

# GUIDELINE

**GNNNN**

## ATTRIBUTES FOR VTS OPERATOR RECRUITMENT

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# DOCUMENT REVISION

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Revisions to this IALA Document are to be noted in the table prior to the issue of a revised document. The latest edition of the Guideline is the only version in force unless the Guideline is explicitly revoked by the Council.

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## 1. INTRODUCTION

IMO Resolution A.1158(32) Guidelines for Vessel Traffic Services [1] emphasizes that:

“A major factor in the operation of VTS is the competence of their personnel.”

Similarly, IALA G1156 Recruitment, Training and Certification of VTS Personnel [2] highlights the importance of having policies and processes for the selection and recruitment of VTS personnel. This may include minimum entry requirements such as:

- prior skills and knowledge
- maritime experience and education
- personal suitability characteristics
- medical fitness requirements

These documents recognize that personal attributes are as important as technical skills and experience for VTS personnel.

This guideline was developed with input from multiple respondent groups, including VTS operators, VTS supervisors, VTS managers, competent authorities, Training Organizations and recruiters. Based on the responses the highest-ranked aptitudes and behaviours remained largely consistent across the groups, which indicates broad agreement on the core competencies necessary for VTS operators.

Assessing a candidate's personal attributes and overall suitability should be incorporated into the selection process. This ensures that candidates bring not only the right knowledge but also the aptitudes and behaviours needed to succeed in the VTS role.

Assessing of personal attributes is one step in the recruitment process designed to determine the suitability of a candidate.

## 2. DOCUMENT PURPOSE

The purpose of this document is to provide guidance on the key personal attributes for VTS operators, as well as the methods to assess these qualities during the recruitment process.

It aims to support competent authorities, VTS providers and training organizations in identifying and selecting more suitable candidates who possess the necessary skills, attitudes and competencies to perform effectively in critical maritime environments.

This document is not intended to replace existing national legislation or established hiring practices but to complement them by offering additional considerations for enhancing the selection process.

This Guideline is associated with Recommendation R0103 *Training and Certification of VTS personnel* [3], a normative provision of Standard S1040 Vessel Traffic Services (VTS). To demonstrate compliance with the Recommendation, the practices of this Guideline should be taken into account.

## 3. APTITUDES FOR VTS OPERATORS

To perform effectively in a VTS role, candidates need to possess a combination of aptitudes and behaviors. These characteristics support the cognitive, emotional and interpersonal demands of the job, particularly in high-pressure, safety-critical environments.

### 3.1. APTITUDES

An aptitude is defined as the natural capacity to learn or understand; intelligence, sharpness and readiness. A number of aptitudes of VTS operators are listed below. They are ranked from highest to lowest, based on a 2025 questionnaire that identified the aptitudes and behaviors demonstrated by successful VTS operators:

- Situational awareness
- Decision making
- Prioritization
- Ability to detect anomalies
- Timely action
- Ability to synthesize information from multiple inputs
- Spatial reasoning or visualization
- Multitasking
- Ability to provide, receive and act upon feedback
- Ability to cope with stress
- Ability to recognize patterns
- Short-term memory recall
- Numerical reasoning
- Empathy
- Critical thinking

### 3.2. BEHAVIOURS

A behaviour is the manner of conducting oneself in the external relations of life; demeanour, deportment, bearing and manners. A number of behaviours of VTS operators are listed below that are also ranked from highest to lowest, based on the questionnaire:

- Responsibility;
- Ability to remain calm and composed in difficult situations;
- Sense of duty; understanding the value of their role
- Ability to maintain attention for extended periods and avoid distraction
- Teamwork; ability to work effectively with others
- Initiative and proactivity
- Ability to maintain focus during periods of low or intermittent activity
- Honesty and integrity
- Adaptability and flexibility
- Ability to be concise
- Self-motivation; ability to work independently

- Ability to maintain effectiveness in single-person operations
- Assertiveness
- Service or client-oriented mindset
- Effective communication skills

## 4. ASSESSMENT METHODS

To gain a comprehensive understanding of a candidate's abilities and suitability, a range of assessment methods should be considered. These may include:

- psychometric tests;
- practical tests or exercises; and
- interviews.

