

FleetViewer

Use your ships big data for enhanced decision-making and cost reductions on board

MARINE



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Introduction to FleetViewer

Shipping is a tough competitive market and maintaining a financially viable business and vessel operation has become increasingly difficult. The market is turning to big data to get a competitive edge. But data tends to be fragmented, placed in different systems or exist only in hard copy. This lack of operational overview makes it very difficult for Captains, Operators and Fleet Managers to make the right decisions that could give your business an edge.

Fact based decision making

FleetViewer gathers data from your vessels and displays it in easy to understand dashboards. The dashboards give you extensive insight into the performance of each of your vessels, making it easy for your managers to make the right operational decisions. In addition, the tool can be used to dive into the data and explore irregularities even further, giving you an answer to, why a ship performed as it did!

We supply and install the system that collects all available data from your vessel. The data is collected in a database that allows correlation and displaying of data such as KPI's as well as targets on dashboards. Data is made available on shore via the vessels internet connection.

The FleetViewer platform also supports integration of most types of manually entered data, such as when and where your last hull cleaning took place, time of arrival and departure as well as data from other systems such as your crewing system to let you see how crew changes affect your performance.

Data for the FleetViewer dashboard can be gathered from all over the vessel and beyond: GPS, wind, weather forecasts, speed log, gyro, condition monitoring equipment, flow meters, draft, rudder, propeller, torque and thrust, just to mention a few.

If you want more ship data, Insatech has more than 25 years of experience within the field of instrumentation and we will be able to assist you in finding the best instrumentation solutions that fits your needs. We also perform pre-inspections, engineering, installation, commissioning, service and support.





Co-creating the value that you need

With more than 500 installations on various types of vessels, we know our instrumentation and the conditions under which it must perform. As a performance system supplier, we know the advantage of using Big Data and which KPI's add value on board. However, to provide you with the management tool that you are looking for, we will embark on a co-creation process, to tailor Fleet Viewer into the exact tool you are looking for.

This means you will only get "the package" that you need with as many or few KPI's that you need, as specified by our co-creation process. It ensures you only get the functionality that is essential to your organization.

Future-proof data platform

FleetViewer is for all operators regardless of fleet or data size. The main functionality of FleetViewer is that it lets your organization facilitate the use of your existing data, but it is also future-proof because you can add more data later. For instance, if you install more instruments on a ship or acquire third party data, it can be integrated into the system at your preferred time. This means investments in the system can be made gradually.

What can you accomplish with FleetViewer?

- Optimize fuel utility
- Vessel performance
- Maintenance planning
- Condition monitoring
- Parts procurement
- Predictive maintenance
- Emissions monitoring
- MRV compliance¹⁾
- ECA compliance¹⁾
- Bunker operation
- Voyage overview & history
- And more

Whatever you want to accomplish or which KPI's you want to navigate after, we will help you define and build the FleetViewer to meet your needs.

¹⁾ Please notice FleetViewer is a data platform which displays and reports data. In any MRV or ECA scheme the responsibility for sailing the ship to produce compliant measures falls on the operator. The FleetViewer platform will display all data "as is" – also if they do not adhere to the regulation.

FleetViewer Dashboard

The dashboards in FleetViewer gives you multiple views with performance and operational data, covering everything from simple Flow Meter readings to advanced Speed Analysis and Trim & List measurements. The ability to customize your own individually views and KPI's makes this a very powerful tool that can run on both PC and tablet (Ipad).

Speed and Consumption

Compare the current speed and consumption with the charter party and get notifications when the vessel is deviating from instructions.

Trim and List

Follow the dynamic trim and list to ensure that the vessel is optimizing its condition to the current speed and draft. Learn how long it takes to complete trimming operations post departure due to e.g. draft restrictions. ▼



Propeller Load Index

See how the propeller is loaded right now and compare it to external factors such as weather, water depth and hull fouling.

Use variations in propeller slip as decision support for slowing down/speeding up depending on external factors.

Vessel Operational Profile

Get the full break down of how the vessel is operated, what speed(s) is/are the most common, what the average water temperature that the vessel is laying idle in, is the vessel operating more in shallow water than its piers etc.

Speed Analysis

Understand how your GPS and Speed Log are performing as well as compensate for any bias or imprecision to get a more reliable speed measurement. Set up a calibration threshold to notify the crew when the log factor has drifted outside the acceptable range. Do not miss out on pool points because of an inaccurate speed measurement. ▼



Auto Pilot Optimization

Monitor how rudder movement and rudder angles varies depending on auto pilot settings and see if the correct setting for the prevailing conditions have been chosen.



