



Behavioural Competency Assessment and Verification for Vessel Operators

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INTERTANKO



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Glossary

The following are agreed definitions for terms used within this paper.

Assessment The action of assessing someone, or the act of judging and observing behavioural competencies.

Assessor A person who can assess officers' competencies according to this competency assessment and verification system and in line with the relevant requirements of the company's management system.

Assessor training A structured training programme for assessors that is based on the International Maritime Organization (IMO) model course 1.30 or equivalent.

Auditing or external verification The process, either internal or external, of auditing and verifying the proper implementation of the system presented in this paper, in accordance with the company's management system.

Behaviour The way in which a person acts or conducts themselves and interacts with other people, systems and equipment, procedures and the environment, especially in terms of safety.

Behavioural competency Competency related to observable behaviour.

Benchmarking Evaluation by comparison with standard or industry data.

Best practice Methods of working or procedures to aspire to as a part of continuous improvement.

Competency The combination of skills, knowledge and behaviours that a person brings to a position that enables them to perform their tasks efficiently, safely and effectively.

Competency domain The broadest categories of competency.

Competency elements Narrower categories of competencies that form part of the higher-level domains.

Competency framework A reference document that provides a common language or understanding of the competencies required.

Guidance Provision of advice or information.

Human element The effective interaction of people with procedures, equipment and each other. Often referred to as human factors.

Negative behavioural indicators Observable behaviours that have a negative impact on a particular competency.

Performance appraisal/review A systematic general and periodic process that assesses an individual's performance and productivity in relation to certain pre-established criteria and organisational objectives.

Positive behavioural indicators Observable behaviours that have a positive impact on a particular competency.

Psychometric tests A standard and scientific method used to measure individuals' cognitive capabilities and behavioural style.

Recommendations Support and endorsement of a particular method of working or procedure.

Safety culture A philosophy promoting safety as the ultimate consideration for all company personnel and applied to all activities undertaken, both ashore and at sea.

Simulation A virtual medium through which various types of skills can be acquired and/or assessed.

Situation awareness The ability to accurately perceive the immediate environment (system or task) and external factors that may have an impact, understand surroundings and predict their status in the near future, and develop effective strategies to manage threats.

Soft skill An ability to interact successfully with other people, systems and equipment, procedures and their environment.

Specialised training Requiring or having detailed training or expertise in a particular field.

Stakeholders Individuals, groups or organisations that have an interest in or are affected by the activity of a business.

Team working Co-operation and willingness of a group of people to work together to achieve a common aim.

Technical skill (hard skill) An ability to perform a task safely, efficiently and effectively using qualifications, knowledge and experience.

Toolbox talk The safety briefing that takes place before an activity begins that informs all participants of expectations and possible hazards.

Abbreviations

ECDIS	Electronic Chart Display and Information System
IMO	International Maritime Organization
ISM Code	International Safety Management Code
OOW	Officer of the Watch
SMS	Safety Management System
SPM	Single Point Mooring
STCW Convention	The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers
TSS	Traffic Separation System
VTs	Vessel Traffic Service

1 Introduction

The shipping industry continues to face challenges in safely moving environmentally sensitive cargo around the world. Since 1970 the industry has made great strides in reducing the number of incidents, presenting a remarkable safety and environmental record.

Unfortunately, many incidents still occur despite rules and regulations. Analysis of the contributing factors in all shipping sectors shows that the major factor is the human element.

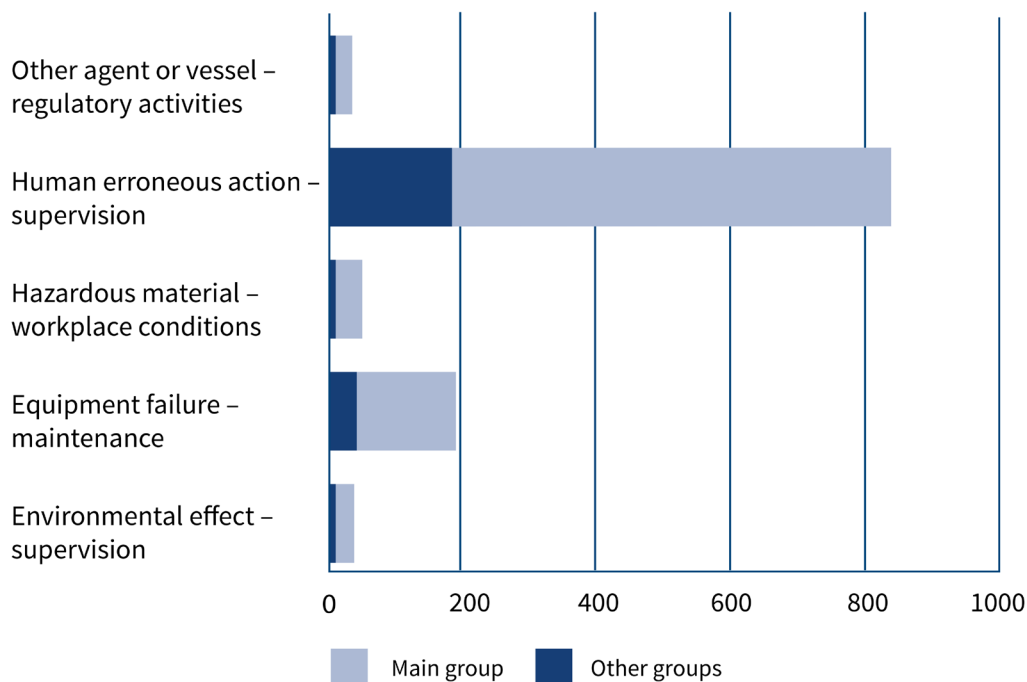


Figure 1.1: Groups of contributing factors 2011–2018 (Source: EMSA 2017)

