What is at stake?

- Our customer have their own business to take care of
- Their businesses need our energy products

- If our products fail to perform, our Customers’ businesses are at stake
- Everything needs to be done so the reliability is secured
- Condition Based Maintenance (CBM) is a safety net that takes care of our Customers’ installations in case something unforeseen is about to happen.
Scheduled Maintenance is a seamless method to plan your maintenance activities.

CBM alerts you when a premature failure is about to occur. It warns you at an early stage so the worse is avoided.

CBM helps you keep an eye on your planning according to actual performance records. It helps you extending your MTBO.
CBM monitors the equipment conditions, continuously analyses operating data, and calculates the optimal performance parameters by diagnosing and predicting the future condition of the equipment.

- Control and monitoring systems
- Pressure measurements
- Temperature measurements
- Speed measurements
- Load measure measurement
- Communications
- Operational Data
- Centralized datacenter
- Expert Analysis
- Remote Access
- Frequent reporting
- Customer Information
- Customer Follow-up
- Any installation Worldwide

How Does It Work?
Lufussa
Pavana III, Honduras
Type: Oil power plant
Location: Pavana, Honduras
Engines: 16 x Wärtsilä 18V46
Total electrical output: 267.4 MW

Connection type
A continuous connection to this power plant is enable through secured remote access.
Parameters can be followed in Live.
Adventure of the Seas

Royal Caribbean Cruise Lines
Type: Passenger Vessel
Location: Caribbean, USA
Engines: 6 x Wärtsilä 12V46
Total power: 75.6 MW

Connection type
Data are sent from the vessel to Wärtsilä on a daily basis. Parameters are stored and can be accessed remotely whenever needed.
Royal Caribbean Cruise Lines

**Type:** Passenger Vessel  
**Location:** Caribbean, USA  
**Engines:** 6 x Wärtsilä 12V46  
**Total power:** 75.6 MW
CBM Reports are generated based on Customer’s specifications

- **Different Level reports**
  - Operators
  - Middle Management
  - Top Management

- **Performance Reports**
  - Fuel Consumption
  - Operation Data Evaluation
  - Heat Recovery
  - Comments/Suggestions

- **Environmental Reports**
  - Emission Calculations

- **Technical Reports**
  - Forthcoming Maintenance
  - Trends / Alarm analyze
  - Comments / Suggestions

- **Reduce operating costs**
  - Reduced fuel consumption
  - Reduced maintenance costs
  - Increased component life time

- **Trim down number of unplanned stops**
  - Avoid equipment failures

- **Improved maintenance planning**
  - Improved follow up of the installation conditions
- According to several insurance companies, as much as 50% to 80% of claims originate from human factor
- The information was available but the correct actions was not taken
- Savings in a range of 10% to 20% of the total operating costs during the life time
Life Cycle Efficiency Solutions

- Spare Parts & Tools
- O&M Support
- Performance optimizers
- Environmental solutions
- Training
- Safety & Reliability

1995

2005
Thanks