

# Reliability Management Systems

BRINGING PREDICTABILITY TO PERFORMANCE



REALIZE  
RELIABILITY

# What is reliability?

## RELIABILITY DEFINED

re·li·a·bil·i·ty  
noun

the quality of being trustworthy or of performing consistently well.

the degree to which the result of a measurement, calculation, or specification can be depended on to be accurate.

## ISO DEFINITION OF RELIABILITY

Probability that a machine will perform its required functions without failure for a specified time period when used under specified conditions (Source: ISO 13372:2012).

**Reliability plays a critical role in reducing total cost of ownership.**



# Ready to prevent unplanned failures?



## Reliable systems create budget certainty, reduce downtime and create more predictable outcomes.

Dealing with the following rotating equipment challenges?

- Vibrations: small or excessive
- Overheating
- Unusual noises
- Cavitation
- Coupling misalignment or failures
- Cloudy oil
- Seal failures

Using the latest techniques and taking on-site measurements relating to the actual behaviour of your plant, machinery and structures, allows our engineers to help you focus your efforts where it matters most so you can avoid:

- Equipment downtime
- Over-budget maintenance
- Insufficient resources
- Inefficient processes
- Lost production

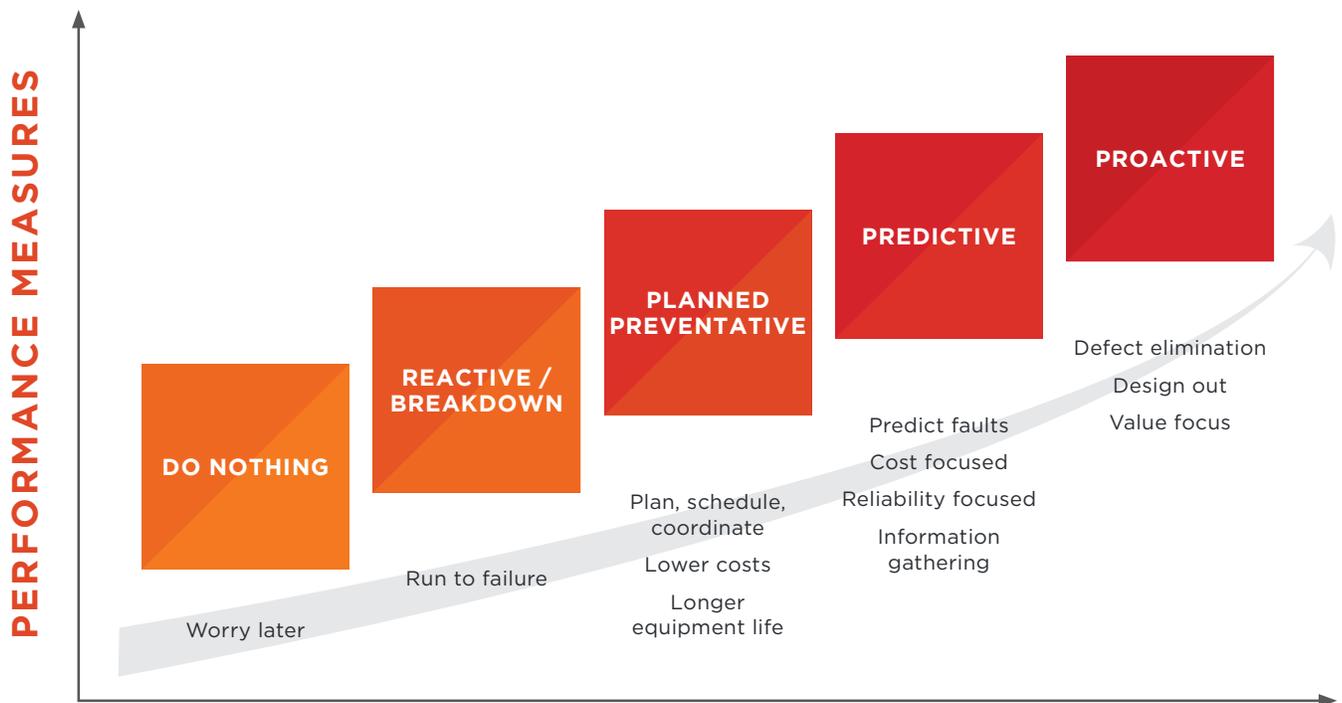
**Using the latest techniques and taking on site measurements relating to the actual behaviour of your plant, machinery and structures, allows our engineers to help you focus your efforts where it matters most.**

# Your asset management strategy

Measurements taken on a routine basis not only verify your current operating state but also play an important role in determining the equipment's time to failure.

