HURYZA

NEST INDUSTRY 4.0

Predictive Maintenance Solution

acoem
CREATING ENVIRONMENTS OF POSSIBILITY

How do you shorten the path between monitoring and informed action?

For more than 50 years we have been designing and manufacturing class-leading multi-parameter environmental monitoring and industrial reliability solutions. We offer our global customers a complete range of integrated measurement technologies and services, ensuring that your data is always accurate and your equipment operates with maximum efficiency.

We believe in helping you find the right balance between progress and preservation. Empowering industries, government authorities, scientists and communities to make knowledgeable decisions based on reliable data, our holistic solutions lead to operational excellence and better outcomes.

At Acoem, we create environments of possibility.

Nest Industry 4.0

Predictive Maintenance Solution

Maintenance and reliability professionals today have adopted modern online condition monitoring and protection technologies for monitoring critical machinery assets. A connected and fully-integrated plant-wide condition monitoring system offers a holistic view of the entire plant, enabling powerful predictive analytics. The unparalleled amount of data collected by such a system empowers reliability managers and proactive maintenance teams to make smarter decisions. NESTi4.0 is the next evolution in predictive maintenance strategy, helping the transition to agile and accurate real-time condition monitoring of an entire industrial facility.

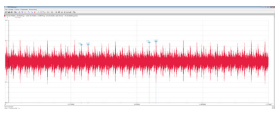
NESTi4.0 Software Platform provides clear, concise and easy to understand information, for everyone involved in maintaining industrial machinery in operational conditions. NESTi4.0 is the most productive vibration analysis software available in the market. In addition to the full range of conventional analysis tools, the user is literally guided through his analysis with the help of a set of innovative tools, like: intuitive machine setup, guided analysis, and ease of access to the automated reports.

Embrace the future of condition monitoring with NESTi4.0 and its revolutionary artificial intelligence to support predictive maintenance in your digital factory.

The only predictive maintenance and diagnostic tool you will ever need

- Easy Access To Big Data
- Intuitive Machine Builder
- Guided Analysis
- Automatic Reporting

Shock Finder™ Index



- Easy shock identification and diagnostic
- Qualifies shocks automatically in the time waveform

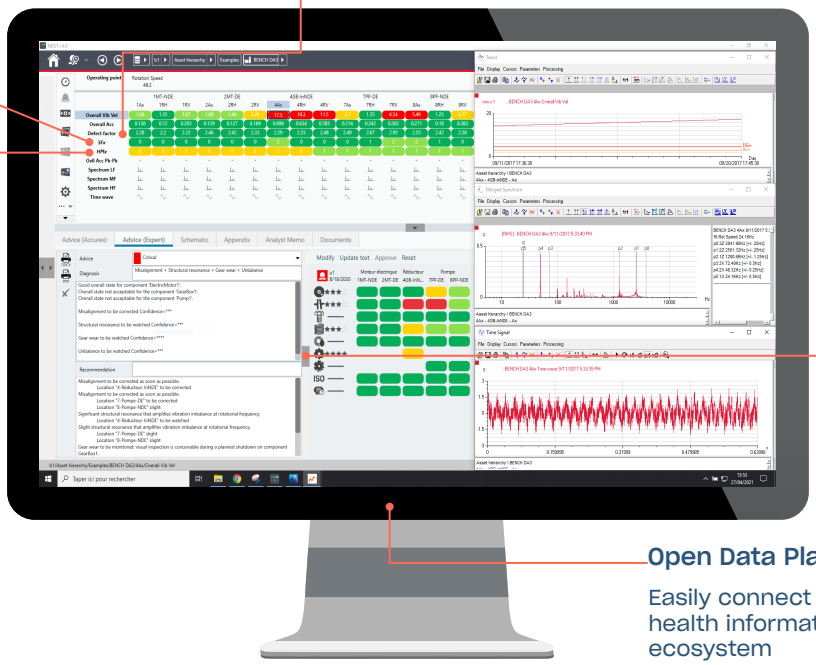
Bearing Defect™ Factor

- Evaluates the roller/ball bearing health automatically
- Continously grows during the bearing life cycle
- Early fault detection

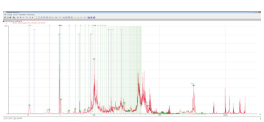
Accurex™

Automatic machinery diagnostics

- The color of the machine (Green, Yellow, Red) corresponds to the first level diagonostic and shows the urgency of the analysis
- Results of faults identified are pre-filled and can be modified by the user



HarmoniX™ Index



- Full frequency high resolution merged spectrum
- Quantifies harmonic families in spectra automatically

