

The background is a collage of industrial images: blue electric motors, large metal gears, a worker in a hard hat and safety vest holding a tablet, and a factory interior with large machinery. A white geometric grid is overlaid on the collage.

FLUKE®

Reliability

**Best Practices Webinar:
The Connected Reliability
Starter Kit – Taking Asset
Management to the Next
Level**



Meet the Speaker



Finlay Craig

Client Relations Manager, Optimal

- BSc Hons in Computing from Robert Gordon University with over 7 years' experience in IT systems and marketing
- Focused on bridging client needs with technology-driven solutions. Passionate about asset management and optimisation
- Works with clients to connect business challenges with solutions through aligning digital platforms with practical asset performance outcomes
- Brings an approachable, solutions-focused perspective to client engagement to deliver measurable business results



We are OPTIMAL



Welcome to our world.

We simplify the complexities of asset management, allowing our Clients to focus on what matters most - achieving their mission.

Operational Readiness

- Asset Reliability
- Asset Inspection
- Asset Maintenance Strategy

Operations & Maintenance

- Maintenance Planning
- Operations Management
- Overall Equipment Effectiveness (OEE)

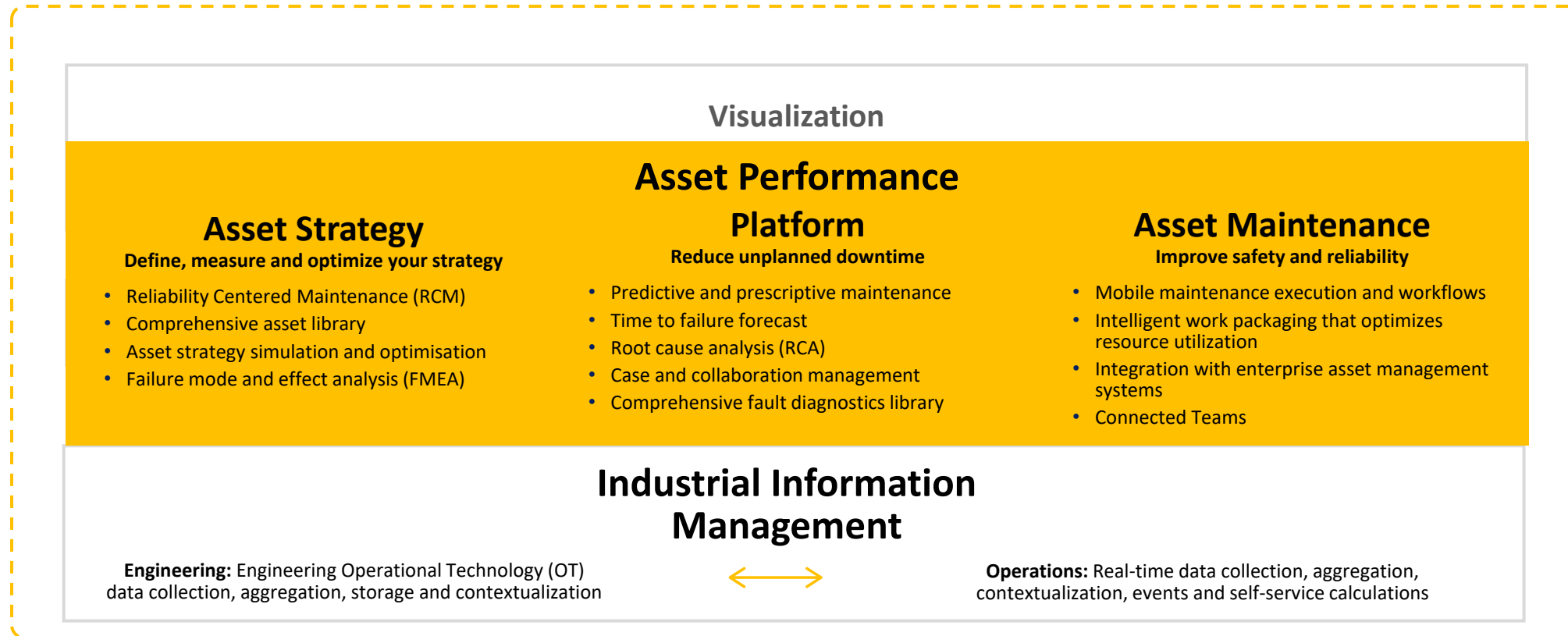
Digital Engineering

- Intelligent Asset Management
- Asset Performance Management (APM)