FleetViewer Dashboard

Main Engine Operational Profile

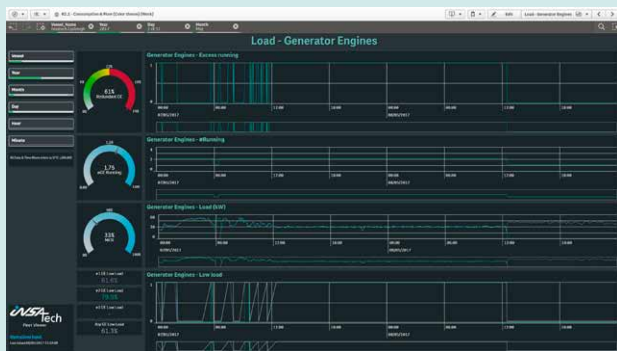
See how your main engine is loaded, what revolutions is the engine most commonly operated at and does the vessel maintain steady RPM as per voyage instructions and how does the crew respond to increased load due to external factors.

Main Engine Efficiency (SFOC)

Track changes in main engine efficiency during daily operation and engine tests by comparing to baseline data.

Generator Operation Profile

Discover how the generators are loaded, how many are running and if multiple generators are running parallel at low load. ▼



Generator Engine Efficiency (SFOC)

Track the impact of generator engine load on the specific fuel oil consumption (SFOC) and quantify the financial impact of running at sub-optimal load under any given condition. ▼



Boiler Operation Profile

Monitor how often the boiler is starts, how long it runs after each start up and how long the boiler is running in total.

Flow Meters – ME & GE

Use the detailed measurements from each flow meter as a powerful tool for troubleshooting. ▼



Data Quality

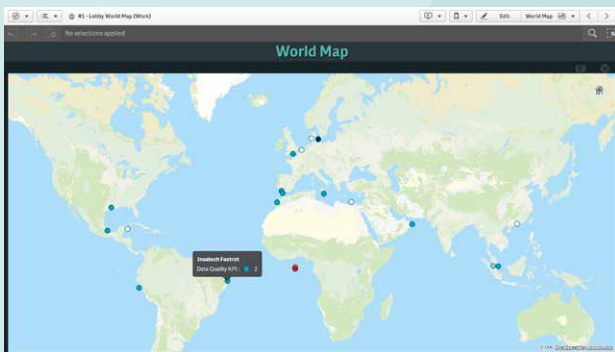
Get warnings on malfunctioning measuring equipment as soon as the fault occurs, so that corrective action can be taken to minimize the impact on measured performance.



FleetViewer Dashboard

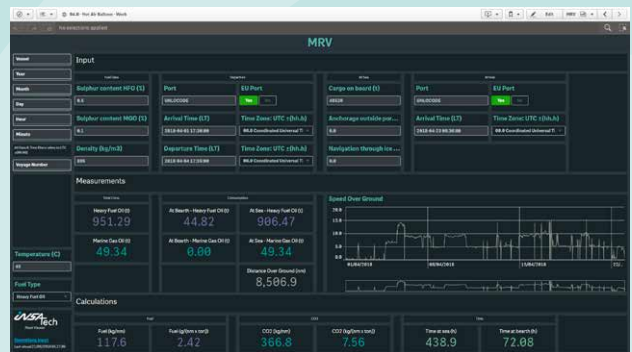
World Map

Follow the location of every vessel in your fleet with color-coded KPI(s) of your choosing. ▼



MRV

Get the mandatory time and consumption MRV data reported automatically to your chosen verifier. ▼

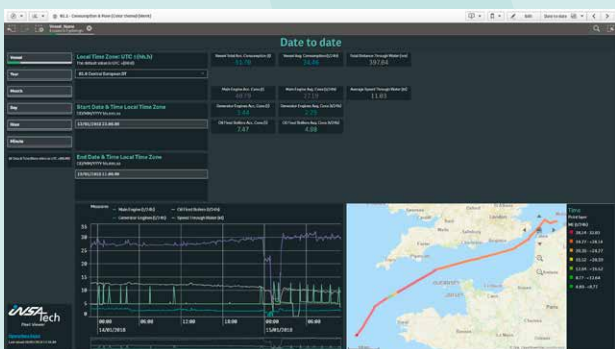


Weather Conditions

Get insight into the weather conditions at the vessels position with information from on board measurements and hind cast weather data and see how the weather affects the motion of the vessel.