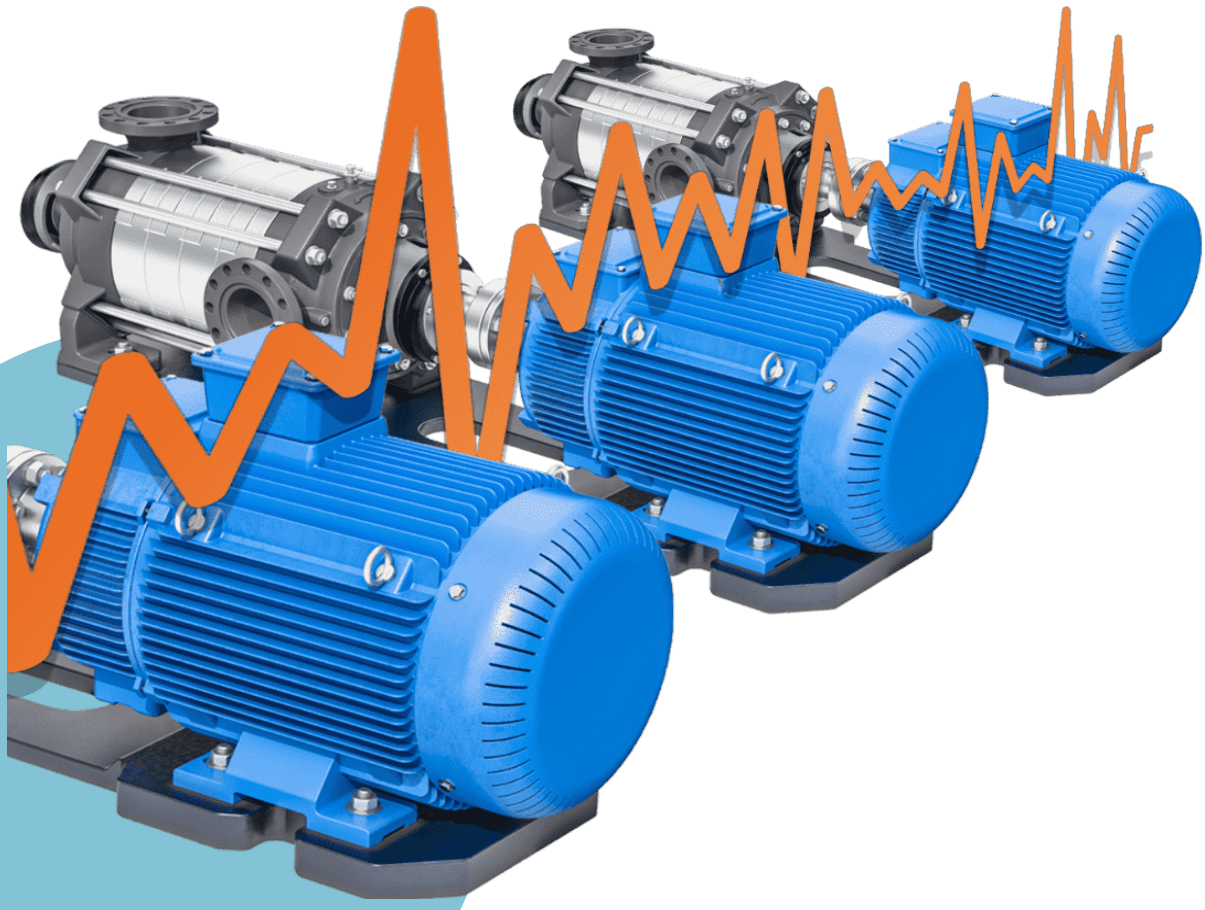
Open Data Platform

Easily connect your assets health information to your ecosystem

- Automatically publish all measurements and diagnostics results available from the matrix
- Standard OPC UA and CSV export formats

Nest i4.0 Integrates Your Entire Monitoring Program

- **Fast visual insight** into potential machinery health issues
- **Secure worldwide access** to your program's data set
- **Software augmented diagnostic and predictive analysis:** AI powered and based on ACOEM's 50+ years of expertise in predictive maintenance technology
- **Wireless monitoring and diagnostic** using the portable FALCON analyzer or the EAGLE wireless monitoring solution
- **Open data platform** with standard format publication allowing easy integration in your digital factory.



Machine Health Matrix

Fast, easy identification of the health of your machines.

