Input paper: [[1]](#footnote-1) VTS53-8.6.2

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Input paper for the following Committee(s): check as appropriate Purpose of paper:

**□** ARM **□** ENG **□** PAP **X** Input

**□** ENAV **X** VTS **□** Information

Agenda item [[2]](#footnote-2) 8.6

Technical Domain / Task Number 2 1.4.3

Author(s) / Submitter(s) Intersessional Group 1.4.3

# future vts

# background

The Committee commenced Task 1.4.3 – *Future VTS* at VTS50 to develop a concise, high level, reference document 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.
* Strategically embrace change and, in particular, how existing VTS practices could be enhanced, potential new practices adopted
* Plan for the future through, for example:
  + Adopting future work programme tasks.
  + Facilitating necessary changes to IALA Standards relating to VTS or the international legal and regulatory framework for VTS.
  + Managing any practical issues and challenges in transitioning to a more proactive role for VTS in the future.
  + Liaison/engagement with other bodies.
  + Engaging and communicating with all stakeholders and the public.

Further background is available at the Task Register (*VTS52-13.3.0.2 WP VTS Task Register 2018-2022)* and the Guiding Principles*.*

# Discussion

At VTS52, the Task Group was requested to prepare the following for the Committee’s consideration at VTS53:

* An updated Discussion Paper, focussing on further exploring:
  + Emerging trends, technologies, and practices other than MASS, digital technologies and communications and Automated Data and Information Exchange
  + The contribution of VTS to protection of the environment associated with the emerging trends, technologies, and practices.
  + Developing the ‘Expectations’ to reflect all the emerging trends, technologies, and practices as appropriate.
  + Grouping/merging some of the thirteen contributing practices, technologies, and trends.
* A draft high-level brief on Future VTS’ for the Committee’s consideration with a view for forwarding to Council.

1. **Discussion Paper** – No amendments have been made to the document tabled at VTS52. Committee members are encouraged to provide comment on the Discussion Document.
2. **Draft high-level brief** – A first draft of the proposed brief has been prepared for the Committees consideration and forwarding to Council (Annex A)

The Task Group intends to review / update the draft brief at VTS53, and Committee members are encouraged to provide comment on the draft.

During the intersessional work the Task Group also identified a need for a new work programme task to develop guidance on ‘*Digital Route Exchange – Operational Requirements from a VTS perspective’*

A draft Task Proposal has been prepared for the Committees consideration and is available at VTS53-6.3.7

# Action requested of the Committee

The Committee is requested to note:

* The Discussion Paper on Future VTS (VTS52-13.2.1.8)
* The proposed work programme task to develop guidance for the use of route exchange within VTS operations (VTS53-6.3.7 Proposed new task - Digital Route Exchange – Operational Requirements from a VTS perspective).
* The draft high-level brief (Annex A)

11 - TECHNICAL ACTIVITIES

*11.4 – VTS Committee*

11.X.X.X Future VTS

Note by the VTS Committee

# INTRODUCTION

Globally, there is a trend for more proactive management of shipping in response to increasing volumes of traffic, emerging practices, technologies, and trends, increasing competition for access to waterway space and changing public expectations.

VTS, as an internationally recognised navigational safety measure contributing to the safety of life at sea, safety and efficiency of navigation and protection of the marine environment, will play a key role in this change.

There is consensus that the transition to embracing emerging developments and ’future VTS’ needs to commence now.

As part of its 2018-2022 work programme the VTS Committee commenced preparing a ‘living document’ 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.
* Strategically embrace change and, in particular, how existing VTS practices could be enhanced, potential new practices adopted
* Plan for the future through, for example:
  + Adopting future work programme tasks.
  + Facilitating necessary changes to IALA Standards relating to VTS or the international legal and regulatory framework for VTS.
  + Managing any practical issues and challenges in transitioning to a more proactive role for VTS in the future.
  + Liaison/engagement with other bodies.
  + Engaging and communicating with all stakeholders and the public.

1. **DISCUSSION**

The document focusses on 13 emerging practices, technologies and trends that will affect the provision of VTS, including:

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

While these present many challenges for the maritime sector, they also provide opportunities for VTS to enhance its contribution to the safety and efficiency of vessel traffic and protection of the environment by evolving with the changes and by adopting new and enhanced capabilities to embrace an evolving role.

The document is available at <link>.

**Key messages**

1. The ‘Future VTS’ paper explores:

* The emerging practices, technologies and trends and how they will affect the provision of VTS the associated implication.
* Expected timeframe/s.
* The expectations for ‘Future VTS’ as these mature; and
* Realising the expectations – that is, ‘how we get there’ and ‘what needs to be done’.

1. As the document matures, the committee is exploring mechanisms to assist planning for the future through:

* Liaison/engagement with other bodies.
* Engaging and communicating with all stakeholders and the public.

1. A different skill set may be required to take VTS forward to its next evolutionary stage in embracing the implications of these emerging practices, technologies and trends.
2. It is important to recognize that the development of applicable technologies and the global standardisation of data models and distribution formats for dispatch of marine data to achieve much of the above developments is within the remit of other international organizations, particularly the IMO.
3. IALA’s contribution to the development of internationally harmonized guidance for vessel traffic services is noted in the IMO Resolution for VTS (A.1158(32) and the annex to the guideline states:

* *IALA is recognized as an important contributor to IMO's role and responsibilities relating to VTS; and*
* *Contracting Governments are encouraged to take into account IALA standards and associated recommendations, guidelines and model courses.*

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| Noting the major changes expected in the next decade or so, there is an expectation for IALA to ensure the implications for managing ship traffic in a rapidly changing environment are considered in the development of applicable IMO instruments and IALA Standards related to VTS. |

1. **THE COUNCIL IS REQUESTED TO**

NOTE: the development of the ‘Future VTS’ document and, as appropriate, bring it to the attention of their organisations to assist the Committee engage with stakeholders and strategically embrace emerging practices, technologies and trends to ensure VTS practices in planning for the future.

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