

DEVELOPMENT OF A **COMMON DIGITAL APPROACH** TO **MARITIME EMISSION DATA REPORTING**

*A framework by maritime industry, for maritime industry –
collaboratively developed and globally harmonised*

Coordinated by
Tripartite Joint Industry Working Group (JIWG)



Introduction

Consultation workshop at SMM Hamburg

The Tripartite Joint Industry Working Group (JIWG) held an industry consultation workshop at SMM in Hamburg on 2 September 2026. The workshop, entitled *Common Framework for Digital Exchange of Maritime Emissions-Related Data*, formed part of the JIWG's wider consultation on the proposed use of Operational Vessel Data (OVD) as the basis for a common industry framework.

The workshop brought together representatives from across the maritime industry to consider how emissions-related operational vessel data can be exchanged more consistently between shipowners, managers, operators, charterers, classification societies, verifiers, technology providers and other data users.

Purpose of the workshop

The purpose of the workshop was to:

- introduce the wider Tripartite JIWG initiative and the proposed common framework;
- explain the OVD standard and how it may be used as a common exchange layer;
- share practical perspectives on the implementation and adoption of OVD;
- discuss its suitability across different organisations, systems, ship types, operational practices and reporting contexts; and
- gather questions, observations and practical feedback from industry stakeholders.

The workshop included a panel discussion with questions and answers, and concluded with a summary of the next steps in the industry consultation.

Content of this report

The presentations delivered during the workshop were:

1. **Welcome and introduction to the Tripartite JIWG initiative**, presented by BIMCO
2. **The OVD Standard: Introduction and how to use**, presented by DNV
3. **Practical support for OVD adoption**, presented by RINA
4. **OVD implementation: A strategic approach**, presented by Bureau Veritas



OVD industry consultation

- development of a common solution for digital reporting of data relevant for emission reporting

September 2026

Workshop during SMM

Hamborg, 2 September 2026

Name: “Operational Vessel Data (OVD) standard: Industry Consultation Workshop”

Agenda of the workshop:

10.00 Welcoming coffee and tea

- (10.10) BIMCO: Welcome and introduction
- (10.15) DNV: The OVD Standard - Introduction and how to use
- (11.15) RINA: Practical support for OVD adoption
- (11.30) BV: OVD Implementation, a strategic approach by Bureau Veritas

11.45-12.15 Light lunch

...

Workshop during SMM

Hamborg, 2 September 2026



...

11.45-12.15 Light lunch

- (12.15) Panel discussion, including questions from the audience
 - Moderated by BIMCO
 - Classification Societies in the panel: DNV, RINA, BV, ABS and ClassNK
 - Shipping company working with different verifiers: STOLT TANKERS
 - Data providers: NAVTOR and CCP-platform
- (13.15) BIMCO: Wrap up and next steps

13.30 End of workshop

The BIG why ?

- Requirements for the **mandatory reporting of verified emissions data from ships have increased significantly in recent years**, with regulatory regimes from the IMO and other international reporting schemes in place
- The mandatory reporting is **creating substantial additional obligations** for ship operators in ensuring that fuel consumption and other relevant **data is accurately recorded and verified** for sharing with relevant authorities
- To simplify this workflow, and **increase accuracy and efficiency in emissions reporting and verification, harmonisation and standardisation** beyond various reporting schemes is needed

Initiative by Tripartite industry forum

Tripartite is an **industry forum** bringing together representatives from shipowners and operators, shipbuilders, and classification societies to address shared technical, safety, environmental and regulatory challenges **through coordinated, non-binding industry dialogue**

Actions from the Tripartite meeting in Shanghai in 2024

- *Tripartite proposes Industry Associations on the **creation of a single comprehensive central standardized list of data and associated formats for emissions reporting**, which is directly linked to the IMO Compendium framework*
- *Establish a **Joint Industry Working Group (JIWG)**, coordinated by BIMCO, to develop and advance this initiative*

Purpose and scope of the JIWG

To establish and adopt a **common business process and associated data exchange protocol** for the accurate, efficient and verifiable data relevant for emission calculation.

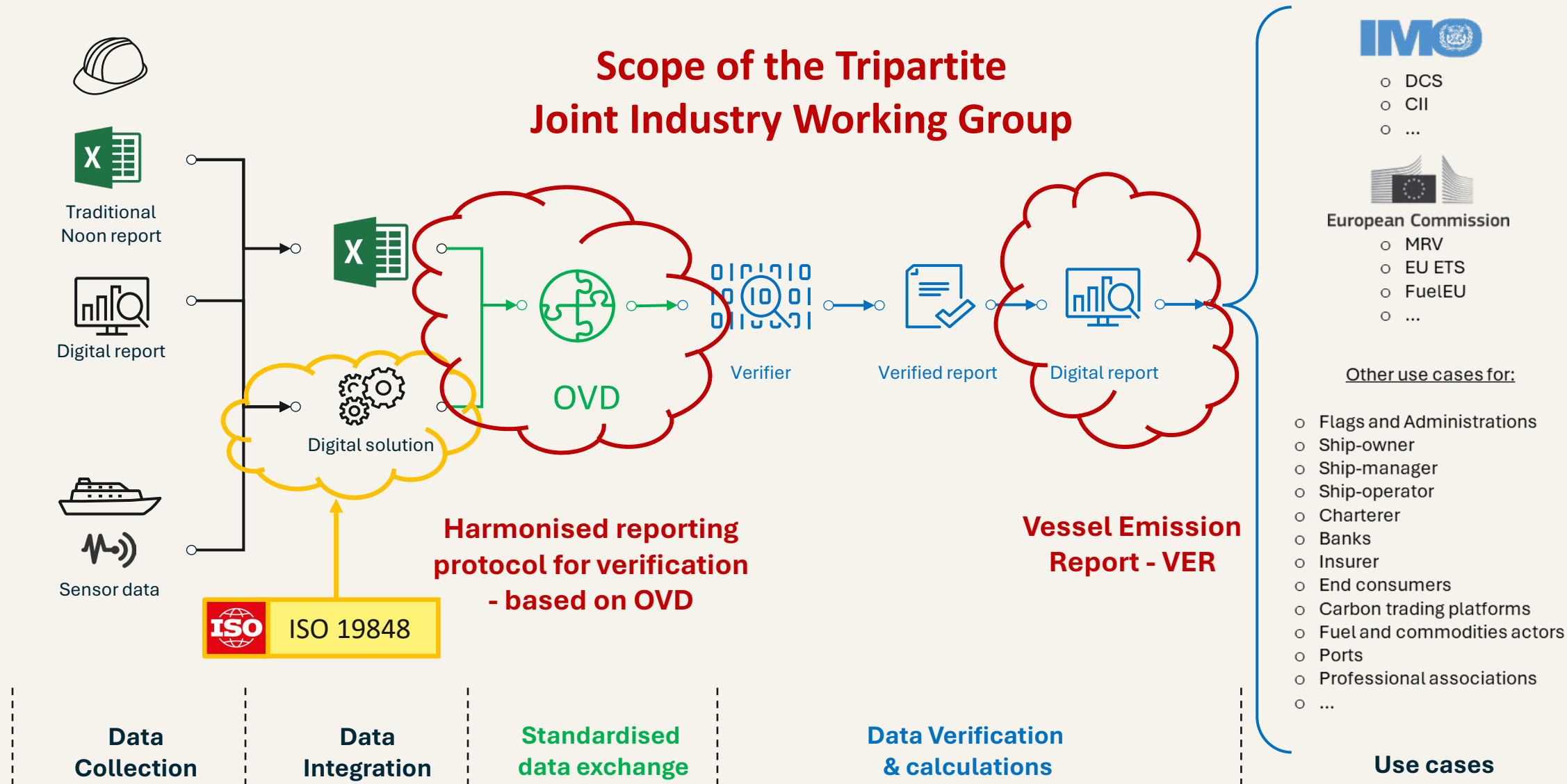
This initiative aims to:

- Ensure **consistency and interoperability** in emissions data reporting across the global maritime sector
- Facilitate **seamless data exchange** between ship operators/owners, verifiers, flag states and relevant authorities
- Ensure the reporting framework is **based on open, non-proprietary standards**
- Support the **uptake of a harmonised data set** based on the IMO Compendium, ensuring alignment with existing international standards

What do we want to achieve?

- Identification of relevant **emission reporting schemes**
- **Develop business process** description based on the IMO Compendium, each of which should be relevant to the various emission reporting schemes
- **Develop protocols** for the business process(es), containing procedures for the exchange of data
- **Develop a set of standardised vessels emission reporting formats tailored to commercial use cases.** These formats should utilise emission outputs as defined by relevant regulation(s) from the applicable data model(s), including information on verification status, and support reporting for any user defined time period
- Identify other elements in the business process, necessary for a **smooth and easy exchange of data**

Structure of data collection and dataflow



Many different business process descriptions depending on the use case

This industry consultation focuses on the OVD framework !

- Identification of relevant **emission reporting schemes**
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Welcome

*Thank you for joining the Tripartite JIWG Industry Consultation
on the Operational Vessel Data (OVD) Framework*

Shaping the future of maritime emissions reporting
through collaboration and standardisation

Presentations

– OVD Industry consultation at SMM Sept 2nd 2026

- Bjarte Walaker, DNV
- Christian Beiersdorf, DNV
- Hanna Pelnikowska, RINA
- Vincent Joly, BV

Jeppe Skovbakke Juhl, BIMCO (Moderator)

OVD Standard

Introduction and how to use

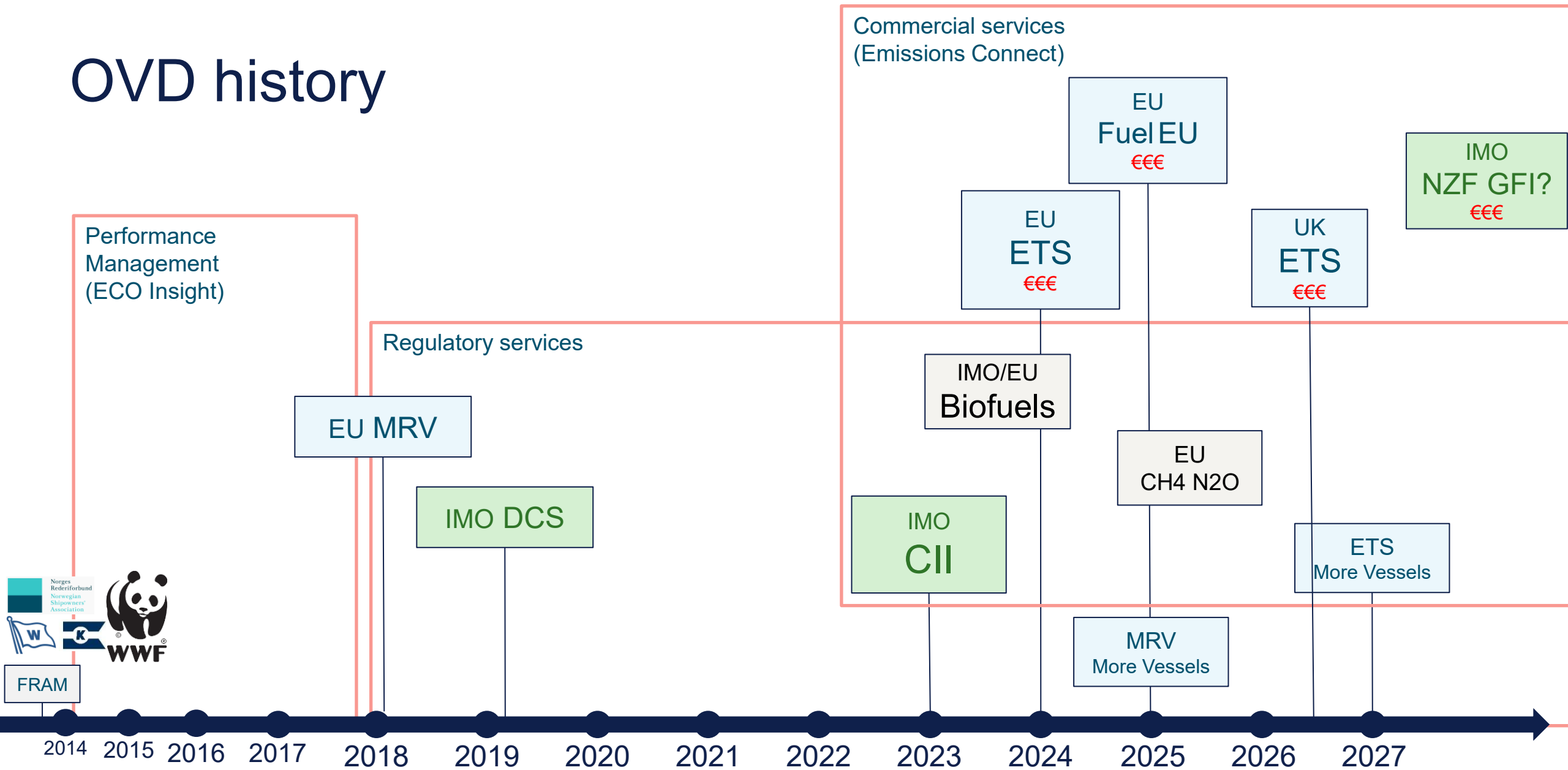
Bjarte Walaker / Christian Beiersdorf

02 September 2026

Presenting OVD

- Introduction to OVD (history, background, outlook/future governance)
- Application of OVD (scope and use cases)
- OVD basics (schemas, events, time reporting, port calls, ...)
- Fuel reporting
 - Option 1 – fuel type-based reporting
 - Option 2 – BDN-based reporting
- Special cases (slip, CII corrections, OPS, direct emissions, ...)

