VPS BOSS

VPS, Your Partner in Data-Driven Decarbonisation

Our innovative, data-driven solutions enable you to reduce emissions, optimize fuel consumption, and enhance overall fleet performance. VPS provides the tools and expertise to help you achieve your sustainability goals.

VPS-BOSS provides tailored vessel reporting, voyage optimization, and management services. Explore our solutions and discover how we can support your transition to a low-carbon future.

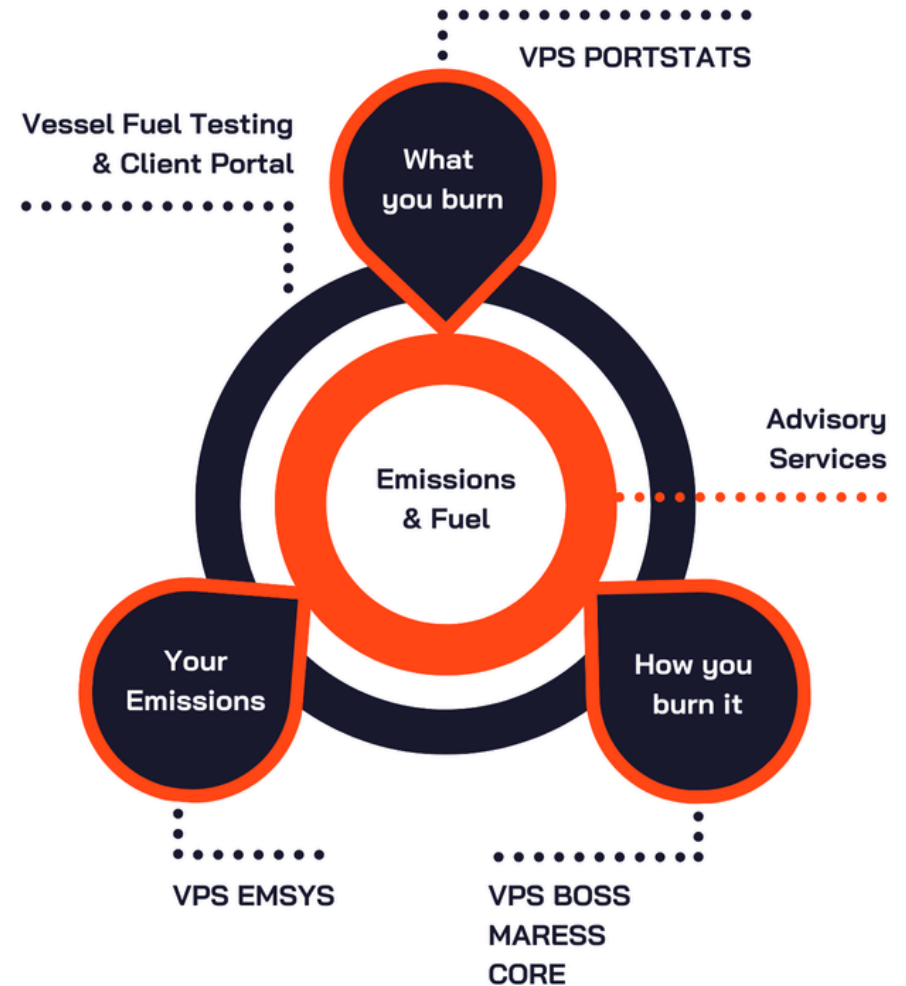**EXPERIENCE ▶ INNOVATION ▶ SUSTAINABILITY**

Moving Forward

Leading the way for sustainable solutions

VPS´ data-driven decarbonisation services

The maritime industry is going through a transition. To meet 2030+ emission targets and to stay competitive, the industry needs collaborative tools that use data in smart ways to give the right information.

VPS develops and partners up with industry experts to bring you a suite of emission-reducing softwares and executes advisory projects for reducing fuel consumption and emission footprints. We call it data-driven decarbonisation. Dive into each of the services to get an understanding of how they may be of use to you and your company on your journey towards more efficient and sustainable operations. Each service can be used stand-alone, or in combination. Our services provide real business value through functionality & insight.

