

About Artesis

- Artesis, an affiliated company of GE, provides customers with innovative condition monitoring solutions. Initial applications of the technology include the Space Shuttle main engine, helicopter engines and gas turbines with funding from NASA, US Army, the State of Florida and Pratt & Whitney.



Invensys
MOTOR SYSTEMS

- GE, Invensys and Sumitomo are among the distributors of Artesis

SUMITOMO



**Technology
Award,
1998**

TUBITAK-TUSIAD-
TTGV



**The 40
Best
Products
of 2000**

Control
Engineering
Magazine, USA



**Technology
Innovation
Award,
2007**

The Institution of
Engineering &

The essence of CM & PdM -difficulties of their implementation

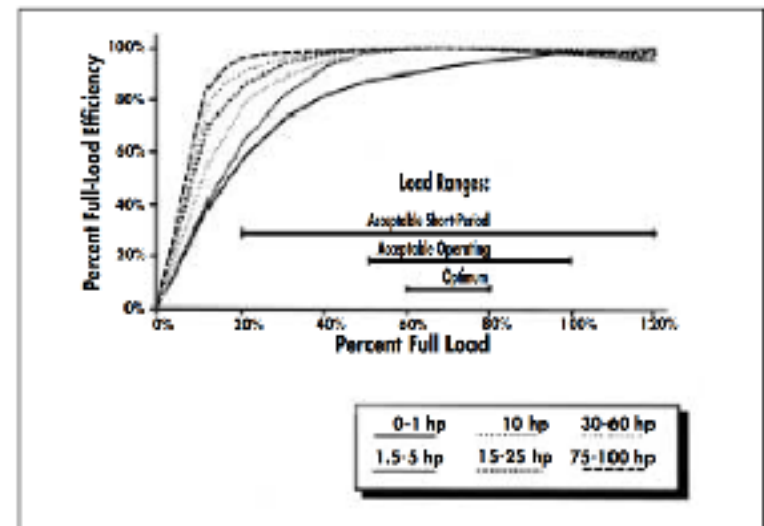
- ❑ Sustainable predictive maintenance is essential for increased production and energy efficiency.
- ❑ Although the benefits of a predictive maintenance program is well recognized, only less than 1% of companies have sustainable predictive maintenance program due to:
 - ❑ Lack of a simple and easy to use condition monitoring device
 - ❑ Lack of actionable information for maintenance scheduling
 - ❑ Time consuming data gathering chores
 - ❑ Data analysis requires expertise
 - ❑ Inordinate reliance on calendar based periodic maintenance
- ❑ Information rather than data provided by MCM , its simplicity and its ease of use makes it possible to establish a sustainable predictive maintenance program