Relying solely on a single method provides limited insight into a candidate's aptitude and behavioural suitability, particularly for a role as a VTS operator. To ensure a more accurate evaluation, a multi-method assessment approach is encouraged.

Designing an effective recruitment process may require expert input. It is also recommended to consider utilizing services offered by external providers or third-party organizations for specific assessment components. This helps ensure that all tests and exercises are appropriately designed to complement the interview process and provide a thorough evaluation of each candidate's potential.

Depending on the nature of the test and the resources available, assessment methods may be conducted in one of two ways:

- in person
- online via computer-based platforms

Psychometric assessments and certain aptitude tests are often well-suited for remote delivery, while practical exercises or simulations may require on-site administration. Choosing the appropriate delivery mode for each method is essential to ensure valid results in the evaluation process.

Personal information, such as CVs, diplomas, experience records and evaluation results, may be collected and processed during recruitment. Applicants should be informed of their rights and the purposes of processing both before application and at recruitment. Organizations must handle all personal information securely and define a retention period.

### 4.1. PSYCHOMETRIC TESTS

A psychometric test is designed to provide a quantitative analysis of a person's mental capacities or personality traits, typically as shown by responses to a standard series of questions or statements.

The contents of a psychometric test are generally divided into two categories:

- Aptitude tests, which measure the intellectual abilities required for work
- Personality tests, which aim to understand the candidate's character

#### 4.1.1. APTITUDE TESTS

An aptitude test is designed to determine a person's capacity in any given skill or field of knowledge, particularly those relevant to job performance. Rather than focusing on academic knowledge or school-based learning, these tests evaluate practical thinking skills such as logical reasoning, information processing and problem-solving

ability. These are competencies that cannot be easily improved through short-term memorization or test preparation—they are typically developed through consistent, long-term habits and experiences.

Aptitude tests are generally divided into two main areas:

- Verbal Reasoning

This assesses the ability to accurately understand the logic and argument of written texts, including vocabulary, reading comprehension and identifying key messages.

High-scoring candidates tend to read quickly and understand texts logically. They are often skilled communicators with strong language habits.

Low-scoring candidates, on the other hand, often lack regular reading habits and may struggle to grasp written content accurately. This can lead to misunderstandings in communication-heavy roles.

- Numerical and Logical Reasoning

This assesses the ability to perform calculations, interpret charts and graphs and apply logic to solve problems efficiently.

High-scoring candidates remain calm under pressure, read problems carefully and select efficient strategies. They are comfortable with numbers and suited for structured tasks like accounting or programming.

Low-scoring candidates, by contrast, tend to skip careful reading and rely on guesswork. They may struggle with division, percentages and overall numerical processing.

Aptitude tests may provide insight into a candidate's personal attributes such as:

- numerical reasoning
- short-term memory recall
- timely action
- ability to recognize patterns
- situational awareness
- spatial reasoning or visualization;
- ability to synthesize information from multiple inputs
- ability to maintain attention for extended periods and avoid distraction

These general intellectual abilities have been shown to be predictive of job performance. While aptitude test scores are important for selection, there is no universal passing score. Each organization should set its own standards based on the skills it needs.

#### 4.1.2. PERSONALITY TESTS

A personality test assesses various traits related to job performance, such as interpersonal style, work attitude and goal orientation, based on a candidate's responses to questions about their everyday behavior and ways of thinking.

The results quantify how well the candidate is likely to adapt to specific job roles and workplace environments, allowing employers to evaluate whether the candidate's characteristics align with the qualities they seek and to identify any discrepancies from the impression formed during the interview.

Personality tests are used to gain a deeper understanding of the candidate's individual strengths/weaknesses and to supplement the findings from interviews.