- **Maress**
- **VPS *BOSS***
- **Emsys**
- **Core**
- **Advisory Services**
- **PortStats**
- **Vessel Fuel Testing (FQT) | Oil Condition Monitoring (OCM) | Customer Portal**
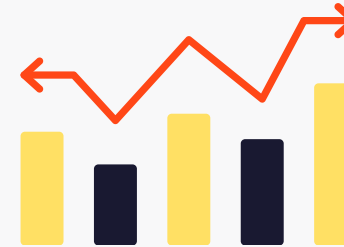

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Maritime shipping industry facing significant challenges

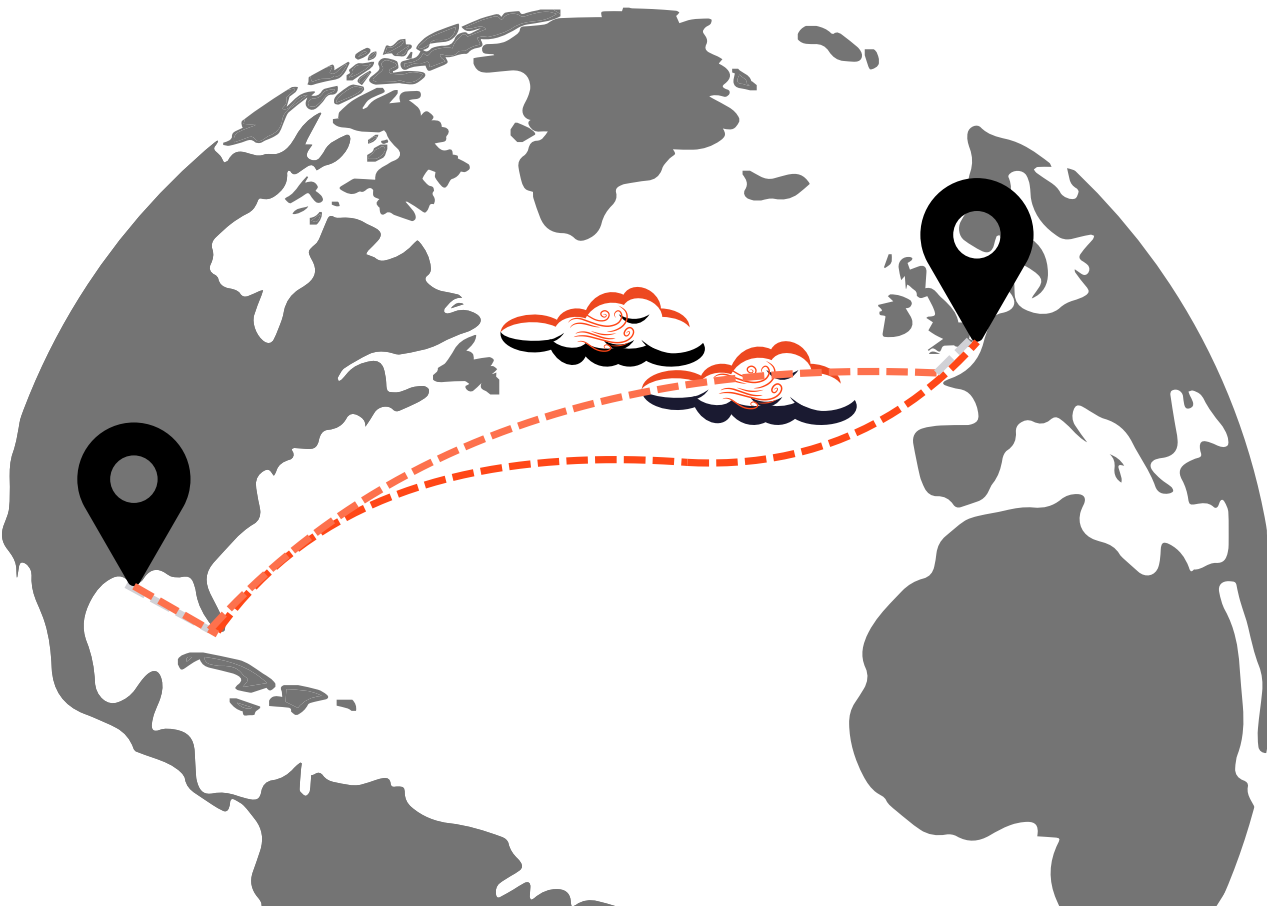### Stricter compliance for Emissions regulations

- Increased use of compliant fuels.