Conducting operations safely and without incidents relies on human competency, which comprises both technical skills (hard skills) and non-technical skills (soft skills).

The industry’s main focus until now has been on developing and assessing technical skills, with the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW Convention) being the main international convention addressing the competencies of seafarers. Any officer who holds a certificate of competency issued by a proper authority that meets STCW Convention requirements is qualified to serve in that rank. Since 2010, the STCW Convention also refers to soft skill competencies such as leadership and managerial skills, decision making, teamwork and communication.

The tanker industry recognises that more focus should be placed on soft skills. Personnel behaviour and attitude are key elements of a positive safety culture that promote a safe work environment and helps reduce incidents. This document serves as a best practice guide for assessing officers’ soft skills by monitoring their behaviours.

The aim of this document is to:

- Highlight the importance of the soft skills dimensions of competency in performing operations safely and incident-free.
- Describe the variety of soft skills and their associated behaviours.
- Identify behaviours to be adopted and those to be avoided.
- Explain the value of having a variety of soft skills and behaviours in a team, which when harmonised can improve performance.

In addition, it provides a simple and flexible tool for the assessment of soft skill competency along with the assessment of technical skills during routine vessel operations.

This best practice guide provides guidance on why, how, when, where and by whom this assessment can be done. The system can be adopted by all companies and incorporated into their existing assessment or appraisal systems. If properly adopted, it can also be used to assist in promotion and recruitment processes.

The overall aim is to develop and improve officers' technical and soft skills for the benefit of each individual and the onboard team. The soft skills assessment should be seen as an opportunity to improve everyone's behaviour. The associated assessment is part of a continuous improvement process rather than another exam that officers need to pass. In this way, it differs from technical competency systems such as those in the STCW Convention.

Companies would benefit from involving their assessors in implementing this system, which may include marine and technical superintendents, as well as training assessors on behavioural competencies and assessment follow-up. This in return will bring onshore personnel and seafarers closer and will help to improve a safety culture. Through the full implementation of this system, companies will increase operational efficiency and reduce the number of incidents. This system represents something new and aims to achieve a step change in safety management at sea. Therefore, the role of the assessor is important and specialised training is recommended.

This best practice guide has been developed by a joint OCIMF and INTERTANKO initiative.

2 The importance of behavioural competency in the maritime sector

Seafarers work in one of the most risk-aware environments. They are trained to a very high technical standard and are therefore able to contemplate risks and prevent them from becoming potential incidents. However, a focus on soft skills would enhance overall safety and further reduce incident rates.

When reading any incident investigation report, causes are very often related to behaviour and performance, such as:

The main cause of the casualty of ... in January 2012 is attributed to “the Master’s unconventional behaviour”.

The main cause for the collision of ... in Feb 2015 was inadequate coordination and communication between all parties involved.

AA’s master assumed that BB would keep clear and he didn’t take it upon himself or task the third officer to closely monitor the tanker.

The remainder of the watch team on the bridge failed to provide situational awareness and input to the officer in charge on deck.

The communication from the pilot on ... to ... was less than optimal.

2.1 Why competencies?

Skills, abilities and motivation play a key role in performance at both the individual and organisational level. Soft skills and the ability to realise an organisation’s strategy and vision are what set excellent performers apart.

High-performing organisations increasingly recognise that it is not just what people do but how they do their jobs that makes the difference in achieving objectives. It is crucial to have systems and practices in place that are geared towards defining, assessing, maintaining and developing the soft skills that contribute to a culture of high performance, which can be observed through people’s actions and behaviours.

Competency frameworks offer a structured approach to managing, appraising and improving performance by reinforcing values and encouraging a common culture. A competency framework signals to personnel what the expected performance areas and levels are and which behaviours are valued and recognised.

Competency frameworks provide clarity and focus through a common language and understanding of behaviours required.

2.2 Defining competencies

Competencies can be difficult to define and assess, so the competency framework set out in the following section provides a common language and understanding of the types of behaviours (behavioural indicators; see section 3) expected in order to ensure successful performance in different types and levels of tasks.

Whether or not someone displays a particular competency will depend on their ability (do they know how to act in that way?) and their motivation (do they desire to act in that way?), as well as the opportunity (when or in what situations they can demonstrate that behaviour).

