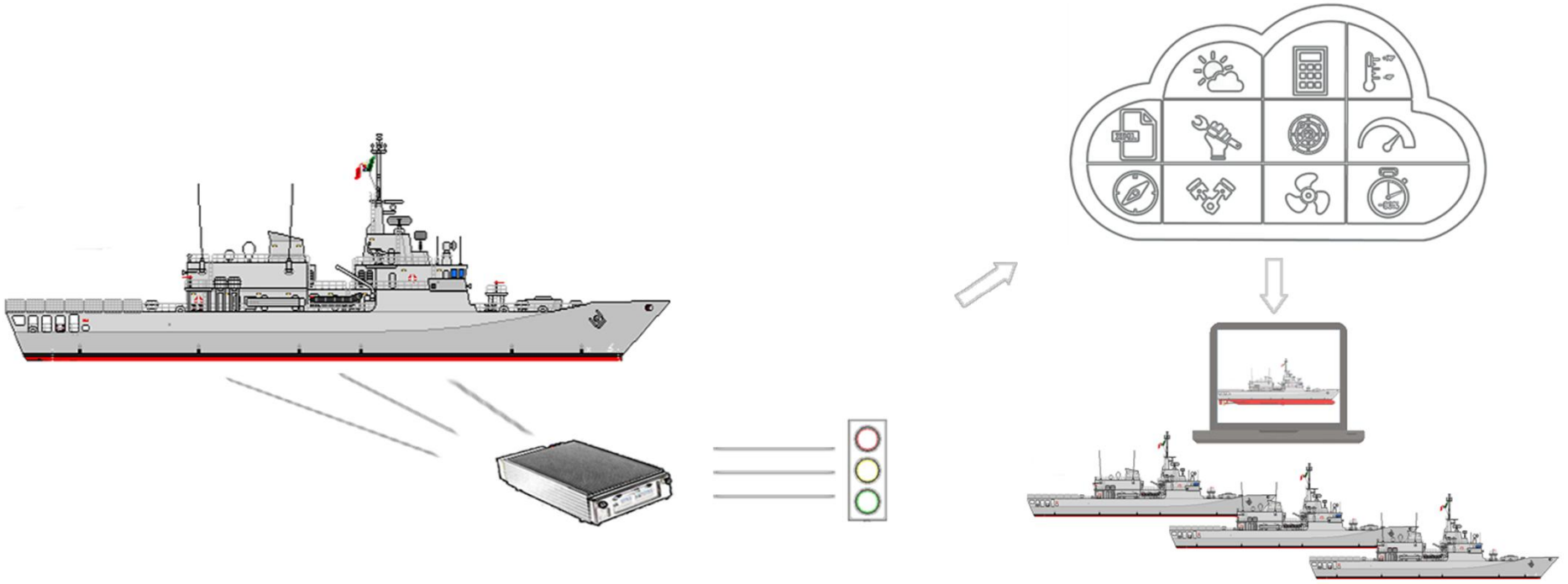
Predictive Maintenance

Navy Requirements

- Acquire knowledge over state of system
- Short term display of task related data
- Extensions for current data displays
- Offer overall data views and analyses
- Optimized task handling for small crews

