Input paper: DTEC2-5.2.2.5

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X DTEC **□** VTS **□** Information

Agenda item 5.1

Technical Domain / Task Number DTEC-7.1.2

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Draft IALA Guideline on Digitalization of Waterways

# Summary

During DTEC1 meeting, WG2 started to work on a new task: *Develop guidance for IALA members on the digitalisation of waterways.* The task is expected to develop a new guideline. The target date for finalization of the guideline is spring 2026. This document aims to introduce the main objectives of the task and the suggested structure of the new guideline.

## Related documents

DTEC2-5.2.2.5.1 Draft IALA Guideline on Digitalization of waterways

# Background

The main objectives of the task are:

* Define what is meant by digitalisation of waterways
* Provide guidance on identifying digital maturity of waterways
* Review guidance on the use of simulation as a tool in waterway design and AtoN planning (IALA G1058 (and G1097, noting this has been superseded by G1058 Ed 3.0))
* Identify best practice in development and use of digital twins
* Provide guidance on the use of digital twins for fairways / aids to navigation provision
* Identify uses of digital twins for planning, monitoring and maintenance
* Identify options to share information on the fairway infrastructure and services in a digital format with users
* Link with, for example, IMT-2030 and beyond for data exchange, AI/ML, S100
* Identify opportunities to enhance sustainability through the use of technology / digital twins for fairways and AtoNs

# Discussion

The first version of draft guideline is attached as a separate input document.

The draft includes Table of Contents and a general description of the intended content of the guideline.

In the guideline, it is initially suggested to distinguish between the two themes:

* the digitalisation process related to efficient maintenance of waterways
* the development and classification of digital services provided for vessels to enhance safety and efficiency (e-Navigation services)

# Action requested of the Committee

The Committee is requested to:

1. Discuss the structure and suggested content of the Draft Guideline on Digitalization of Waterways