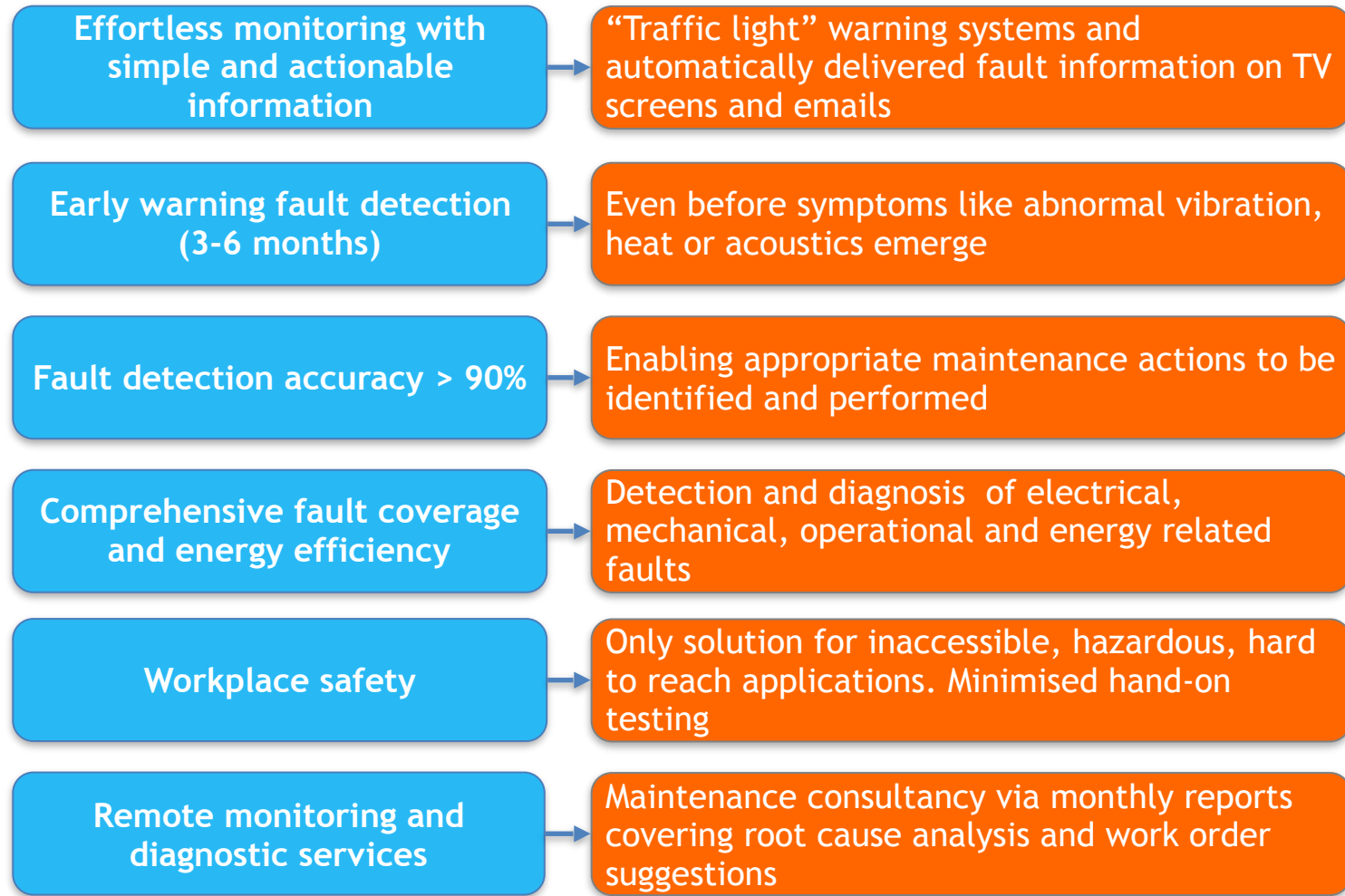
Why monitor motors?

- ❑ Majority are out of sight-out, out of mind ... until they break.
- ❑ For the petroleum and chemical industries the average downtime costs are \$87,000 per hour.
- ❑ Because they're a major energy consumer!
- ❑ In the US alone, 1.2 billion+ motors consume 20% of all energy used in the US.
- ❑ These same motors consume 59% of all electricity generated.

Motor efficiency is best at maximum load. MCM measures and reports on motor efficiency. Owners then have the info they need to size a motor correctly for the specific application.