- Analyze a machine's health in just one screen
- Overview of all parameters and easy drill-down to each individual parameter and point
- Manage and access data for even the largest machines
- Full reporting capability
- Add and customize parameters in no time
- Direct access to waveforms and spectra

NEST i4.0 is powerful and productive tool to manage the predictive maintenance program

It can be managed even without specific vibration knowledge as it includes an automatic setup based on machine kinematic description.

In addition, ACOEM ACCUREX™ analysis method offers the possibility to get automatic diagnosis. For the vibration analyst, it is a way to save a lot of time as he/she can focus on machines which really needs to be looked at in details. This analysis is also speed up with dedicated functions:

- The Health Matrix
- SFx & HMx Indexes
- Merged Spectrum
- Shock Finder Filter

"With NESTi4.0 machine builder, it is possible to create a full reliable machine setup with a hundred of parameters in less than a minute, without any vibration expertise required"

Accurex™ Diagnostic Matrix

Machine diagnosis at a glance

Access machine diagnostics at a glance:

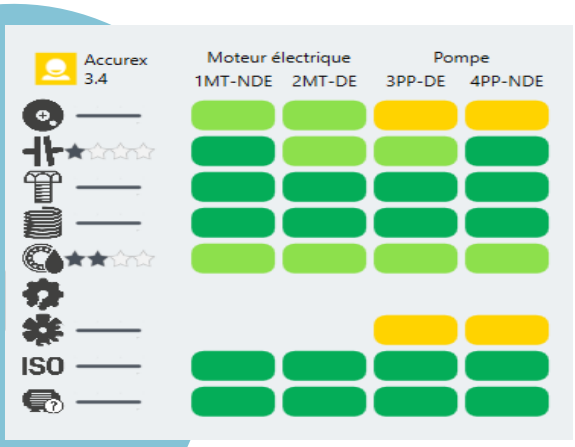
- Know what the defects are
- Know where the defects are located
- Know how important they are
- Know the confidence level

Accurex™ Matrix available for any machine

- Smart display of the Accurex™ automatic diagnostic
- Smart display of the real expert diagnostic

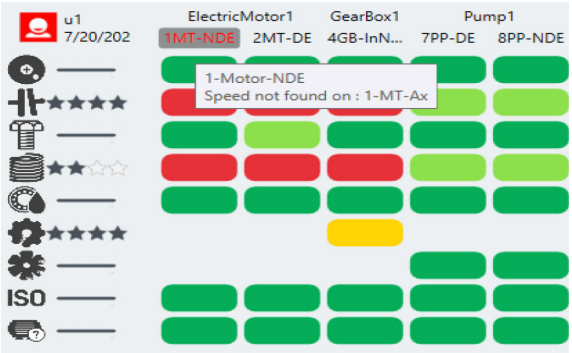
Expert productivity boosted by Accurex AI

- Save up to 30% additional time in your periodical Analysis thanks to the automatic consideration of your previous diagnostic



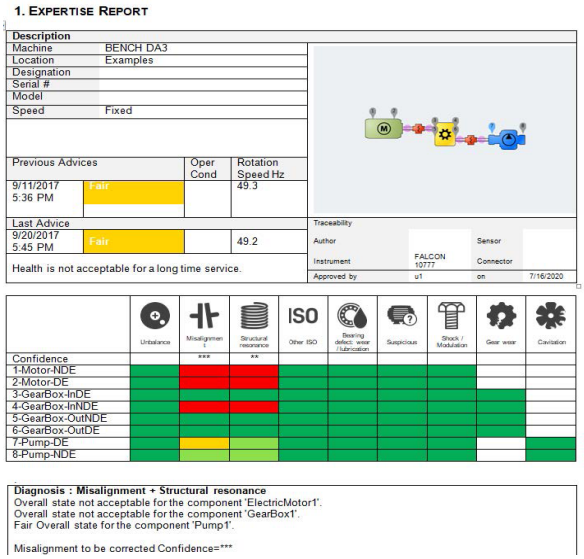
Accurex diagnosis: "No significant change since last approved advice"

Running speed detection alerts



Enhanced reporting productivity

- Save up to 50% on reporting time
- Automatic text generation from the matrix
- Can be modified manually if needed
- Accurex™ Matrix included in report



1. EXPERTISE REPORT

Description	
Machine	BENCH DA3
Location	Examples
Designation	
Serial #	
Model	
Speed	Fixed

Previous Advices	Oper Cond	Rotation Speed Hz
9/11/2017 5:36 PM	Fair	49.3
Last Advice		
9/20/2017 5:45 PM	Fair	49.2

Health is not acceptable for a long time service.