Advisory & Optimisation

- Asset Strategy Development
- Asset Management Policy
- Asset Criticality Analysis







Dashboard

Reports

Scheduler

Parts Reorder List

Assets

Asset Transfer Transaction

Assignments

Condition Monitoring

Contacts

Failure Modes (Sub)

Interactive Plans

Parent Functional Locations

Parts

Problem Cause Remedy

Projects

Purchase Order

Assets

New

Actions

Table

Settings

Saved views

☐	Number	Image	LIVE-Asset Portal ID	Available In LIVE-Asset	LIVE-Asset Component ID	Asset Description	Asset Type	Serial Number	Model Number	Building	Manufacture
☐	14			False		Atlanta - Line 101 - Pump Motor 205	Production				
☐	13			False		Motor 1	Manufacturing				
☐	11			False		Cross Model 55 Universal Gear Chamfering Machine	Manufacturing				
☐	10			False		LeBlond Gap Bed Engine Lathe	Manufacturing				
☐	9			False		Kearney & Trecker Horizontal Mill	Manufacturing				
☐	8			False		Bolster Plate - 144" x 54" x 9"	Manufacturing				

25

Displaying 1-13 of 13 results



Connected Reliability: eMaint is Just the Beginning

Your maintenance technologies work better together, and so does your workforce.



Everything is connected, from data to teams

Break down your information silos. Automate time-wasting tasks. Maintenance & reliability professionals can communicate quickly on the mobile app, send POs to accounting, tap into production monitoring data, and more.



See machine failures coming

Predict faults and failures with eMaint condition monitoring. Automate work orders to trigger in response. You increase your uptime, reduce MTTR, and strengthen reliability.



A maintenance strategy to rule them all

How do you transform maintenance from a cost into a smart investment? What works for *your maintenance program—and what doesn't*? Digestible, data-driven insights show you the way.

Meet the Speaker



Zulfikar Umar

Fluke Reliability Systems Manager, Africa

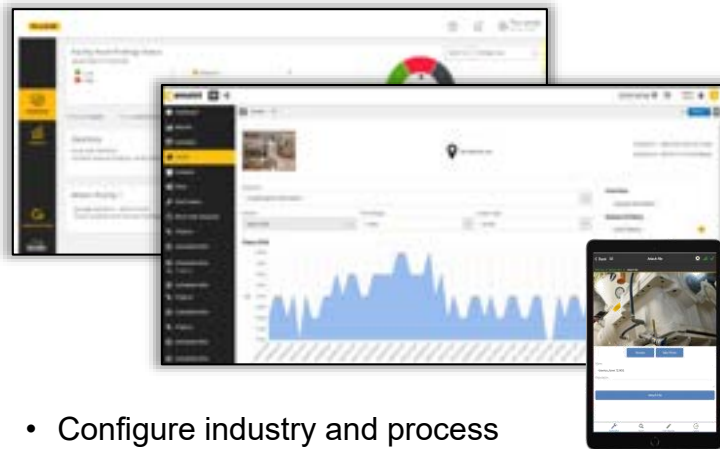
- Seasoned Vibration Analyst with over 25 years field experience in Predictive Maintenance and Asset Efficiency Optimization on rotating equipment
- Focus on Connected Technologies and Remote Diagnostics and Cloud based solutions
- Passionate about the product, software and services that drive the Connected Reliability Journey towards operational success.
- BTech Mech Eng, VA CAT3, IR CAT2



Building on Connected Reliability



Innovative Software Solutions



- Configure industry and process specific workflows
- Open solution/ integration capabilities
- In-depth analysis, issue tracking, predictive maintenance

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Reliability

**Connected
Reliability
Ecosystem**

Asset and Condition Knowledge



In-house/onsite
expertise



Remote
expertise



AI analysis



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Purpose-built Tools



Continuous / periodic
vibration monitoring

Route-based or incident-based
data collection and analysis for
vibration and balancing