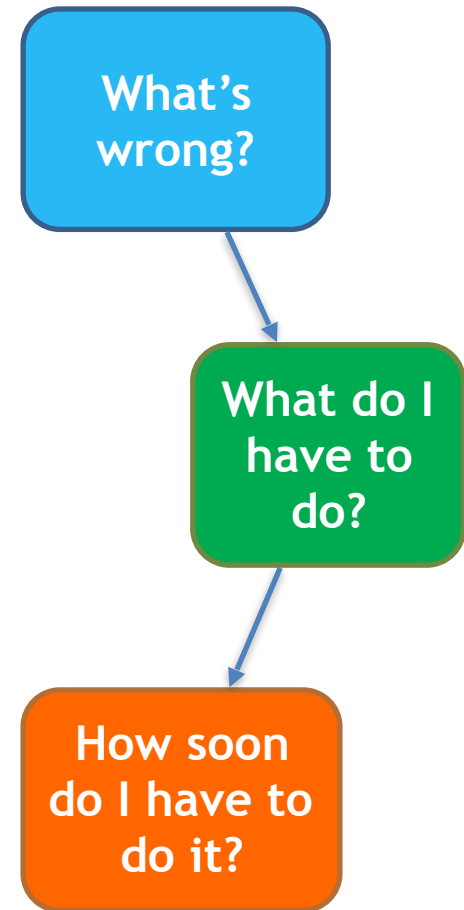


Why monitor motors with MCM



Our value for your customers

- ❑ We understand maintenance personnel do not have time for monitoring and diagnosis and need answers to the following questions:
- ❑ MCM's periodic condition assessment reports can answer these questions in a concise manner with simple work order suggestions for maintenance and repair.



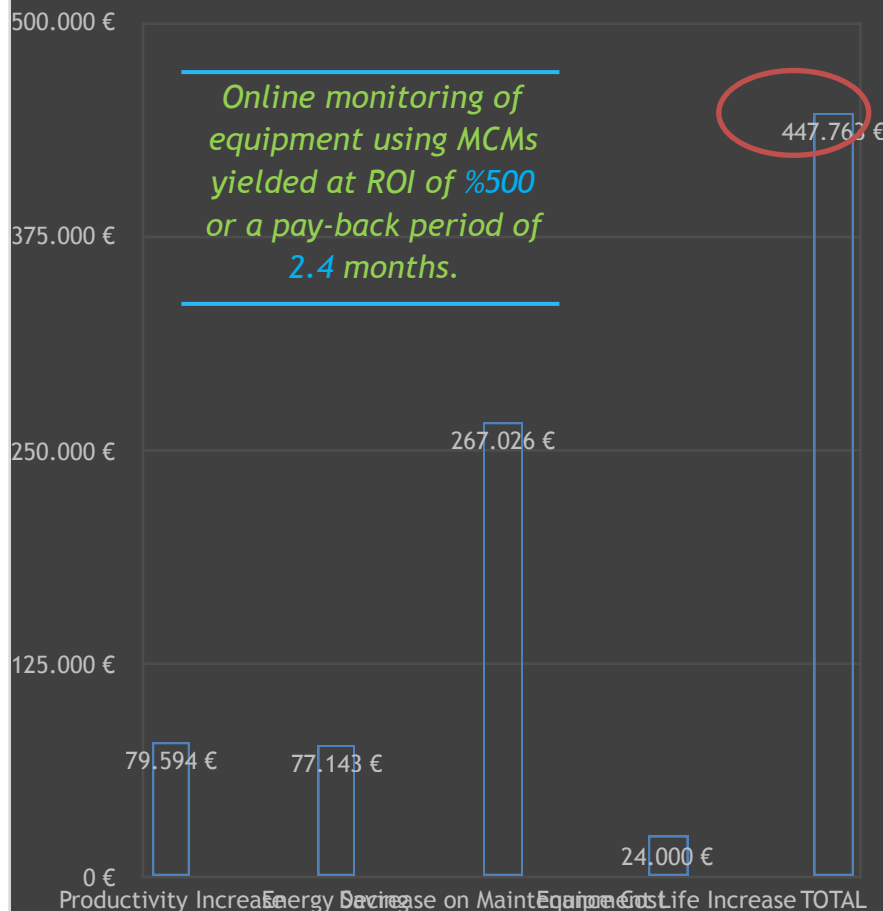
Value case

- ❑ Up to 5% increase in productivity; reduction in number of equipment downs and increase equipment availability
- ❑ 2% - 4% energy savings
- ❑ 10% - 50% departmental reduction in maintenance-related OPEX due to avoidance secondary damage and emergency repair
- ❑ Up to 10% CAPEX efficiency saving by avoiding redundancy and extending equipment life
- ❑ Reduction in performance penalties and damage to image
- ❑ Process safety improvements

