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

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) n.n

Technical Domain / Task Number 2 TD3

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VTS Manager Training

# Summary

The importance of training personnel working in maritime sector is a key element which is internationally recognized in increasing the safety of navigation.

A major factor in the efficient operation of a VTS centre is the standard of competence of its entire personnel, both operational and managerial.

IALA Recommendation V103 introduces VTS professional positions (Operator, Supervisor, Manager) drafting, for each one, a job description and the possible career progression.

As per IALA V103, the VTS Manager is responsible for managing and coordinating the activities of the VTS centre on behalf of the VTS Authority.

Therefore a high level of specialisation is required, aimed at the organisation of the work of a VTS-Operator. His field of work is connected to organisational theories and focussed at the ability to manage humans, materials and other resources. The character of the work changed from operational to tactical/strategic.

An IALA guideline which recognises the importance of the standardisation of the work of the VTS-manager will help to increase the quality of his work.

Since VTS Centres are differently organised, allocating Management tasks to either the VTS-Operator and/or the supervisor and/or the manager, it would be preferred to talk about a management role rather than a management position. This allows VTS-centres more freedom to organise management tasks as they seem fit.

## 1.1 Purpose of the document

The following document aims:

- to investigate in a meticulous manner which VTS Management tasks and competences are executed in the different VTS-centres. The basis of this investigation is the attached questionnaire, which can be review and administered among TD3 members. The outcome of the questionnaire will get more insight in the processes of competences that are specific for management positions in a VTS-centre. This will help to define the related educational need;

- to provide – as a working paper - a Guide Line/Model Course for VTS Manager training, including a possible educational scheme (curriculum) which is based on the job description given by recommendation V103 (document 2 in attachment);

- to propose a new approach to VTS training, based on competence and qualification, that respond to the need of standardisation

## Related documents

* IALA Recommendation V 103
* Input Paper VTS40-10.1.4 ;

# Background

Training need analysis theories show that educational requirements are linked, moreover, to tasks, competencies and abilities that have to be executed in a particular area of activity.

Since there is a different approach to VTS management of VTS Centers it is important to define a shared list of tasks and competencies for VTS Manager on which constructing a training process. Questionnaire in ANNEX 1 aims to achieve this result.

On the other hand, the Guide Line/Model Course in ANNEX 2 takes into account the general tasks and competences as defined in V 103 in order to draft an educational path.

There is an important concept that emerges from the document in Annex 2: the relevance of a VTS background in defining manager training process and needs.

The duration or the development of a training module, indeed, is linked to previous qualification or professional experience as Operator or Supervisor.

There are common Learning Areas that connect Operators , Supervisors and Managers.

The difference between these professional positions are levels of knowledge abilities, skills and responsibilities.

We could try to draft a VTS management process as a progression in career but also as an increasing of levels of learning areas and learning outcomes.

This new approach – based on qualification frameworks will be developped in a joint study set up by Netherland and Italy .

# Discussion

A qualification framework is an instrument to provide common training standards.

A qualification framework is a tool for the development and classification or qualifications, which relate and compare qualifications using a hierarchy of learning outcomes, usually of increasing complexity.

Learning outcomes are a set of knowledge, skills and/or competencies that an indivudual has acquired and/or is able to demonstrate after a completion of a learning process.

Learning outcomes are statements of what a learner is expected to know, understand and/or be able to do at the end of a period of learning.

The construction of a Qualification Framework has the potential to increase the levels of interoperability which is needed to face maritime related risks and threats in more coherent manner.

Educational progression should be the key to construct a training path on VTS management.

The inclusion of the topics mentioned in this input paper into the work-programme 2018-2022 will give IALA the oppertunity for a comtemporary approach to management. This approach will follow the ideas of the European Union with regard to training and qualification (EQF/SQF). By including this topic into the next working programme IALA recognises the specific contribution that management tasks have for the VTS-centres and the demands placed on the person(s) executing these tasks. TD3 will be asked to do some research in order to give the document a solid foundation and to identify those tasks and processes that need to be addressed in the guideline to be developed.

# References

1. IMO A.857(20)
2. IALA V 103 Recommendation: Standards for Training and Certification of VTS Personnel;

# Action requested of the Committee

The Committee is requested to consider the two documents in attachment by:

* approving the review and launch of the questionnaire among TD3 members for the only purpose to investigate, in a meticulous way, VTS Manager’s tasks and competencies in order to define the related educational needs;
* considering to add the development of the Guide Line/Model Course on VTS Manager training needs into the new work plan 2018-2022, deciding which kind of document would be preferable for the purpose;
* Consider to incorporate the new proposed approach to training– in the work plan 2018 – 2022.