Fleet Monitoring

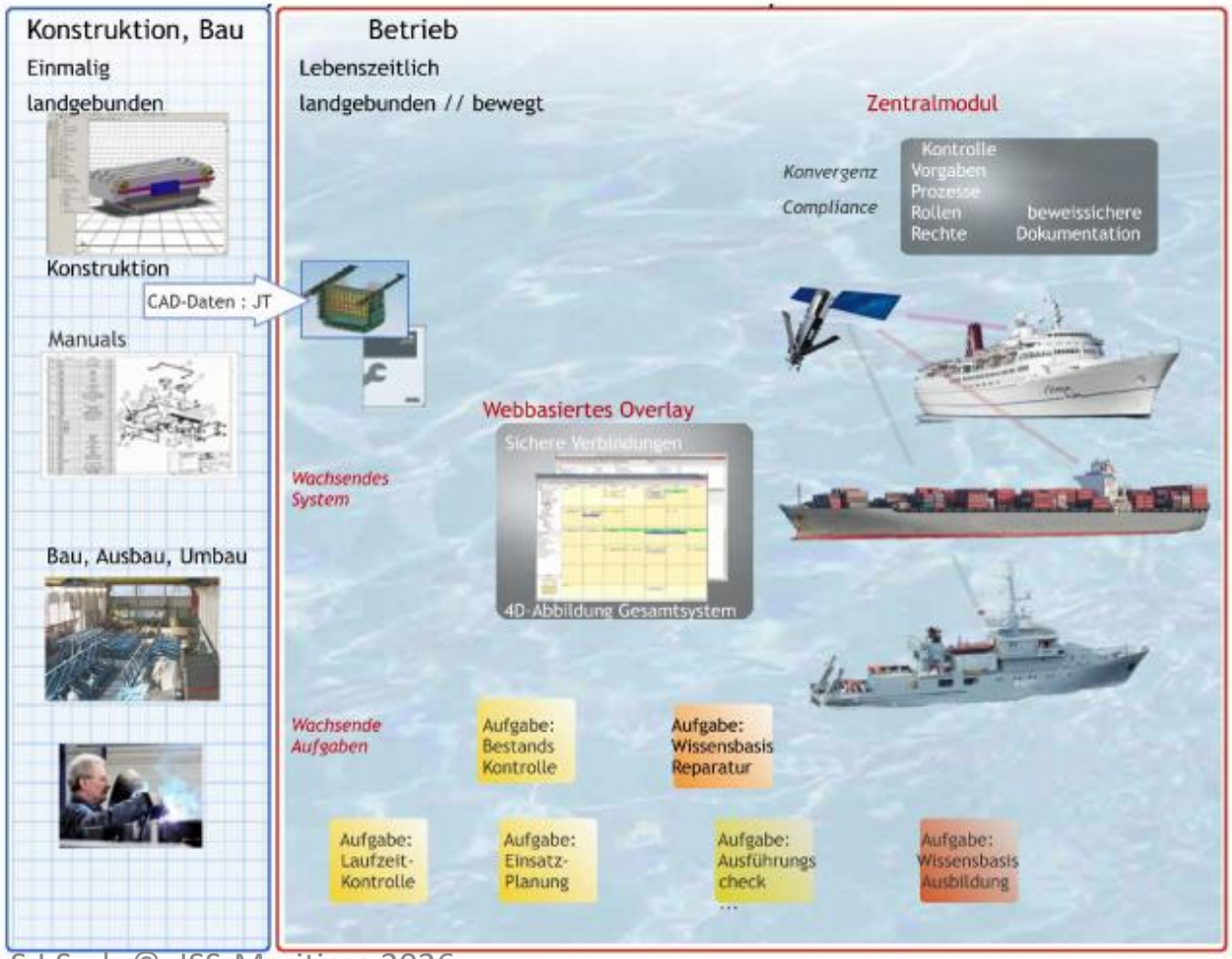


Integrated Systems into one Platform

Overall System Impact

Construction

Repair



Operation

Data Exchange

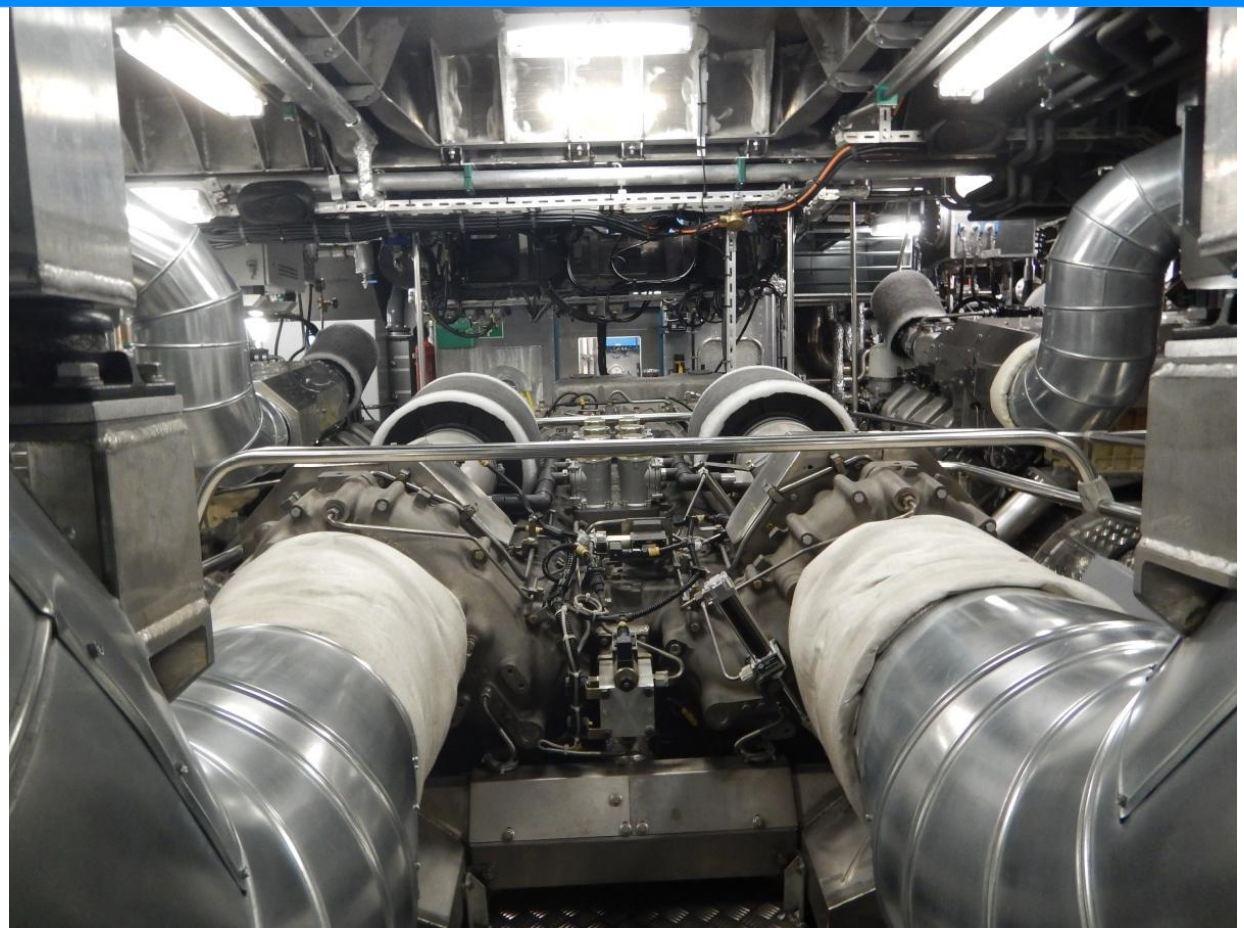
Documentation
Logistics
Instruction
Lifetime tracking