Vessel Track

Track your vessels performance with a color-coded voyage using a KPI of your choice, e.g. charter-party speed and consumption compared to measured speed and consumption. ▼

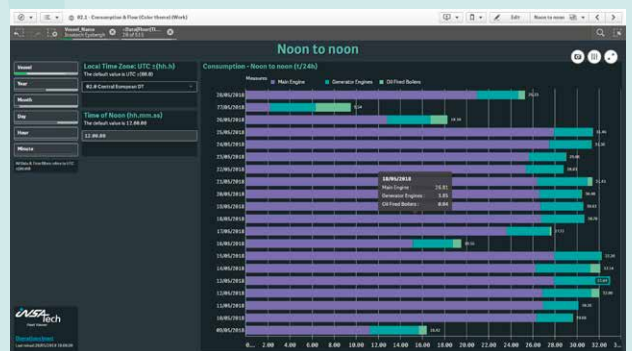


KPI Overview

Customize your dashboard with a combination of built in and custom KPI's to monitor the data that matters to you.

Noon to noon

Get a quick overview in a classic "noon to noon" layout. ▼



Fuel Change Over

See how much time is spent changing between fuels and if this is done before or after passing ECA borders.



FleetViewer DataEntry

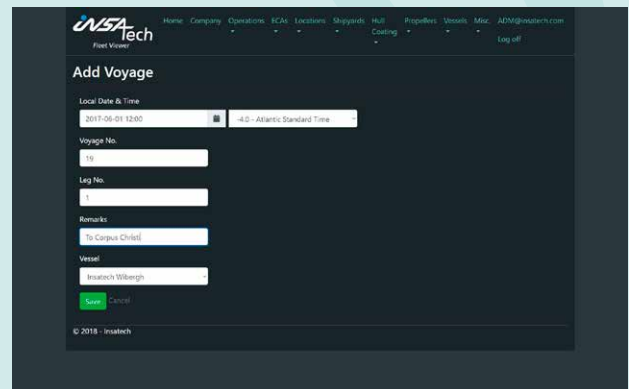
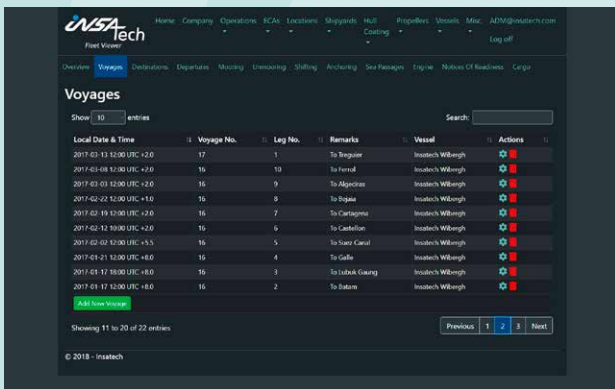
Not all data is available digitally and would normally be written down on paper for example in the ship's logbook, but this data can help you gain more insight into your vessels performance. The FleetViewer data entry module lets you enrich your auto-logged data with manually recorded data. One of the many advantages of this could be to learn more about the different processes that a vessel performs, e.g. discharge operations, maneuvering, mooring, etc.

Register operational data

Easily register your operational data to enrich the auto-logged dataset. Information such as Voyage numbers, Destinations and Speed instructions in addition to data about Anchoring, Mooring and Cargo operations can be entered. ▼

Reduce registration workload

Based on existing entries the system pre-fills the forms with all available information which helps reduce the workload on the crew as well as help prevent erroneous reporting. ▼














Performance Monitoring, the foundation of FleetViewer

The Performance Monitoring System is a data / autologging system on board the vessel, that provides data for the FleetViewer. It can collect and store data from various instruments as well as navigational data from the bridge. Besides datalogging, the system can also present real-time data to the operators / crew of the vessel via an operator panel.






Data collected by the system




Bridge

- 
GPS
 Position and Speed Over Ground (SOG).
- 
Anemometer
 Wind speed and direction, Relative wind speed and direction.
- 
Speed Log
 Speed Through Water (STW).
- 
Gyro
 True Heading.
- 
Panel
 Shows all the data both collected and calculated. Can be installed in engine room, engine control room and bridge.
- 
Draft
 Draft signals.
- 
Echo Sounder
 Depth and under Keel Clearance.
- 
Rudder
 Movement and angle.
- 
Propeller
 Pitch.

Engine Control Room

- 
Ethernet
 In order to send data to shore the system needs access to the internet.
- 
Power Meter
 Power output data from the auxiliary engines, kW, current and cos phi.
- 
Motion Sensor
 Measures weather influences.