- Enhanced scrutiny of emissions data.

- Pressure to adopt energy-efficient practices in voyage planning and execution.

- Penalties for higher emissions or non-compliance are severe.

Economic uncertainty leading to fluctuating global trade & higher market volatility

- Unpredictable trade patterns emerging globally.

- Freight demand swings between extremes.

- Market volatility increases across sectors leading to a wide range in spot market rates

- Increased focus on agile logistics solutions.

To overcome these challenges, operating at peak efficiency with available resources is crucial.

Utilizing data analytics, fleet owners can significantly mitigate risks and optimize performance. However, many shipping companies struggle with inadequate tools to assess fleet data and gain actionable insights.

VPS-BOSS

Voyage Optimization service addresses this gap by integrating vessel, voyage, weather, and market data to deliver optimized route guidance.

Service Offerings

Self-Service Platform

You can enroll your fleet in BOND effortlessly using publicly available vessel data, bypassing lengthy fleet-level agreements.

Signing up is as simple as creating a social media account.

Vessel Reporting & Monitoring

BOSS uses MIRROR for accelerated and validated vessel noon reporting.

A HTML based form which works offline avoiding the need to install any software on the vessel.

Fleet Monitoring, Visualization & Maritime Tools

Gain complete visibility of your fleet with the latest vessel positions from aggregated terrestrial, dynamic and SAT-AIS data with custom Geo-fencing alerts.

Vessel Performance Analysis

Our data-analytics toolkit analyzes the relationships between engine load, fuel consumption, RPM and Speed to understand the current and historic vessel performance trend.

Voyage Optimization

We have a proven track record of an average 3-5% fuel savings against a transparent voyage benchmarking system.

LNG / BOG Optimization

Predicting BOG in LNG is complex, demanding industry expertise and high-precision analytics. BOSS experts use AI/ML-driven algorithms to deliver accurate BOG predictions for LNG voyages.

Emissions Analysis & Compliance

With seamless API integration, emission reporting becomes effortless, ensuring compliance with ease and precision.

Who we serve

Our solutions are designed to cater to a diverse range of professionals in the maritime industry, ensuring optimal performance and efficiency across every voyage.

Fleet Owners
Professionals responsible for overseeing the entire fleet, focusing on the profitability, safety, and operational efficiency of their vessels.

Charterers
Individuals or companies that lease vessels for cargo transportation, requiring precise planning and execution to meet contractual obligations.
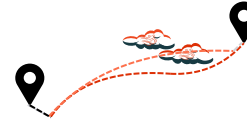
Voyage Managers
Experts tasked with managing the details of each voyage, including routing, scheduling, and logistics to ensure seamless operations.

Technical and Commercial Operators
Teams responsible for the day-to-day technical and commercial management of vessels, focusing on maintenance, compliance, and cost-effectiveness.

The value

Optimized Routes

Fuel Efficiency

Regulatory Compliance

Operational Efficiency
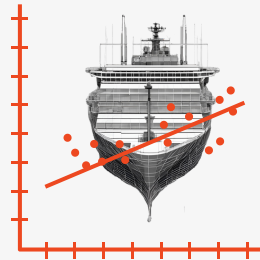
Data-Driven Decisions