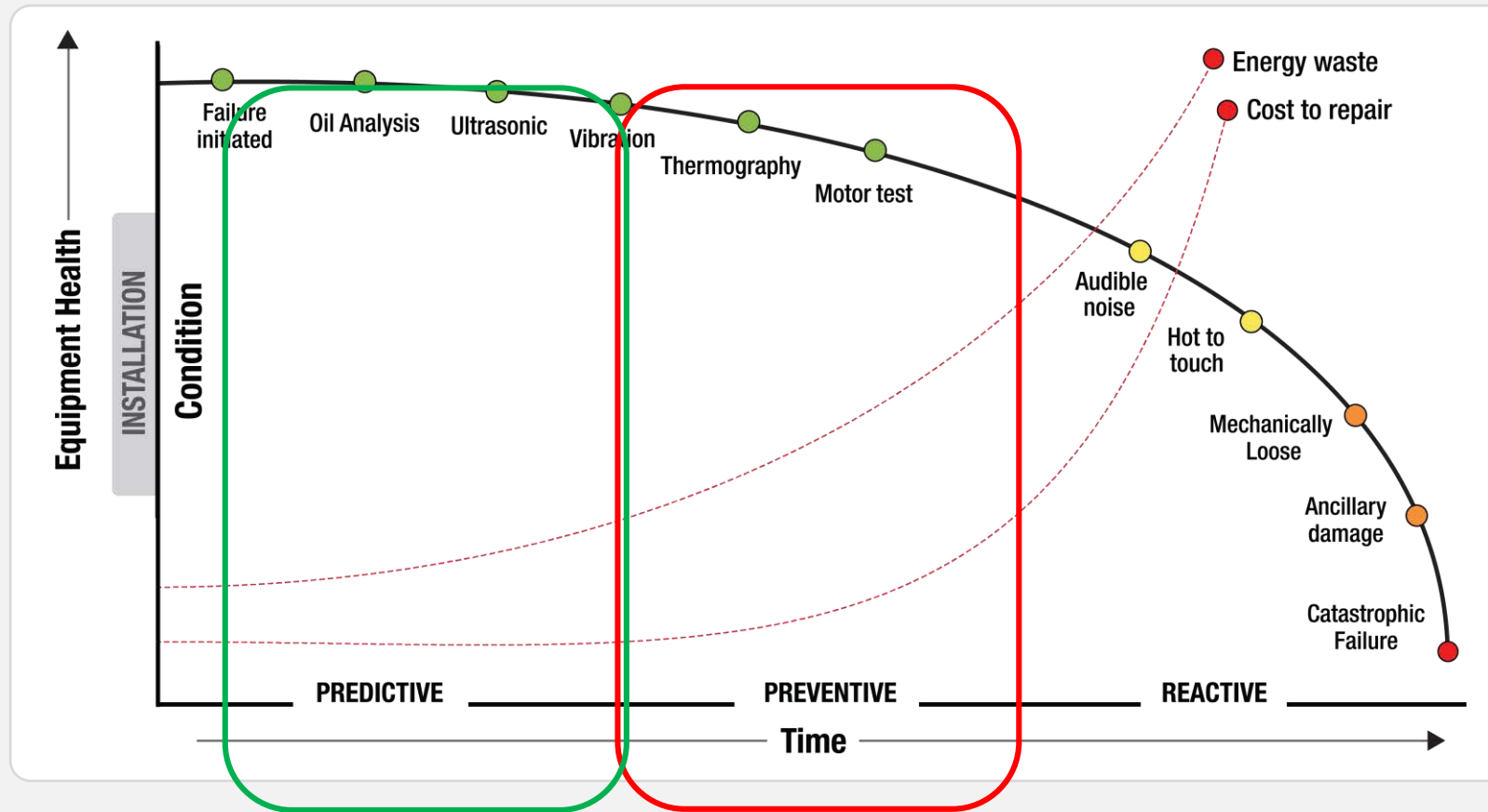


Mitigate alignment related
issues during Install/
Refurbish/ Repair

Other modalities like acoustic,
thermal and power condition



Using the P-F Curve to Guide a Reliability Program