OVD history



OVD selected by IACS to be basis for the industry “Noon reporting” standard

<https://veracity.com/ovd>

VERACITY
by DNV

Sign in

Veracity for Developers > Documentation

 **Data Standards**
Documentation

Content

Operational Vessel Data (OVD)

Last updated: August 25th 2023

[OVD Interface description](#)

[OVD Guide](#)

[CSV file converter](#)

[Sample files](#)

[OVD Whitepaper](#)

Contribute on GitHub

Operational Vessel Data (OVD) is a standard for log abstracts and other operational data from vessels, and a data service on DNV's Veracity Data Platform. To learn more about the purpose, history and background of OVD, have a look at the OVD Whitepaper.



JIWG Tripartite

All IACS members confirm that it is OK to proceed with OVD as basis



More than 50 Ship-to-shore reporting solutions already supporting and using OVD

Other initiatives will most likely not prevail:

LEAP

ABOUT INITIATIVES PUBLICATIONS MEMBERSHIP NEWS CONTACT

Energy LEAP Publishes Vessel Emissions Reporting Standard VERS 0.9

18 JUL 2023

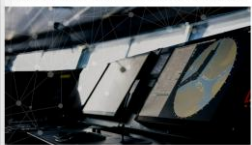
Headline

Energy LEAP is pleased to publish a proposed Vessel Emissions Reporting Standard, denoted VERS version 0.9 in draft for consultation.

Introduction

Working together in close collaboration with ship owners, charterers, oil majors, association bodies and software vendors, Energy LEAP sees a great opportunity for the digital exchange of information across several aspects of Shipping Operations, delivering a range of benefits beyond just administrative efficiency.

Standardised Noon Report data format launched

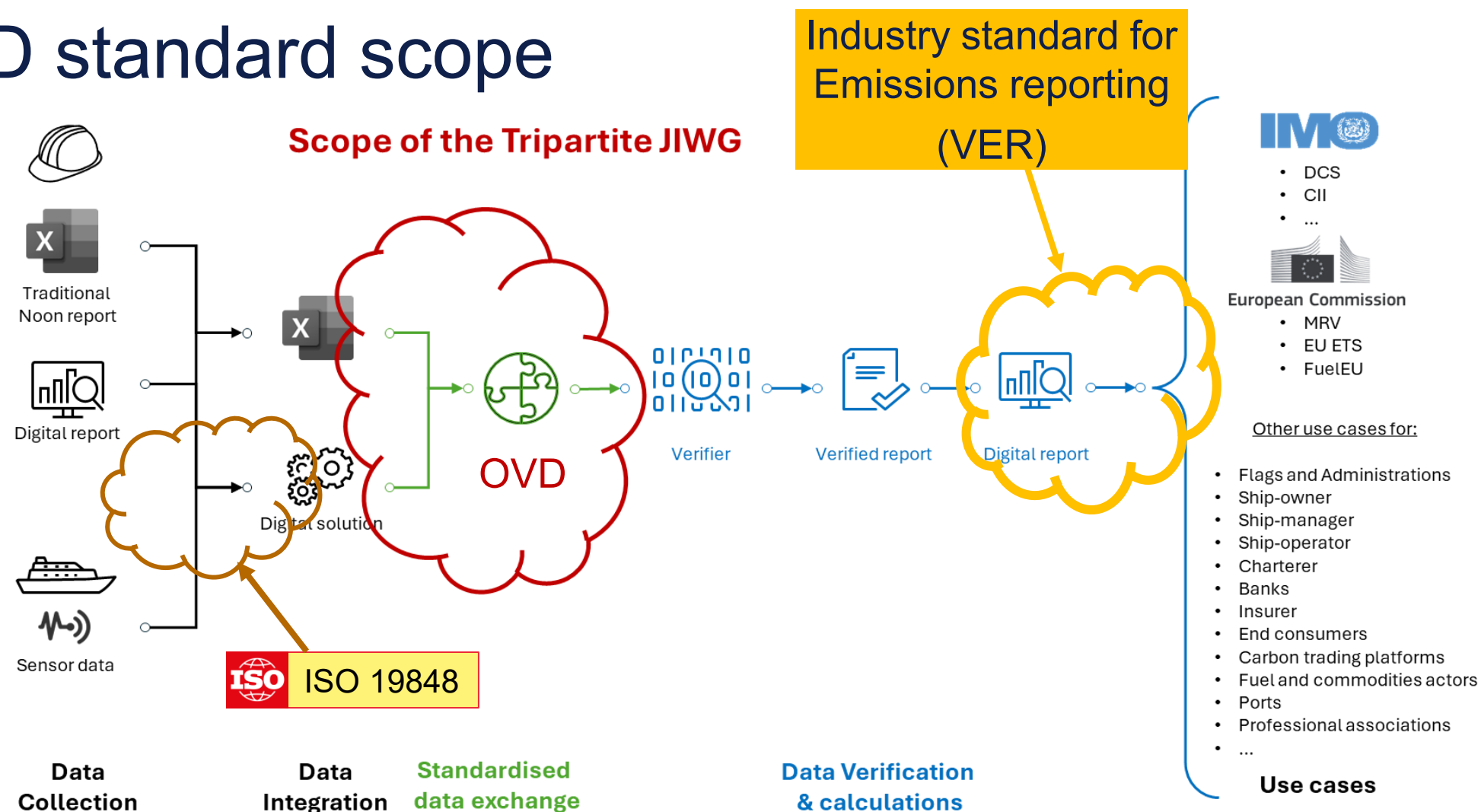


A Standardised Noon Report (SNR) for Noon Reports has been launched by the International Maritime Organization (IMO) following the completion of a period of extensive project involving several operations (IMO Maritime, Marine Group and others). Offering a common reporting format and data exchange for the industry, the SNR will be used to simplify data collection and analysis.



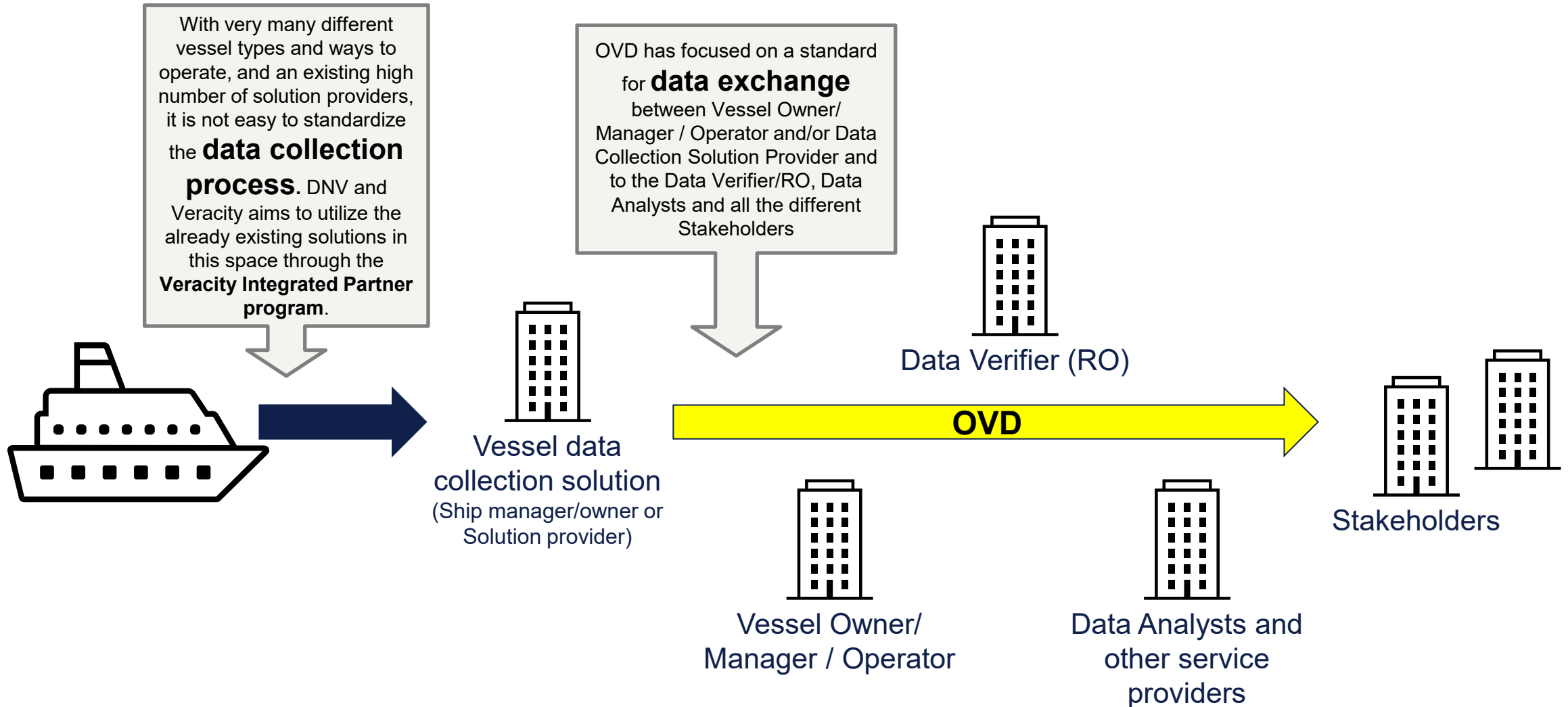
Data Quality requirements

OVD standard scope



Many different business process descriptions depending on the use case

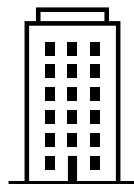
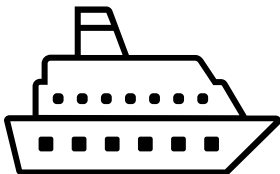
Where/what to standardize?



