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| From: ENG Committee | ENG21-9.2.2.6 |
| To: DTEC Committee | 17 October 2025 |

LIAISON NOTE

Reply on liaison note of G1178 - AN INTRODUCTION TO ARTIFICIAL INTELLIGENCE (AI) FROM AN IALA PERSPECTIVE

# INTRODUCTION

The ENG Committee thanks the DTEC Committee for informing the ENG Committee about revised Guideline on Artificial Intelligence (AI). The ENG Committee discussed the liaison note and the Guideline and asked the members for project or use cases.

# DISCUSSION

The ENG Committee discussed the topic of Artificial Intelligence and the use. During the discussion one example came up from The Netherlands concerning a project for an AI-Powered Framework for Data-Driven Maritime Performance and Infrastructure Optimization Research context.

## Project Description AI Framework for the North Sea

The following text is taken from the project vacancy position

*The North Sea is one of the world's busiest maritime regions, witnessing a continual surge in utilization for both navigation and renewable energy ventures. With the rising demand for renewable energy, more wind parks are being planned and developed in this domain, creating a complex challenge: how to integrate these new functions while maintaining nautical safety. Balancing the urge to expand renewable energy initiatives while ensuring nautical safety remains a key concern. Addressing this challenge necessitates innovative approaches, utilizing new technologies, and interdisciplinary collaborations.*

*In response to these challenges, a collaboration has been forged between Rijkswaterstaat, Coastguard, and TU Delft through a data-sharing and support agreement. This alliance signifies a concerted effort to explore, analyse, and address the complex interplay between the utilization of the North Sea for renewable energy endeavours and the imperative to maintain and enhance nautical safety standards. Under this collaborative agreement, the Sea and Shipping AI research program has been initiated. Co-financed by the Rijkswaterstaat, the overarching goal is to harness the potential of advanced data analytics, machine learning, and artificial intelligence techniques to enhance sea and shipping performance. This initiative aims to investigate, innovate, and develop strategies that augment the performance and operational efficiency of sea and shipping activities within the North Sea while simultaneously ensuring the highest standards of safety and sustainability.*

*The initiative encompasses focusing on strategic and operational aspects of sea infrastructure and creating a novel working environment. This includes setting up skill beds for testing and refining new methodologies to address challenges in maritime management. Together, these roles support the program's broader goal of improving North Sea infrastructure through research and application.*

***Further Description***

*The primary responsibility of this will be to develop a novel working environment that incorporates the latest advancements in artificial intelligence and leverages access to new data sources. This innovative working environment will at least include setting up of skill beds, and providing a dynamic platform for testing and assessing new data-driven methodologies across a spectrum of challenges within the Maritime Sector.*

*The focus will be on creating a collaborative space where AI models and methods can be tested comprehensively. There will be create a hub for “Sea Infrastructure State and Use” AI problems. By leading the way in creating well-organized test cases, such as:*

* *Reconstructions of past shipping incidents (Data fusion)*
* *Detection of sea infrastructure changes using satellite images (CNN)*
* *Creating virtual ships that react to the environment and consume energy like real ships (Digital Twins)*
* *Creating virtual captains that act like real captains (RL)*
* *Detecting anomalous behaviour on the North Sea (Embedding, Manifold methods)*

*Using existing platforms like Hugging Face and the Delft Blue cluster you can help scientists and practitioners to focus on real problems with real impact. By creating an organized workflow where new methods are continuously benchmarked and made available for reuse you will help to accelerate the research field as a whole. This working environment will become a hub for experimentation, ensuring that new methodologies are rigorously evaluated for their effectiveness in solving complex issues related to safety, logistics, and infrastructure management. This offers a unique opportunity to be at the heart of shaping the future of North Sea functions by establishing a foundation for the practical application of innovative AI solutions.*

*Website:* [*https://noordzeeloket.nl/en/functions-use/offshore-wind-energy/shipping-safety-around-offshore-wind-farms-moswoz/*](https://noordzeeloket.nl/en/functions-use/offshore-wind-energy/shipping-safety-around-offshore-wind-farms-moswoz/)

# ACTION REQUESTED

The DTEC Committee is requested:

1. To take in account the AI project of The Netherlands;
2. Inform the ENG committee on further progress and projects of AI in the domain of IALA.