3 Competency domains, elements and behavioural indicators

In the following tables, the behavioural competencies vital for safe and efficient vessel operations are defined. The behaviours have been organised in a hierarchical structure:

1. Competency domains: broad categories of behaviour.
2. Elements: narrower categories of behaviour that form part of the higher-level domains. For example, participation is an element in the competency domain team working.
3. Behavioural indicators: the positive and negative observable behaviours associated with each element.

The competency framework consists of six competency domains:

- Team working.
- Communication and influencing.
- Situation awareness.
- Decision making.
- Results focus.
- Leadership and managerial skills.

Each of the above domains has been defined with elements identified for each domain. Each element has a non-exhaustive list of behavioural indicators, i.e. observable behaviours that relate to the competency. A list of negative behavioural indicators has been provided for companies that will also adopt negative marking.

This system is designed to suit the company that is implementing it. It provides guidance on how to assess soft skills and so it should fit within a company's management system. Therefore, when implementing the system, a company may combine or delete parts and so reduce the domains to suit their system. The essential concept is that this system can achieve an objective assessment of seafarers' soft skills. Indicators are there to help the assessment by providing examples of some behaviours that are easy to understand and observe and therefore help the assessment of competency domains and elements.

A Team Working	
Works effectively in a team, building productive working relationships through cooperation with colleagues, treating others with respect, resolving conflicts among team members and balancing individual and team goals.	
A1 Participation	
+	<ul style="list-style-type: none"> Actively participates in team tasks. Establishes an atmosphere for open communication and participation. Encourages input and feedback from others. Builds rapport and establishes a common bond with others. Encourages idea generation.
–	<ul style="list-style-type: none"> Blocks open communication. Creates barriers between crewmembers. Competes with others. Supports individualistic or silo ways of working.
A2 Inclusiveness and Consideration of Others	
+	<ul style="list-style-type: none"> Helps others feel valued and appreciated. Welcomes and includes others. Demonstrates respect for others and their differences. Shows understanding of others' perspectives and personal situations. Notifies the suggestions of other crewmembers. Gives detailed and constructive personal feedback.
–	<ul style="list-style-type: none"> Displays little appreciation for others' contributions and perspectives. Ignores suggestions of other crewmembers. Shows a lack of concern for others' problems. Shows a lack of respect. Treats some crewmembers more favourably than others.
A3 Supporting Others	
+	<ul style="list-style-type: none"> Helps other crewmembers in demanding situations. Shares expertise with others.
–	<ul style="list-style-type: none"> Hesitates to help other crewmembers in demanding situations. Creates reasons resources and support cannot be shared. Withholds information and refuses to share knowledge that would help others do a better job.
A4 Conflict Resolution	
+	<ul style="list-style-type: none"> Keeps calm in conflicts. Suggests solutions to resolve conflicts. Expresses disagreement constructively by giving alternative or different perspectives.
–	<ul style="list-style-type: none"> Overreacts emotionally in interpersonal conflicts. Reluctant to consider a compromise or solution to a conflict, thus allows it to escalate. Blames other crewmembers for the conflict situation. Unable to deal objectively with conflicts and disputes when they arise. Avoids challenging inappropriate language or behaviours.

B Communication and Influencing	
<p>Gives and receives communication clearly, precisely and in a convincing way to groups as well as individuals at all levels, including senior/line managers, colleagues and subordinates.</p> <p>Interacts with others sensitively and effectively in a risk- and time-sensitive environment.</p>	
B1 Shared Understanding	
+	<ul style="list-style-type: none"> Clearly explains plans, expectations and roles to each person, ensuring that they understand them. Gives clear and concise briefings and updates at appropriate times. Asks questions and observes others to confirm their understanding. Uses a range of communication methods (such as spoken, written, hand signals, etc.) to suit the message and the intended recipients.
–	<ul style="list-style-type: none"> Does not clearly communicate plans, expectations and roles. Briefings are unclear, lengthy and/or delivered at inappropriate times. Does not check whether plans and expectations have been understood. Communication is one-way and does not seek feedback or encourage questions.
B2 Style of Communication	
+	<ul style="list-style-type: none"> Uses language appropriately, e.g. clear phrasing, terminology and speed of delivery. Acknowledges cultural diversity in communications. The amount of communication is appropriate for the situation. Clearly puts forward views and personal position while listening to others. Uses the right medium to deliver the message (face-to-face, radio, email, telephone, etc.).
–	<ul style="list-style-type: none"> Uses inappropriate or unacceptable language or communication methods, e.g. jargon, body language, tone. Fails to consider cultural diversity in communications. Provides too much, too little or vague communication. Communication is one-way and fails to allow or encourage questions or feedback. Communication is not tailored to individual needs, e.g. style, method, timing.
B3 Feedback	
+	<ul style="list-style-type: none"> Actively seeks and acts upon feedback. Receives feedback constructively.
–	<ul style="list-style-type: none"> Does not seek or welcome feedback and does not take action on feedback. Reacts defensively or aggressively to feedback.
B4 Persuasion	
+	<ul style="list-style-type: none"> Influences others in a way that results in acceptance, agreement and/or behaviour change. Communicates in a way that elicits appropriate action from others.
–	<ul style="list-style-type: none"> Fails to gain buy-in to important messages. Pushes through own agenda, rather than acting in line with company objectives.