Noon report data vs Emissions Report

OVD – “Noon report” data

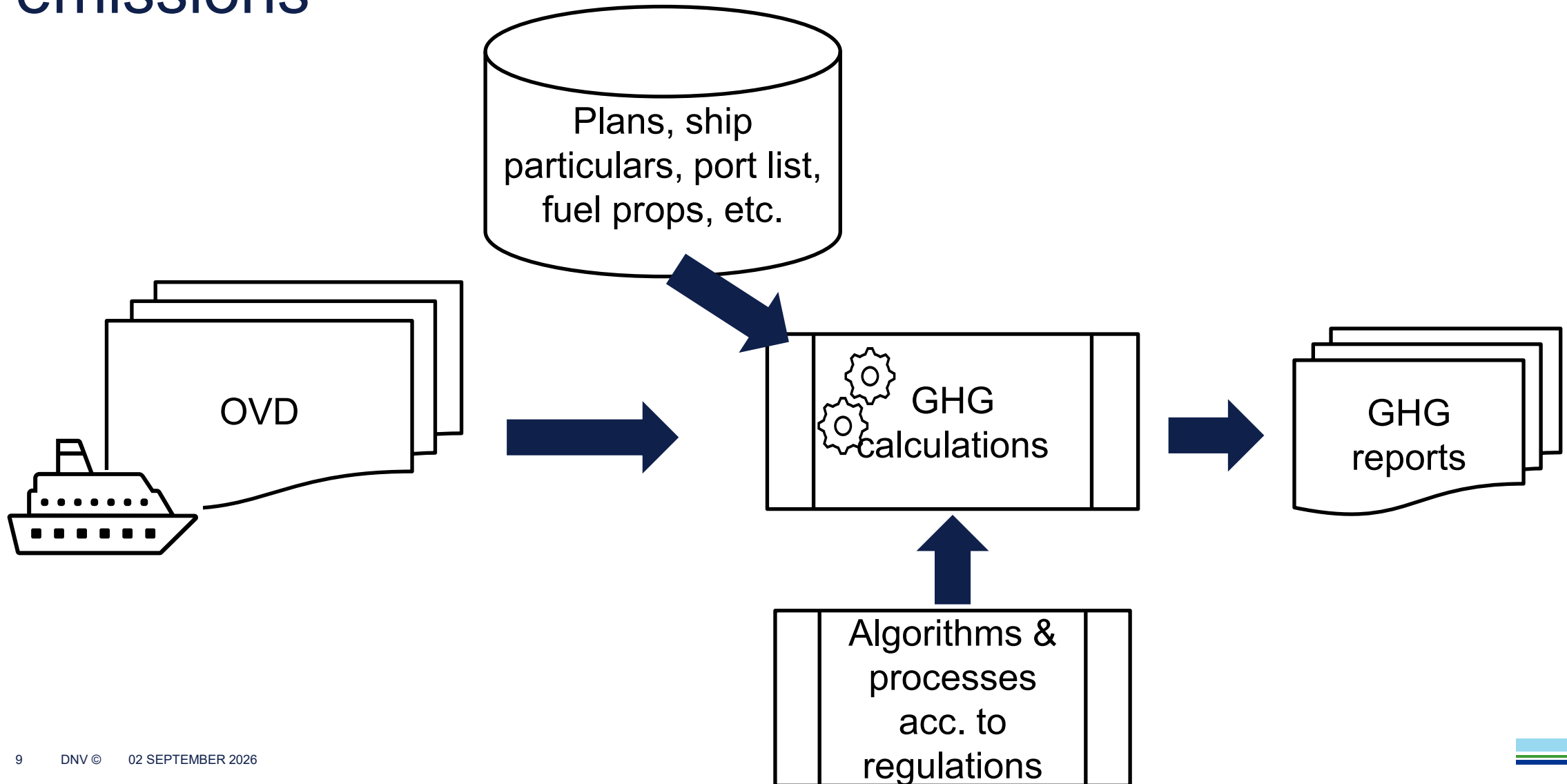
- Log abstract as produced by the vessel
- Focus on what vessel is doing and what the crew should know
- Elements that should not be part of this
 - CO2 and other calculated measures
 - Vessel particulars, like Deadweight/GT
- This is NOT an “emissions report”



VER – Vessel Emissions Report

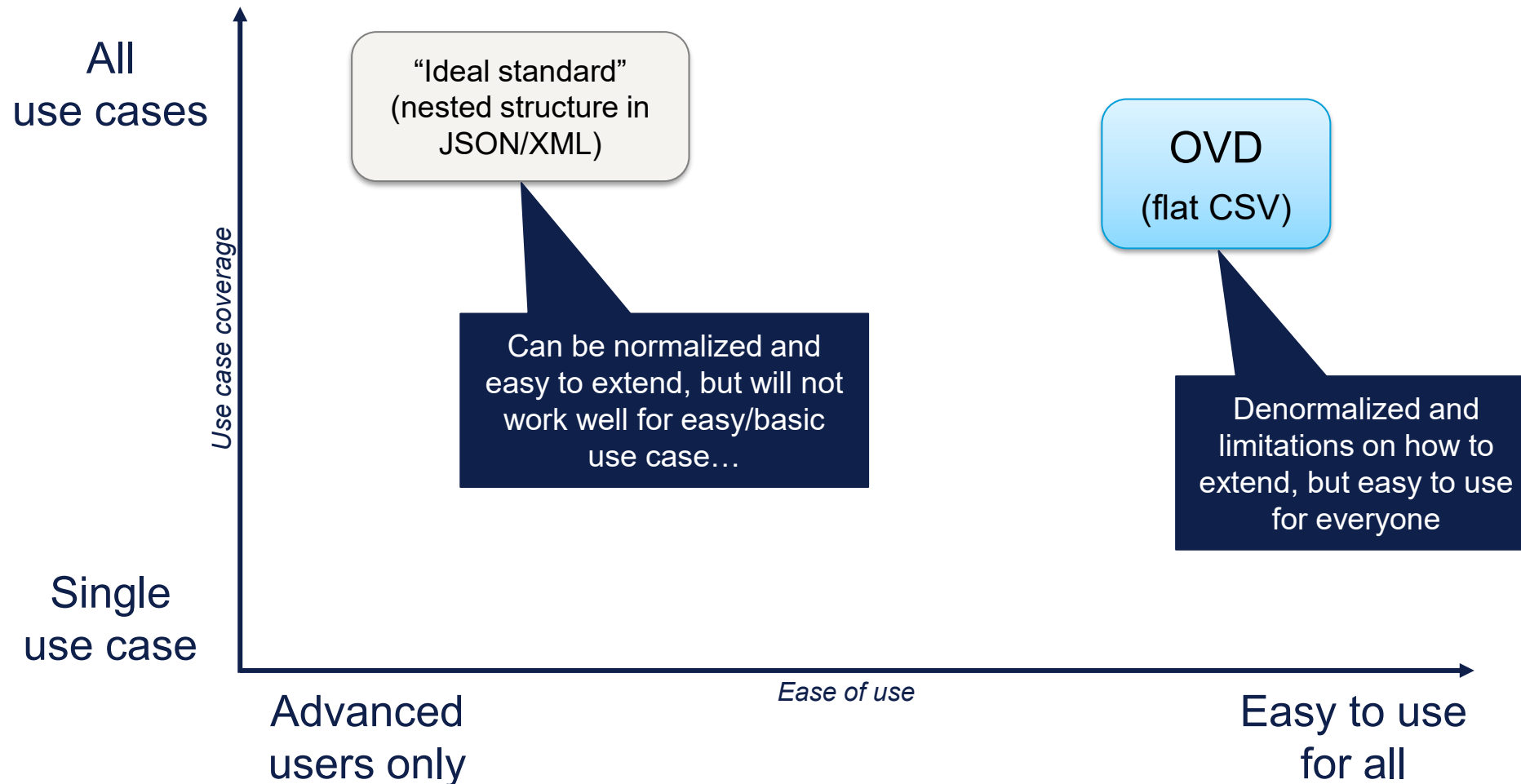
- Summary of emissions like total CO2 for a voyage, period or year
- Aggregated according to use case, e.g. EU MRV CO2 is in scope of EU MRV
- Might or might not include details about voyages or events
- Currently no single standard for this, both EU and IMO have XML standards according to their specific regulations

OVD is one piece of the puzzle to calculate GHG emissions

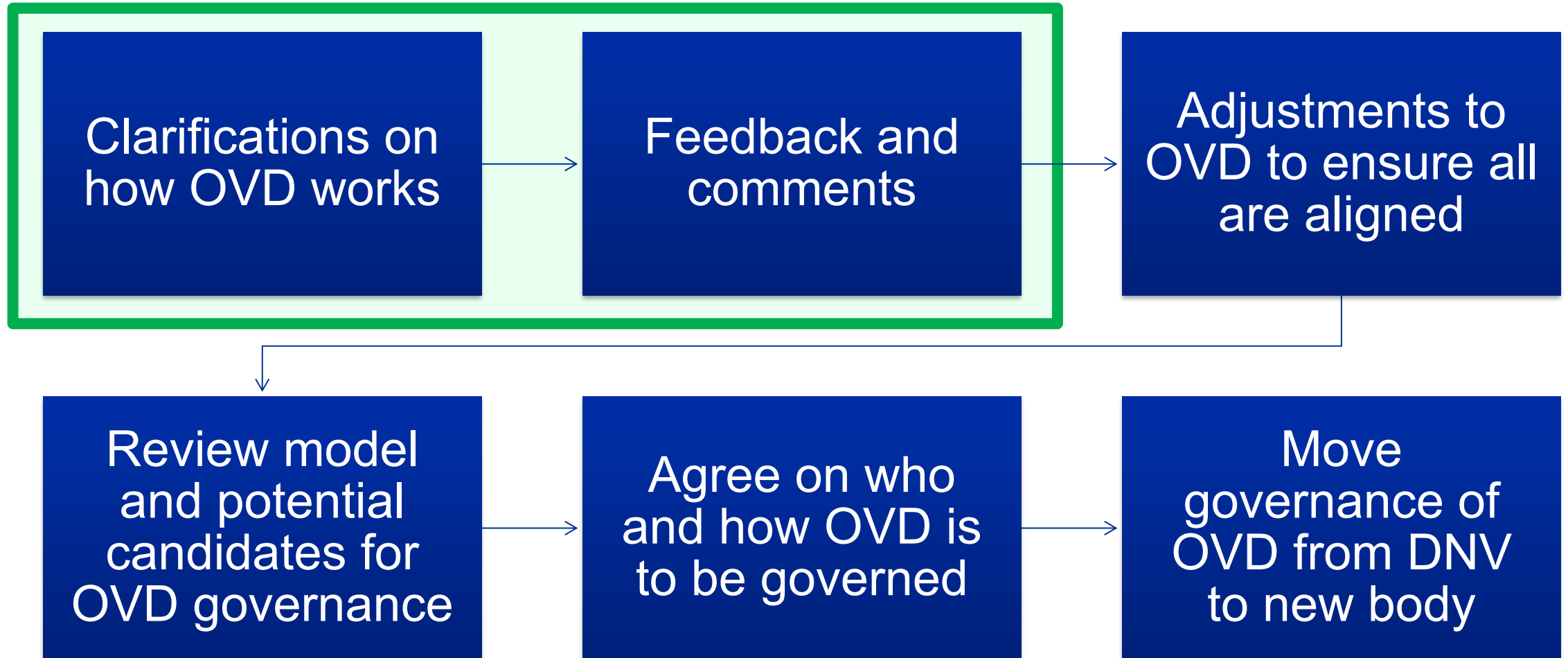


Standards for Maritime operational reports

“Noon reporting” / “Log abstracts”



Next steps for JIWG on establishing industry standard for noon reporting



Scope and use cases

Data is reported by the crew and fed to OVD

Every noon they report, amongst others:

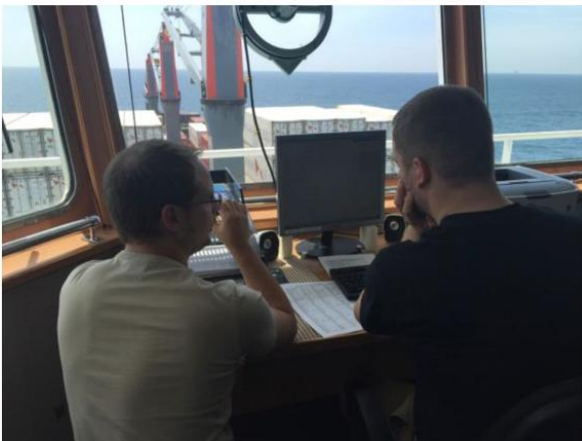
- Time sailing
- Distance sailed
- Fuel consumed
- Cargo
- Weather

