
Increase fleet performance, profitability and reduce emissions with data-driven decision making

Gain full visibility of vessel performance and insight into your fleet operations





Connected vessels for data-driven decision making

The marine sector is investing in reducing emissions, while profits are under pressure from fuel costs and complex maintenance schedules. The use of vessel control and propulsion systems monitored by sensors to assess fleet performance promises to improve profitability, environmental impact and safety. However, the challenges of capturing, analyzing and displaying data in such demanding and remote environments has limited the value that can be gained from sensor or on-board system deployments.

Limited connectivity and delayed data transfers leave crews operating with unreliable information and leave headquarters-based teams with poor visibility of fleet performance. Deployment and management of multiple technical systems on vessel and at office sites add cost and complexity, and can be problematic if technical issues arise at sea.

90%

of businesses expect data-driven insight to become a key differentiator ¹

¹ - A Forrester Consulting study of over 580 business and Digital leaders based in North America, Europe, and Asia Pacific, commissioned by Atos (Jan 2017)

Maximize the value from your on-board systems

Unlock key performance insights

SISHIP EcoMAIN Suite for Connected Vessels:



A single, end-to-end, Internet
of Things (IoT) solution



Designed for
remote connectivity



Intelligent data
analysis capabilities



Co-designed with
the customers

VESSEL

Vessel crew is given full visibility of the data from control and propulsion systems, and artificial intelligence (AI)-enabled analytics help them optimize vessel performance.

FLEET

Transparency of performance data supports operational improvement at a vessel, fleet and commercial business level.

HEADQUARTERS

Efficient delivery of data to headquarters teams provides accurate and actionable insights into vessel and fleet performance.

Insights that enable greener shipping

Governments, port authorities and the International Maritime Organization (IMO) have all introduced regulation that requires vessel emissions to be significantly reduced. Non-compliant vessels cannot dock at some ports, while customers are showing preference for 'greener' fleets to meet their own environmental objectives. Fines, taxes and fees may also be levied based on vessel emissions levels.

Data from engines running on alternative fuel sources (such as e-fuels or batteries) and solutions that clean emissions are key to assessing performance, developing training and reporting.

Accelerate emissions reduction and accurate environmental reporting with fleet-wide monitoring and analysis:



VESSEL CREW

Vessel emissions, alternative power system performance and the effectiveness of emissions reducing systems can be easily monitored. A consolidated view of data enables crew to take action as issues occur and to provide accurate reports to harbor authorities.



HEADQUARTERS

Full visibility of fleet emissions enables accurate and efficient analysis to support benchmarking, improve training and enable regulatory reporting. Transparency of data supports efforts to deliver greener shipping, assess solutions and maximize the value from any future investments.



Optimize fuel efficiency across your fleet

With fuel accounting for a significant proportion of vessel operating costs, minimizing fuel consumption is critical to profitability. Accurately analyzing and assessing fuel consumption fleet-wide is also vital to longer-term profitability and offering competitive pricing to customers.

Efforts to reduce fuel consumption such as consolidating routes, improving the utilization of generator sets and optimizing trimming are most effective when data is accurate. But manual input and analysis is subject to minor errors and lack of context that can have significant implications.

Fuel costs can account for **50-60% of vessel operating costs**, depending on the type of ship and service.²

Reduce fleet-wide fuel consumption with real-time performance insights delivered to your vessels and your business:



VESSEL CREW

Fuel consumption analysis is consistently delivered to vessel crew, enabling immediate changes to optimize fuel consumption given conditions.



HEADQUARTERS

Accurately track fuel consumption for visibility of best practices to reduce fuel costs and increase efficiency. Assess routes and fuel reduction solutions based on real-world data and analysis.

Examples of solutions supported



Waste Heat Recovery (WHR)
including optimized
soot treatment



Operational optimization
of the main and
auxiliary engines



Central fleet
management



Route
optimization

Increase profitability and performance with predictive maintenance

The ability to identify potential maintenance issues ahead of time helps ensure maximum value can be gained from planned maintenance activities.

Time spent in dock can be kept to a minimum, and damage, component failure and costly repairs avoided. Adoption of on-board sensors and systems enables continual monitoring. However, condition-based maintenance (CBM) only reflects the condition of parts or equipment at a point in time, not the rate of deterioration, which informs preventive measures that address issues before they can cause problems.

Maximize fleet availability, performance and safety by predicting issues before they occur:



VESSEL CREW

Accurate visibility of current condition of parts and components combined with intelligent analysis and insight to predict maintenance requirements ahead of time. Optimize performance, reduce parts replacement and damage and reduce emergency maintenance and engine downtime.



HEADQUARTERS

Management can make data-driven, informed decisions based on known and predicted condition to identify and address potential issues across the fleet, improve training and aid selection of new solutions, equipment and products. Maintenance can be planned more efficiently, keeping time spent in harbor to a minimum.



SISHIP EcoMAIN Suite

Connecting vessels to enable data-driven decision making

Designed to deliver accurate and actionable data insights and analysis in remote environments, this complete solution combines Atos Codex IoT, AI and Analytics solutions and expertise and Siemens maritime technology excellence and innovation.

With Atos's BullSequana high-performance Edge computing capabilities providing AI inference and real-time analytics, insight is delivered to both vessel crew and operator headquarters. Vessel crew gets full visibility of performance metrics and advanced analysis to aid decision making, and central fleet management gains accurate and timely visibility and monitoring capabilities.

The solution has a modular approach to design and deployment, offering seamless integration with current vessel infrastructure, an open eco-system and robust security. It can be provided as a ready-to-deploy package, a modular solution co-designed with customers and installed onsite, or provided as a managed service.



Atos and Siemens

Experts in helping customers extract business value from IoT investments



Established trusted global strategic alliance since 2011



Jointly delivered proven solutions to marine segment customers



A collaborative approach to design: solutions are co-developed with customers



Global presence with delivery capabilities worldwide



Joint investment fund for innovation



Siemens has won multiple awards for its innovative marine solutions³ and Atos is a recognized global leader in IoT engineering and services⁴

3 - <https://www.energyglobe.info/norway2019?cl=en&id=336010>
<http://www.mynewsdesk.com/no/siemens-as/news/two-otc-awards-to-siemens-for-energy-storage-and-subsea-power-grid-368097>

4 - IDC: Worldwide leader, IoT Engineering & Managed Services. 2020

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Atos

rtlmarketing@atos.net
atos.net/iot

Atos SE
River Ouest 80,
Quai Voltaire,
95877 Bezons
France

Siemens

marine@siemens.com
siemens.com/marine

Siemens Gas and Power GmbH & Co. KG
Siemens Energy
Marine
Lindenplatz 2
20099 Hamburg, Germany