C Situation Awareness

Accurately perceives the immediate environment (system or task) and external factors that may have an impact. Understands surroundings and predicts their status in the near future. Develops effective strategies to manage threats.

C1 Awareness of Vessel Systems and Crew

- +**
 - Monitors, cross-checks and reports changes in vessel system states.
 - Monitors, probes and reports signs of changes in the state or behaviour of other crewmembers.
 - Acknowledges entries and changes to vessel systems.

- - Does not ask for updates on different vessel systems and other crewmembers.
 - Does not signal awareness of changing systems.
 - Does not look for or signal awareness of crewmembers' deteriorating state or behaviour.

C2 Awareness of External Environment

- +**
 - Maintains awareness of the present state of the vessel systems and environment (position, weather, shipping traffic, terrain).
 - Contacts outside resources about the environment when necessary.
 - Shares information about the environment with others.

- - Does not enquire about environmental changes and their impact on vessel systems.
 - Unaware of changes in the external environment.
 - Does not seek regular and timely updates on position, weather, traffic or terrain.
 - Ignores external reports about changes to the environment or status of other vessels.
 - Does not interrogate, verify or cross-check external information about the environment against information from internal vessel systems or crewmembers' reports.

C3 Awareness of Time

- +**
 - Anticipates future states, threats and their consequences.
 - Discusses contingency strategies.
 - Uses all available resources to manage threats.
 - Takes timely and mindful actions.

- - Unable or unwilling to make predictions of future states and threats.
 - Does not discuss the relationship between past events and the present/future.
 - Is surprised by outcomes of events, with little or no contingency planning.

D Decision Making	
<p>Reaches systematic and rational judgements or chooses an option based on relevant information by analysing issues and breaking them down into their discrete parts.</p> <p>Demonstrates readiness to make decisions and take action.</p>	
D1 Problem Definition and Diagnosis	
+	<ul style="list-style-type: none"> Gathers information and identifies the problem. Reviews causal factors. Consults those with specialist expertise or local knowledge when required.
–	<ul style="list-style-type: none"> Does not clearly state or define the problem. Fails to diagnose the problem correctly. Does not discuss probable causes with crewmembers. Allows commercial pressure (whether real or perceived) to influence course of action. Makes decisions without recognising or acknowledging own limitations or lack of experience.
D2 Option Generation	
+	<ul style="list-style-type: none"> Generates multiple responses to a problem. Encourages idea generation and challenges existing norms. States alternative courses of action.
–	<ul style="list-style-type: none"> Focuses on a narrow range of responses to problems Does not search for alternative courses of action.
D3 Risk Assessment and Option Selection	
+	<ul style="list-style-type: none"> Assesses and shares the risks and benefits of different courses of action through discussion. Selects the best response to the problem. Confirms selected course of action and implements in a timely manner. Considers options from external advisers, e.g. Pilot, but retains decision-making responsibility and accountability.
–	<ul style="list-style-type: none"> Evaluation of possible actions is inadequate. Selects a course of action without a clear risk analysis. Fails to inform crew of decisions taken. Has difficulty making decisions when faced with complex or ambiguous data. Constantly changes decisions when not justified by new information. Normalises risk (“This is the way it has always been done here”). Risk assessment of options from external advisers, e.g. Pilot, is inadequate.
D4 Outcome Review	
+	<ul style="list-style-type: none"> Checks the outcome of a solution against goal or plan. Reviews the quality of the decision made.
–	<ul style="list-style-type: none"> Fails to check selected outcome against goal. Shows little consideration for the quality of decisions made.

E Results Focus	
<p>Focuses on achieving desired results and how best to achieve them.</p> <p>Takes conscientious action to get the job done, using initiative and energy, and demonstrating flexibility and emotional toughness.</p>	
E1 Initiative	
+	<ul style="list-style-type: none"> Identifies what needs to be done and initiates appropriate action. Implements new ideas and better ways to do things; finds solutions to problems. Puts in extra effort to achieve objectives. Challenges accepted risks, processes or measurements.
–	<ul style="list-style-type: none"> Seldom takes action to improve outcomes, processes or measurements. Seldom seeks out or accepts additional responsibilities in the context of the role. Avoids all but what is directly asked of them. Frequently requires supervision to complete routine tasks.
E2 Determination	
+	<ul style="list-style-type: none"> Pushes self and others to reach milestones. Renews and increases effort to achieve goals, persisting in the face of problems. Has a sense of urgency about solving problems and getting work done. Looks for opportunities to help achieve team objectives. Willingly puts in extra time and effort in crisis situations.
–	<ul style="list-style-type: none"> Fails to sustain pace and progress over a period of time. Performance suffers substantially when working long hours. Allows work to drift away from priorities.
E3 Flexibility	
+	<ul style="list-style-type: none"> Responds positively to change, embracing new ideas or practices to accomplish goals and solve problems. Adapts to changing business needs, conditions and responsibilities. Adapts approach, goals and methods to achieve solutions and results in a changing environment. Shows others the benefits of change.
–	<ul style="list-style-type: none"> Sticks to outdated methods, puts off making changes for as long as possible or finds excuses for not doing things differently. Does not respond to the changing demands of the situation. Makes little or no attempt to promote change positively.
E4 Emotional Toughness	
+	<ul style="list-style-type: none"> Recovers quickly from setbacks and responds with renewed and increased effort. Persists in the face of difficulty and finds alternative ways to complete tasks and goals. Handles high workloads, competing demands, vague assignments, interruptions and distractions with composure. Stays calm and maintains focus in emergency situations.
–	<ul style="list-style-type: none"> Constantly thinks about past disappointments or failures. Struggles to maintain focus and perseverance in the face of obstacles. Is unable to perform mentally or physically taxing work effectively. Panics, reacts inappropriately or with hostility to stressful situations.

