MARITIME AI INNOVATION LAB

NEWS UPDATE | JULY 2026

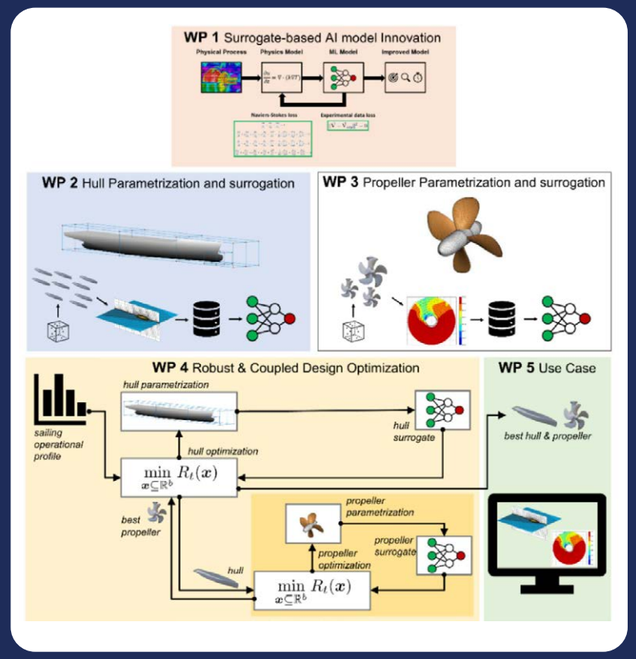
Join us to shape what's next …

We're excited to share that the first two innovation tracks within the Maritime AI Innovation Lab are already up and running. The third track just started, bringing together again partners to accelerate short-cyclic innovation and deliver impactful results.

SAVE THE DATE: AI INNOVATION EVENT 28 SEPTEMBER 2026

The next AI Innovation Event will take place on 28 September. This day we will give an update on the present tracks, explore the next innovation tracks and co-create agile concepts that turn ideas into solutions and help shape the future roadmap of maritime AI.
Register here.

TRACK 3 OFFICIALLY LAUNCHED



We are pleased to announce the official start of Track 3: *Coupled and Robust AI Surrogate-based Design Optimisation*. Partners joining this initiative are Feadship, De Voogt, Wärtsilä and C-Job.

Track 3 focuses on a shift from static, single design-speed optimisation towards operational-profile-driven system design. By enabling integrated hull–propeller optimisation, the approach aims to improve propulsive efficiency while reducing fuel consumption and emissions already at the design stage. The project aims to deliver reusable AI building blocks: physics-informed surrogate models, parametrization frameworks to enable data-driven performance improvements regardless of vessel types.

Core partners DAMEN, SAFE SYSTEMS, MARIN, TU Delft, RH MARINE, NHL STENDEN

Cooperation partner Nederland Maritiem Land – Samen voor een blauwe toekomst

Flexible ring FEADSHIP, NEXT OCEAN, Spliethoff, WÄRTSILÄ, C-JOB, Ocean AI, MO4

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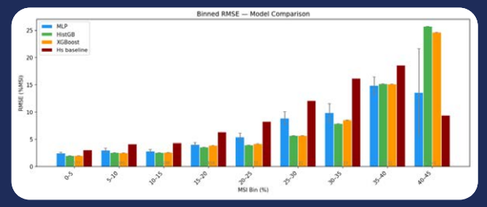
Update innovation tracks

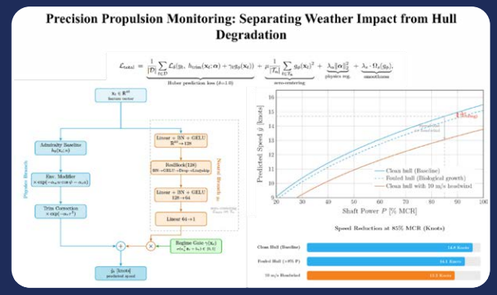
TRACK 1: SAFETY AND WORKABILITY

We have managed to train models on vessel and weather data to predict MSI (motion sickness incidence) for CTVs. Though the model predicted MSI quite accurately for the lower MSI regions, at more critical MSI regions the model's performance still needs to be improved. One of the identified reasons was the lack of data in the dataset at higher MSI numbers. Therefore, we are looking to broaden our dataset with data from higher sea states. The initial model did show good transferability to other sites and vessels which makes us positive about the wider use of the model once its performance in higher MSI regions has improved.



TRACK 2: EMISSION REDUCTION

We developed a shared operational dataset with ~87,000 time-stamped records covering propulsion, navigation, environmental, and vessel-state data, providing a solid, audit-ready basis for modelling energy performance. A fully automated data preparation pipeline ensures consistent data quality through validation, anomaly filtering, and structured imputation, resulting in reliable and traceable training datasets. Building on this, we created advanced feature sets that capture nonlinear vessel behaviour, enabling accurate models for fuel consumption, trim optimisation, and speed prediction. Together, this work delivers a Predict–Detect–Act framework that supports fuel efficiency, condition monitoring, and emission reduction.



RESEARCH UPDATE: HOW CAN THE EU DATA ACT AND AI ACT FACILITATE DATA SHARING IN THE MARITIME SECTOR?

My Professional Doctorate research focuses on the legal and ethical conditions for data sharing and AI in the maritime sector. Recent work explored the impact of the EU Data Act and AI Act through interviews, conversations, and a survey among data and legal professionals, helping to map key barriers to data sharing. Outreach activities included a publication in SWZ Maritime and a conference presentation in Austria on responsible AI, engaging both maritime and broader audiences. In parallel, I'm strengthening my technical understanding through a programming minor. A key insight so far is that regulation can support data quality and sharing, but real progress also requires greater trust and a cultural shift within the sector. After the summer, the focus will be on developing practical and legal solutions to enable fair, transparent, and effective data sharing. Input is welcome via:

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