ANNEX 1 –

**QUESTIONNAIRE ON VTS MANAGER JOB DESCRIPTION: Competences and tasks**

**OBJECTIVE**: The objective of this questionnaire is to map VTS Manager job descriptions – where such a professional position exists – in the different Member States. Hopefully resulting in a complete and shared list of competences and tasks.

**AIM**: The final aim of the questionnaire is to define, for each task, the pertinent training need;

**METHODOLOGY**: In **column A** there’s a list of VTS Manager competences as described in IALA Recommendation V 103. The competences are divided into three principals skills: managerial, operational and communicational;

In **column B** you can sign yes or not if the enlisted competences are met for your VTS Manager;

In **column C** you can specify which kind of activity Managers are requested to do in relations to the described competences.

For any group of competences (Managerial, operational, communicational) you can add **OTHER** activities.

|  |  |  |  |
| --- | --- | --- | --- |
| **A** | **B** | | **C** |
| **Job description, according to IALA Recommendation V 103** | **Agreement/Disagreement** | | **Note** |
| **MANAGERIAL COMPETENCES** | **YES** | **NO** |  |
| Ensuring that the aims and objectives of the VTS are met at all times | X |  | (example)  Provide periodical internal audit |
| Ensuring that the standards set by the Competent/VTS Authority for operator qualifications and training are met |  |  |  |
| Ensuring that the training and certification of VTS personnel are appropriate to the service types being provided |  |  | (example)  Provide annual/periodical assessment |
| Ensuring VTS quality standards are maintained |  |  |  |
| Maintaining awareness of continuing development for the VTS centre(s) |  |  |  |
| Managing and co-ordinating financial, technical and human resources |  |  |  |
| OTHER  (feel free to insert additional rows) |  |  |  |
| **(example)**  *Ensuring that relevant personnel take place in additional training and seminars* | X |  | **(example)**  VTSO exchange programme |
| **OPERATIONAL COMPETENCES** |  |  |  |
| Ensuring that all VTS operations follow current rules, regulations and legislation |  |  |  |
| Planning and developing of emergency procedures as appropriate to the VTS area of responsibility |  |  |  |
| Ensuring that all adopted standard operating procedures are reviewed and amended as required |  |  |  |
| OTHER  (feel free to insert additional rows) |  |  |  |
| **(example)**  *Ensuring that requirements for documentation are met* | X |  | **(example)**  Reporting of incidents Issuing operational procedures  Issuing / signing VTSO’s Logbooks |
| **COMMUNICATIONAL SKILLS** |  |  |  |
| Developing and maintaining a good public information and relations program |  |  |  |
| Ensuring compliance with evidentiary provisions in the event of an incident or accident occurring in the VTS area |  |  |  |
| Ensuring that all such events are properly recorded and readily available for examination by the Competent/VTS Authority |  |  |  |
| OTHER  (feel free to insert additional rows) |  |  |  |
| *Promote co-operation with allied services* | X |  | Pilot meetings  STS-operators meetings |

**ANNEX 2**

Document Revisions

**IALA Guide Line**

**/Model Course**

**No. ####**

**On**

**Vessel Traffic Service**

**Manager training**

**Edition ---**

**------- 2016**

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Revisions to the IALA Document are to be noted in the table prior to the issue of a revised document.

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| **Date** | **Page / Section Revised** | **Requirement for Revision** |
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PART B COURSE FRAMEWORK

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INTRODUCTION

The importance of training of personnel working in maritime sector is a key element, internationally recognized, in increasing the safety of navigation.

A major factor in the efficient operation of a VTS centre is the standard of competence of its whole personnel.

IALA Reccomendation V 103 introduces VTS professional positions (Operator, Supervisor, Manager) drafting, for each one, a job description and the possible career progression .

As per IALA V 103, the VTS Manager is responsible for managing and coordinating the activities of the VTS centre on behalf of the VTS Authority.

Therefore an high specialisation is requested, focused on work organisations theories and on the ability to manage humans and materials resources.

Considering that VTS Centres have different organisation of their own management, the following document aims to give a guide line for VTS Manager training.