Personality tests may provide insight into a candidate's personal attributes such as:

- ability to give, receive and act upon feedback
- ability to cope with stress
- decision making
- empathy
- prioritization
- adaptability and flexibility
- assertiveness
- honesty and integrity
- initiative and proactivity
- ability to maintain effectiveness in single-person operations
- ability to maintain focus during periods of low or intermittent activity
- ability to maintain attention for extended periods and avoid distraction
- responsibility
- self-motivation; ability to work independently
- teamwork; ability to work effectively with others

## 4.2. PRACTICAL TESTS OR EXERCISES

Practical tests or exercises aim to simulate key aspects of the VTS work environment, allowing recruiting team members to observe how candidates respond to realistic tasks and challenges. These assessments provide valuable insights into a candidate's applied skills, cognitive processes and behavioural tendencies that may not be fully captured through psychometric testing or interviews alone.

Unlike psychometric tests that focus on abstract reasoning or personality traits, practical exercises are designed to evaluate real-time performance, including how candidates process information, make decisions under pressure and communicate in dynamic environments. Practical exercises can take many forms and should be tailored to reflect the demands of VTS operations.

When incorporating practical tests into the recruitment process, it is essential to:

- Define clear assessment criteria based on the aptitudes and behaviours identified as critical for VTS roles;
- Ensure the test design and difficulty are appropriate to distinguish between candidates with different ability levels;
- Where appropriate, integrate different practical test elements within or alongside VTS simulation exercises;
- Provide structured briefing to ensure candidates understand the objectives, context and format of the exercise;
- Ensure fairness and consistency by providing standardized training for evaluators, using structured scoring tools and ensuring a controlled testing environment; and
- Train assessors to observe not only whether tasks are completed, but also how tasks are approached and what reasoning is applied.



Practical tests should not be overly complex or technical, particularly for candidates who have not yet undergone VTS training. Instead, exercises should focus on assessing potential, not current proficiency.

In this context, particular attention should be given to a candidate's capacity to learn and adapt. The ability to reflect on feedback, adjust approaches and progressively improve performance is a critical indicator of future effectiveness as a VTS operator. Candidates who demonstrate learning potential, such as gradually modifying their behaviour or communication procedures during exercises, may become competent operators over time, even if some essential abilities are not fully evident at the recruitment stage.

The following sections provide examples of practical tests or exercises. These should not be used as stand-alone procedures but should complement a wider recruitment process.

#### 4.2.1. VTS-SIMULATION

Guideline G1027 Simulation in VTS Training [5] acknowledges the use of VTS simulation when assessing a candidate's suitability to operate in a VTS. The inclusion of a simulation exercise in the recruitment process will provide insight how a candidate may behave in a VTS training and in a VTS operational environment.

When conducting simulation in the recruitment process attention should be given to the candidate's background and experience. Furthermore, expectations and assessment of the candidate's performance should be different from those during participants in a VTS training course. The exercise should be simple and focused on assessing the candidate's general abilities. The candidate should be briefed of the expectations prior to the exercise and how to operate the equipment.

A simulation exercise may provide insight into a candidate's personal attributes such as:

- adaptability and flexibility
- ability to remain calm and composed in difficult situations
- timely action
- situational awareness
- effective communication skills
- initiative and proactivity

It is essential that the team assessing the exercise understands the principles of a simulation exercise and is aware of the qualities that determine a candidate's suitability.

#### 4.2.2. ACCURACY UNDER TIME PRESSURE TEST

Accuracy under time pressure testing may be used to assess a candidate's ability to process information, make decisions and perform tasks when working within a set timeframe.

The exercise may include tasks requiring candidates to receive, understand and act on information accurately within limited time which may include:

- identifying irregular or abnormal situations
- handling multiple tasks at the same time
- maintaining consistent performance during longer or demanding task periods

It may be possible to use a VTS simulator or software with similar functions, however this is not critical to the assessment approach. The exercise should be simple and focused and candidates should be briefed on the scenario, expectations and any equipment or software prior to the exercise.

Assessment may include the accuracy rate of task completion, reaction time, the ability to maintain accuracy under time pressure, performance consistency throughout the exercise and the type and severity of errors. Errors may be categorized, for example, as critical errors, e.g. omission of information or failure to recognize key

information or major risks, or incorrect transmission of critical information, and non-critical errors such as incomplete information gathering, delayed but correct responses, or less effective prioritization.