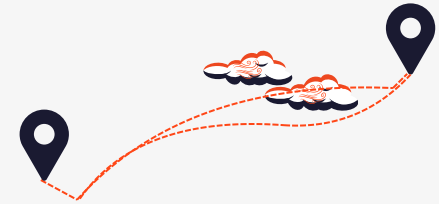**24 x 7 Customer Support**

There are 3 key components of effective voyage optimization

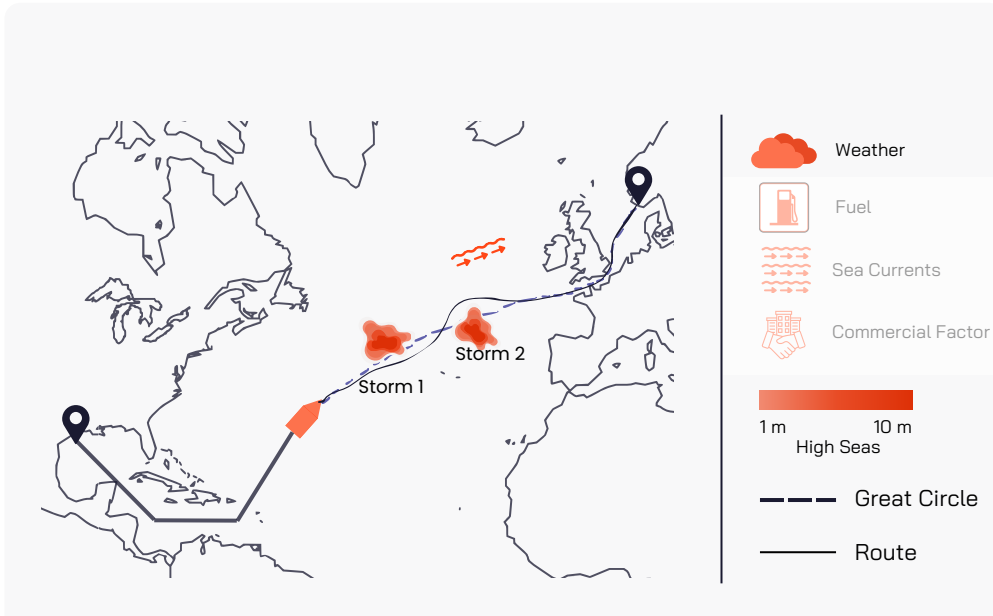**Accurate weather forecasts** from acclaimed weather providers

Vessel's Hydrodynamic Model that predicts speed, power and fuel consumption in all weather conditions.

Proactive route guidance that continuously optimizes based on changing market factors and weather conditions.
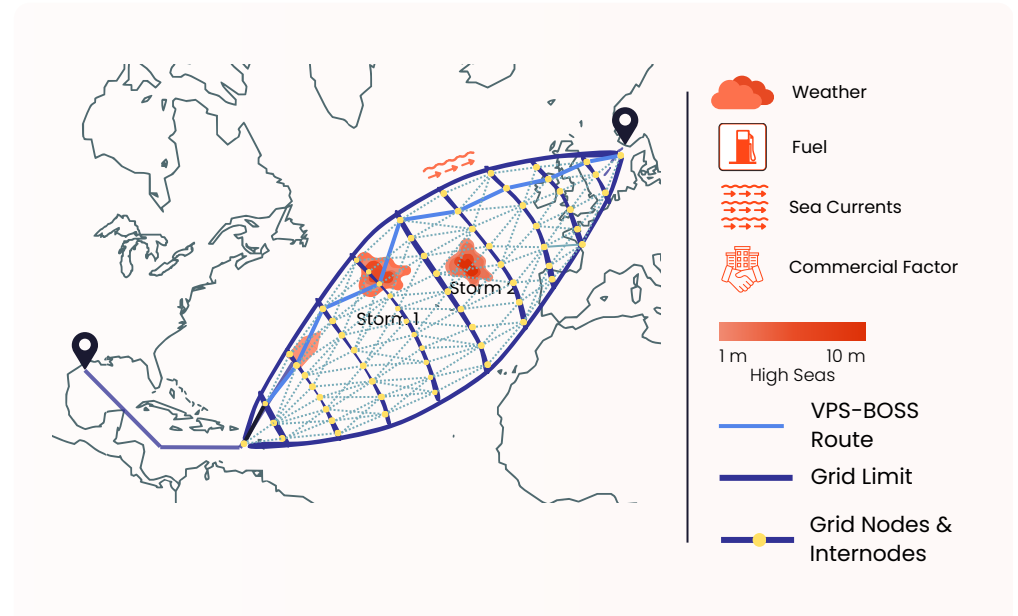
Traditional Weather Routing

Reactive approach

The recommended route is not optimized for key factors such as fuel efficiency, speed, and market conditions. It overlooks the potential advantages of leveraging dynamic speed, missing an opportunity for a more efficient and cost-effective journey.