Collection of Noon reports

Log Abstract

	A	B	C	D	E	F	G	H
1	IMO	Date_UTC	Time_UTC	Voyage_From	Voyage_To	Event	Distance	ME_Consumption_HFO
2	1234567	2017-11-25	07:30	DEHAM	NLRTM	Departure	0	0
3	1234567	2017-11-25	11:00	DEHAM	NLRTM	Noon	35	3.85
4	1234567	2017-11-26	04:00	DEHAM	NLRTM	Arrival	170	18.7
5	1234567	2017-11-26	11:00	DEHAM	NLRTM	Noon	0	0
6	1234567	2017-11-27	03:00	NLRTM	BEANR	Departure	0	0
7	1234567	2017-11-27	11:00	NLRTM	BEANR	Noon	80	8.8

CO2



OVD is using exiting data, i.e. noon and bunker reports



Tapping into already existing daily noon reporting



Extended to some extent defined and driven by Regulations
Aim of OVD is to hide the specifics governed by the Regulations from the crews



OVD is about data from vessels – “crew language” – OVD should be based on what the vessel does and what the crew can relate to – Noon reports/log abstracts

Single ship-to-shore reporting to cover all regulatory use cases

- Current application of OVD is for Emissions Regulations
- OVD can be applied to other use cases, e.g. vessel/fleet performance management
- One schema covering all Regulations – nothing in OVD is directly linked to a specific regulation, everything is generic
 - EU MRV
 - EU ETS
 - FuelEU Maritime
 - IMO DCS/CII
 - UK ETS



Schemas and Events

OVD Schemas

- OVDLA – Log Abstract – the typical “noon report”
- OVDBR – Bunker Report
- OVDEL – Electricity Report
- Optional schemas
 - OVDCP – Commercial Period
 - OVDCN – Cargo Nominations

Log Abstract Interface Description (OVDLA)			
			
Log Abstract			
Data field description			Description / explanation
Mandatory or relevant in GHG verification context data fields			
Vessel		IMO Number	IN
Date		UTC date	D
Time		UTC time	Ti
Period messages	Period messages can be reported when the reporting for a vessel starts or ends. Period messages are required to determine the scope, with respect to the MRV regulations, i.e., in, in to, out of EU, of the voyage.	Either 'Start' or 'End' indicating the purpose of the message. Ports called as per MRV regulation which are not covered in the reported period. If prev. or next port is a transshipment port as per MRV regulation, report additionally the port before/after the transshipment port.	Pi Pi N N
Voyage	From	From - port code (Departure port)	V
	To	To - port code (Arrival port)	V
	Voyage type	E.g. STS (in context of DCS CII Correction Factors), one way, round trip, idle	V
	Number	Name or number	V
Introduction Notes on GHG reporting Log abstract Bunker report EDN report Commercial period Cargo nomination			

Events

Report frequency depends on use case

Standardized event names

- Arrival / Departure
- ArrivalSTS / DepartureSTS
- *STS*

From 2026:

- BOSP / EOSP

Other events

- Noon (any name)
- Anchoring (any name)
- Shifting in port (any name)
- Sailing in ice (any name)
- ...

Event Types

* Note: only Arrival and Departure, BOSP/BeginOfSeaPassage/FAOP/FullAheadOnPassage and EOSP/EndOfSeaPassage and ArrivalSTS, DepartureSTS and STS are fixed in spelling and will be recognized by OVD voyage logic. Spelling of all other event names is flexible, but the names below are recommended.

Recommended event types and spelling	Remark
Arrival *	Arrival at berth
Departure *	Departure from berth
ArrivalSTS *	Arrival at STS location
DepartureSTS *	Departure from STS location
STS *	Events at which STS operation took place
BOSP *	Start of 'underway' period for DCS regulation
EOSP *	End of 'underway' period for DCS regulation
BeginOfSeaPassage *	Alternative to BOSP
EndOfSeaPassage *	Alternative to EOSP
FAOP *	Alternative to BOSP
FullAheadOnPassage *	Alternative to BOSP

Duration reporting

Time since previous report and time elapsed

Data field description		Description / explanation	Data field name	Type	Unit
Time elapsed	Since previous event report (duration)		Time_Since_Previous_Report	Decimal number	h
	Sailing	Fraction of the reporting time frame spent in sailing. For port recommended to report maneuvering	Time_Elapsed_Sailing	Decimal number	h
	Time at anchor	Fraction of the reporting time frame spent in anchor. Not applicable in port	Time_Elapsed_Anchoring	Decimal number	h
	Dynamic positioning	Fraction of the reporting time frame spent in DP. For extra information. Not applicable in port.	Time_Elapsed_DP	Decimal number	h
	Operating in ice	Time spent operating in ice; This is not a fraction of Time_Since_Previous_Report but the duration and can overlap with other Time_Elapsed_* values	Time_Elapsed_Ice	Decimal number	h
	Maneuvering	Fraction of the reporting time frame spent in maneuvering	Time_Elapsed_Maneuvering	Decimal number	h
	Waiting	Fraction of the reporting time frame spent in waiting	Time_Elapsed_Waiting	Decimal number	h
	Loading/ Unloading	Fraction of the reporting time frame spent loading/unloading please see notes.	Time_Elapsed_Loading_Unloading	Decimal number	h
	Drifting	Fraction of the reporting time frame spent in Drifting. For extra information. Not applicable in port.	Time_Elapsed_Drifting	Decimal number	h

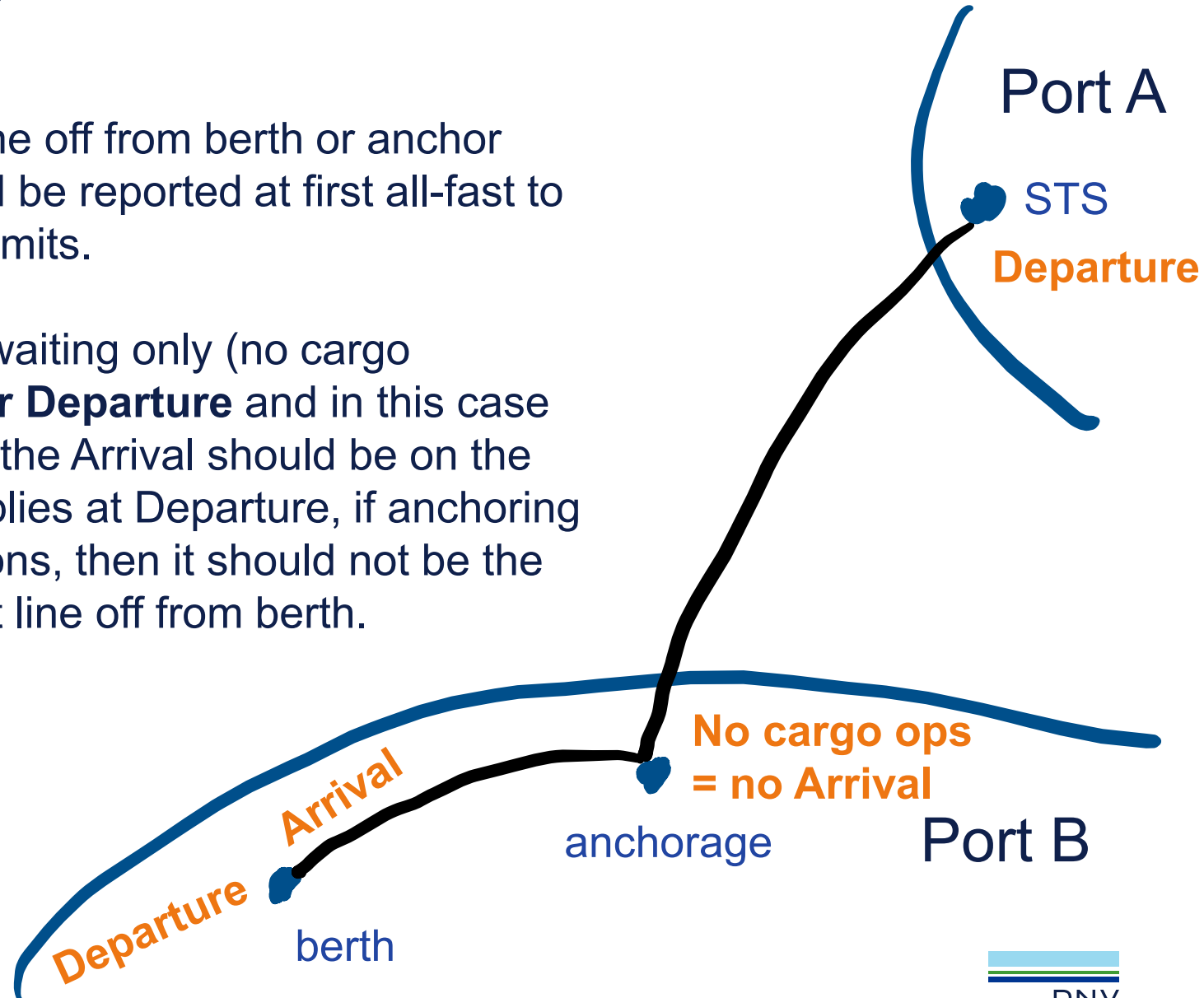
- Time_Since_Previous_Report is mandatory on ALL events – should always be consistent with date/time of report vs previous report
- Time elapsed columns are mostly optional, only mandatory for specific use

Port calls

Arrival and Departure

Departure should be reported at last line off from berth or anchor aweigh within port limits. **Arrival** should be reported at first all-fast to berth or anchor brought up within port limits.

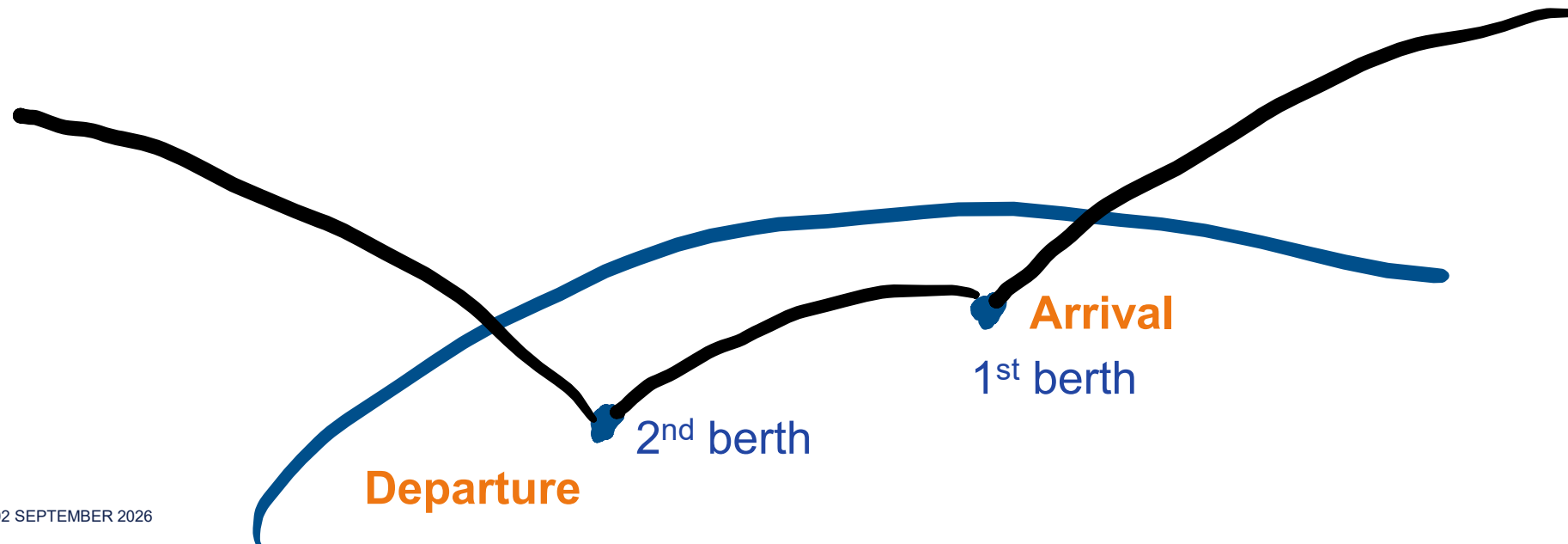
If the anchoring within port limits is for waiting only (no cargo operations), **it should not be Arrival or Departure** and in this case another event name must be used and the Arrival should be on the following all-fast instead. The same applies at Departure, if anchoring after last berth is without cargo operations, then it should not be the Departure, but instead the previous last line off from berth.