Understanding the operating behaviour of your equipment over time is critical when developing and implementing maintenance strategies.

Every piece of machinery is made up of many components that operate together in harmony to perform a specific function / output. When the machinery no longer performs that specific function it is considered broken or deemed to fail.



<b>REWARDS</b>	Short term savings	Overtime heroes	No surprises	Comp. advantage	Best in class
<b>MOTIVATION</b>	Meets budgets	Breakdowns	Avoid failures	Uptime	Growth
<b>BEHAVIOUR</b>	Decaying	Responding	Discipline	Learning	Inventing

**ASSET RELIABILITY IS ESSENTIAL**



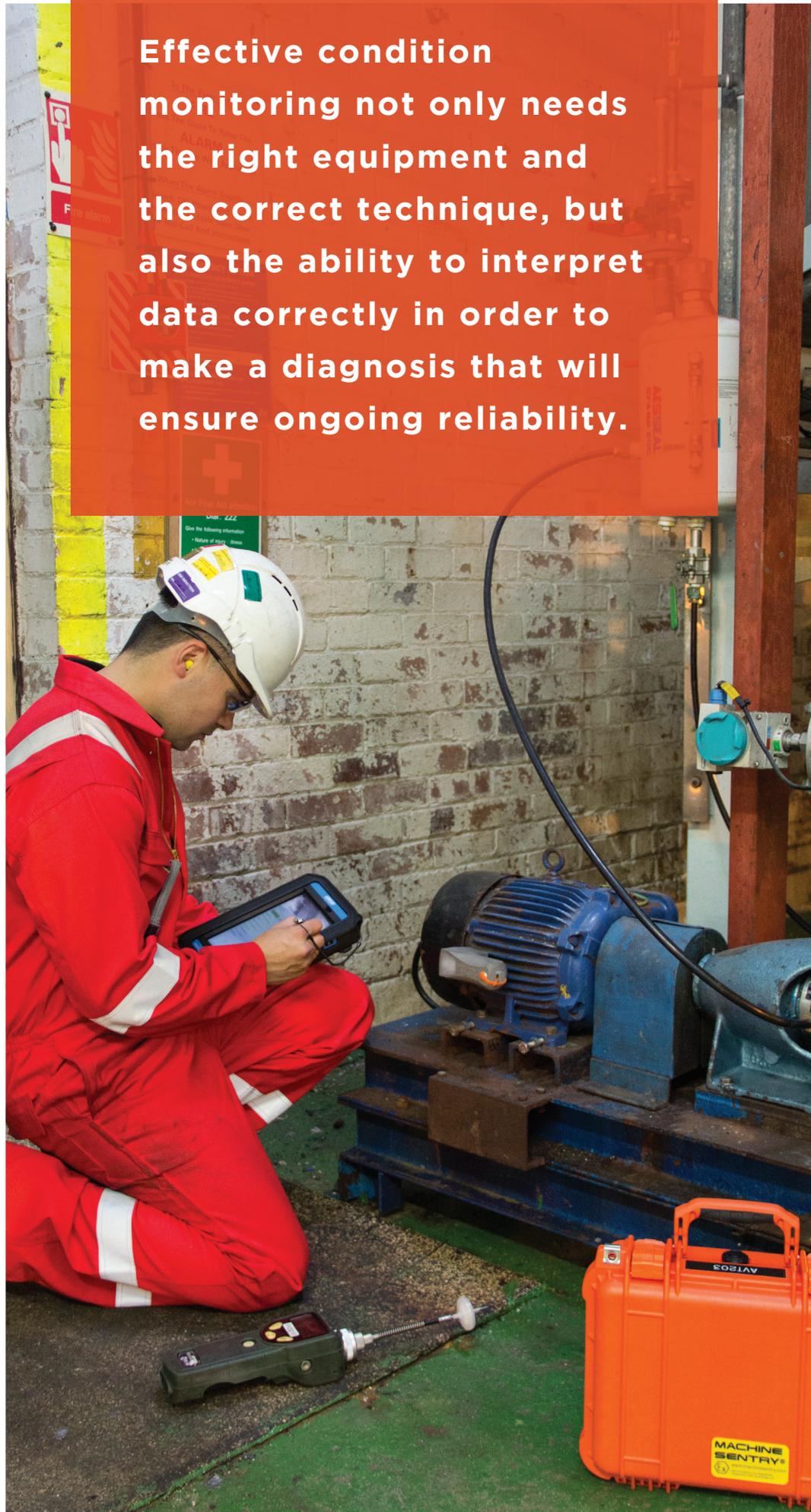
All equipment will eventually fail, and with current operating strategies we don't know what part will fail or when it will fail.