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E Results Focus (*continued*)

E5 Accountability and Dependability

- | | |
|----------|--|
| + | <ul style="list-style-type: none">• Effectively manages their time and resources to accomplish tasks, prioritising the most important ones.• Takes personal responsibility for the quality and timeliness of work and achieves results with little need for supervision.• Shows up to work on time and follows instructions, policies and procedures.• Stays focussed on tasks and meets productivity standards, deadlines and work schedules.• Acknowledges and corrects mistakes, taking personal responsibility when appropriate. |
| – | <ul style="list-style-type: none">• Struggles to use time efficiently.• Fails to prioritise or plan ahead; completes least important tasks first.• Often slow to respond or to adjust priorities.• Becomes distracted or unable to complete tasks when confronted with challenges.• Misses deadlines or leaves tasks unfinished.• Defers authority and decision making to others, e.g. terminal staff/pilots, rather than take responsibility. |

F Leadership and Managerial Skills

Inspires, motivates and empowers personnel to perform at their best to achieve goals.

Adjusts leadership style to situations, including those that develop suddenly or change rapidly.

F1 Setting Direction

- +**
 - Communicates clear expectations.
 - Considers the bigger picture and long-term needs before committing to a course of action.
 - Translates the vision into clear strategies and work programmes.
- - Fails to create direction for the team.
 - Demonstrates a lack of knowledge and insight into wider issues, developments and long-term impact.

F2 Empowerment

- +**
 - Supports others to have a level of independence in how they do their work.
 - Creates and maintains an environment of open and frequent communication with clear and direct flow of information.
 - Encourages others to acquire new skills and develop themselves.
 - Recognises, appreciates and supports others' contributions.
 - Develops cooperative and respectful relationships with others.
 - Understands the needs of crewmembers and cares about their welfare.
 - Creates a feeling of achieving results together as one team.
- - Micromanages direct reports.
 - Does not support crew to develop their own initiative and judgement.
 - Fails to motivate or support the team or applies inappropriate pressure.
 - Does not show appreciation for others.
 - Takes credit for others' achievements.
 - Delegates without giving responsibility or authority.

F3 Authority and Assertiveness

- +**
 - Creates a culture that enables challenge and participation while maintaining command authority.
 - Encourages crewmembers to review, raise concerns or challenge plans of actions.
 - Creates a safe and trusting environment for crewmembers, supporting them to openly share lack of knowledge and to speak up without hesitation.
 - Takes decisive action as required.
 - Takes command if the situation requires.
 - Advocates own position.
- - Avoids challenging inappropriate language or behaviours.
 - Hinders or withholds crew involvement.
 - Is passive and waits for others to take the lead or make decisions.
 - Does not take a clear stand, with own position not recognisable.
 - Blames the team if things go wrong.
 - Leaves team members to cope alone in difficult situations.
 - Tolerates behaviour that negatively affects the performance, development and morale of others.

(continued next page)

F Leadership and Managerial Skills (*continued*)

F4 Providing and Maintaining Standards

- | | |
|----------|--|
| + | <ul style="list-style-type: none"> • Demonstrates high ethical and moral standards, setting a personal example of what is expected from others. • Ensures compliance with policies and procedures and intervenes if crewmembers deviate. • Uses appropriate tools and notifications when dealing with non-routine operations. • Challenges current processes to find new and innovative ways to improve the team's work and vessel operations. |
| – | <ul style="list-style-type: none"> • Is a poor role model to others in terms of personal ethics and standards, e.g. does not comply with company policies and procedures. • Does not monitor crew for compliance or intervene when crewmembers deviate. • Applies non-standard procedures without thorough risk assessment or communicating with crewmembers. • Sets standards that are unclear, unrealistic or too challenging. • Avoids tackling performance issues or sticks to ineffective ways of working. |

F5 Planning and Coordination

- | | |
|----------|--|
| + | <ul style="list-style-type: none"> • Organises tasks, activities and resources. • Sets achievable goals, makes plans and establishes measurable milestones with timescales and quality standards. • Encourages shared understanding and participation among crewmembers of planning and task completion. • Monitors plans for achieving targets. • Delegates to achieve top performance and to avoid workload peaks and troughs. • Reviews and communicates plans and intentions clearly to the whole crew, changing plans if necessary. |
| – | <ul style="list-style-type: none"> • Plans only for themselves and does not involve crew. • Changes plans without informing crew. • Follows plans strictly despite circumstances demanding a different approach. • Panics about deadlines. • Makes short-term demands. |