Shifting within port

When shifting within port limits, do NOT report Departure and Arrival for every berth, use other event names like StartShifting/EndShifting or similar.

Only the first and last event as described above should be reported as Departure and Arrival. I.e. **any port stay should have only one Arrival and only one Departure.**



Reporting – port-of-call

A port-of-call is detected by comparing the ‘cargo amount’ reported in OVD at arrival and departure. **If there is a change to these numbers, a port-of-call is assumed.**

For certain vessel types this approach cannot be used, i.e., LNG Carriers, PAX and offshore ships.

For LNG Carriers, PAX and offshore ships it is mandatory to report `Time_Elapsed_Loading_Unloading`.

`Time_Elapsed_Loading_Unloading` is expected to be greater than zero in case cargo is loaded/discharged or passengers/crew embarks/disembarks.

Alternatively, `Purposes_Of_Call` can be reported.



Reporting – STS

Cargo operation outside port limits i.e., Ship-To-Ship (STS) operations at open sea, is not considered as a port call.

Hence, **STS operations** at open sea **must not** be reported with **Arrival** and **Departure** events.

OVD supports 2 methods for reporting of STS

1. Events where the cargo amount is changing have the name containing the keyword “**STS**”, e.g. NoonSTS, STS, ...
2. Explicit start and end of the operation are reported with the event names **ArrivalSTS** and **DepartureSTS**

The 2nd method is required for tankers which want to benefit from CII corrections due to STS operation.

Option 1 - Fuel Type based reporting

Fuel Type based reporting

- Fuel Type based reporting is following the traditional reporting of consumption and ROBs
- Only applicable for standardized/fossil fuels where all fuel properties (e.g. LCV, cf, etc.) are defined by the Regulations
- Per fuel type, e.g., HFO, MGO, LNG, LPGP, etc. dedicated data fields exists in OVD for both consumption and ROB
- Per consumer group (e.g. AE – all auxiliary engines) the consumption since previous report is reported per fuel type

IMO	Event	Time_Since_Previous_Report	ME_Consumption_HFO	ME_Consumption_MGO	AE_Consumption_HFO	AE_Consumption_MGO	Boiler_Consumption_MGO	HFO_ROB	MGO_ROB
1234567	Departure	19.5	0		0	1.55	0.4	217	128
1234567	Noon	3.5	3.85	2.5	1.5	0.35	0	211.7	125.2
1234567	Arrival	17	18.7	0	0	1.65	0.05	193	123.5
1234567	Noon	7			0	0.55	0.15	193	122.8
1234567	Departure	16	0		0	1.3	0.3	193.4	121.2
1234567	Noon	8	8.8		0	0.8	0	184.6	120.4

Option 2 - BND-based reporting for non-standard fuels (biofuels)

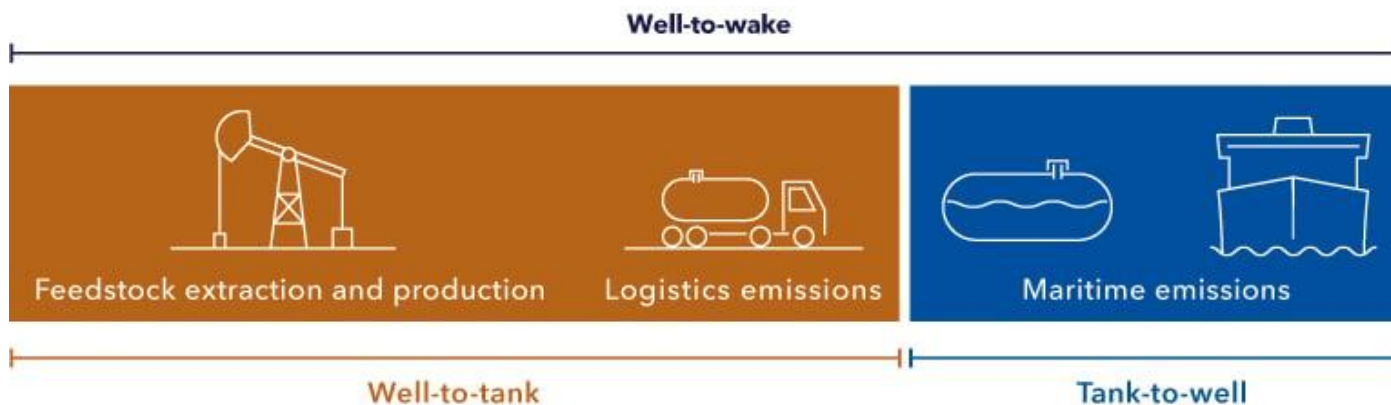
Biofuels reporting – complex requirements

- Complex regulations, both IMO and EU
- Each bunker might have different factors
- OVD standard for biofuels reporting is complex, but as simple as we managed to make it while still supporting all regulations and all use cases...



- DCS
- CII

- EU MRV
- EU ETS
- FuelEU
- UK ETS



FuelEU Maritime – lifecycle GHG intensity of energy

$$\text{GHG intensity} \left[\frac{\text{gCO}_2\text{eq}}{\text{MJ}} \right] = f_{\text{fuel}} \times (\text{WtT} + \text{TrW})$$

WtT	$\frac{\sum_{i=1}^n \text{fuel}_i \times \text{CO}_{2\text{eq, WtT, } i} \times \text{LCV}_i + \sum_{k=1}^K \text{CO}_{2\text{eq, electricity, } k}}{\sum_{i=1}^n \text{fuel}_i \times \text{LCV}_i + \text{RWD}_1 + \sum_{k=1}^K E_k}$
TrW	$\frac{\sum_{i=1}^n \text{fuel}_i \times \text{engine}_{i,j} \times \left[\left(1 - \frac{1}{100} \times \text{slip}_j \right) \times \left(\text{CO}_{2\text{eq, TrW, } i, j} \right) + \left(\frac{1}{100} \times \text{slip}_j \times \text{CO}_{2\text{eq, TrW, slip, } i, j} \right) \right]}{\sum_{i=1}^n \text{fuel}_i \times \text{LCV}_i + \text{RWD}_1 + \sum_{k=1}^K E_k}$

BDN based reporting in short

- Each fuel consumption is reported as data pair (Consumption ; BDN number)
- Each ROB is reported as data pair (ROB ; BDN Number)
- The BDN Number is the link to the OVD Bunker Report record where the fuel is defined

Benefits of using BDN based reporting:

- Only viable option for biofuel consumption/ROB reporting in OVD
- Fuel used is always linked to a particular bunker allowing easy tracking of consumption vs. available fuel vs. ROB
- Easy to add further fuel properties
- Additional fuel properties, e.g. sulphur content, can be assigned to a consumption and used in later assessments

Consumption reporting using the BDN based method

- The fuel consumption is reported per event in data field pairs.
- A pair consist of the fuel oil amount consumed and of the BDN number of the consumed fuel.

The pairs follow this pattern:

(X_consumption,X_Fuel_BDN)
 (X_consumption_BDN_2,X_Fuel_BDN_2)
 (X_consumption_BDN_3,X_Fuel_BDN_3)
 (X_consumption_BDN_4,X_Fuel_BDN_4)

where X is ME, AE, Boiler, IGG, GCU or DPP for consumptions
 and X is ME or AE for BDN.

Consumption for Boiler, IGG, GCU or DPP share the BDN data fields
 with the ones for AE_Fuel_BDN to AE_Fuel_BDN_4.

Date_UTC	Time_UTC	ME_Consumption_HFO	ME_Consumption_MGO	HFO_ROB	MGO_ROB	ME_Consumption	ME_Fuel_BDN	ME_Consumption_BDN_2	ME_Fuel_BDN_2	BDN_ROB	ROB_Fuel_BDN	BDN_2_ROB	ROB_Fuel_BDN_2
2023-09-12	12:00	10	2	47	96								
2023-09-13	12:00	10	2	37	94								
2023-09-14	12:00					10	HFO_BDN	2	MGO_BDN	47	HFO_BDN	96	MGO_BDN
2023-09-15	12:00					10	HFO_BDN	2	MGO_BDN	37	HFO_BDN	94	MGO_BDN

OVD Bunker Report

Updates required for biofuels

- OVD aims to ask for as few parameters as possible for biofuel bunkers
- The system will compute or look-up not provided parameters
- OVD Bunker Report has been extended for fuel components to support fuel blends
 - Fuel components are referring to the resulting fuel mix, i.e., the blend
 - Fuel components might refer to another, already existing bunkered fuel

Example of biofuel bunker intake in the OVD Bunker Report – grey fields should be left empty as DNV is able to compute those

Fuel_Type	BDN_number	Mass	Used_By_BDN	Lower_Heating_Value	EU_Lower_Calorific_Value	FLL_Energy_Share	EU_GHG_Intensity	IMO_GHG_Intensity	Sustainability	Fuel_Pathway_Code
Blend	BDN-123453									
MDO	BDN-123453_C1	70	BDN-123453							
HVO	BDN-123453_C2	30	BDN-123453	44	44		12.2	14.9	ISCC	

Note that Bunker_Delivery_Date, Bunker_Delivery_Time and IMO should be added to make the example complete but has been left out to make table fit the page.

Consumer level reporting and methane slip

Consumption reporting – different granularity options

.In OVD Fuel Oil Consumption can be allocated to different levels of granularity of the consumers

The levels supported are

1. **Consumer group level** consumption

- all consumption of a specific consumer group is allocated to this group, e.g. ME, AE, Boiler, ...
- most used reporting scheme

2. **Consumer level** consumption

- all consumption of an individual consumer, e.g. ME #1, AE #3, is allocated directly to this consumer, e.g. ME_1, AE_3.
- this works only with BDN-based reporting
 - required if consumers in a group have different combustion properties, e.g. CH4 slippage

Consumers supported in OVD

Consumer groups in OVD

- ME_ (main engines)
- AE_ (auxiliary engines)
- Boiler_ (boilers)
- IGG_ (inert gas generators)
- GCU_ (gas combustion units)
- DPP_ (diesel power packs)
- Incinerator_ (incinerators)

Consumer granularity options

Consumer level

- ME_1_Consumption (BDN based)

Consumer group level

- ME_Consumption_HFO
- ME_Consumption (BDN based)

Slip definition and mapping from monitoring plans to consumers

Monitoring plan:

Same slip values for all MEs and all Boilers

ME_Consumption

Boiler_Consumption

Table B.3. Emission sources and fuel types used

Emission source reference no.	Name of the emissions source	Type of the emissions source	Emissions source class	Technical description of emission source	(Potential) Fuel types used
ME 1		Main engine	LNG Otto - DF medium speed	slip ME 1	HFO, MDO/MGO, LNG
ME 2		Main engine	LNG Otto - DF medium speed	slip ME 2	HFO, MDO/MGO, LNG
ME 3		Main engine	LNG Otto - DF medium speed	slip ME 3	HFO, MDO/MGO, LNG
ME 4		Main engine	LNG Otto - DF medium speed	slip ME 4	HFO, MDO/MGO, LNG
BLR 1		Boiler	Boiler	slip Blr 1	HFO, MDO/MGO, LNG
BLR 2		Boiler	Boiler	slip Blr 2	HFO, MDO/MGO, LNG

Different slip values each ME
Boilers always have 0-slip

- ME_1_Consumption
- ME_2_Consumption
- ME_3_Consumption
- ME_4_Consumption

CII corrections

Data Elements to account for CII corrections

All operational data required to account for correction factors and voyage adjustments for the CII calculation are covered in the OVD Log Abstract ^{*)}

Applicability is defined in the SEEMP part III

$$\frac{\sum_j C_{Fj} \cdot \left\{ FC_j - \left(FC_{voyage,j} + TF_j + (0.75 - 0.03y_i) \cdot (FC_{electrical,j} + FC_{boiler,j} + FC_{others,j}) \right) \right\}}{f_i \cdot f_m \cdot f_c \cdot f_{iVSE} \cdot Capacity \cdot (D_t - D_x)}$$

^{*)} Correction factors accounting for ship design, e.g., ice class, are static. Hence, not in the OVD standard.