**PART A - OVERVIEW**

**1 OVERVIEW**

IALA recommends that training providers utilise accredited training courses as per IALA Guideline1014 on the Accreditation of VTS Training Courses. This document is meant to complement IALA pubblications on VTS personnel training

**2 PURPOSE OF THE DOCUMENT**

The purpose of this document is to assist maritime training organisations and their teaching staff in the preparation and introduction of new training courses for VTS Manager.

This document provides details of the subject areas for knowledge and practical competence required to gain an endorsement as a VTS Manager.

**3 USE OF THE DOCUMENT**

The guide line (or model course) comprises 5 modules, each of which deals with a specific subject representing a requirement or function of a VTS Manager. Each module contains a subject framework stating its scope and aims, a subject outline and a detailed teaching syllabus. This modules should be part of a training Course or considered as a necessary prerequisite that a VTS Manager has to possess.

**PART B- COURSE FRAMEWORK**

**1 INTRODUCTION**

The course covers the requirements of the IALA Recommendation V-103. On successful completion of the course and assessments, the participants should have been presented with sufficient training and to carry out with competence the duties of a VTS Manager at a VTS centre.

In particular they should be fully conversant with the principles and practices of the particular VTS, the types of service provided and the overall structure and capabilities of the VTS organisation.

The manager should also possess managerial qualifications required by the Competent or VTS Authority concerned

**2 REQUIREMENTS FOR ENDORSEMENT AS A VTS MANAGER**

Every candidate for a VTS Manager endorsement should:

• be in possession of a valid VTS Supervisor Certificate, if requested, or of the theoretical and practical knowledge appropriate to the requirements of a VTS Operator or Supervisor;

• have achieved the International English Language Testing System (IELTS) level 6, or its equivalent;

• satisfy the Competent Authority by passing the appropriate assessment for the accredited course of Manager training or being in possession of requested prerequisites.

**3 COURSE INTAKE - LIMITATIONS**

Class sizes may be limited at the discretion of the Competent Authority in order to allow the instructor to give adequate attention to individual participants.

**4 TRAINING STAFF REQUIREMENTS**

All instructors and assessors should be appropriately qualified for the particular types and levels of training or assessment required for the course.

**PART C- COURSE MODULES**

The complete course comprises 5 modules, each of which deals with a specific course module and subject representing a requirement or function of a VTS Manager, followed by simulated exercises and assessment intended to be representative of events and incidents likely to be experienced in a VTS Centre. The recommended duration in hours do not include the time necessary for examinations or tests of proficiency.

The course duration will take into account of prior learning assessment, considering the possession of equivalent training courses or qualifications already attended.

|  |  |  |
| --- | --- | --- |
| **Module/Subjects/**  **Prerequisites** | **Tasks/competences (according to IALA V 103) and related**  **training needs** | **Purpose of training/education** |
| 1. Quality Management System | * Ensuring that the aims and objectives of the VTS are met at all times; * Ensuring that the standards set by the Competent/VTS Authority for operator qualifications and training are met; * Ensuring that the training and certification of VTS personnel are appropriate to the service types being provided; * Ensuring VTS quality standards are maintained; * Maintaining awareness of continuing development for the VTS centre(s); | Having the necessary knowledge on QMS in order to apply this methodology to VTS Centre. |
| 1. Crew resource Management applied to VTS | * Managing and co-ordinating human resources; | Provide the necessary training/knowledge for an efficient management of a VTS Centre, optimizing the resources available, making operations safer and more efficient, reduce stress levels and increase the efficiency |
| 1. VTS Management | * Ensuring that the aims and objectives of the VTS are met at all times; * Ensuring that all VTS operations follow current rules, regulations and legislation; * Planning and developing of emergency procedures as appropriate to the VTS area of responsibility; * Ensuring that all adopted standard operating procedures are reviewed and amended as required; * Managing and co-ordinating financial, technical and human resources; | Provide the necessary training for planning VTS Regulation, the VTS manual and managing all other information of interest to the VTS Centre, according to the standards provided by the management systems and taking account of the various port and areas to be audited / monitoring. |
| 1. Emergency Communication | * Developing and maintaining a good public information and relations program; * Ensuring compliance with evidentiary provisions in the event of an incident or accident occurring in the VTS area. * ensuring that all such events are properly recorded and readily available for examination by the Competent/VTS Authority. | Manage strategies to develop proper communication in crisis situation that has in the media and in public opinion the main target of comparison |
| 1. Risk management Toolbox - IALA Seminar | * Planning and developing of emergency procedures as appropriate to the VTS area of responsibility; | Provide the instruments to analyse and calculate risks in a VTS Area in order to plan and develop VTS procedures |

**MODULE 1 - QUALITY MANAGEMENT SYSTEM**

**1.1 INTRODUCTION**

Instructors for this module should be skilled in ISO 9000 and Quality Management System (QMS) or **EQUIVALENT**.