Seenotrettungskreuzer BERLIN

M.O.S.I.S OBU

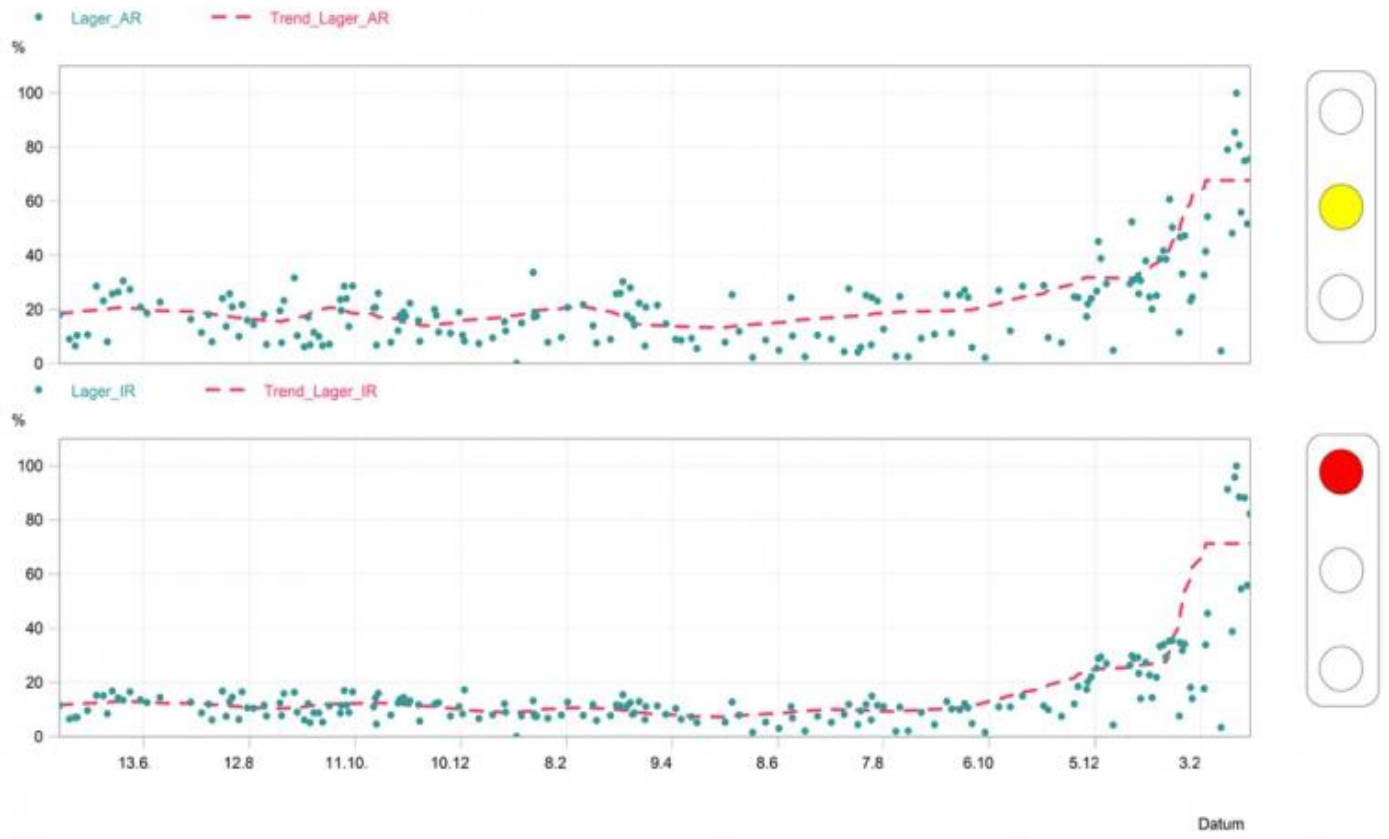
On Board Unit

Implementation View SAR



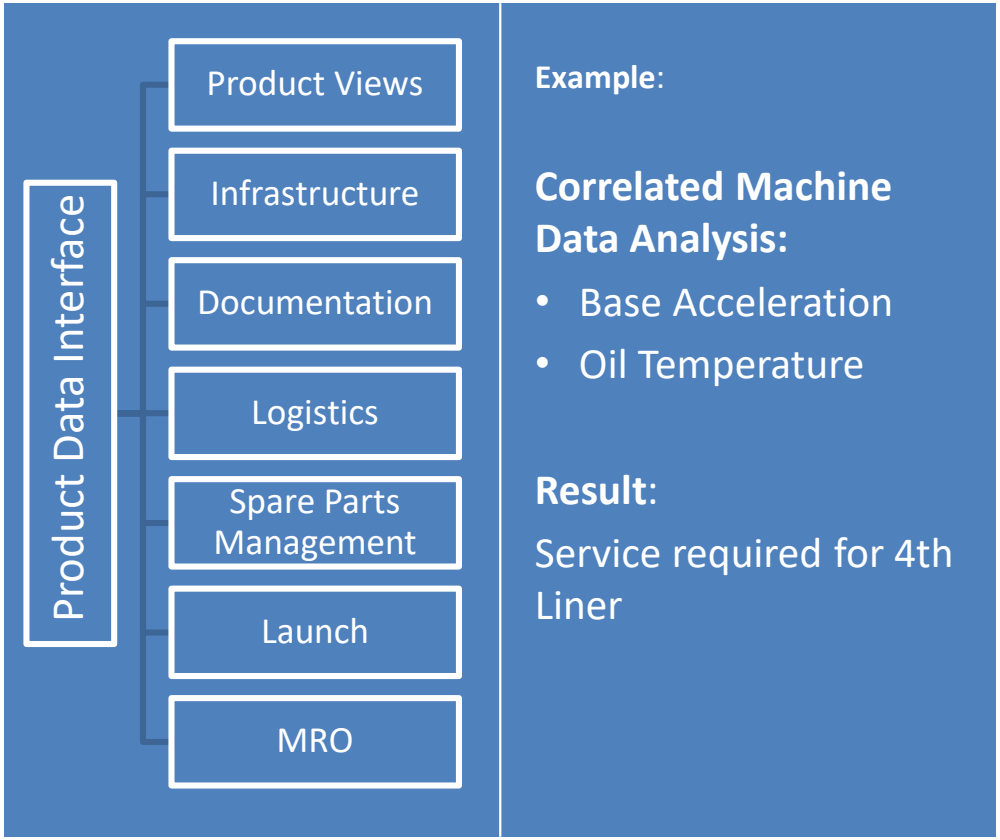
