

MaritimeMET: Stakeholder Opinion

Emission Regulations and Data Challenges

Zero44 GmbH | MaritimeMET
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About the authors and the company

Ms. Friederike Hesse is Co-Founder and Managing Director of zero44 GmbH. Previously, she was COO at Homeday, where she was responsible for building up the sales organisation and digital customer service processes, and was thus able to gain extensive experience in the digitalisation of a previously rather traditional industry. Prior to this, she was, among other things, Managing Director at the Dussmann Group. She acquired knowledge in legal regulation and related political processes during several years as an advisor at the German Federal Ministry of Labour and Social Affairs.



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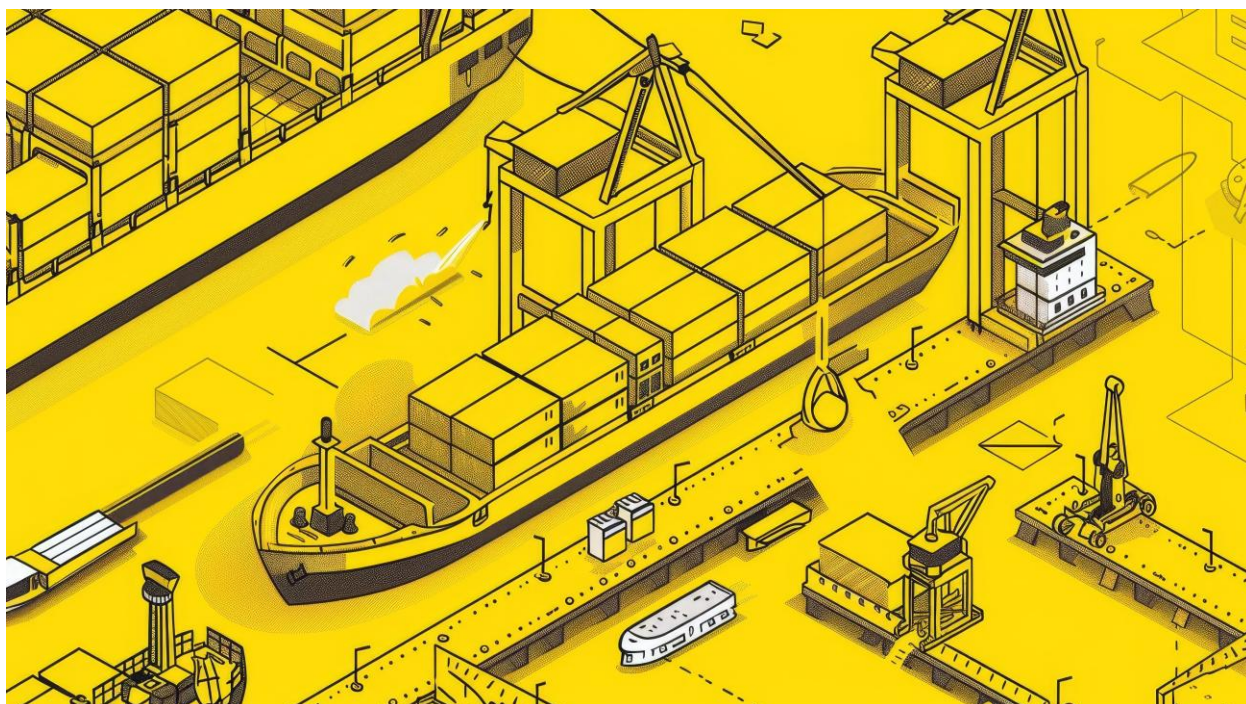
Ms. Sandra Bronsvort is Strategy Manager at zero44 GmbH. In her previous role as a consultant, she worked with various clients in the maritime industry to optimize their supply chains. She has successfully integrated innovative software and data-driven ways of working into well-established organizations and processes, driving efficiency and adaptability.

Zero44, founded in Berlin in January 2022, is a software company dedicated to providing digital solutions for the maritime industry to achieve carbon neutrality. Their mission is to assist shipping companies, charterers, and ship managers in effectively managing and reducing CO₂ emissions. In October 2023, zero44 launched a comprehensive software solution to facilitate the maritime sector's compliance with the EU Emissions Trading Scheme (EU ETS), which became applicable to shipping on January 1, 2024.



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Emission Regulations and Data Challenges

With the introduction of EU ETS for Maritime and FuelEU in 2024 and 2025 respectively, along with expected global measures in the near future, emissions management is becoming increasingly important in shipping companies' strategic planning. Companies that fail to adapt to these new regulations and continue burning conventional fuels will face increasingly high costs.