List of data elements used to account for CII corrections

Correction factors

OVDLA events are enriched with data elements to account for electricity used and fuel consumed, hence, emissions. Those data elements are for

- $FC_{electrical}$ (Reefer, cargo cooling and discharge pumps)
`XXX_Work, XXX_SFOC, XXX_Fuel_Type`
with `XXX` → `Reefer, Cargo_Cooling, Discharge_Pumps`
Instead of `Reefer_Work` the number of plugs used can be reported in `Reefer_20_Chilled, Reefer_40_Chilled, Reefer_20_Frozen` and `Reefer_40_Frozen`
- FC_{boiler} (cargo heating and steam driven discharge pumps)
`Cargo_heating_Consumption_<Fuel_Type>`
- FC_{other} (Stand alone engines/Diesel Power Packs)
`DPP_Cargo_Pump_Consumption_MDO` and
`DPP_Cargo_Pump_Consumption_O` +
`DPP_Cargo_Pump_Consumption_O_type`

Voyage adjustments

OVDLA events eligible for voyage adjustments are flagged. The flag depends on the type of adjustment.

- Due to securing the safety of a ship, life saving or damage to the ship:
`Offhire_Reasons` → keyword “Emergency” *)
- Due to STS:
`Voyage_Type` → keyword “%STS%”
- Due to sailing in ice:
`Time_Elapsed_Ice` → duration `Time_Elapsed_Ice` equals `Time_Since_Previous_Report`

*) Other `Offhire_Reasons` exist for MRV out-of-scope flagging

Other topics

Other topics

Elements in OVD, but not fully matured yet/under development:

- OPS and electricity, first version implemented
- Direct emissions measurements (Method D), first version implemented
- Custom slip/engine load monitoring, not started
- CCS, not started

Questions from the Industry Feedback process

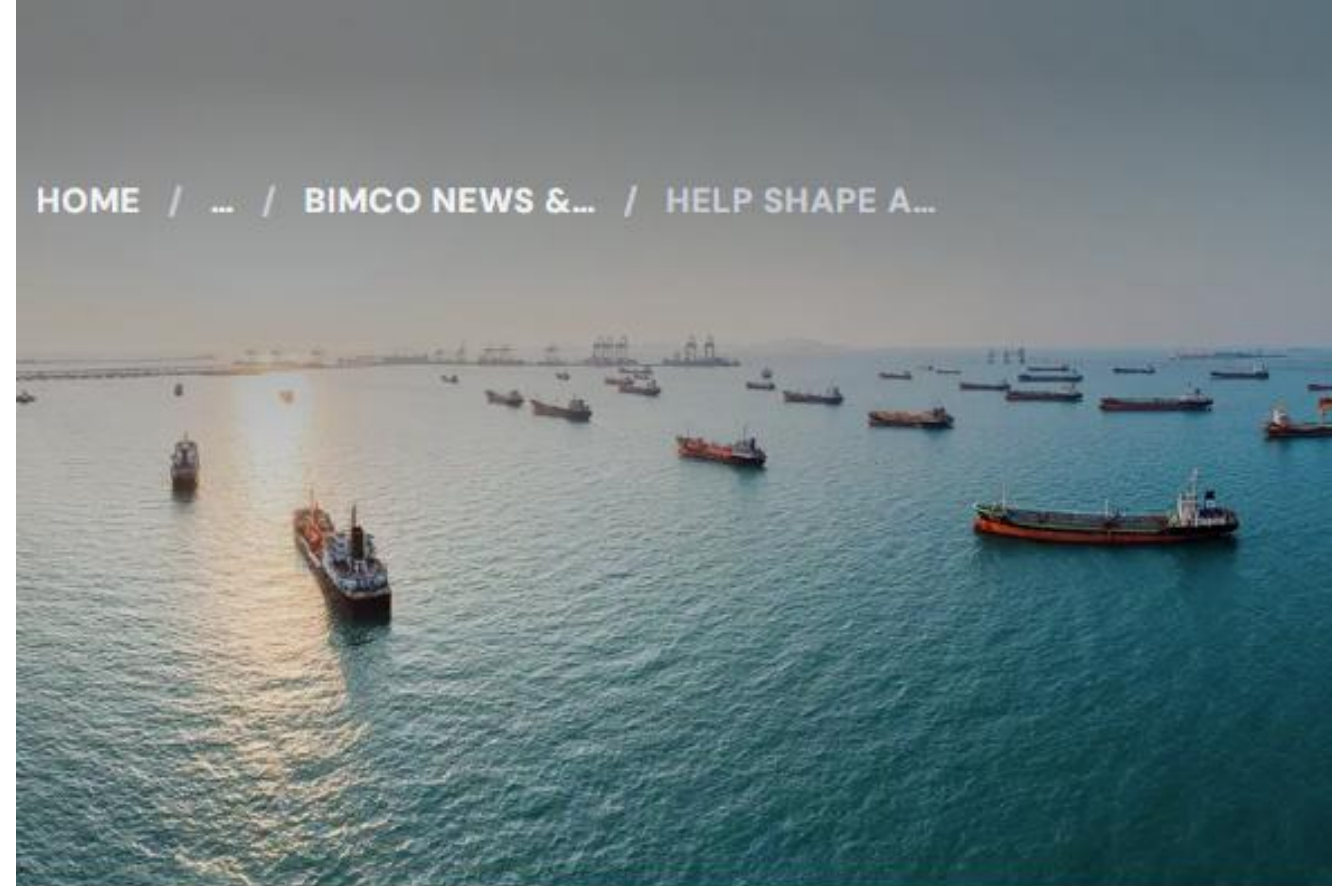
OVD resources

veracity.com/ovd

- Introduction and detailed descriptions can be found via veracity.com/ovd
 - OVD White paper: veracity.com/ovd-whitepaper
 - [OVD Interface Description](#) (Excel file with all schemas, tags and detailed descriptions)
 - [DNV guides on using OVD](#), a set of PDF documents describing how to report using OVD
 - OVD Guide: ovdguide.veracityapp.com/
 - Free tool to test the standard (requires login or free Veracity registration)
- Veracity Integrated Partner program: veracity.com/partner-integration
 - OVD integration with connectivity to close to 50.000 vessels

Feedback process – please join

- [Feedback](#)
BIMCO hosts a feedback form on their website
search for «OVD feedback» on the BIMCO homepage
- SMM
open workshop during SMM Hamburg on 2 September 2026
register via <https://email.bimco.org/p/7NF0-K47> (or the feedback form)
- Presentaion of gathered feedback in a webinar
open webinar on 15 October 2026



HOME / ... / BIMCO NEWS &... / HELP SHAPE A...

Help shape a common standard for maritime emissions data reporting



Practical support for OVD adoption

RINA's approach to a common industry framework

*Hanna Pełnikowska,
RINA Poland Plan Approval Centre*

Tripartite JIWG Industry Consultation Workshop,
SMM Hamburg 2 September 2026

Our experience. Your growth.

Industry starting point, a shared challenge and common direction



The Tripartite declaration of a common industry direction is supported by the JIWG White Paper and working documents, which provide the practical foundation for implementation.

Reality



Environmental regulations, transparency expectations and commercial uses of emissions data are expanding

What's happening?



The same operational data must be shared among accredited verifiers, RO-s, charterers, commercial platforms etc.

Problem



Different formats and definitions require repeated mapping and reconciliation, increasing cost, effort and the risk of inconsistent outcomes

Common direction



A harmonised exchange framework to improve interoperability, traceability, consistency and efficiency across the value chain

Why RINA joined the JIWG Common Industry Solution for Digital Reporting of Data Relevant for Maritime Emission Reporting



RINA's commitment to industry standardization

While RINA keep supporting existing exchange standard, we believe a common industry framework creates greater long-term value for all stakeholders.

For this reason RINA decided to actively participate in the Tripartite JIWG and support the adoption of the OVD framework as a common exchange layer for operational ship data.

Our aim is to contribute to an open, practical and industry-driven standard that:

- Reduces complexity and duplication
- Enhances interoperability between different platforms and organisations
- Connects the OVD framework with recognised industry standards, including the IMO Compendium
- Protects customers' existing investments while supporting future developments

Why standardization matters?

Real Customer Challenges Caused by Non-Harmonised Data Standards

Key Issues Observed During Verification

1

Customers changing verifier must remap data manually

- Reformatting the same source data to meet a different reporting structure

Different interpretations of the same operational activity

- For example, using elapsed time and determining which operational periods may overlap

2

3

Different voyage segmentation methodologies

- For example, identifying voyage boundaries and applying the EU MRV “port of call” definition

Platform-specific rules increase manual efforts

- Mandatory fields, report sequencing and additional data for corrections or deductions

4



Limited interoperability increases compliance costs

Principles of the JIWG Common Industry Solution



Theory

Standardisation

A common structure and shared definitions reduce fragmentation, duplication and inconsistent interpretations across the industry

Transparency

Published schemas, transparent governance and predictable versioning support trust and consistent adoption

Neutrality

The framework is vendor-neutral and does not require the use of any specific software, platform or commercial solution, allowing all stakeholders to participate on equal terms

Interoperability

Different systems can exchange and use data without manual conversion

Real-life benefits

Collect data once, use it everywhere

Reuse the same information across regulatory, verification and commercial processes

Confidence in adoption

Clear governance and transparent development help stakeholders adopt the framework with confidence

Freedom of choice

Stakeholders choose the systems that suit them best and have their trust, rather than being tied to a single provider

Seamless data exchange

Data flows between stakeholders without manual re-entry or spreadsheet conversions

OVD adoption pathway

Implemented by RINA to support a common industry framework while protecting existing customers' investments.