Cost saving & ROI cases

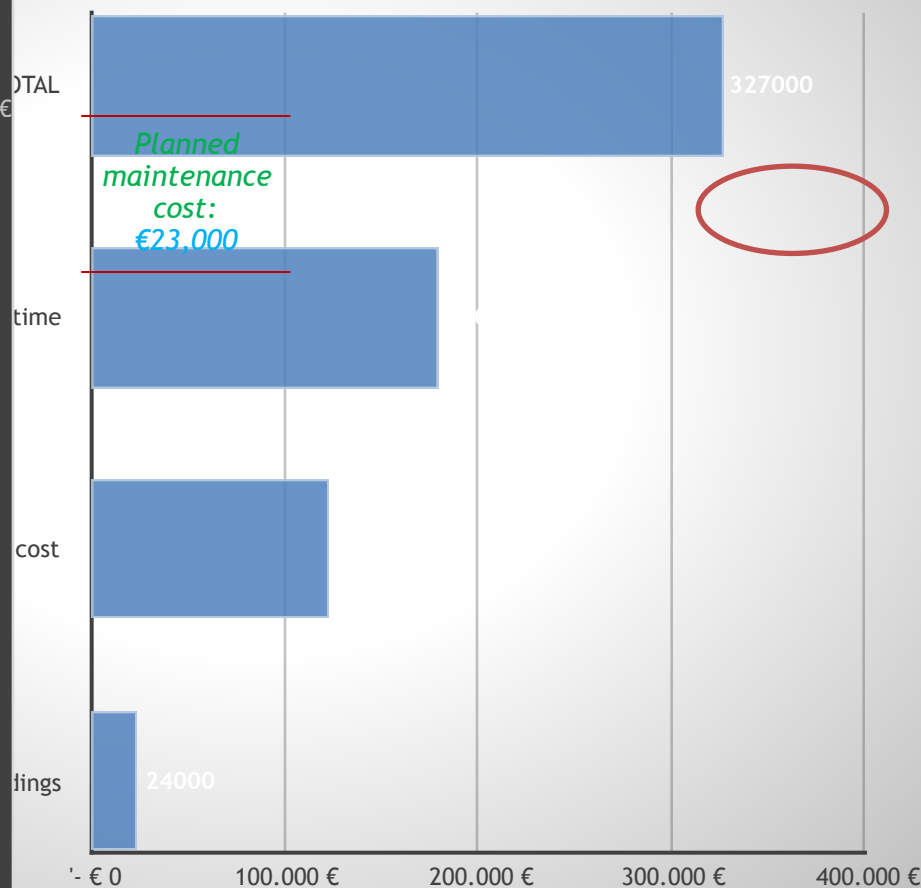
Mineral processing plant

Approximate annual cost saving during the pilot application for 34 equipment





Oil refinery plant compressor

prevention of a burned propane compressor (440kW)



What does Artesis offer?

- Artesis **MCM** and **AMT** Portable Units offer continuous condition monitoring and instant condition assessment

Continuous Monitoring	Instant Assessment
<p data-bbox="247 825 517 868">Artesis MCM</p> 	<p data-bbox="1020 825 1290 868">Artesis AMT</p> 

Artesis has multiple customers...

Water	Pharmaceutical
	
Food & Beverage	Automotive
	

...across multiple industries

Oil & Gas	Metal
 <p>Petkim</p> <p>MAERSK</p> <p>Exxon</p> <p>centrica</p> <p>FLUXYS</p> <p>DRAGON LNG</p> <p>Shell</p>	 <p>POSCO</p> <p>FERRO DÖKÜM</p> <p>ERDEMİR</p> <p>ALCOA</p> <p>ASSAN ALÜMİNYUM</p> <p>TÜPRAG</p> <p>SPECIAL METALS</p>
Energy	Transportation
 <p>International Power</p> <p>TALISMAN ENERGY</p> <p>Cummins</p> <p>British Energy</p> <p>AES</p> <p>BAYMİNA ENERJİ</p> <p>SUEZ</p>	 <p>BAA Heathrow</p> <p>Avrasya</p> <p>LOUIS</p> <p>babcock</p> <p>MAERSK</p> <p>ROYAL NAVY</p> <p>PRINCESS CRUISES</p>