F6 Workload Management

- | | |
|----------|--|
| + | <ul style="list-style-type: none"> • Defines clear roles and responsibilities for crewmembers for both normal and abnormal situations, including workload assignments. • Prioritises and manages primary and secondary operational tasks. • Distributes tasks appropriately among the crew, balancing the needs of every team member. • Recognises work overload and signs of stress and fatigue in self and others; acts promptly to deal with it. • Uses available external and internal resources to complete tasks on time. |
| – | <ul style="list-style-type: none"> • Inadequate workload planning. • Delegates work unequally across the team. • Sets unrealistic deadlines. • Lacks awareness or consideration of how much pressure team is under. |

4 Implementation of the competency framework

This chapter gives guidance on how to bring the competency framework to life. The purpose of this system is to ensure that officers' behavioural competencies are fully and objectively assessed for the job they do on board. There are four key principles of assessment:

- Each officer is to be individually assessed.
- It is recommended that assessors are appropriately trained and qualified.
- The system should be open to auditing or external verification. Those verifying should be appropriately qualified.
- The system must be easily incorporated into the company's existing system, e.g. a Safety Management System (SMS), training system, appraisal system, etc.

The assessment of behavioural competencies is recommended to be done during these four operational areas:

- Navigation.
- Mooring.
- Cargo operations.
- Engineering.

This will provide many opportunities to carry out the assessment. These four operational areas can be simulated in all modern simulators ashore, allowing even more assessment opportunities.

Once a behavioural competency is assessed during an operation, there is no need for this specific competency to be assessed again during another. However, the system should not be regarded as a tick box exercise where as soon as one part is assessed, it can be forgotten about. The system will work best when it is understood as an ongoing process aimed at the continual improvement of seafarers' soft skills. This does not apply to the assessment of technical competencies, which have to be assessed separately.

In general, behavioural competencies apply to all seafarers. Good communication, situation awareness and accountability are elements that all officers should demonstrate. However, the level depends on rank, e.g. a different level of leadership is expected from the Master compared to the 2nd Officer. This should be taken into account when developing assessment scenarios.

Examples of opportunities/scenarios in the four operational areas can be found in the appendix. These are examples and are not prescriptive. More than one competency domain can be represented in an example scenario. A competency domain can also be demonstrated in a variety of situations and scenarios other than those given.

4.1 Example scenario

Scenarios can be developed to assess any of the four operational areas. The following scenario is a worked example for assessing the 2nd Officer's behavioural competencies during a mooring operation, while leading the aft mooring team. The assessor will need to determine whether the officer has the right behavioural competencies for his role as mooring team leader.

The key to safe and efficient mooring operations is planning and ensuring that all procedures are followed, according to the company's SMS. Before starting any mooring operations, the ISM Code requires a proper risk assessment to be conducted.

- During mooring operations, there should always be enough seafarers available both forward and aft of the vessel to ensure safety.
- An officer should be in charge of the mooring party and suitable means of communication between responsible individuals and the vessel's bridge team should be established. If communication involves portable radios, then the ship should be identified by name to prevent confusion with other users.
- All seafarers involved in such operations must wear protective clothing, including a safety helmet, safety shoes and gloves, and be fully briefed on the berthing plan.
- After operations, any lessons learned and areas for improvement/best practices should be communicated to the Master and then the company and the fleet.

The assessor can observe and assess the officer during the whole mooring operation and should conclude with a debrief and feedback session. Oral questioning techniques can also be used in parallel.

Phase of the Operation	Opportunities for Observation	Relevant Behavioural Competencies
Prior to mooring	<p>During the pre-mooring meeting with the Master and officers for planning the operation.</p> <p>During pre-mooring meeting between Pilot, Master and officers.</p> <p>During pre-mooring toolbox meeting and risk assessment review with their team.</p>	<p>A Team working A1 Participation A3 Supporting others</p> <p>B Communicating and influencing B1 Shared understanding B2 Style of communication B3 Feedback</p> <p>D Decision making D3 Risk assessment and option selection</p> <p>F Leadership and managerial skills F1 Setting direction</p>
During mooring	<p>During mooring to follow the plan; observe any changes; give instructions if needed; communicate with bridge.</p> <p>How the officer ensures that crew stands well clear of tug rope and snap-back zone.</p>	<p>B Communicating and influencing B1 Shared understanding B2 Style of communication</p> <p>C Situation awareness C1 Awareness of vessel systems and crew C2 Awareness of external environment</p> <p>D Decision making D1 Problem definition and diagnosis D4 Outcome review</p> <p>E Results focus E1 Initiative E1 Determination E3 Flexibility</p> <p>F Leadership and managerial skills F2 Empowerment F3 Authority and assertiveness F5 Planning and coordination F6 Workload management</p>
Oral questioning techniques	Why do you conduct a toolbox meeting before the operation?	<p>A Teamwork</p> <p>F Leadership and managerial skills</p> <p>B Communication and influencing skills</p>
	How do you evaluate the mooring team's rest hours?	F Leadership and managerial skills