Accept

OVD accepted as an input format alongside existing RINA templates

Align

RINA introduces automatic mapping of OVD standard to the Leonardo Emissions data model

Govern

Exchange

Align

Accept

Exchange

OVD-compliant reporting format enable clients to share data across the industry

Govern

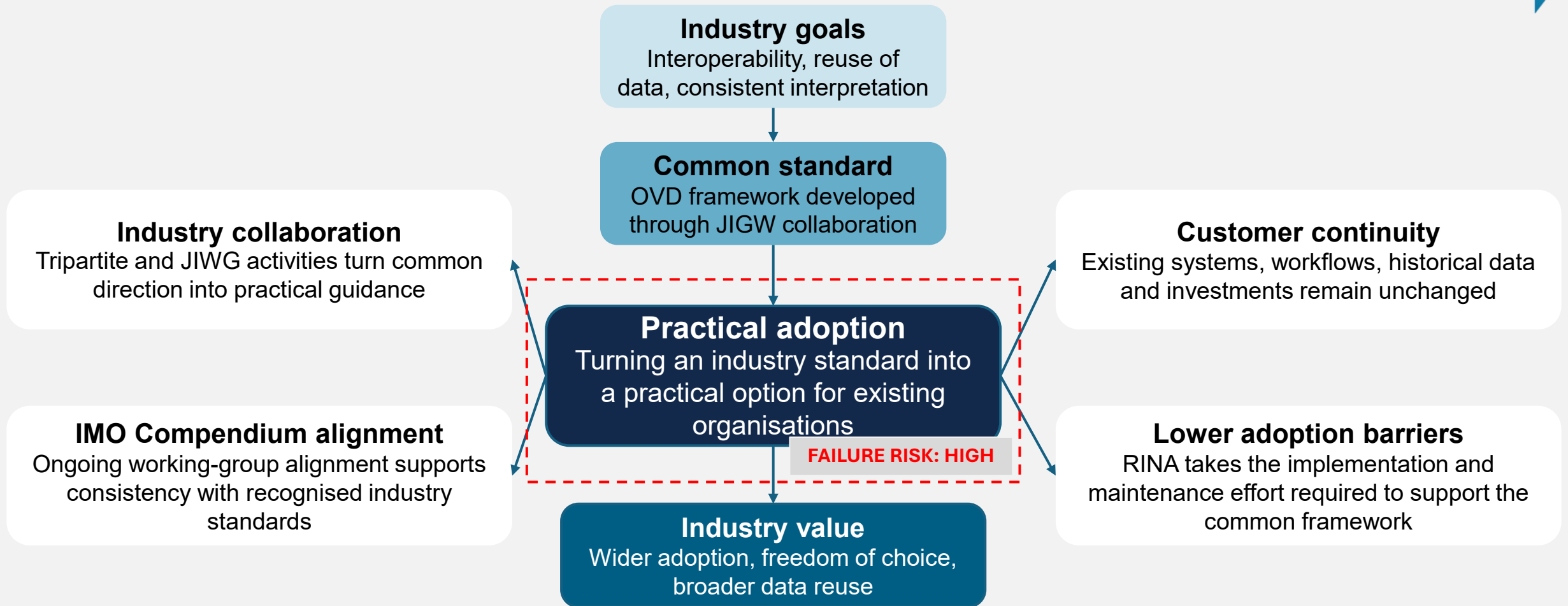
Active participation in the governance, maintenance and future development of the standard

OVD integration in Leonardo Emissions: industry interoperability without customer disruption

RINA takes on the OVD integration, mapping and maintenance effort.
Customers gain interoperability while preserving existing systems, workflows and historical records.

What RINA handles?	What Customers keep and gain?
Flexible inputs Existing RINA formats or OVD, through CSV upload or API integration	No forced changes Existing reporting format remains accepted
Mapping and alignment Automated OVD mapping in Leonardo Emissions, aligned with the IMO Compendium	Same experience Interfaces, services, workflows remain unchanged
Ongoing maintenance Manages mapping updates as the common framework and platform evolve	Reduced effort No customer-side mapping, manual re-entry or format maintenance
Verification-ready outputs EU MRV/ETS, FuelEU, UK ETS, IMO DCS & CII and commercial statements	Wider reuse Use the same industry format across multiple stakeholders
Historical data continuity Keeps historical data accessible in the platform	Protected investment Retains value from past reporting and records

Making OVD standard practical



RINA's goal: minimize failure risk. Lowering adoption barriers by taking on implementation of OVD and maintenance efforts of existing standard, while protecting customer investments and reducing burden.

Benefits and priorities



Benefits

- Reuse data across regulatory and commercial use cases
- Lower cost and effort, faster and easier reporting
- Better data quality, traceability and trust
- Interoperability without replacing existing systems
- Freedom of choice and wider market access

Priorities

- Achieving broad industry adoption
- Maintaining common definitions and interpretation
- Establishing clear governance for long term stability
- Respecting data ownership and confidentiality
- Preserving platforms' independence and freedom of choice

Common standard for data exchange, not common system.

Why would competitors adopt the same standard?

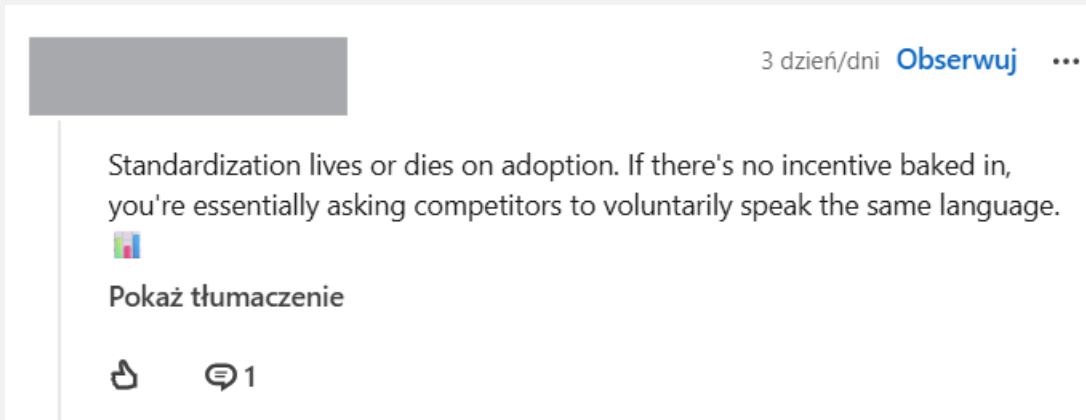


Why would competitors voluntarily adopt the same standard?

Because common standards reduce shared costs while allowing companies to continue competing through their services, expertise and innovation.



The concern:



RINA's view:

This is not about competition; it is about industry progress.

Although Classification Societies compete in certain service areas, we work together to standardize emissions reporting. RINA supports the new standard, regardless of its origin, because transparency, harmonization, and simplification are essential to driving efficiency and development to the maritime sector.

Compete on services.
Collaborate on standards.

Looking ahead

Support the common framework

Turn the JIWG working documents into practical implementation

Drive industry adoption

Build engagement and alignment across the maritime industry

Preserve customers' choice

Support the transition to common standards while preserving existing operations

Build trust

Ensure transparency, consistent interpretations and governance

Shape the future

Strengthen the framework through experience and collaboration

The common direction set by the Tripartite collaboration is taking practical shape through the JIWG White Paper and working documents, including ongoing alignment of OVD with the IMO Compendium.

Common standard

Freedom of choice

Continuous innovation

Thank you!



Hanna Pełnikowska
RINA Poland Plan Approval Centre
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BUREAU VERITAS MARINE & OFFSHORE

OVD IMPLEMENTATION A STRATEGIC APPROACH

2 Sept. 2026



BUREAU
VERITAS



Why emission data model **standardization** matters?



Data quality
&
Compliance

Maintenance
&
Governance

Interoperability
&
Competitiveness

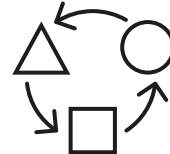
WHY OVD? WHEN EVERYONE ALREADY HAS A DATA MODEL

MANUAL & AUTO



One model for **IT**
and **operational**
people

ALL REGULATIONS

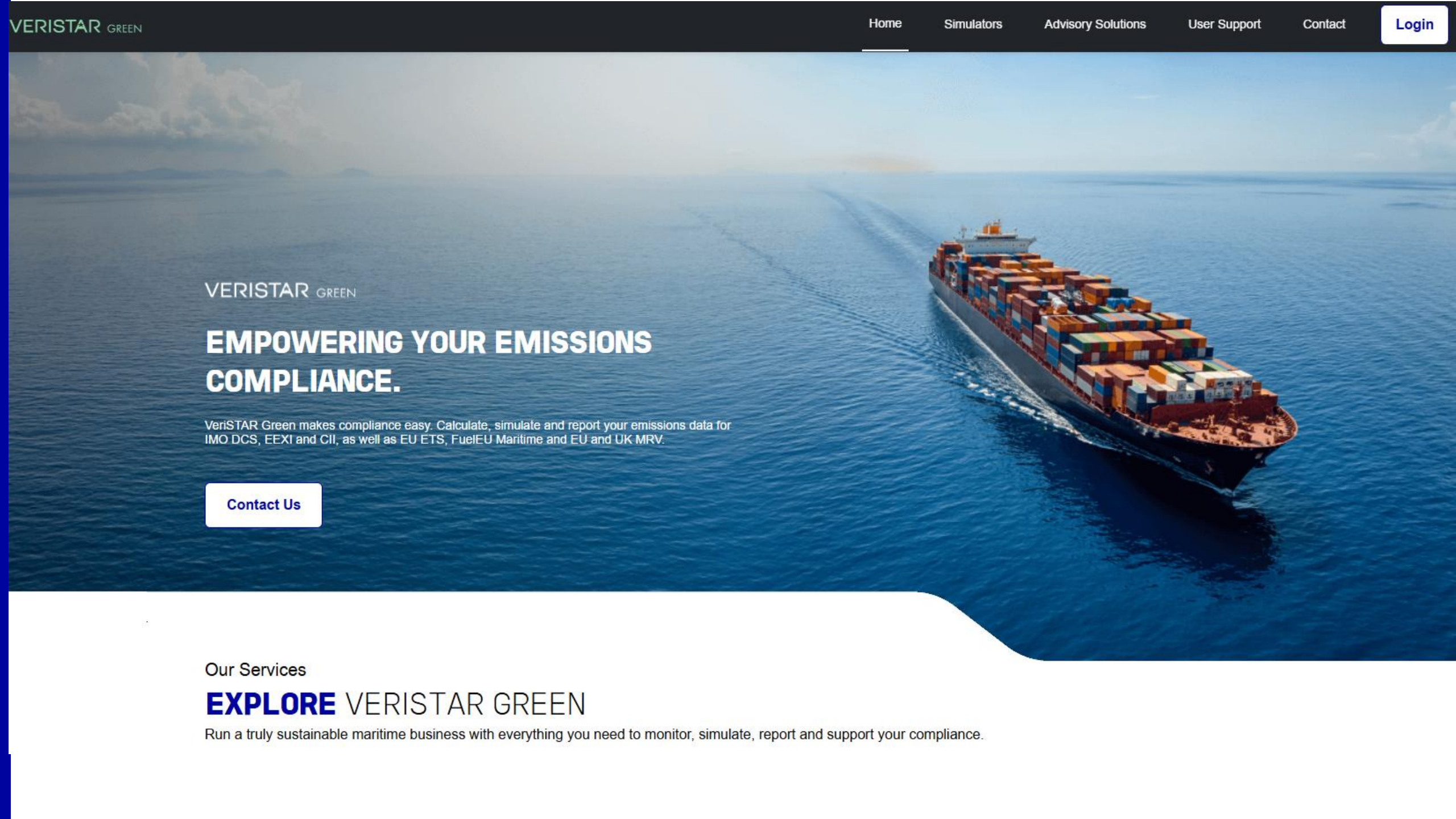


IMO DCS/CII, **EU**
MRV/ETS, FuelEU,
UK ETS, ...

ALL SHIPS



Ship **types**,
Marine **fuels**,
Ship **operations**

The background of the hero section is a high-angle photograph of a large container ship sailing on a deep blue ocean. The ship is moving from the bottom right towards the center, leaving a white wake behind it. The sky is a pale blue with some light clouds. The overall tone is professional and maritime.

VERISTAR GREEN

EMPOWERING YOUR EMISSIONS COMPLIANCE.

VeriSTAR Green makes compliance easy. Calculate, simulate and report your emissions data for IMO DCS, EEXI and CII, as well as EU ETS, FuelEU Maritime and EU and UK MRV.

[Contact Us](#)

Our Services

EXPLORE VERISTAR GREEN

Run a truly sustainable maritime business with everything you need to monitor, simulate, report and support your compliance.