Engine Room

- 
Torque and Thrust
 Torque or Torque and Thrust measurements, as well as RPM and power.
- 
Flow Meter
 Consumption (Main Engines, Auxiliary Engines and Boilers).
- 
Cabinet
 The cabinet functions as a central processing station which takes in signals as well as saving them to the internal database.



The performance concept

On board

3. Act



This is the system featured in this brochure.

Performance Management System

- Same as Performance Monitoring System
- PLUS** Management tool
- PLUS** Data based predictions / help
- PLUS** Data entry for Voyage Numbering, Destinations, Anchoring, Mooring, Cargo and more...

2. Learn



Performance Monitoring System

- Same as Fuel Consumption System
- PLUS** Signals for Wind, Depth, Torque, Thrust, Draft, Rudder, Propeller, Motion Sensor and more...
- PLUS** Databases and Data Link

1. Measure



Fuel Consumption System

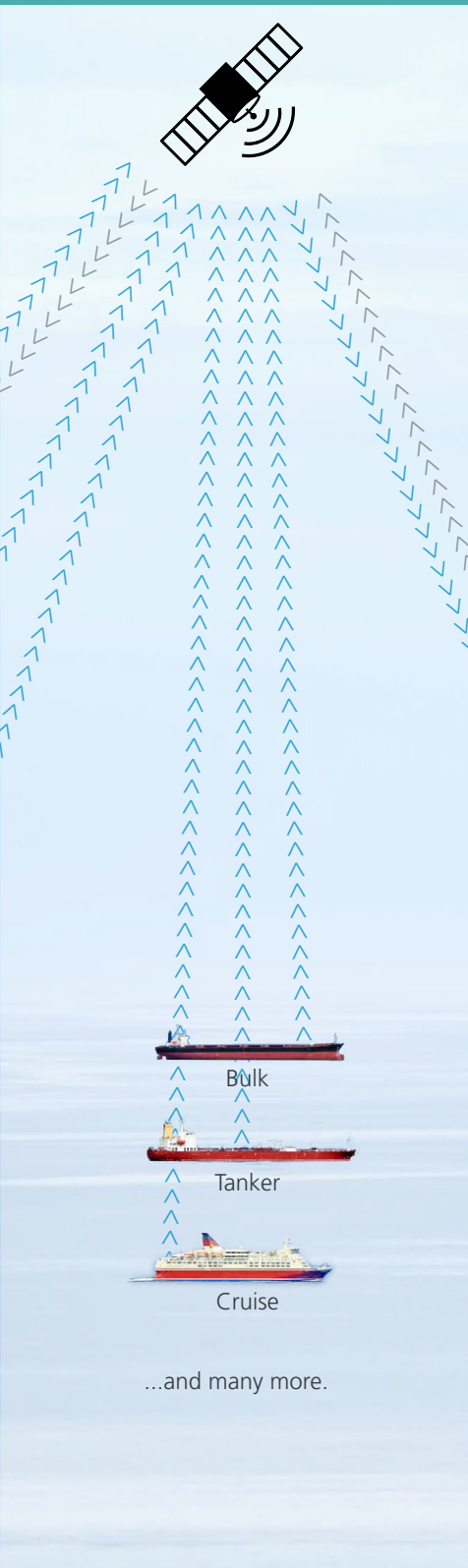
- Real-time fuel measurement
- Data saved locally on memory card
- Optional database and Data Link

On board computer with database containing ship data.



Data Link

On shore



4. Manage

FleetViewer

- Access all your data on shore
- Help your captains optimize their voyage



On shore database with data from entire fleet connected to the system.

Our modular performance concept

Build your performance systems according to your company's needs – upgrade gradually.

1. Fuel Consumption System

The entry model to the performance concept. Start with basic measuring and get knowledge of your fuel consumption.

2. Performance Monitoring System

Get more sophisticated insight into your vessel's performance by adding bridge and engine room data to the system.

3. Performance Management System

Ease management decision making on board by getting performance predictions based on current data, weather and next voyage.

4. FleetViewer

Get the complete overview of your fleet's performance and consumption, and use it to optimize in large scale.

Data Link

The database on board sends data to shore. In case of no connection, the accumulated data will be sent when back online.



Our international agent network

In order to provide the best possible customer support Insatech Marine works closely together with selected agents. This network of dedicated agents will help to ensure your positive experience with our systems and support functions. The agent network will be developed continuously to serve you locally wherever you may operate.

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Customer support at your preferred destination.





Get a simple overview of your vessel and fleet with the FleetViewer Data Platform – improve decision-making for ship and shore on a future proof platform.

MARINE



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