns at a plant

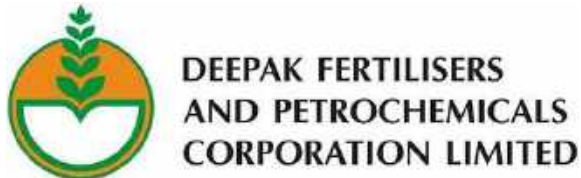
Reduction in spares inventory

- Up to 30% reduction in spares inventory has been achieved by employing vEdge sensors which gives root-cause analysis of impending failures

Safety

- Physical distancing and reduction in external outsourced service labour improves the safety of the organization and plant in the times of Covid-19
- With sensors on all rotating machines, no outsourced services are needed to manually measure vibration data from each machine

USERS OF vEDGE



THANK YOU