1.1.1 Background

A QMS provides an organization of the VTS Center activities.

It guarantees an efficient and effective organization of procedures and resources, and ensures a control of corrective actions which results in a process of continuous improvement .

**1.2 SUBJECT FRAMEWORK**

1.2.1 Purpose:

Provide the necessary training on the ISO 9001 and its eight core principles in order to apply this methodology to VTS Centre

1.2.2 Aims:

At the end of the module the course participant possesses knowledge of :

* ISO 9001 principles;
* The relationship between quality management and customer satisfaction;
* The terms commonly used in quality management;
* points under ISO 9001

and he is capable of:

* identify customer requirements and regulatory requirements;
* plan, organize and monitor the performances of the processes;
* identify and pursue areas of improvement.

|  |  |  |  |
| --- | --- | --- | --- |
| **Subject Area** | **Reccomended Competence Level** | **Recommended Hours** | |
| **Presentations/ Lectures** | **Exercises/ simulation** |
| ISO 9001 aim and its enforcement | 3 | 1 |  |
| 8 principles of quality | 3 | 1 |  |
| Procwess approach – Purpose, terms and definitions | 3 | 1 |  |
| Quality Management System | 3 | 1 |  |
| Management responsability (customer focus, quality policy, authority and communication, management review) | 3 | 1 |  |
| Resource management (human and matherial resources, work environment) | 3 | 1 |  |
| Product realisation (planning of product realisation, customer related process, planning and development, provision, production and service provision) | 3 | 1 |  |
| Measurement, analysis and improvement (internal control and external tools, non compliance, data analysis, improvement) | 3 | 1 |  |
| Practical activity (role play) |  |  | 2 |

**1.3 PRIOR LEARNING ASSESSMENT**

Candidate should be in possession of a certificated training course on Quality Management – ISO 9000 or **equivalent**, valid as a prerequisite.

**MODULE 2- CREW RESOURCE MANAGEMENT**

**1.1 INTRODUCTION**

Instructors for this module should be skilled in CRM and VTS organisation.

1.1.1 Background

CRM has developed in the aeronautical area; the same principles are applied on bridge management onboard vessels. This way of organizing human and materials resources should be promoted also in a VTS context.

**1.2 SUBJECT FRAMEWORK**

1.2.1 Purpose:

provide the necessary training to optimize the resources available, making operations safer and more efficient, reduce stress levels and increase the efficiency of teamwork at the VTS centers.

1.2.2 Aims:

to acquire the frequent techniques included in the discipline of Crew Resource Management (CRM), born in aeronautical environment and then spread to all areas of work characterized by teamwork.

After completing this module the visitor acquires the following knowledge:

* greater awareness of teamwork and limitations that this entails working methodology;
* responsibility to direct a working group;

and it is capable of:

* apply the techniques of CRM within the VTS.

|  |  |  |  |
| --- | --- | --- | --- |
| **Subject Area** | **Reccomended Competence Level** | **Recommended Hours** | |
| **Presentations/ Lectures** | **Exercises/ simulation** |
| Analysis of the evolution of human resources and projection of future development | 4 | 2 |  |
| Basic concepts of CRM | 4 | 2 |  |
| Situational awareness in a VTS Center | 4 | 1 |  |
| Decision Making | 4 | 1 |  |
| Communication in a working team (internal – external) | 3 | 1 |  |
| Teamwork | 4 | 1 |  |
| Leadership | 4 | 1 |  |
| Understanding performance ahping factors, fatigue and stress | 4 | 1 |  |
| Ethical and legal issues in CRM and leadership actions | 4 | 1 |  |
| Simulation | 4 |  | 6 |

**1.2 PRIOR LEARNING ASSESSMENT**

The performance and duration of this module should vary considering Managers VTS background and prior qualifications

**MODULE 3 - VTS MANAGEMENT**

**1.1 INTRODUCTION**

Instructors for this module should be skilled in VTS organization, Operative procedures, planning activities in routine and emergencies situations, management of technical and material resources.

