



iHelm

The optimization solution for your fleet.

CetaFuel

Your virtual fuel reader.



Cetasol.

Intelligent Maritime Sustainability.

About Cetasol



Cetasol is a deep tech/green tech company from Gothenburg Sweden and an independent spin-off from Volvo Penta. Offering decision support for the crew, business owners, and managers in their journey toward sustainability, Cetasol supports energy optimization, energy measurement, and electrification.

Cetasol aims to make sustainability a simple choice for the entire maritime industry and create intelligent solutions to support the making of this. The solutions provided by Cetasol are iHelm, intelligent decision support, and CetaFuel, a virtual fuel reader.

What is energy optimization

Energy optimization is the act of improving efficiency and minimizing the waste in energy usage. Various strategies and techniques are used to reduce energy consumption while maintaining or even improving performance and output. Deploying an Energy Management System (EMS) and decision support software can help monitor, control, and optimize energy usage in buildings, vessels, facilities, and industrial processes. EMS systems provide real-time data and analytics, which can be used to identify energy-saving opportunities and automate energy-saving measures.

Minimize energy consumption

Save time, energy and money

Real-time data

image will be updated



The iHelm solution

iHelm is an energy optimization solution based on AI that learns from the operation. The iHelm platform creates automatic dynamic modeling of vessels and operations. The solution will support operations to save money and fuel while also gaining deeper insights and understanding of the operations.



Recorded
savings of
10-17%

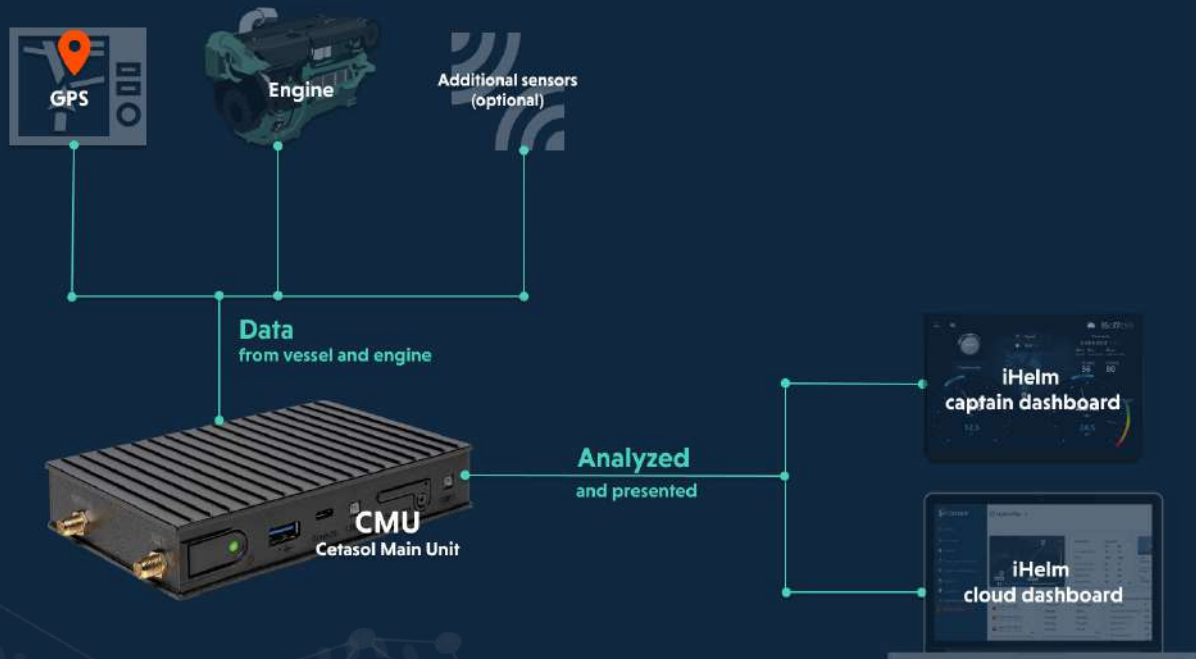
Who is iHelm for?

iHelm works on any vessel, driveline, and brand of engine. As a result of our advanced data modeling, iHelm is independent of vessel type. iHelm has been installed on diesel, hybrid, and electric vessels ranging from ferries, cargo, pilot, tug, and icebreakers.

How does it work?

A CMU (PC) is installed onboard the vessel. It is connected to the engine(s), GPS, and available signals. The CMU is connected to a screen in the bridge where the captain receives insights in real-time for optimized operation with minimal energy usage. All the data gathered from the operation is also analyzed and transmitted to the iHelm cloud dashboard.