Table 4.1: Example for assessment during mooring operation

When developing scenarios, the critical technical operations should be considered and as practicable as possible, scenarios should closely simulate them. Examples of critical operations are:

- Navigation: navigation in congested waters or anchorages, passage plan and monitoring, approach to pilot stations, entering or leaving a port, crossing a Traffic Separation System (TSS), bridge equipment failure, etc.
- Cargo operations: cargo plan and operations, use of various pumps, inert gas system, tank cleaning, ballast/de-ballast during cargo operations, etc.
- Mooring: berthing, unberthing, use of tugs, anchoring, Single Point Mooring (SPM) operation, etc.
- Engineering: stand by, routine maintenance and repairs, bunker operations, change of fuel, use of emergency systems, etc.

4.2 Performance review templates

To facilitate the use of the system, two templates have been developed to illustrate how the assessment results can be recorded. These templates are far from exhaustive and can be amended to suit every company's existing assessment or appraisal system.

These templates are for documenting an actual performance review and should be a summary of observations made over the performance review period. The first, simpler version is designed for assessment at the competency domain level. The second template is designed for assessing performance at a more detailed level and includes elements as well as domains.

A detailed reading of the performance review should always provide enough information for constructive feedback, both for the management and for creating a personal learning and development plan. Assessor's comments should be clear and precise, with identification of any strong points or training needs.

The template should also be user friendly and allow the results to be used for benchmarking or statistical analysis.

The idea is that assessors check how good the answer/responses are (or if there are contra-indicators) but they do not have to assess/observe every competency element and their associated indicators, nor would anyone necessarily demonstrate every indicator.

Name: Rank: Area (navigation, mooring, cargo operations, engineering):	A	B	C	D	E	Comments <i>Record strengths and areas for improvement.</i>
	Exceptional	Exceeds Expectations	Meets Expectations	Needs Improvement	Unsatisfactory	
Team Working						
Participation Inclusiveness and consideration of others Supporting others Conflict resolution						
Communication and Influencing						
Shared understanding Style of communication Feedback Persuasion						
Situation Awareness						
Awareness of vessel systems and crew Awareness of external environment Awareness of time						
Decision Making						
Problem definition and diagnosis Option generation Risk assessment and option selection Outcome review						
Results Focus						
Initiative Determination Flexibility Emotional toughness Accountability and dependability						
Leadership and Managerial Skills						
Setting direction Empowerment Authority and assertiveness Providing and maintaining standards Planning and coordination Workload management						
Comments						
Assessor name: Date: Location:						

Table 4.2: Performance Review Template 1

Review period from:		to:		Review date(s):		Review by:	
Name:		Rank:		Fleet:			
Competency	Exceptional	Exceeds Expectations	Meets Expectations	Needs Improvement	Unsatisfactory	Comments on Achievement (for ratings <i>above</i> or <i>below</i> Meets Expectations)	
Team Working							
Participation							
Inclusiveness and consideration of others							
Supporting others							
Conflict resolution							
Communication and Influencing							
Shared understanding							
Style of communication							
Feedback							
Persuasion							
Situation Awareness							
Awareness of vessel systems and crew							
Awareness of external environment							
Awareness of time							
Decision Making							
Problem definition and diagnosis							
Option generation							
Risk assessment and option selection							
Outcome review							

(continued next page)

Competency <i>(continued)</i>	Exceptional	Exceeds Expectations	Meets Expectations	Needs Improvement	Unsatisfactory	Comments on Achievement (for ratings <i>above</i> or <i>below</i> Meets Expectations)
Results Focus						
Initiative						
Determination						
Flexibility						
Emotional toughness						
Accountability and dependability						
Leadership and Managerial Skills						
Setting direction						
Empowerment						
Authority and assertiveness						
Providing and maintaining standards						
Planning and coordination						
Workload management						
Comments on overall performance <i>(highlight key achievements; describe specific areas/behaviours where performance needs improvement or exceeds expectations)</i>						
Signatures						
Employee name:				Manager name:		
Signature:				Signature:		
Date:				Date:		

Table 4.3: Performance Review Template 2

4.3 Methods for competency-based assessment

While observation will usually be the main method of assessment, a number of different methods can be used (either individually or in combination) to assess a behavioural competency.

These include:

- Observation of work activities on site or in a simulator (if in a simulator, the assessor should have received appropriate guidance in instructional techniques involving the use of simulators).
- Questioning techniques (oral and written).
- Projects and assignments.
- Computer-based questions or tests.

The appendix includes examples of observation opportunities/scenarios in the four operational areas (navigation, mooring, cargo operations and engineering) which may be used during the assessment process. Real-time audits also usually take place during critical operations in all four operational areas. Therefore, they are an opportunity for observation and assessment of both technical and soft skills of various crewmembers at both management and operational levels. A pertinent example is also included in the appendix.