Display View on Board = on Land

Limit Analysis



Case: Identify Service Needs

What is being monitored ?



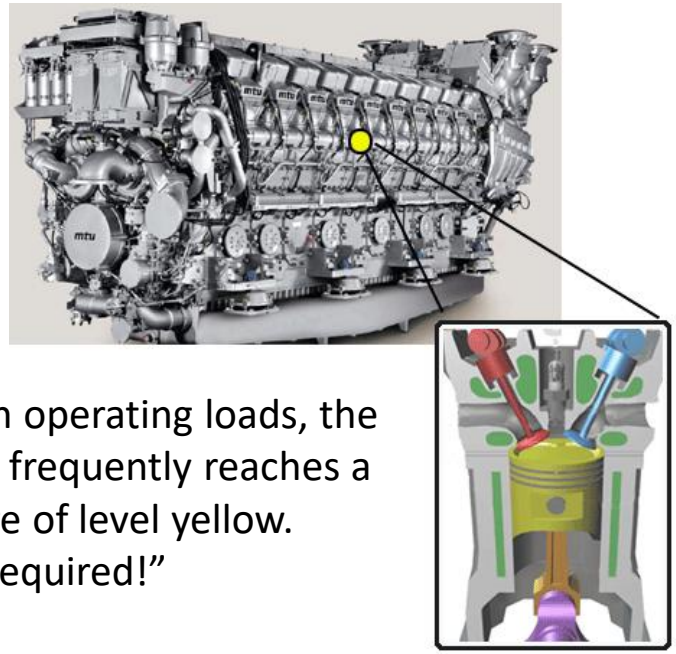
Example:

Correlated Machine Data Analysis:

- Base Acceleration
- Oil Temperature

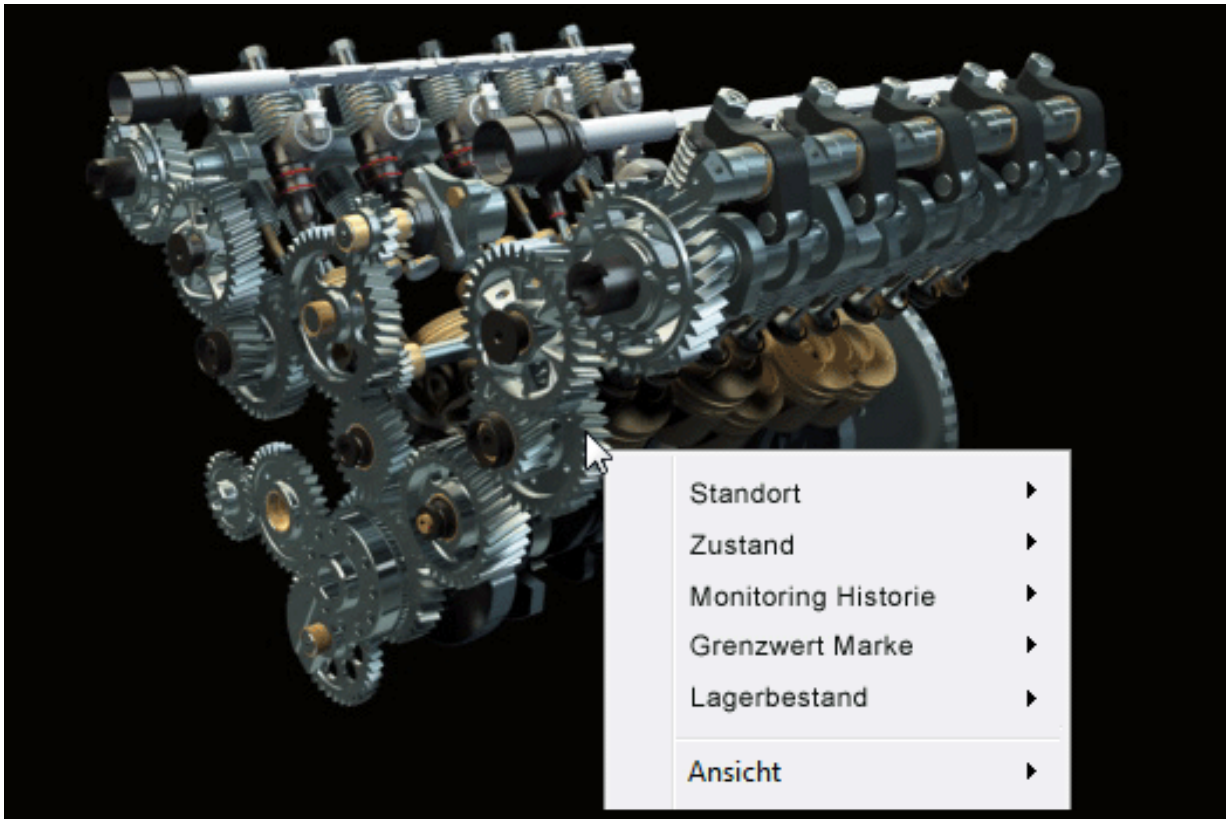
Result:

Service required for 4th Liner

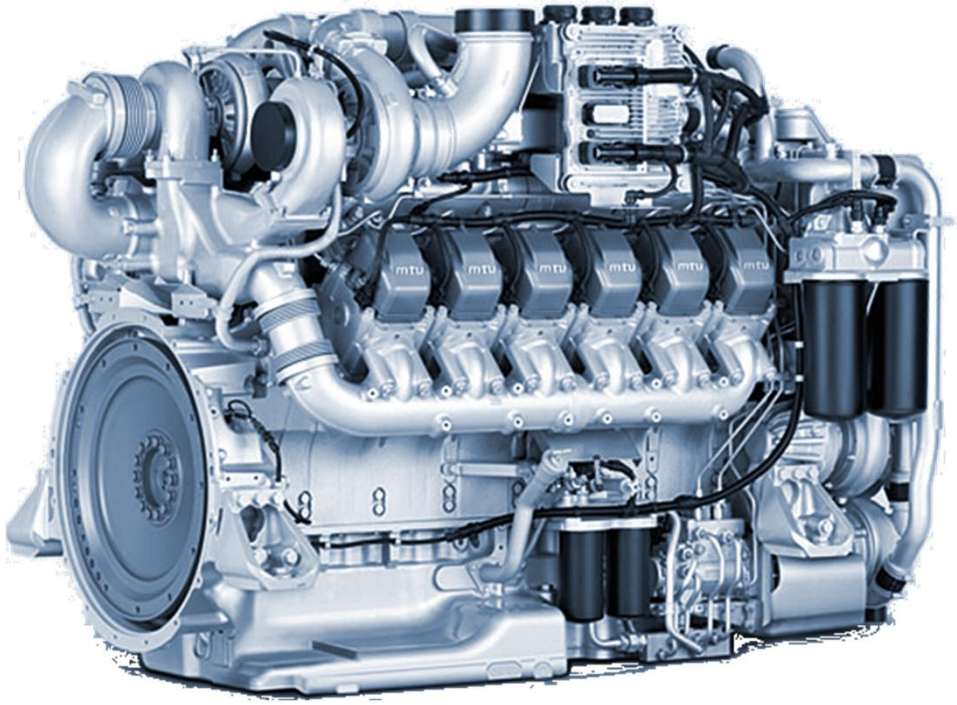


"Under high operating loads, the fourth liner frequently reaches a temperature of level yellow.
→ Service required!"

3D View


Standort
Zustand
Monitoring Historie
Grenzwert Marke
Lagerbestand
Ansicht

Added Value from Data Usage



Machine Data

- Rotational speed
- Cylinder Temperatures
- Fuel Consumption

Performance: (g/kw)h

Operational Optimizing

Case: Optimizing of Chiller Operation

What is being monitored?

Product Data Interface

- Product Views
- Infrastructure
- Documentation
- Logistics
- Spare Parts Management
- Launch
- MRO

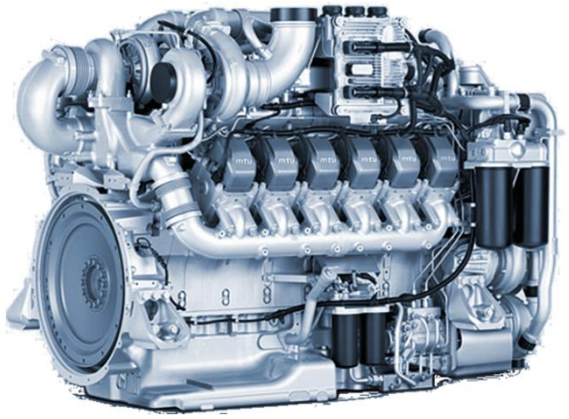
Example:

Correlated Machine Data Analysis:

- Temperature
- Consumption

Benefit:

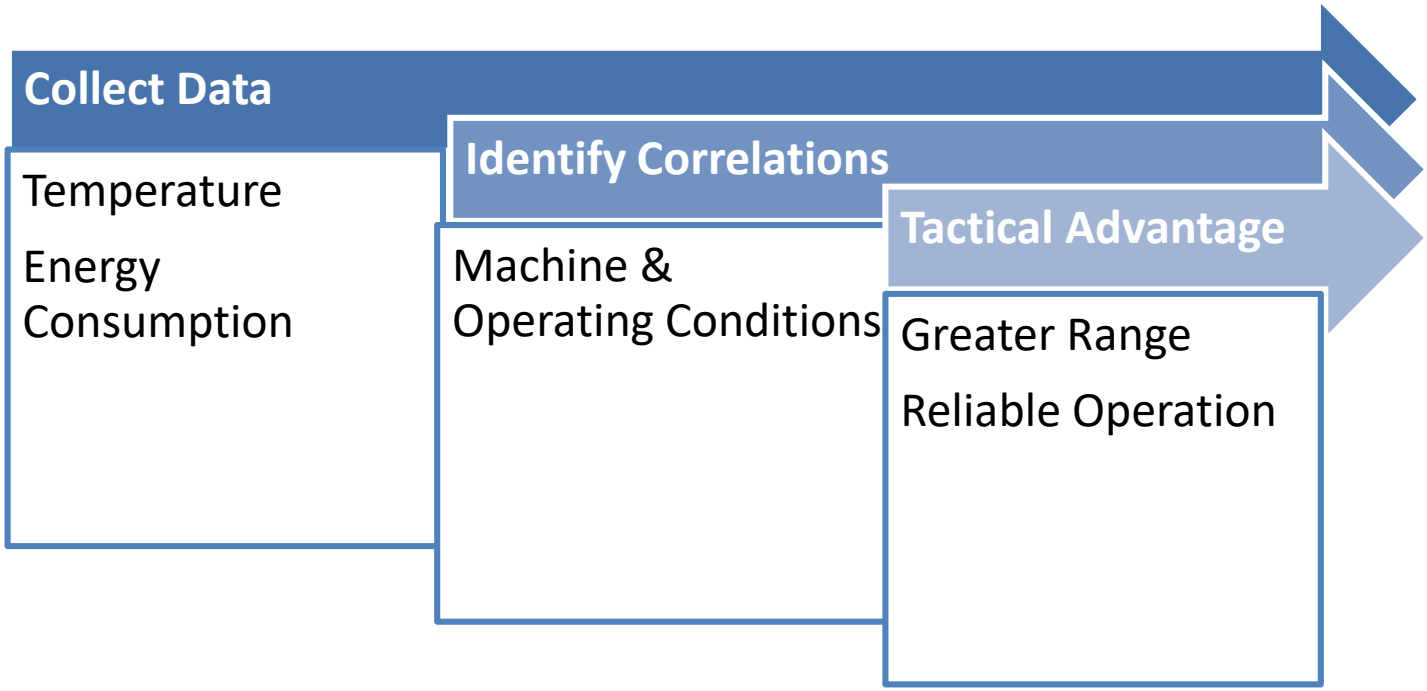
- Reduced material consumption
- Increased operational range



“Relationship between machine control events and load in the chilled water system”

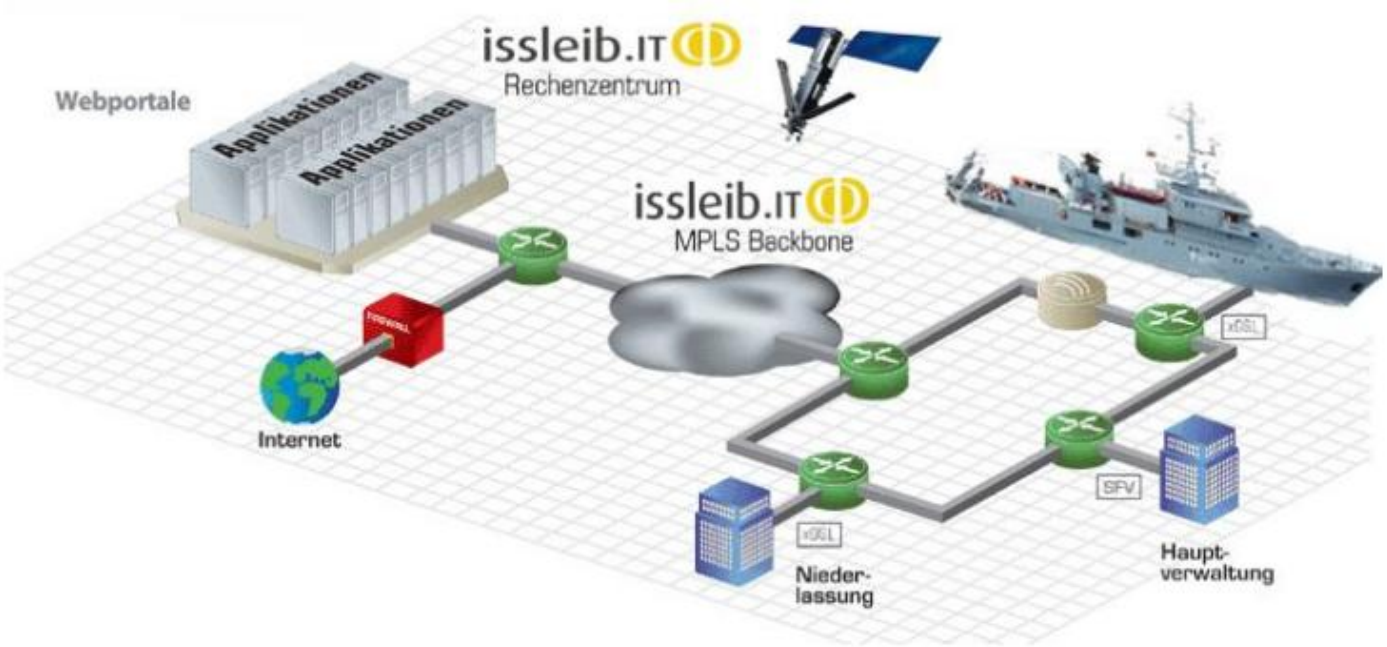
“Relationship between machine control events and specific fuel consumption.”