In the cloud, analyzed data is presented with insights and knowledge needed for your operation. You can view real-time data, identify problem areas, find fault codes, and more. Ready-made reports can also be downloaded, containing pre-created calculations and analyses by data science. iHelm is AI-based and will learn your operation, identify variations, and recognize driving patterns.



iHelm for cargo

Cargo vessels mostly travel after what we call non-repeatable operations and over a long period. With iHelm, these operations can measure trips and voyages.

In the iHelm cloud dashboard, a logbook can also be found. In the logbook you can make personalized tags, that can be applied to specific legs.

With the IMO regulations, all ships of 5,000 GT and above are required to calculate and report their operational Carbon Intensity Indicator (CII). From January 2025 offshore and general cargo ships from 400 GT also fall under the MRV regulations. Creating these reports and these calculations can be complex and time-consuming. With our automated emission reports, we save you time and energy.

Measure voyage

Logbook

Emission reports



iHelm for ferries

Typical for ferries is their repeatable nature. The vessels travel from A to B or A to B to C every time it's operated. Even though the operation is repeatable, there are variations not visible without looking at the data. With iHelm installed onboard your vessel, these variations become noticeable. The captain is recommended on the captain display to operate without these variations. When variations appear, they are easy to notice in the cloud dashboard where all the data from the vessel is presented.

iHelm also offers pre-made reports on a daily, weekly, or monthly basis, containing a summary of the operation.

Limit variations

Automated reports

Operational data



iHelm for pilot, tug and ctv

These types of vessels qualify under non-repeatable operations. Either there is no fixed timetable or a fixed A to B route. These types of operations need to operate even when other vessels may not due to weather conditions. They are designed to be efficient and effective, yet there is a focus on fuel efficiency to reduce costs.

iHelm can support fuel optimization, both onboard and in the cloud. Onboard, the captain can choose the destination, for example, connection point A, and the time of arrival. iHelm will recommend how to operate the vessel at speed to reach the destination with minimal fuel usage.

The cloud dashboard in the iHelm solution is where all the data from the operation is analyzed and presented. In the cloud, land-based personnel can view the vessels in real-time with consumption, location, and many different parameters. The data presented in the cloud can also inform strategic decision-making for the business, aid in long-term planning, and provide valuable insights that may otherwise go unnoticed.



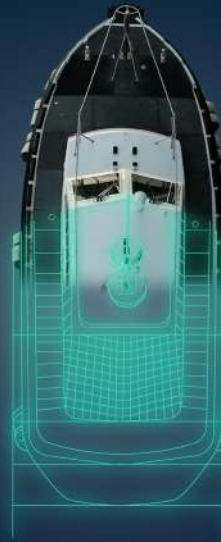
New insights

**Be in control of
your data**

Cetasol Digital twin

B

A



- Energy optimization
- Predictive maintenance
- Redesign
- Alternative energy
- Route planning
- Fleet level optimization
- Situational simulation

What is a digital twin? How can you benefit from it for your operation?

A concept many talk about right now is the digital twin. It is a complex topic with many different definitions.

A digital twin is a digital representation of an operation or vessel.

At Cetasol, we create a digital twin based on your vessel and engines, which can be used in various ways and offers several benefits for your operation.

One of the most significant advantages of using AI-powered automation is the process of optimization, decrease in manual labor, and increased efficiency. Additionally, AI can handle massive amounts of data quickly and accurately, making it an excellent tool for data analysis and decision-making.

By incorporating AI into digital platforms we can create more intelligent efficient and user-friendly experiences for both businesses and customers. Ultimately, the integration of AI can lead to a vast array of benefits that can improve the overall performance of the organization.

Even identical vessels aren't identical

Even among identical vessels and engines, nuances distinguish one from another. These subtle variations create unique areas for improvements across different vessels within a fleet, emphasizing the need for tailored solutions, including monitoring the health of marine engines.

IMO regulations mandate stringent measures for emission reduction in the maritime industry. Compliance with pollution prevention and emission reduction standards is imperative for shipping companies.

To not only meet but surpass those standards, our cutting-edge AI technology supports energy management, speed optimization, and more. Variations in fuel consumption among different captains operating identical vessels on the same routes can reach up to 25%. iHelm serves as an effective tool in mitigating this human factor, curbing fuel consumption and emissions.



CetaFuel fuel reader

Don't have energy measurement on your vessel?

We have the solution. CetasFuel is a virtual fuel reader. Cetafuel provides fuel reading without complex installation. As it is a virtual fuel reader, it is not placed in the fuel flow, which means there is no risk of clogging. We use the model to analyze 2-3 motor signals and generate real-time fuel consumption data.

This is our patented solution.



**No risk of
clogging**

**97-99.5%
accuracy**

**Affordable
solution**

Easy installation

Be the change.

Sustainability has never been easier.

On all social media @cetasol
Website www.cetasol.com



Get started with energy
optimization today.

Contact us:
empowered@cetasol.com



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