

Vessel Route Optimization Artificial Intelligence (AI) Market Forecasted to Achieve US \$2.4 Billion by 2029

The Business Research Company's Vessel Route Optimization Artificial Intelligence (AI) Global Market Report 2025 – Market Size, Trends, And Forecast 2025-2034

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/EINPresswire.com/ -- How Big Is The [Vessel Route Optimization Artificial Intelligence \(AI\) Market](#) In 2025?

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In recent years, the market size for the artificial intelligence (AI) in vessel route optimization has seen considerable expansion. The industry is projected to escalate from \$1.34 billion in 2024 to \$1.51 billion in 2025, marking a compound annual growth rate (CAGR) of 12.7%. The historic

growth trend is mainly due to factors such as heightened regulatory pressures related to emissions, the growing requirement for operational efficiency, an intensified focus on safety and risk management, escalating fuel costs, encouragement from government and industry through incentives, and a swelling demand for digitalization.

Expectations are high for quick expansion of the vessel route optimization AI market in the coming years, with a projected rise to \$2.41 billion by 2029, corresponding to a Compound Annual Growth Rate (CAGR) of 12.3%. This prospective growth can be credited to factors such as the

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rising acceptance of autonomous vessels, increased demand for smart marine navigation, greater investments in port upgrades, the digital revolution in the maritime industry, and more stringent environmental rules. Notable trends to look out for over the forecast period encompass improvements in sensor technology, the incorporation of AI technologies, adoption of technology in autonomous vessels, advancements in data processing, and the inclusion of real-time data.

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What Are The Key Driving Factors For The Growth Of The Vessel Route Optimization Artificial Intelligence (AI) Market?

The growth of the vessel route optimization artificial intelligence (AI) market is anticipated to be spurred by escalating fuel costs. When we discuss fuel costs, we are referring to the expenditure involved in acquiring the fuel necessary to drive vehicles, machinery, ships, or aircraft. This surge in fuel costs is a result of fluctuations in crude oil prices, induced by geopolitical disturbances and imbalances in supply-demand. Vessel route optimization AI reduces these costs by offering data-guided route planning, which proves beneficial for fleet operators and shipping firms. By optimizing navigation routes and averting delays, it trims down undesirable fuel consumption, enhancing operational efficiency and sustainability. To exemplify, data from the Competition and Markets Authority, a governmental entity in the UK, shows that between May and August 2025, the average price of petrol swelled by 1.9 pence, reaching 133.9 pence per litre. In the meantime, diesel prices shot up by 3.5 pence, achieving 141.9 pence per litre in September 2025. Thus, the escalation in fuel costs is spurring the growth of the vessel route optimization artificial intelligence (AI) market.

Who Are The Key Players In The Vessel Route Optimization Artificial Intelligence (AI) Industry? Major players in the Vessel Route Optimization Artificial Intelligence (AI) Global Market Report 2025 include:

- Wärtsilä Oyj Abp
- Kongsberg Maritime AS
- Spire Inc.
- RINA S.p.A.
- HD Hyundai Oilbank
- ZeroNorth A/S
- Weathernews Inc.
- Windward Ltd.
- OneOcean Group Ltd.
- Danelec Marine A/S

What Are The Upcoming Trends Of Vessel Route Optimization Artificial Intelligence (AI) Market In The Globe?

Major businesses in the AI-based vessel route optimization market are concentrating their efforts on creating innovative solutions, such as those based on AI technologies to increase operational efficiency, lessen emissions, and augment safety in maritime processes. An AI-based vessel route optimization solution is a system that applies artificial intelligence and real-time information to design optimal and cost-efficient routes for ships, minimizing fuel use and pollution. For example, HD Hyundai Marine Solution Co. Ltd., an engineering services company from South Korea, introduced OceanWise, an AI-based route optimization solution for shipping

vessels, in January 2025. The new system uses extensive data and AI algorithms to perfect maritime routes, making considerable deductions in fuel usage and emissions of greenhouse gases. OceanWise showed an average fuel-saving capacity of 5.3%, leading to significant cost reductions. HD Hyundai aims to extend the solution to a variety of vessel types and make it available on a subscription basis, with the objective of endorsing sustainable and economical shipping in the face of growing environmental guidelines.

What Segments Are Covered In The Vessel Route Optimization Artificial Intelligence (AI) Market Report?

The vessel route optimization artificial intelligence (AI) market covered in this report is segmented as

- 1) By Component: Software, Hardware, Services
- 2) By Vessel Type: Container Ships, Bulk Carriers, Tankers, Passenger Ships, Other Vessel Types
- 3) By Deployment Mode: On-Premises, Cloud
- 4) By Application: Fleet Management, Fuel Optimization, Voyage Planning, Emission Control, Other Applications
- 5) By End-User: Commercial Shipping, Defense, Oil And Gas, Fishing, Other End Users

Subsegments:

- 1) By Software: Predictive Analytics, Decision Support Systems, Simulation Modeling, Machine Learning Algorithms, Route Planning Platforms
- 2) By Hardware: Onboard Navigation Devices, Communication Equipment, Sensors And IoT Devices, Tracking And Monitoring Devices
- 3) By Services: Consulting Services, Implementation And Integration Services, Maintenance And Support Services, Training And Education Services, Data Management Services

View the full vessel route optimization artificial intelligence (ai) market report:

<https://www.thebusinessresearchcompany.com/report/vessel-route-optimization-artificial-intelligence-ai-global-market-report>

Which Region Is Expected To Lead The Vessel Route Optimization Artificial Intelligence (AI) Market By 2025?

In 2024, North America led the global market for vessel route optimization artificial intelligence (AI) as indicated in the 2025 report. The said report also includes other regions such as Asia-Pacific, Western Europe, Eastern Europe, South America, the Middle East, and Africa.

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