# TASK 1.X.X Ensuring VTS Guidance documents evolve with the advent of MASS

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| **Standard** | Vessel Traffic Services | | |
| **Topic Area** | VTS Implementation / Operations / Communications / Additional Services / Data and Information management / Technologies / Data Models and Data Encoding | | |
| **Task** | To assess the implications associated with the advent of MASS on IALA Standards specifically related to the establishment and operation of VTS.  A draft framework for undertaking the scoping exercise is attached.  *(Propose a name for the task)* | | |
| **Objectives of the task** | To ensure IALA Standards specifically related to the establishment and operation of VTS evolve with the advent of MASS and continue to provide an effective framework for achieving worldwide harmonisation of VTS through a scoping exercise to:   * Identify guidance requiring updating/amendment. * Identify additional guidance required with the advent of MASS. * Provide a framework for planning the preparation of amended/new guidance that reflects the conclusions described in the *Discussion Paper - Implications of MASS from a VTS perspective*, as amended, particularly with regards to the assumptions, implications and expected timeframes.   *(Describe the objective/s of the task)* | | |
| **Expected outcome/s** | A mechanism to achieve:   * Consensus on the implications associated with the advent of MASS on IALA Guidance related to VTS and * IALA Standards specifically related to the establishment and operation of VTS reflect the advent of MASS and changes to associated IMO instruments and continue to provide an effective framework for achieving worldwide harmonisation of VTS.   *(Describe the expected outcome: e.g. Recommendation, Guideline or Other)* | | |
| **Compelling need** | The IALA *Current Drivers and Trends* document (*link to document*) serves as guidance as to how IALA can reach its strategic goals with a long-term horizon and perspective. Nine trends and developments have been identified to be monitored closely and when required, appropriate action should be taken such as an adjustment of the priorities and/or structure of the organization, including:  *“Development of autonomous, automated and unmanned vessels”*  Completion of the scoping exercise provides a sound basis for ensuring IALA guidance specifically related to VTS keeps pace with the advent of MASS  *(Describe briefly why this task should be included in the Work Programme)* | | |
| **Strategic Alignment**  *(See IALA Strategic Vision)* | **Goal**  G1 - Marine Aids to Navigation are developed and harmonised through international cooperation and the provision of standards.  **Strategy**  S1 - Develop standards suitable for direct citation by States, in areas deemed important by the General Assembly, and the related Recommendations and Guidelines.  S2 - Position IALA as the source of standards, knowledge, and expertise that will enable States to provide Marine Aids to Navigation, in accordance with relevant international obligations and recommendations.  S6 - Improve and harmonise the delivery of VTS globally and in a manner consistent with international conventions, national legislation and public expectations, to ensure the safety and efficiency of vessel traffic and to protect the environment. | | |
| **Scope** | **In Scope:**  Align with the assumptions and implications for VTS described in the *Discussion Paper – Implications of MASS from a VTS Perspective*.  All IALA guidance documents specifically related to the establishment and operation of VTS.  Providing a plan to for reviewing/updating appropriate guidance documents with the advent of MASS and changes to IMO instruments associated with MASS operations for the Committee’s consideration and approval by Council.  **Note:** - *It is intended that all updated/ new guidance would be undertaken through work programme tasks approved by the Committee/Council.*  *(Describe key items that are in scope/out of scope)* | | |
| **Brief and concise description of the work to be undertaken and programme mile­stones** (where appropriate). | Identify guidance documentation requiring updating/amendment.  Identify additional guidance documentation required with the advent of MASS  Provide a plan to for reviewing/updating appropriate guidance documents with the advent of MASS and changes to IMO instruments.  Key milestones include:   |  |  | | --- | --- | | Commence Task | Oct 2021 (VTS51) | | First Draft completed for approval by the Committee | Mar 2022 (VTS52) | | Review/update of document at each Committee meeting recognising the advent of MASS and associated changes to IMO instruments. | ?? | |  |  | | | |
| **Expected numbers of sessions for completion** | Session number:  51 52 53 54 55 56 57  X  X  X  X  X  X  X | | |
| **Committee notes** | **Origins** |  | |
|  | **Agreed by session** | **TD#** | **Comments** |
| 51 |  |  |
|  | **Approved by Council** | *(Council Session)* | *(Date)* |
|  | **Revision Notes:** |  | |

# Objectives

There are two steps to determine impacts of mass on VTS documents. The first step is to analyse and research gaps on the relating VTS documents, and the second step is to propose solutions.

# Methodology

## degree of autonomy:

|  |  |
| --- | --- |
| **Degree of autonomy** | **contents** |
| Degree 1 | Ship with automated processes and decision support |
| Degree 2 | Remotely controlled ship with seafarers on board |
| Degree 3 | Remotely controlled ship without seafarers on board |
| Degree 4 | Fully autonomous ship |

In order to unify the understanding of the degrees of autonomy, the following hypotheses were formulated during the initial scoping for facilitating the process:

.1 MASS of degree one is considered as a conventional ship with some additional functions to support human decision making. The specific automated process and decision support are not considered due to their diversities.

.2 No matter if MASS can be operated from another location, seafarers on board are assumed to be able to meet all the operation and control requirements (For degrees one and two).

.3 For degree of autonomy four, it is assumed there will be no seafarer on board.

## Gaps Analysis

A apply to MASS and do not impede the function of VTS on MASS, but may need to be amended or clarified, or

B apply to MASS and do not impede the function of VTS on MASS, and require no actions; or

C do not apply to MASS and impede the function of VTS on MASS.

The identification process can be presented in the following flow chart:



## Solutions

The most appropriate method classification to solve the impact of MASS:

1. equivalences as provided for by the instruments or developing interpretations; and/or
2. amending existing documents; and/or
3. developing new documents; or
4. none of the above as a result of the analysis.

# SCOPING RESULTS

**TALBE 1 GAPS ANALYSIS**

|  |  |  |  |
| --- | --- | --- | --- |
| **Provisions** | **Degree of autonmy** | **MASS application** | **Comments/remarks** |
|  | DEGREE ONE |  |  |
| DEGREE TWO |  |  |
| DEGREE THREE |  |  |
| DEGREE FOUR |  |  |

**TABLE 2 ANALYSIS OF SOLUTIONS**

|  |  |  |  |
| --- | --- | --- | --- |
| **Degree of autonomy** | **the most appropriate way of addressing MASS implications**  **(I, II, III, IV)** | **Reasons** | **Themes/ potential gaps that require addressing** |
| DEGREE ONE |  |  |  |
| DEGREE TWO |  |  |  |
| DEGREE THREE |  |  |  |
| DEGREE FOUR |  |  |  |