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Agenda item [[2]](#footnote-3) 6.2

Technical Domain / Task Number 2 Related to task 2.2.2 and task 1.4.7

Author(s) / Submitter(s) Secretariat

Designing an Optimized AIS Data Pipeline

# Summary

Over the last few years, the Secretariat, through the World-Wide Academy, has supported university students at bachelor and master level by offering internships in IALA. In 2025, five months of internship was offered to Ms. Kiki Beumer, at the time studied International Bachelor in Data Science by Design at CY Tech, Cergy Paris Université.

Ms Beumers reported on her work at the recent Risk Management Seminar in June 2025 and she has now competed a full report on her work titled "Designing an Optimized AIS Data Pipeline: Architecture, Standardization, and Quality Control." The report addressed the design of an optimized technical architecture for collecting and storing AIS data for analytical purposes. It also addressed some of the issues with assessing the quality of a given dataset to determine its usability for analysis.

Most IALA members operate AIS networks and gather the data in some sort of a database, in order to monitor and analyse vessel behaviour in their waters. Many face challenges when trying to utilize these data for analysis.

Noting that the ARM committee is developing a model course on AIS data management as well as looking for resources which could be added to the IALA Risk Management Toolbox, it was felt that this report could help informing the work of the committee.

## Related documents

ARM21-6.2.4.1 AIS Data management Model course template\_v2.0

ARM21-6.2.4.2 Overview AIS model course\_v3.0

# Action requested of the Committee

The Committee is invited to take note of the information provided and to utilize it as deemed appropriate.

1. Input document number, to be assigned by the Committee Secretary [↑](#footnote-ref-2)
2. Leave open if uncertain [↑](#footnote-ref-3)