Optimal installation

yields high performance from the beginning of asset life

Early discovery

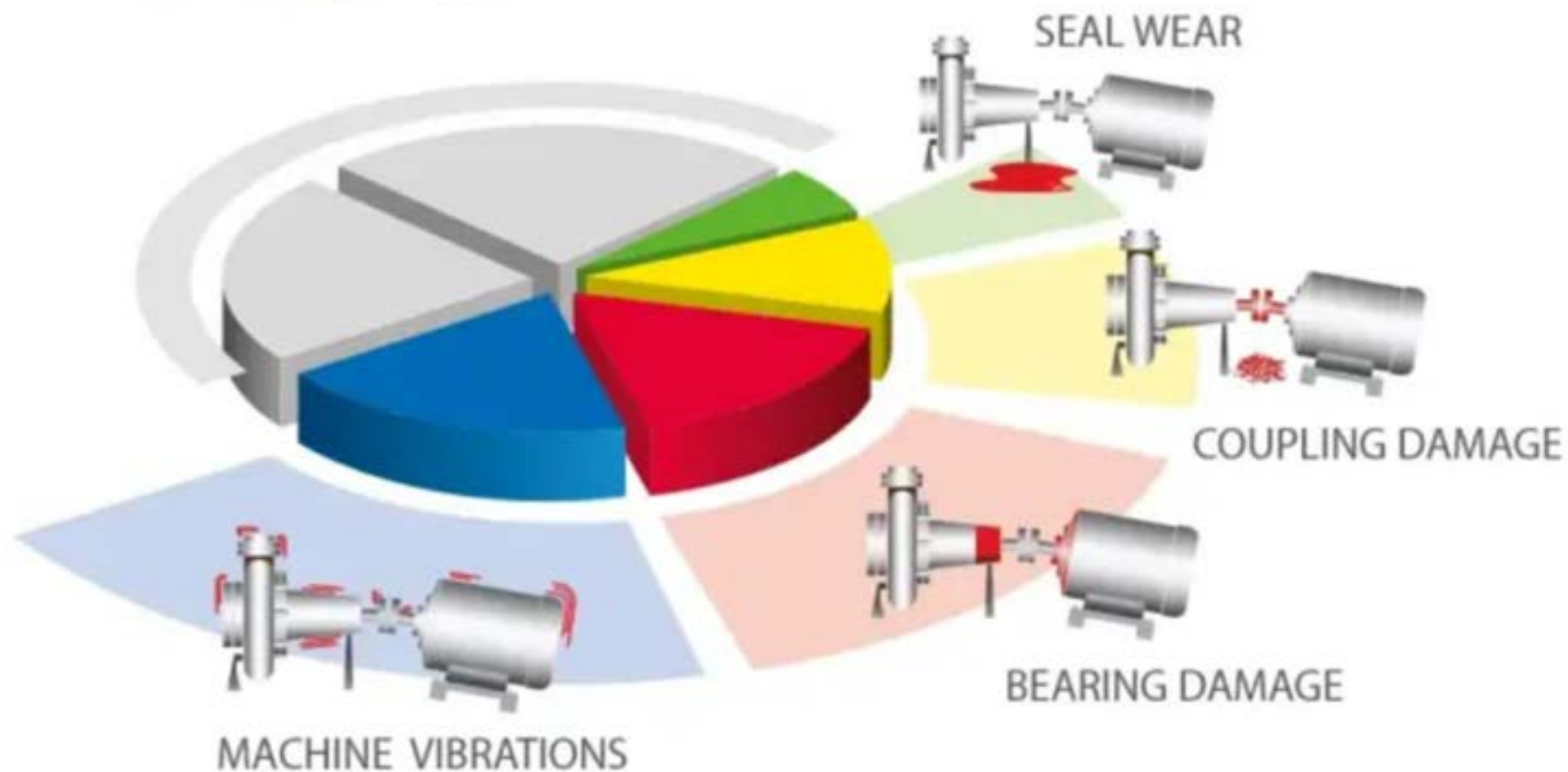
of potential performance problems is key to continued high reliability