1.1.1 Background

The manager should have knowledge of the principles and practices of the particular VTS, the types of service provided and the overall structure and capabilities of the VTS organisation. This VTS knowledge may be gained through experience as a VTS Operator or VTS Supervisor and is the basis for a good management. Such experience would be particularly relevant where the role includes responsibilities for VTS contingency planning

**1.2 SUBJECT FRAMEWORK**

1.2.1 Purpose:

provide the necessary training for planning VTS Regulation, the VTS manual and managing all other information of interest to the VTS Center, according to the standards provided by the management systems and taking account of the various port and areas to be audited / monitoring.

1.2.2 Aims:

at the end of the module the visitor acquires the following knowledge:  
- structure of the documents relating to management systems;  
- differences between procedures, instructions, forms and manuals;  
and he is capable of:  
- prepare Standard Operating Procedures (SOPs) and Operating Instructions;  
- Develop operational procedures inside and outside of routine and emergency related to the VTS;

* Manage technical al material resources.

|  |  |  |  |
| --- | --- | --- | --- |
| **Subject Area** | **Reccomended Competence Level** | **Recommended Hours** | |
| **Presentations/ Lectures** | **Exercises/ simulation** |
| Structure of the documentation in management systems | 4 | 1 |  |
| Procedure, operating instructions, manuals | 4 | 1 |  |
| VTS regulation and user manual | 4 | 1 |  |
| List of radio signals | 4 | 1 |  |
| Implementation of standard operating instructions | 3 | 2 | 1 |
| Implementation of internal and external operating procedures, in routine and emergency situation | 4 | 3 | 4 |
| VTS tools and their management | 4 | 3 |  |

**1.3 PRIOR LEARNING ASSESSMENT**

The performance and duration of this module should vary considering Managers VTS background and prior qualifications

**MODULE 4 - COMMUNICATION IN EMERGENCY SITUATION**

**1.1 INTRODUCTION**

Instructors for this module should be skilled in communication in crisis situation.

1.1.1 Background

One of the main goal for an efficient management of an emergency situation is communication. A correct and effectiveness internal and external communication contribute to garantee a good management of crisis situations.

**1.2 SUBJECT FRAMEWORK**

1.2.1 Purpose:

Manage strategies to develop proper communication in crisis situation that has in the media and in public opinion the main targets of comparison.

1.2.2 Aim:

provide knowledge and develop integrated skills on theoretical and practical operational tools aimed at the management of crisis situations and emergencies from the point of view of psycho-social and communicational, inspired by new developments in human sciences.

Provide knowledge on resilience elements for a dinamic and positive reaction to difficult situations.

|  |  |  |  |
| --- | --- | --- | --- |
| **Subject Area** | **Reccomended Competence Level** | **Recommended Hours** | |
| **Presentations/ Lectures** | **Exercises/ simulation** |
| Crisis, emergencies and context | 4 | 3 |  |
| Comunication models and traditional communication | 4 | 5 |  |
| Digital communication | 4 | 3 |  |
| Crisis management, legal and organi zational approaches, media relations | 4 | 5 |  |
| Psychology : crisis, emergencies and their influence on communication processes | 3 | 3 | 2 |
| Methodologies and techniques for crisis and emergency management | 4 | 3 | 3 |

**1.3 PRIOR LEARNING ASSESSMENT**

The performance and duration of this module should vary considering Managers VTS background and prior qualifications.

**MODULE 5 – RISK MANAGEMENT TOOLBOX**

**1.1 INTRODUCTION**

Instructors for this module should be skilled in risk Management analysis in a VTS area and IALA risk management tools.

1.1.1 Background

IALA, through WWA organize a seminar on risk management toolbox. This training course should be useful to AtoN and VTS Managers.

**1.2 SUBJECT FRAMEWORK**

1.2.1 Purpose:

Provide theoretical and practical training necessary to have a satisfactory understanding of the three IALA risk management tools, IALA Waterway Risk Assessment Program (IWRAP Mk2); Port and Waterway Safety Assessment tool (PAWSA) and simulation.

1.2.2 Aim:

The course is intended to cover the knowledge required to understand the use of IALA risk management tools within their organization.

**SEE IALA MODEL COURSE**

**1.3 PRIOR LEARNING ASSESSMENT**

The participation to IALA seminar.

ANNEX 3

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