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| **From**: VTS Committee | ARM16-6.2.4  April 2022 |
| **To**: ARM Committee  ENG Committee  ENAV Committee |  |

LIAISON NOTE

Future VTS

# INTRODUCTION

The VTS Committee commenced work on *Task 1.4.3 –* *Future VTS* in March 2021. The purpose of this document is to provide a basis for discussion on emerging trends, technologies and practices that have implications for VTS and to strategically plan and coordinate embracing the change associated with these to improve the safety and efficiency of navigation, contribute to the safety of life at sea and support protection of the marine environment.

In particular, the document aims to provide a concise, high level, reference to assist the Committee:

* Be cognisant of emerging practices, technologies and trends that will affect the provision of VTS.
* Assess and monitor the potential impact, challenges, and opportunities for VTS.
* Achieve a common view regarding the role and capabilities of ‘Future VTS’ in contributing to the safety and efficiency of navigation and the protection of the environment by mitigating the development of unsafe situations.
* Strategically embrace change, how existing VTS practices could be enhanced and potential new practices adopted.
* Plan for the future.

As a ‘living document’, it is intended that the document will be reviewed/updated by the Committee at each meeting as appropriate.

# DISCUSSION

Emerging trends, technologies and practices that will shape the role and capabilities for ‘*Future VTS’* being considered include:

* Maritime Autonomous Surface Ships (MASS)
* Digital technologies and communications
* Green House Gas Emissions / Just in Time Arrival
* Advanced Decision Support Services
* Automated Data and Information Exchange
* Navigational Support / Assistance
* Sea Traffic Management
* Marine Spatial Planning
* Interacting Objects
* Digital situational awareness / Common Situational awareness
* Slot Management
* New sensing technology for nearshore and port waters
* Long-distance sensing technology

Core sections of the document include:

* ***Expectations for ‘Future VTS’*** – Explores the expectations for future VTS associated with the emerging trends, technologies and practices.
* ***Realising the Expectations*** - Explores ‘*How we get there’*, *‘what is needed’* in moving to *‘Future VTS’* in terms of requirements/functionality.
* **Contributing practices, technologies, and trends** – This section describes each of the emerging trends, technologies, and practices, focussing on:
* The significance of the emerging practice, technology, or trend for VTS and why it should be monitored / assessed by the Committee.
* The timeframe expected for the emerging development to significantly impact.
* The possible challenges it is expected to present for VTS.
* The opportunities for VTS that may be realised in actively embracing the changes the practice / technology.
* The expected outcome.
* Implications for the international framework for VTS.

# ACTION REQUESTED

The committees are requested to note the progress associated with *Task 1.4.5 – Future VTS* and provide comment as appropriate.

# ENCLOSURES

* *WP TG.1.4.3 Future VTS Discussion Paper as at VTS52.*