Acting promptly

maintains high performance, energy efficiency, and low cost to repair

The major consequences of misalignment on the condition of the machine

Over 50% of machine failures are caused by misalignment



PRÜFTECHNIK shaft alignment product line-up

SHAFTALIGN®
touch



OPTALIGN® touch



ROTALIGN® touch



ROTALIGN® touch EX
Upper-Range



sensALIGN 3



sensALIGN 5



sensALIGN 7

Accessories



Shims

Precut shims designed to speed up machine alignment



Brackets

Solid and versatile sensor mountings



PULLALIGN

Pulley alignment with laser technology



EDDYTHERM 2x

Induction bearing heater for medium-sized bearings



EDDYTHERM Portable

Portable induction bearing heater

FRS Condition Monitoring : Vibration product line-up



Entry Level Handheld

Expert Level Handheld



Wireless



VIBROTECT
OR
Transmetteur
4-20 mA

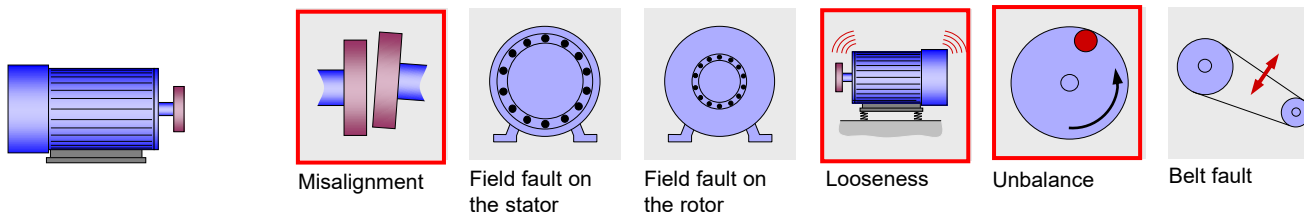


VIBREX
Protection de Machine

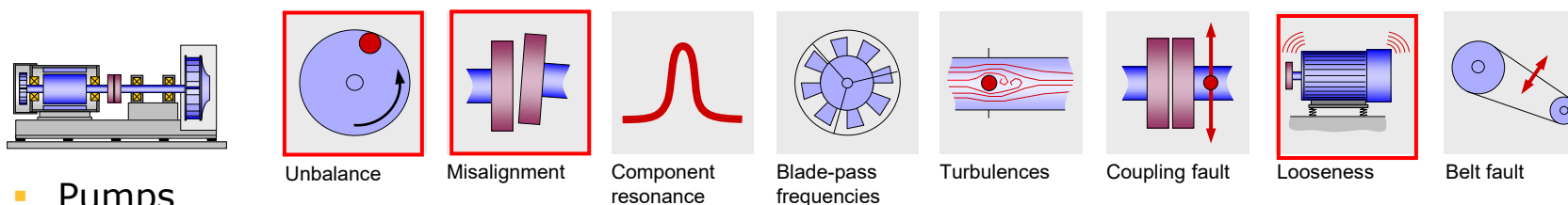
Online

Vibration causes on standard machines

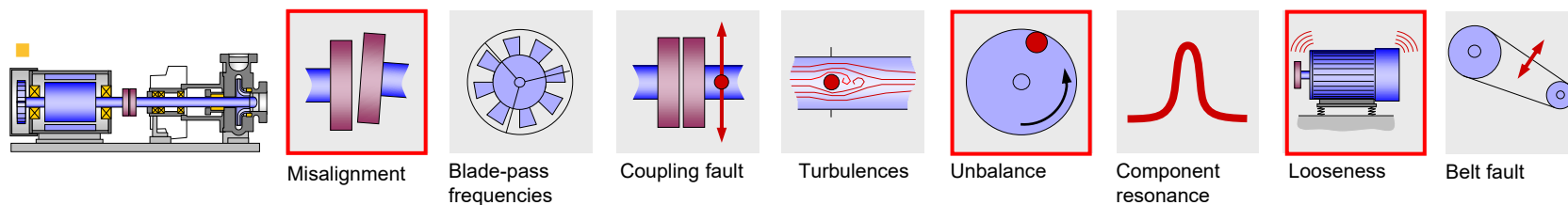
- Standard machines most commonly used in industry:
- Electric motors



- Fans



- Pumps



- For vibration evaluation the machine arrangement and operating conditions have to be taken into account!

Watchman 360™ System

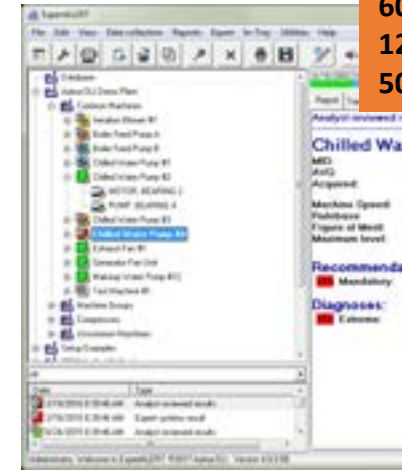
Remote Setup App



Vibration Data Sources



Expert Automated Diagnostic System



Vibration AI

6000+ Trained Diagnostic Rules
1200+ Identifiable Fault Conditions
50+ Asset Component Library