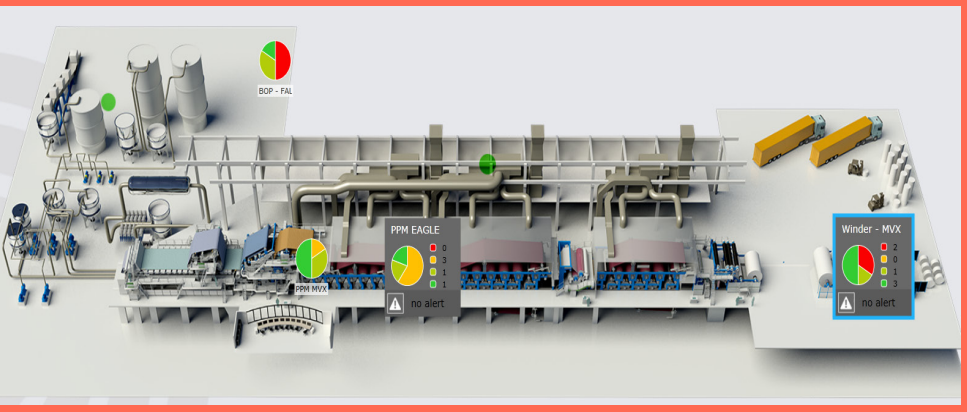
Traceability
Author
Sensor
Instrument FALCON 10777
Connector
Approved by u1 on 7/16/2020

	Unbalance	Misalignment	Structural resonance	ISO Other ISO	Bearing defect: wear / lubrication	Suspicious	Shock / Modulation	Gear wear	Cavitation
Confidence		***	**						
1-Motor-NDE									
2-Motor-DE									
3-GearBox-InDE									
4-GearBox-InNDE									
5-GearBox-OutNDE									
6-GearBox-OutDE									
7-Pump-DE									
8-Pump-NDE									

Diagnosis : Misalignment + Structural resonance
Overall state not acceptable for the component 'ElectricMotor1'.
Overall state not acceptable for the component 'GearBox1'.
Fair Overall state for the component 'Pump1'.

Misalignment to be corrected Confidence=***

"Accurex™ Artificial Intelligence offers unrivalled instant automatic diagnostic capabilties. It is the result of the modelization of our 50+ years of experience through a Bayesian network, additionnally powered by machine learning on our long history of qualified diagnostics."



Easy Access To Big Data

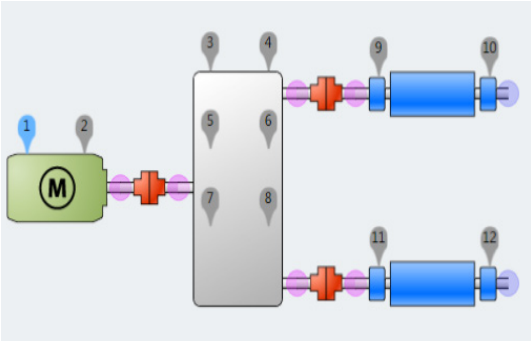
NESTi4.0 Software provides exactly that, for everyone involved in maintaining industrial machinery in operational conditions.

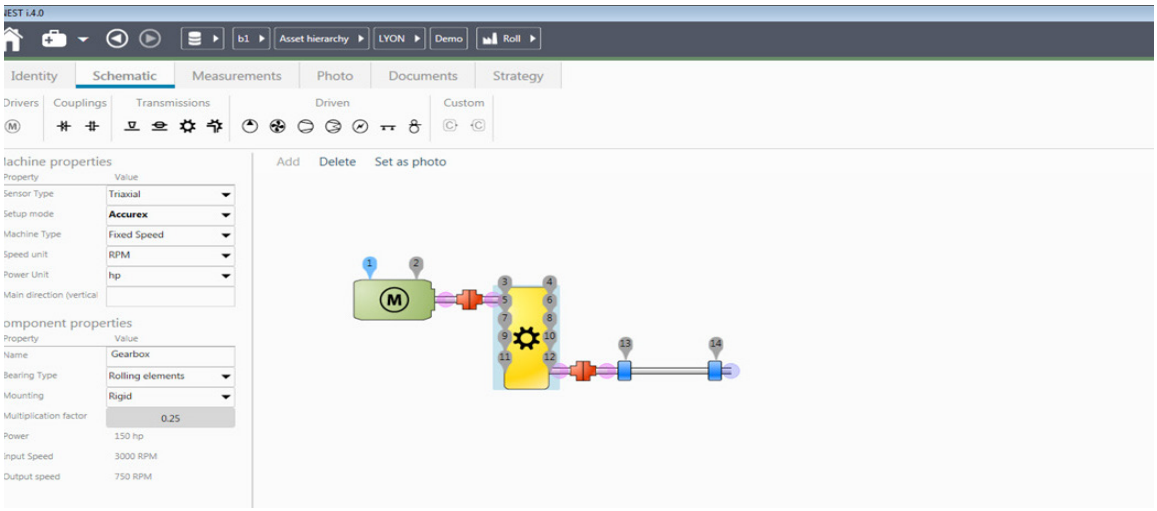
Intuitive and resolutely visual, it makes the assets' health condition available to staff at all responsibility levels, regardless of prior expertise. Reports are instantly accessible from anywhere around the world, via an ordinary internet connection.