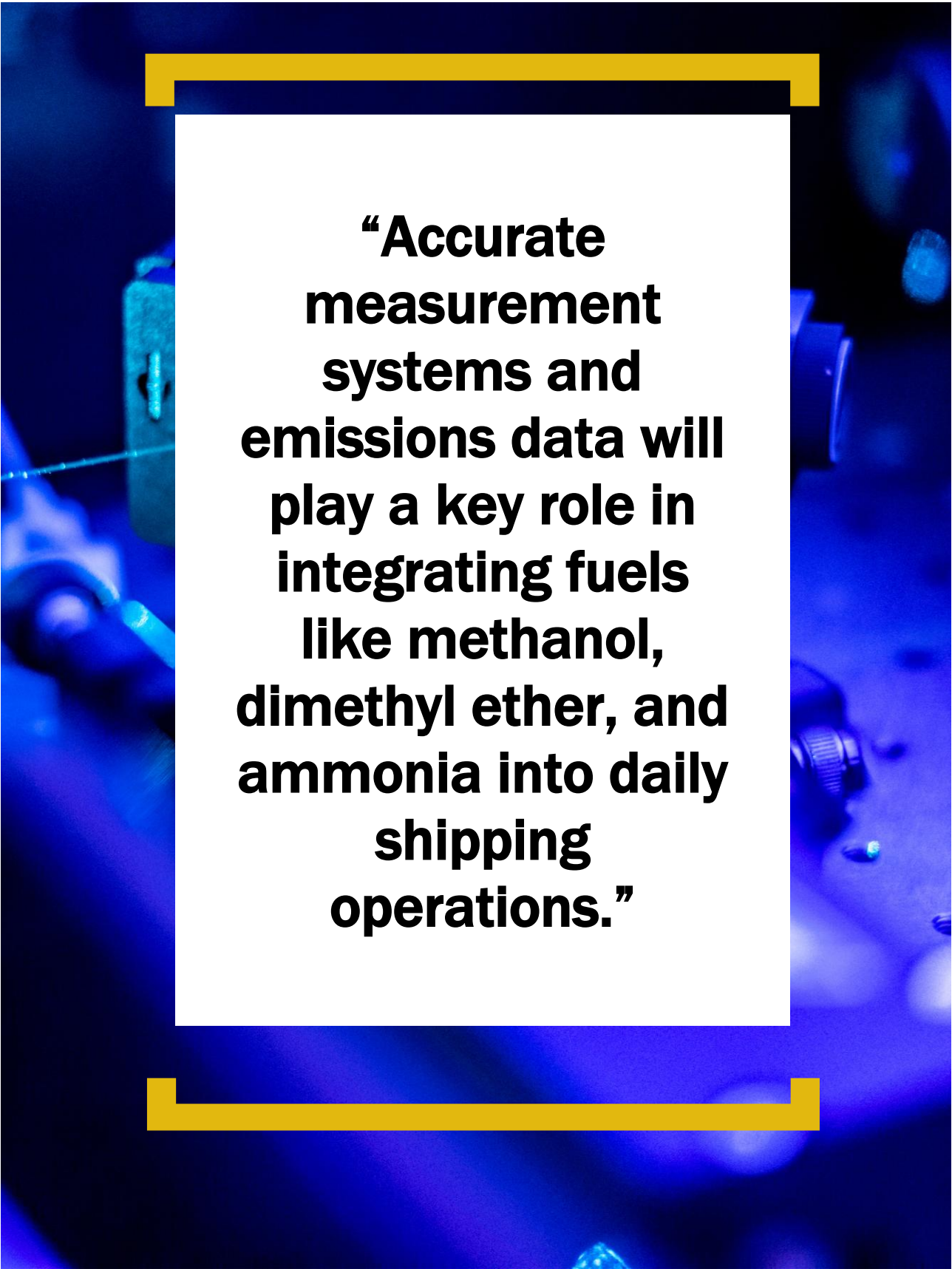
The new FuelEU Maritime regulation in particular will have a significant impact on fuel choice. By setting targets for the average greenhouse gas intensity on board a vessel, it incentivises the adoption of sustainable fuels.

Some alternative fuels, like biodiesel, are quite well understood by industry now. For others, more research and empirical observations are still needed to gain wider acceptance in the industry.

The Proof of Sustainability, which addresses the emissions related to production, processing, transport and distribution of the fuel, is provided by fuel suppliers and partly fulfills this need. For the tank-to-wake emissions of alternative fuels, companies can provide their own combustion emission factors and methane slip factors, provided they can be demonstrated according to international standards. Alternatively, companies may use the default values specified by regulations. Interestingly, data gaps become very apparent here, as such defaults are yet to be established for many of the more innovative fuels.

Accurate measurement systems and emissions data will play a key role in integrating fuels like methanol, dimethyl ether, and ammonia into daily shipping operations. As measurement consistency improves, so too will operators' confidence in how these future fuels perform in real-world conditions - on their specific vessels and within their unique operational patterns.

Addressing these gaps requires collaboration among industry stakeholders. We are therefore pleased to work with MaritimeMET to translate the latest regulatory requirements and industry challenges into insights that drive further research toward zero-emission shipping.



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Please note: the opinion mentioned here reflects the perspectives of the author, and is only collected to formulate an overall insight into the industry and the challenges to metrology.

We want to hear from you as well. Contact us or fill in our Stakeholders Questionary [HERE](#).

Would you like to stay informed about the project progress, have opportunity to contribute and provide feedbacks continuously during the project timeline and get engaged into the valuable discussions? Register to become the project stakeholder [HERE](#).

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