Asset Data Lake



100,000
Unique Assets



150,000
Asset Components



3,000,000
Machine Tests

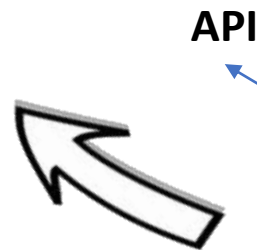


150,000
Component Specific Faults



100 Trillion
Individual Vibration Test Points
approximately

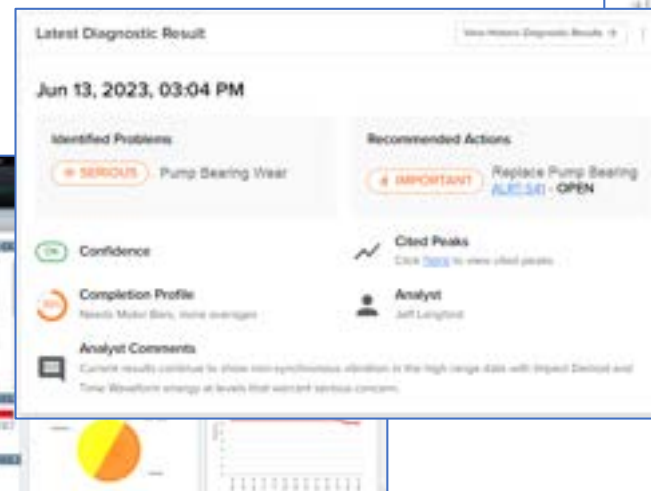
Level 2, 3, 4 ISO Certified
50k Assets Monitored
350k Annual Machine Tests



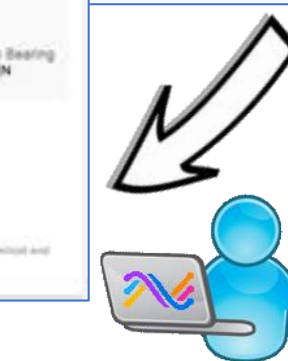
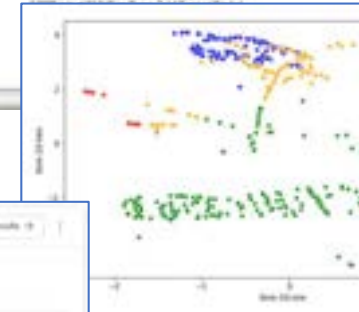
API



Program Management



Watchman Portal™



Watchman Services



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Connected Reliability Starter Kit

Select combination of condition monitoring, alignment, Infrared and acoustic emission technologies bundled with the right software and training and calibration service to get your program off the ground quickly.

Technology	Product	Description
CM	Fluke 805 FC	Vibration Meter
ALI	Shaftalign ALI 53.001 OP ROW AD	Laser Alignment Tool
	Pullalign ALI 2.004 SET	Belt Alignment Tool
	Shim Set ALI 2.860- KP	Stainless Steel Shim Kit
IR	Fluke iSee TC 01 A	Mobile Thermal Camera
AE	Fluke ii915	Acoustic Imager
SW	Fluke Connect App	CM, IR, AE App
	Alignment Reliability Centre 4.0	Alignment Software

Institute	Course	Certificate
Mobius	Asset Reliability Practioner ARP Cat 1	Examination
	Vibration Seminar VA Cat 1	
Pruftechnik	Vibration Seminar Level 1	Attendance
	Machine Diagnostic Practical Applications	
	Alignment Seminar Level 1	



Connected Reliability Intermediate Kit

More comprehensive equipment with software, training and service for the next progression level in your program

Technology	Product	Description
CM	VibScanner 2 Triax	Handheld Data Collector
	VibXpert 2 Analyser	Handheld Data Col & Analyser
	VibXpert 3 Advanced Analyser	Handheld Data Col & Analyser Adv
	VibGuard Compact	Online 6 ch Data Acquisition Device
ALI	Optalign ALI 53.002 OP ROW AD	Laser Alignment Tool Mid
	Rotalign ALI 53.003 OP ROW AD	Laser Alignment Tool Adv
	Pullalign ALI 2.004 SET	Belt Alignment Tool
	Shim Set ALI 2.860- KP	Stainless Steel Shim Kit
IR	Fluke TiS 75	Infrared Camera
AE	Fluke ii915	Acoustic Imager
SW	Omnitrend Centre	Vibration Software
	Expert Alert Diagnostics	Vibration Software
	eCM	Vibration Software
	Fluke Connect App	CM, IR, AE App
	Alignment Reliability Centre 4.0	Alignment Software
	eMaint	CMMS system