VERSISTAR GREEN IMPLEMENTS OVD STANDARD FOR DATA COLLECTION: THROUGH MANUAL .XLS TEMPLATE OR API

L9														
Event N°	Vessel	Date	Time	Voyage		Event	Purposes of port call	Time elapsed				Distance	Cargo	
	IMO	Date UTC	Time UTC	Voyage_From	Voyage_To	Event	Purposes_Of_Call	Since previous event report (duration)					Weight	People
								Time_Since_Previous_Report	Time_Elapsed_Sail	Time_Elapsed_Anchor	Time_Elapsed_Drift	Distance	Cargo_Mt	Passeng
1	9999916	01/01/2026	17:30:00	GBPME	FRSML	Departure	PassengerMovement	0				0	900	650
2	9999916	01/01/2026	20:15:00	GBPME	FRSML	BOSP		0,5				5	900	650
3	9999916	02/01/2026	07:45:00	GBPME	FRSML	EOSP		10				132	900	650
4	9999916	02/01/2026	08:15:00	GBPME	FRSML	Arrival		0,5				5	900	650
5	9999916	02/01/2026	10:30:00	FRSML	GBPME	Departure	PassengerMovement	2,25				0	750	775
6	9999916	02/01/2026	11:00:00	FRSML	GBPME	BOSP		0,5				5	750	775
7														
8														

L10														
Bunker reports														
BDN	IMO	BDN_Number	Used_By_BDN	Coming_From_BDN	Bunker_Deliver_y_Date	Bunker_Deliver_y_Time	Fuel_Type	Mass	EU_Lower_Calorific_Value	EU_GHG_Intensity	Sustainability	Lower_Heating_Value	IMO_GHG_Intensity	
1	9999916	BDN-HFO			01/01/2026	15:00:00	HFO/HSFO	200						
2	9999916	BDN-MGO			01/01/2026	15:00:00	MGO	50						
3	9999916	BDN-B30-MGO			01/01/2026	15:00:00	Blend							
4	9999916	B30-Bio	BDN-B30-MGO		01/01/2026	15:00:00	HVO	15	37	14,9	EU-ISSC-Cert No.			
5	9999916	B30-fossil-MGO	BDN-B30-MGO		01/01/2026	15:00:00	MGO	35						

B- Fill in the IMO number of your vessel once

IMO Number 9999916

0-Version changes 1-User guide 2a-Reporting Log Abstract 2b-Reporting Bunker 2c-Reporting Electricity Fields desc. - Log Abstract Fields desc. - Bunker report Fields desc. - EDN report Ports Event t

CHALLENGES & PERSPECTIVES

Processes

- OVD is the **output** of company's reporting processes.
- OVD is also the **input** of verification processes:
 - Check consistency
 - Aggregate by voyage/leg
 - Calculate GHG metrics

Aggregations

- OVD data is **disaggregated data** at event level (noon, logs, reports)
- Regulation have **different aggregation** rules that quickly which **evolve overtime**

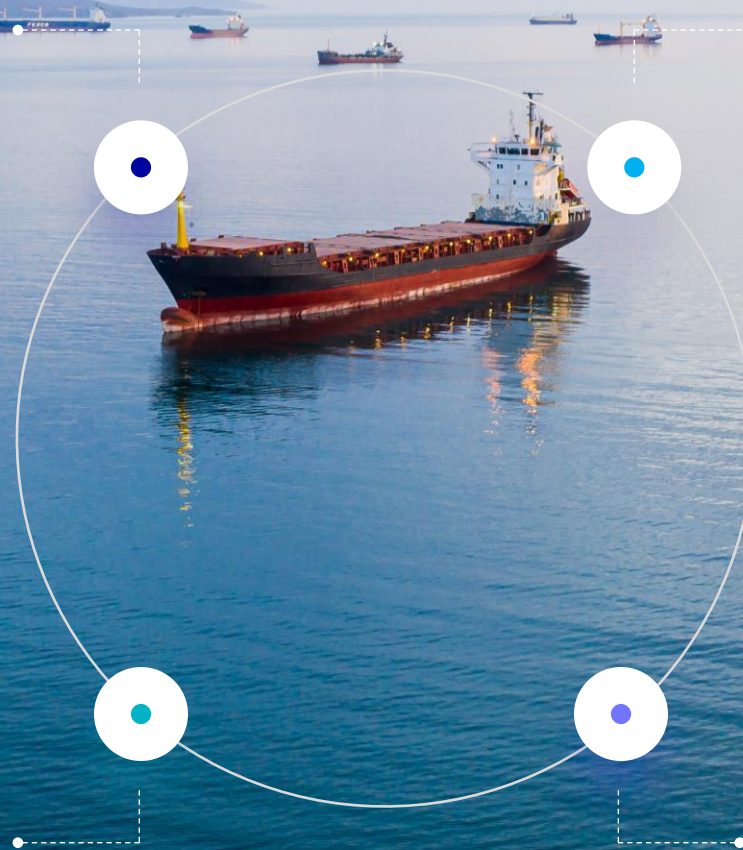
Maintenance

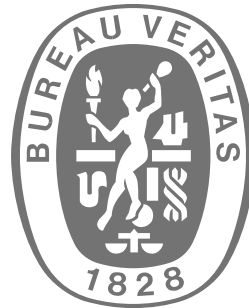
- OVD avoids duplicated efforts for maintenance overtime with the evolving regulations:
New data points, new events, new fuel parameters, new leg/voyage aggregations, ...

Governance

A **central** but **open** governance is proposed for

- Addressing all situations
- Harmonized interpretations
- Regular maintenance





**BUREAU
VERITAS**

Shaping a World of Trust



Panel discussion

– OVD Industry consultation at SMM Sept 2nd 2026

- Sean Crowley, Stolt tankers
- Christian Bonfils, CCP / OceanPass
- Jacob Clausen, NAVTOR
- Hanna Pelnikowska, RINA
- Vincent Joly, BV
- Stefano Penco, ABS
- Satoshi Hirayama, ClassNK
- Bjarte Walaker, DNV

Jeppe Skovbakke Juhl, BIMCO (Moderator)



What are the next steps?

Purpose and scope of the work

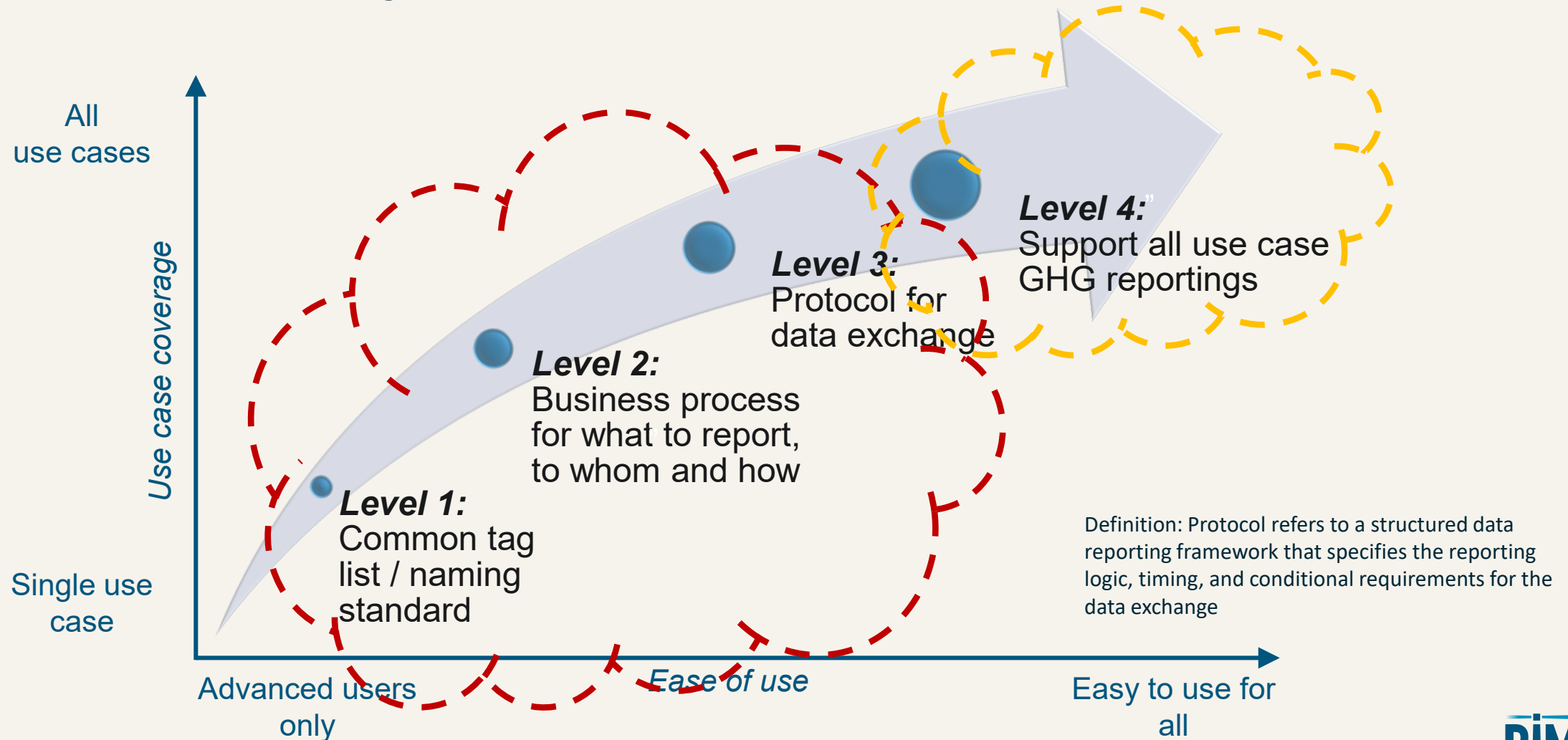
- To establish and adopt a **common business process** and associated data exchange protocol for the accurate, efficient, and verifiable **reporting data relevant for emission calculation**

This initiative aims to:

- Ensure **consistency and interoperability in emissions data reporting** across the global maritime sector
- Facilitate **seamless data exchange** between vessel operators/owners, verifiers, flag States, and relevant authorities
- Support the uptake of a **harmonised dataset based on the IMO Compendium**, ensuring alignment with existing international standards

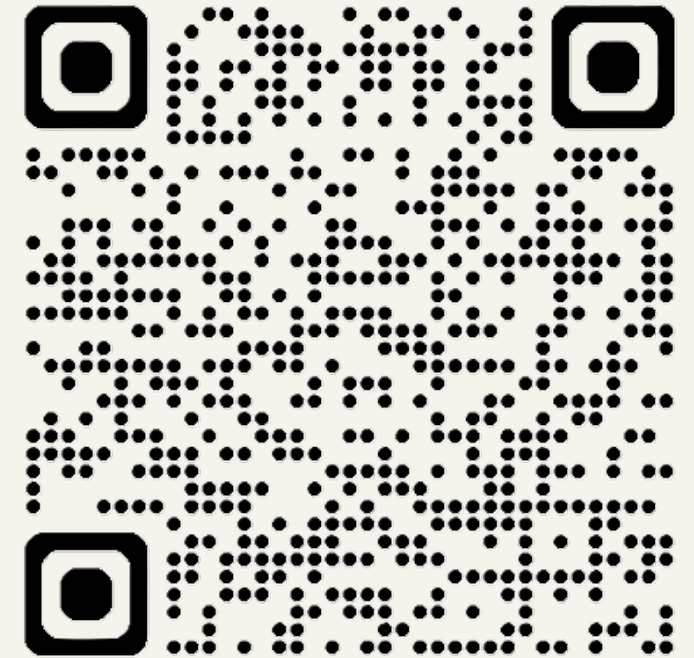
Where are we now?

- and where do we want to go...



Call to action !

- We **invite all maritime stakeholders** - including shipowners, operators, classification societies, port authorities, technology providers, and regulatory bodies - **to join this initiative**
- Together, we can agree on, and **adopt a common robust, future-proof framework** that supports global decarbonization goals and enhances the integrity of maritime emissions reporting
- **Join the OVD industry consultation** to development of a common digital approach to maritime emission data reporting



Next step



- **The industry consultation will close on 15 September.** Please remember to submit your feedback before this date
- To share the key outcomes, we will host an **online webinar on the morning of 15 October**, where we will present a high-level summary of the consultation findings
- We will **continue to provide updates through social media** and targeted email communications
- If you have **any questions** or would like to discuss the consultation further, please feel free to contact me:

Jeppe Skovbakke Juhl
jsj@BIMCO.org



On behalf of the Tripartite JIWG

Thank You for Attending the OVD Workshop

Help shape the future of
maritime environmental reporting

- and don't forget to submit your feedback on the OVD framework before 15 September

Together, our voice is
STRONGER



BIMCO

The practical
voice of shipping