With Westpower's Reliability Management System you can better predict the occurrence of failures.

Choosing the right maintenance strategy will help extend the mean time between failures (MTBF).

**Increased reliability is accomplished by better designs, better assembly, better installation and commissioning and better operations.**

**Effective condition monitoring not only needs the right equipment and the correct technique, but also the ability to interpret data correctly in order to make a diagnosis that will ensure ongoing reliability.**



# Your Reliability Tool Kit

## an integrated approach to asset management

Westpower's reliability management tool box offers turn-key support for your facility and rotating equipment, creating more reliable uptime and predictable operating outcomes. Backed by 25 years of experience through Westpower's technical rotating equipment services including: engineering and design, manufacturing and fabrication, service and repair, field service and coating services, our team can add value at each stage of your equipment life cycle.



**PUMP PERFORMANCE TESTING**

- Comprehensive Performance Audit
- Troubleshooting

**SEAL SUPPORT SYSTEMS**

- Design
- Fabrication

**MECHANICAL SEALS**

- Troubleshooting
- Type Design Changes
- Management of Change Consulting

**ACOUSTIC EMISSION**

- Lubrication Monitoring
- Non-destructive Testing
- Leak Detection

**ELECTRICAL CONDITION MONITORING**

- Partial Discharge
- Current Analysis
- Energy Audit

**SYSTEM PERFORMANCE**

- In-house Process Design
- Acoustical and Resonance Troubleshooting

**VIBRATION**

- Condition Monitoring
- Advanced Analysis
- Advanced Testing

**THERMAL**

- Condition Monitoring - Mechanical and Electrical
- Machinery Root Cause Analysis
- Valves and Pipeline Testing

**ULTRASONIC TESTING**

- Bearing Condition
- Bearing Lubrication
- Reciprocating Valve Condition

**LUBRICATION**

- World-class Standards
- Lubrication Audit Program
- Troubleshooting and Recommendations

# Experience the benefits of reliability management with Westpower

**COATING SERVICES**

- HVOF Services
- Proprietary Nano Formulas



**FIELD SUPPORT**

- Commissioning and Start-up
- Alignment and Balancing
- Parts Replacement



**SERVICE AND REPAIR**

- Regional Service Centres
- State of the Art Machining Facilities



**MANUFACTURING AND FABRICATION**

- Pump Fabrication
- Part Fabrication
- Module Fabrication



**ENGINEERING AND DESIGN**

- Equipment Re-rates
- Reverse Engineering
- Hydraulic Upgrades



**WESTPOWER**  
Technical Support Services

- Cost effective license price structure
- Cloud based software
- No need to install software
- No need for IT testing for EAM development
- Free software upgrades with licenses
- Free software support with licenses
- Licenses are easily expandable
- Bluetooth® 3-axis vibration and temperature sensor
- Flexible condition monitoring system with vibration analysis, process parameters, visual inspection, thermography and oil analysis capabilities
- Turn any Android tablet or Smartphone into a powerful condition monitoring data collector
- ADATM Automatic fault diagnostic assistant advises on common vibration problems (similar level to a Category II vibration analyst)

our conditioning monitoring software is powered by our partnership with



## CONTACT A WESTPOWER RELIABILITY EXPERT

[sales@westpowergroup.com](mailto:sales@westpowergroup.com)

Phone: (403) 720-3300

[westpowergroup.com](http://westpowergroup.com)

## BACKED BY INDUSTRY'S HIGHEST STANDARDS.

Westpower's Reliability Management Systems comply with applicable standards including but not limited to ISO, API, HI, ICML, and IEEE.

## ABOUT WESTPOWER

Westpower is a leading North American rotating equipment solutions provider with services spanning industrial and engineered pumps, fabricated engineered fluid systems, reliability and lubrication products, field service and repair solutions that enhance performance. Headquartered in Calgary, Canada, we have operations in Edmonton, Vancouver, Grande Prairie, Salt Lake City, and Denver.