Added Value from Data Usage



M.O.S.I.S **Enhanced Insight from Sensor Data.**

Network Topology



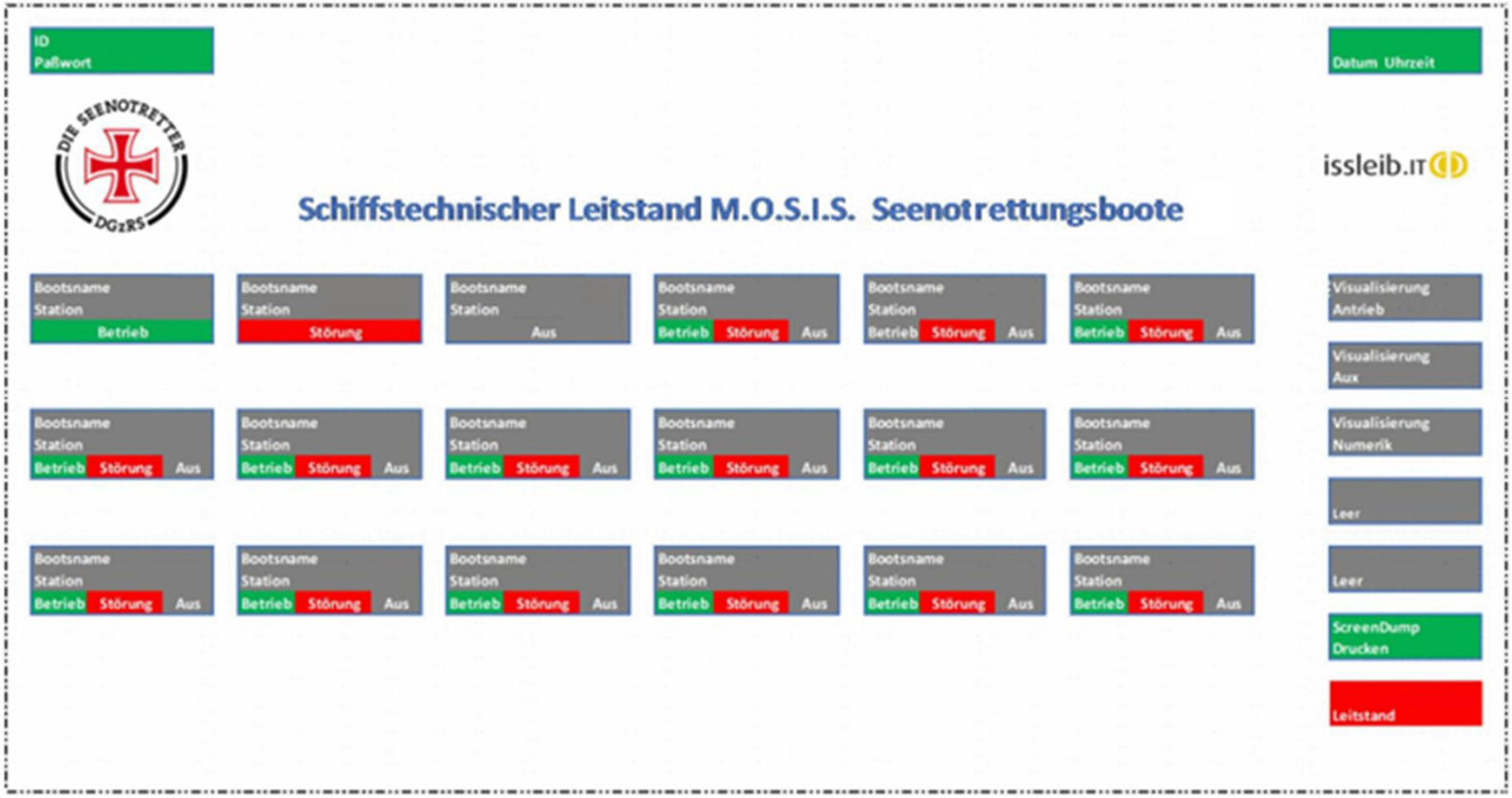
User-Management

Datenstruktur

Skalierbarkeit

M.O.S.I.S System Example

Custom application in the cloud



Ground-to-air link via K_uBand Satellite