Machine Builder

Quick and intuitive set up: drag and drop

- Build complex machines with hundreds of vibration parameters in just minutes
- Create virtually any machine using built-in or customized templates
- Compatible with Accurex™ automatic diagnostics
- Accessible to all staff levels
- Build what you will see during the analysis
- Easily add or modify a parameter or signal on one of several measurement points at the same time
- Create custom complex machines with the use of the custom component
- Customizable: number of bearings, 1 or 2 shaft outputs, speed ratio for each shaft
- Free component labelling.



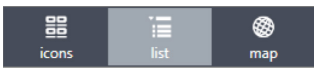


Supervision Tool

Easily browse your assets

- Show the machine according to the alarm or expert advice

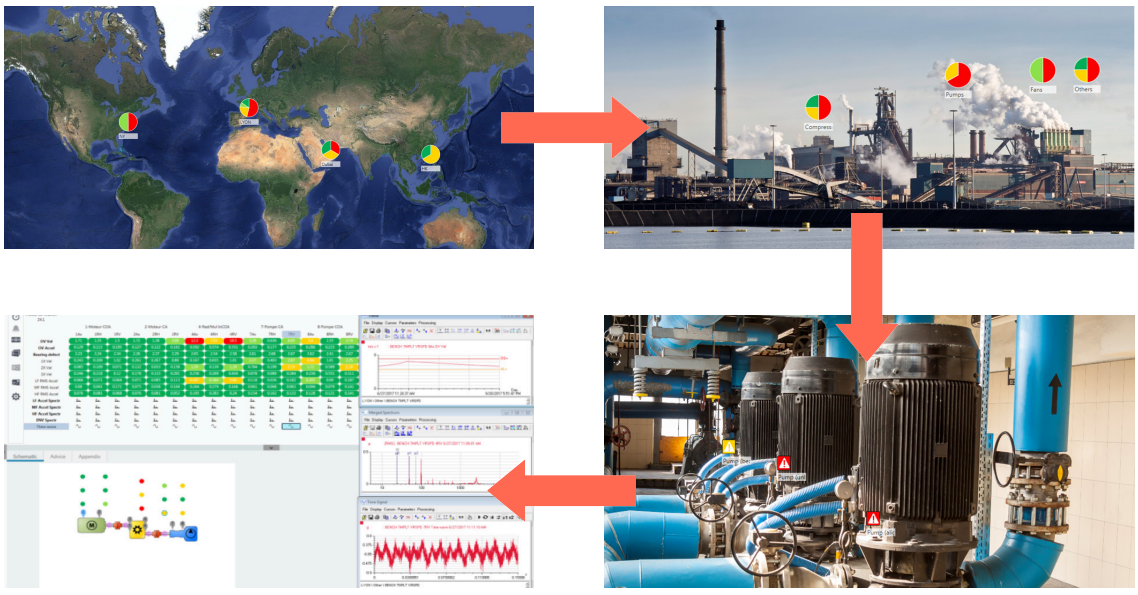
- Digital display: Icons / list / picture



- Use the Flat mode to show all assets in one view

World-wide data center

- Display can be customized to the user's profile (analyst, reliability engineer, manager and more)
- Any place, any time login allows users to access reports via the optional NEST Dashboard.



Drill down from a global view to an individual machine

About **Acoem**

Creating environments of possibility

At Acoem, we create environments of possibility - helping organisations find the right balance between progress and preservation - safeguarding businesses and assets, and maximising opportunities while conserving the planet's resources. We deliver unrivalled, interoperable AI-powered sensors and ecosystems that empower our customers to make enlightened decisions based on accurate information.
Together with 150 distributors, our 800+ employees work across 27 offices, 5 manufacturing facilities and 3 R&D centres in 11 countries to provide trusted, holistic data solutions for customers worldwide.
Acoem links possibilities with protection.

For more information, please visit **acoem.com**

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