VPS - BOSS Route Optimization

Proactive approach

The route takes advantage of favorable sea currents and adjusts speed along the entire journey, considering weather, voyage costs and commercial factors like voyage priority and laycan window. This strategy enables the vessel to save 3-5% on fuel costs, reduce CO_2 emissions, and improve the CII rating.

Hydrodynamic Model

A ship's Hydrodynamic Model calculates the relationship between a vessel's propeller RPM, engine power, speed, and fuel consumption, predicting how these factors will interact under various sea conditions.
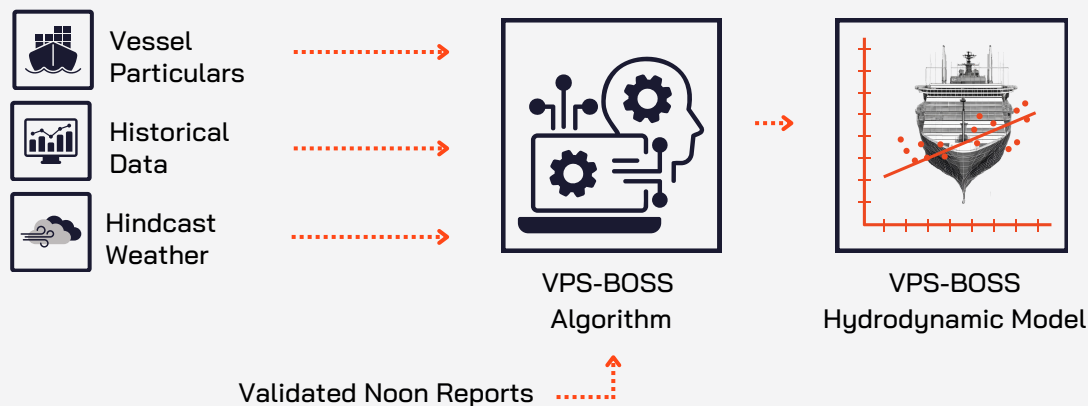
There are two approaches to creating a hydrodynamic model:

Physics-based model
which uses vessel characteristics to gauge how a ship will perform.

Statistics-based model
which uses historic at-sea performance statistics to predict the performance.

VPS-BOSS Hydrodynamic Model

The BOSS optimization module employs a **hybrid methodology** to create an adaptive hydrodynamic model, combining the strengths of both physics-based and data-driven approaches for more accurate performance predictions.

Vessel Particulars

Historical Data

Hindcast Weather

VPS-BOSS Algorithm

VPS-BOSS Hydrodynamic Model

Validated Noon Reports

This approach **ensures predictions** that closely align **with real-world performance.** According to one of our clients, the model's accuracy is "*spot-on accurate,*" consistently providing **insights that mirror actual vessel behavior with impressive precision.**

"

Voyage Optimization is proactive, with continuous monitoring and adaptation to evolving conditions for optimal performance.

"

Impact

278,000 +
Voyages Optimized

2,166,000 + MT
Total Fuel Savings

6,736,000 + MT
CO_2 Emission Reductions

Join us on this journey

Join us in the journey towards a greener, more sustainable maritime industry. We are committed to accelerating the shift towards a low-carbon future, and we invite you to be part of this transformative change.

Are you a vessel owner or a stakeholder in the maritime industry? Let's collaborate to reduce your carbon footprint and make your operations more eco-friendly. With VPS, you will gain access to data-driven solutions, expert advice, and digital tools that guide you along the path to sustainability. Together, we can create a more environmentally responsible and economically efficient maritime sector.

Contact us today and let's pave the way to a cleaner, greener future for the maritime industry.

Contact

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