Institute	Course	Certificate
Mobius	Asset Reliability Practioner ARP Cat 2	Examination
	Vibration Seminar VA Cat 2	
Pruftechnik	Vibration Seminar Level 2	Attendance
	VibScanner 2 & Omnitrend Centre	
	Operational Balancing	
	Rolling Bearing Diagnostics	
	Alignment Seminar Level 2	

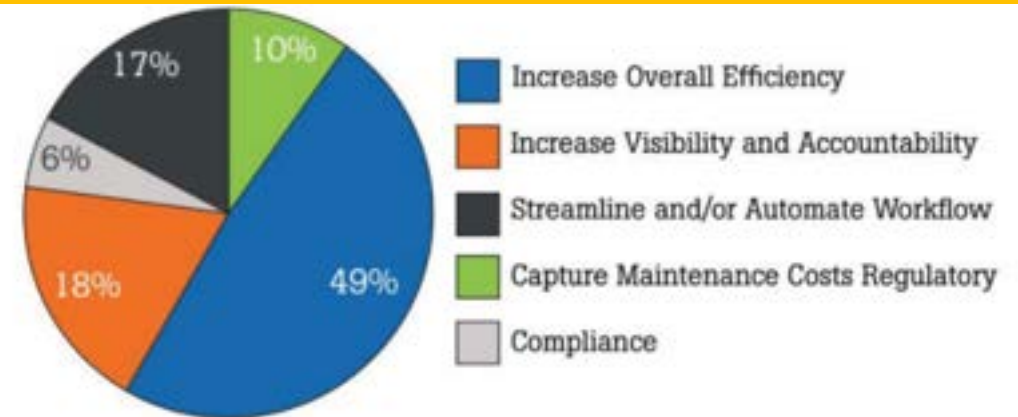
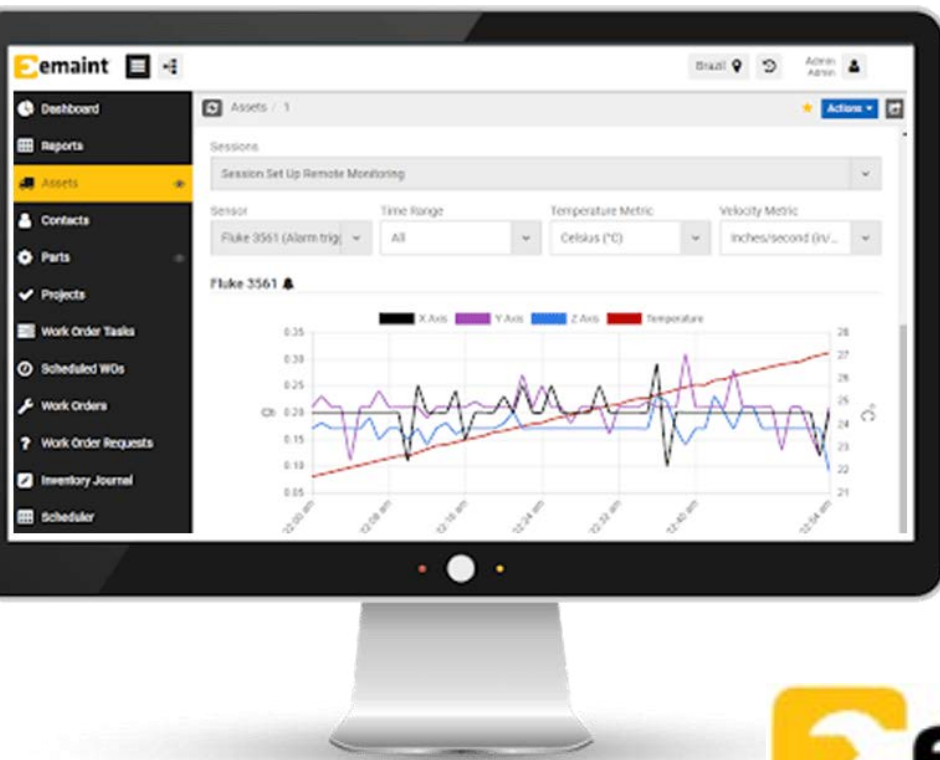


eMaint CM & CMMS

eMaint computerized maintenance management system (CMMS) software from Fluke is an awarding winning solution helping businesses manage enterprise assets, streamline workflows, track inventory and schedule preventative and predictive maintenance.

CMMS automates maintenance functions and is used in industrial settings where any type of equipment or asset requires maintenance and upkeep, providing a central repository for all asset data, works orders, materials and inventory and other vital information for maintenance teams.

