



# MRV: Are you in compliance?

MRV is coming your way! In order to get and keep your ships in compliance with the coming regulations, there is quite some work to be done, or not?

## MRV reporting

From January 1st 2018, shipping companies will have to monitor and formally submit the reports of the following verified data per single voyages to, from and/or between ports in the European Union:

- Port of departure and arrival, including time and date;
- Distance travelled & time spent at sea;
- Cargo carried;
- Fuel consumption & emission factor & emitted CO<sub>2</sub>

To avoid the extra paperwork and related manual errors in order to report these details per ship, per voyage, there is a clear solution. Automatic data collection in combination with automated MRV reports are the answer to push back the extra work and to be in compliance with the EU MRV regulations.

## IVY® Basic: From sensor to MRV report

IVY® will give you MRV reporting at your fingertips. From ship to shore, IVY® automatically collects data from various sensors and provides insight into the relevant data and KPIs. All this information is displayed on an easily-accessible dashboard either on an office desktop, mobile laptop, tablet or any other device.

Get in compliance by automated voyage reports including automatic berth and anchorage detection, daily reports, fuel oil consumption monitoring, and MRV reports with IVY® Basic. contact our IVY experts for more information or a free demo.

## From Basic reporting to Expert performance management

IVY® has a solution for every performance goal and budget, and grows together with the ship owner's needs to make sure the ship is ready for the future and in compliance with (future) environmental rules and regulations. If you want to step it up a notch, besides basic reporting, data enrichment and more than 30 KPIs are part of the Advanced package. And those who desire expert propulsion performance management, can save up to 20% on their fuel and maintenance bill by using the IVY® Expert modules, such as hull and propeller efficiency module. Find out more about the advanced and expert features of IVY® via [www.vaf.nl/IVY](http://www.vaf.nl/IVY) or contact us for a free demo.

[WWW.VAF.NL/MRV](http://WWW.VAF.NL/MRV)

TO BE  
REALLY  
SURE

# Build your own IVY

**IVY EXPERT** add on the expert modules to maximise your performance efficiency, e.g. hull & propeller fouling module

**IVY ADVANCED** advance and improve your propulsion performance by data enrichment and target 30+ KPIs

**IVY BASIC** start reporting on your fuel consumption, and generate automated voyage reports for MRV and IMO

## Features and prices

Via continuous improvement and its modular structure, IVY® can grow alongside your ambition, when your needs change because of new rules and regulations or when you want to improve your ship's performance even further.

Features per module	IVY® BASIC	IVY® ADVANCED	IVY® EXPERT
Visualisation of KPIs	± 15	± 30	± 40
Voyage overview, integrated voyage, MRV & IMO reporting	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Ship locations, track and heading	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fuel consumption, FOC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Ship speed (STW / SOG)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Zoom in on individual sensor signals	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Compare</b>			
Compare ship's KPIs / sensor data	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fleet overview and performance	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Data enrichment</b>			
SFOC, engine load, power speed diagram	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Torque, shaft rpm, power, thrust and propeller quotient	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Advanced Hull &amp; Propeller module:</b>			
Hull resistance (over time)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Propeller performance (over time)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Quantified additional FOC in \$ due to performance decrease	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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