The exercise may provide insight into a candidate's personal attributes such as:

- decision making
- timely action
- teamwork as the ability to work effectively with others
- effective communication skills
- situational awareness
- ability to detect anomalies
- spatial reasoning or visualization
- critical thinking
- ability to cope with stress
- ability to remain calm and composed in difficult situations
- prioritization
- ability to maintain attention for extended periods and avoid distraction
- ability to maintain focus during periods of low or intermittent activity

#### 4.2.3. WORKING MEMORY TEST

Working memory supports the development and maintenance of situational awareness and reliable monitoring and communication performance. Working memory testing may be used to assess a candidate's ability to temporarily store, update and apply information relevant to task performance.

The working memory test may include tasks requiring candidates to retain key information over short periods, recall and use information accurately, update stored information as situations change, integrate new and existing information and maintain task performance despite distractions or interruptions.

The exercise should be simple and focused and candidates should be briefed on the scenario, expectations and any equipment or software prior to the exercise.

Assessment may consider accuracy of information recall, effectiveness of memory updating, task accuracy under distraction, response time during interference and the ability to maintain task continuity throughout the exercise.

These tasks may provide insight into a candidate's personal attributes such as:

- situational awareness
- ability to detect anomalies
- ability to synthesize information from multiple inputs
- spatial reasoning or visualization
- ability to recognize patterns
- short-term memory recall

### 4.3. INTERVIEW

The interview plays a critical role in assessing a candidate's motivation, communication skills, personal attributes and alignment with the responsibilities of the VTS role. While psychometric and practical tests provide measurable data, interviews allow assessors to explore how and why a candidate behaves in certain ways. They also provide an opportunity to evaluate interpersonal qualities such as calmness, clarity of expression, adaptability and judgment under pressure. In addition, interviews help determine whether the candidate can integrate smoothly into the team and contribute effectively as a member of the organization.

At the same time, the interview enables candidates to assess the organization. Through direct interaction with interviewers, candidates can consider whether they can adapt to the organizational culture, apply their abilities effectively and feel comfortable in the working environment. In this way, interviews serve as a two-way process that helps prevent mismatches in expectations between the candidate and the organization.

To ensure fairness and effectiveness, careful preparation and structured execution are essential when conducting interviews.

Preparation before the interview should include the following points:

- **Set Evaluation Standards**  
Decide in advance what aptitudes and behaviors the organization is looking for in a candidate. Having clear standards helps make sure that different interviewers judge candidates in the same way. To keep the process fair and reduce bias, tools such as evaluation sheets or scoring rubrics should be prepared and shared among assessors before the interview.
- **Prepare a Question List**  
Make a list of questions that go beyond just checking the resume or work history. Questions should aim to bring out the candidate's qualities, experiences and motivations, giving a clearer picture of their character, suitability and commitment to the role.
- **Trained Assessors**  
Interviews should be conducted by assessors who are trained in objective evaluation techniques, including recognizing behavioral indicators and avoiding common biases. Ideally, the panel should include experienced VTS personnel or instructors who can relate candidate responses to the VTS operational environment.

When conducting the interview, the following practices are recommended:

- **Balanced Atmosphere**  
Create an interview environment where candidates feel at ease and able to speak openly. Using a respectful and professional tone helps candidates relax and give honest, useful answers. At the same time, interviewers should stay objective and avoid becoming too casual, so the interview keeps its role as a fair and serious assessment.
- **Structured Approach**  
A structured interview ensures a fair and consistent process.  
  
Begin by inviting the candidate to briefly present their motivation for applying, including their interest in VTS operations and the organization. This helps confirm alignment of expectations before proceeding with the interview.  
  
Ask questions based on the resume and work history to confirm accuracy, then continue with the prepared question list to explore relevant competencies and experiences.

Finally, leave time for the candidate to ask their own questions. This helps address any doubts they may have and ensures expectations are clear on both sides.