Spending less time on administrative tasks allows the team to devote more time to achieving reliability goals.

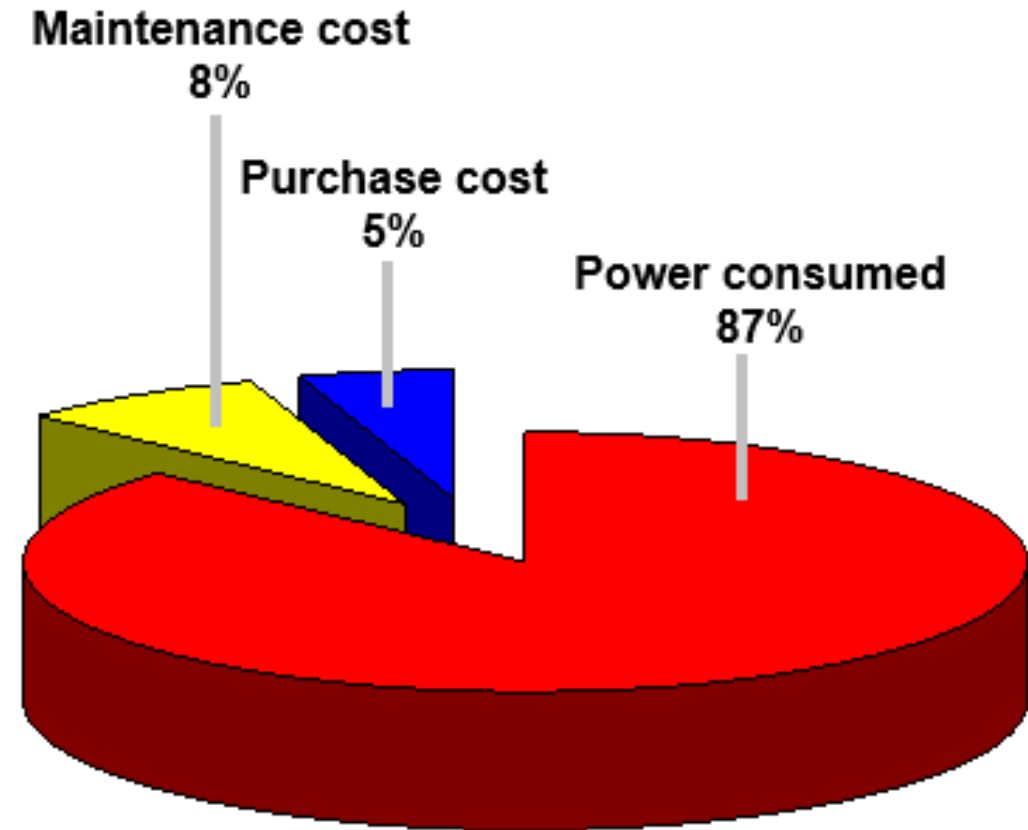


Power Consumption

The power consumption can reach 90% of total life cycle cost of operating in general

Misalignment can increase power consumption by up to 10%

Life cycle costs of a water pump



75kW Pump Set Misalignment Cost Evaluation

Data in yellow boxes can be modified to suit plant details and costs

	Alignment Data	KW Rating	Number of Units
Measured misalignment	0.75 mm	15 KW	0
Power loss	1.68%	35 KW	0
Cost of power per KWh	1.61	75 KW	1
Operating hours per day	24	125 KW	0
Operating days per year	320	300 KW	0

Total additional cost of power consumed across plant 14786.06



R14 786.06



Data in yellow boxes can be modified to suit plant details and costs

	Alignment Data	KW Rating	Number of Units
Measured misalignment	0.10 mm	15 KW	0
Power loss	0.15%	35 KW	0
Cost of power per KWh	1.61	75 KW	1
Operating hours per day	24	125 KW	0
Operating days per year	320	300 KW	0

Total additional cost of power consumed across plant 601.05



R601.06

Cost of power consumption on a poorly aligned 75kW pump set versus a well aligned pump is 23.5x higher

QUESTIONS?



Thank you!

To learn more about **Fluke Reliability** and our **Webinar Series**



SURVEY

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WEBINAR SERIES

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<https://www.accelix.com/community/best-practice-webinars/>



DEMO

Visit [Accelix.com](https://www.accelix.com) for a free demo of our Connected Reliability Framework.



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THANK YOU!