- **Systematic Scoring**

Evaluate responses against pre-defined evaluation standards so that judgments are based on observable behaviours and aptitudes rather than subjective impressions.

Keeping records of each interview supports fair and objective decisions. When there are multiple interviewers, share and compare notes to avoid biased judgments and ensure a balanced evaluation.

Web-based interviews offer advantages such as widening access to candidates and reducing the time and cost of selection. However, they also have some limitations. For example, facial expressions and reactions may be harder to assess for both candidates and recruiters, which can make communication less smooth than in face-to-face interviews. It can also be difficult for organisations to present their workplace environment and for candidates to fully demonstrate their suitability for the role. In addition, technical problems may occur.

Online interviews require careful preparation including:

- selecting reliable interview platforms
- checking audio-visual equipment and internet connections in advance
- communicating more clearly and expressively than in face-to-face settings

Where appropriate, a hybrid approach combining online and in-person interviews can retain the advantages of online interviews while supporting better mutual understanding.

## **5. USE OF ASSESSMENT OUTCOMES**

Assessment results should not only serve as a basis for hiring decisions but also provide long-term value for training and career development.

- **Feedback to Candidates**

Assessment outcomes can help candidates gain a better understanding of themselves. Even brief or structured feedback supports professional growth and may improve future performance.

- **Reference for Placement Decisions**

For organizations recruiting for multiple VTS centres, assessment results can guide optimal placement. Each location may differ in working environment, staffing structure, workload and office atmosphere. Matching candidates to environments where their strengths align enhances their ability to adapt and succeed.

- **Support for OJT Guidance**

Assessment results can also serve as a reference for OJT instructors and supervisors when guiding new operators. The relationship with instructors and the way colleagues interact during the initial assignment strongly influences a new operator's adjustment and retention. By understanding the individual's characteristics in advance—such as how responsibilities can be assigned effectively, the situations where they may face difficulties and the best ways to provide support—instructors and supervisors can improve communication and help new operators adapt more smoothly to their role.

## **6. REVIEW AND UPDATE OF ASSESSMENT METHODS**

Assessment methods and criteria should be reviewed and updated regularly to ensure they remain relevant and effective. With ongoing technological advances, operational requirements and the competencies necessary for



VTS operators may change over time. In addition, the job market and candidate profiles can evolve, which may require adjustments in evaluation methods.

Regularly revisiting interview questions, scoring rubrics and evaluation sheets helps maintain fairness and accuracy in candidate selection. This process also ensures that the assessments continue to reflect the qualities and behaviours most important for success in VTS roles. Adjustments may include adding, removing, or refining criteria based on operational feedback, changes in organizational priorities, or lessons learned from previous recruitment rounds.

By keeping assessment tools up to date, organizations can continuously improve their recruitment processes, better identify suitable candidates and support both operational effectiveness and long-term retention.

## 7. DEFINITIONS

The definitions of terms used in this Guideline can be found in the International Dictionary of Marine Aids to Navigation (IALA Dictionary).

## 8. ACRONYMS

CV	Curriculum Vitae
MASS	Maritime Autonomous Surface Ships
OJT	On-the-Job Training
VTS	Vessel Traffic Services

## 9. REFERENCES

- [1] IMO. Resolution A.1158(32) on Guidelines for Vessel Traffic Services
- [2] IALA. Guideline G1156 Recruitment, Training and Certification of VTS Personnel
- [3] IALA. Recommendation R0103 Training and Certification of VTS personnel
- [4] IALA. Guideline G1027 Simulation in VTS Training

## 10. FURTHER READING

- Andy, F., Thomas R., Joseph B., & Jeffrey, K.(2025) Individual differences in working memory and the benefit of retrieval practice.
- Boon, P., Theeuwes, J., & Belopolsky, V. (2019) Updating spatial working memory in a dynamic visual environment.
- Isabelle, G., Stephanie, G., Carolyn, H., Oliver H., & Lynn, N.(2025) How prediction error drives memory updating: role of locus coeruleus-hippocampal interactions.
- Lisa, S. & Christian, M.(2018) Memory retrieval of everyday information under stress.