4.4 Competency assessment definitions

A levels-based rating system is recommended, which encourages objective identification of training needs, proper follow up and continuous improvement of all involved. Every company can choose a rating system that best suits their purpose and conforms to their management systems.

The table below uses a five-level rating scale and provides definitions for each level to aid assessment.

Competency Assessment	
Exceptional <i>(consistently exceeds expectations)</i>	<ul style="list-style-type: none"> • Recognised within the company as outstanding in this competency. • Almost always exceeds expected results. • Is a clear role model or mentor and helps others develop this competency.
Exceeds expectations <i>(meets all and often exceeds expectations)</i>	<ul style="list-style-type: none"> • Exceeds the expectations of the position. • Frequently exceeds expected results. • May be viewed as a role model or mentor and helps others develop this competency.
Meets expectations <i>(consistently meets expectations)</i>	<ul style="list-style-type: none"> • Demonstrates this competency at a level appropriate for the position. • Meets and sometimes exceeds expected results. • Is reliably and consistently successful.
Needs improvement <i>(sometimes meets expectations)</i>	<ul style="list-style-type: none"> • Needs further development, guidance or evaluation to consistently demonstrate this competency at a level appropriate for the position. • Needs to strengthen this competency to achieve results. • Does not always learn from feedback, coaching or training.
Unsatisfactory <i>(does not meet expectations)</i>	<ul style="list-style-type: none"> • Regularly fails to achieve results. • Regularly demonstrates behaviours inconsistent with this competency. • Does not follow through on feedback, coaching or training.

Table 4.4: Competency assessment definitions

4.5 Follow up of identified training needs

The purpose of any assessment is to identify specific areas of improvement in order to optimise the person's performance. These improvement areas can be technical skills, soft skills or both.

Once a specific area of improvement has been identified, the best way to address the need, as well as its priority, has to be decided based on each company's training and development culture. In most cases, the area of improvement is translated into a tangible training need, the need is prioritised and a timeframe is established.

As with technical skills, the ongoing monitoring and strengthening of soft skills plays an integral part in ensuring continual improvement for the individual as well as developing a safety culture on board. Hence, it is recommended to include a soft skills assessment section within the standard seafarer performance evaluation.

Regardless of the soft skills assessment outcome, any officer who holds a certificate of competency that meets the requirements of the STCW Convention is qualified to serve in that rank. If the assessment process identifies areas for soft skills improvement, appropriate next steps should be planned for the officer involved, as described above and in line with company policy.

Where competency gaps are identified in entire teams or in multiple individuals, company-wide training programmes focusing on specific competency domains may be appropriate, such as leadership development or communication and influencing.

5 Training assessors

This chapter provides guidance on how assessors should be trained and how the International Maritime Organization (IMO) model course 1.30 (On-board assessment) can be applied to fulfil requirements for assessor training. It is recommended that assessor training is based on the IMO model course 1.30.

The IMO model course addresses the training requirements of onboard assessors and was developed to support the implementation of the STCW Convention, 1978, as amended, and in particular, regulation I/6 of the STCW Convention and section A-I/6 of the STCW Code. The duration of the model course is 16 hours (two days). Management-level deck and engine officers and shore-based personnel with sufficient onboard expertise (for example, marine and technical superintendents) are eligible to attend the course.

While the IMO model course system gives either a competent/not competent outcome, this best practice guide recommends a sliding scale and relies on the assessor's knowledge and experience to ensure the candidate is properly assessed. It also identifies training needs and areas for improvement.

5.1 Overview

The purpose of assessments is to confirm that seafarers are fully assessed for their behavioural competency for the role on board. Assessments can be carried out both on board and ashore. Both have equal validity in this system, but a combination allows the assessor to cover a greater range of scenarios.

The best assessments are properly organised and recorded, and completed by well-trained and motivated assessors. Care should be taken during in-service training or assessment on board to avoid adversely affecting normal operations.

5.2 Considerations for assessment

If an assessor observes a potentially hazardous situation developing, they should not hesitate to intervene, as safety takes priority over an assessment. The assessor should identify and report if assessed persons are not receiving appropriate support and mentoring on board.

The following factors are known to affect performance during assessment and should be taken into consideration:

- Type of task (theoretical/practical).
- Limited knowledge and technical skills.
- Language and cultural barriers (ability to understand instructions).
- Guessing answers.
- Fatigue or ill health.
- Morale or motivation levels.
- Previous training.
- Experience in the role.
- Safety and contextual factors, e.g. when assessed following a major incident such as a fatality, collision or grounding, etc.
- Personal issues outside of work.

5.3 Behavioural indicators

A defined set of behaviours related to the task should be observed during the assessment. This will give important information about the assessed person's understanding of their own communication, role and behaviour and its influence on safety and performance.

The IMO model course 1.30 describes six behaviours to look for during the assessment.

- Team working.
- Communication and influencing skills.
- Situational awareness.
- Decision making.
- Results focus.
- Leadership and managerial skills.

5.4 IMO model course 1.30 structure

Section	Heading	Contents
Part A	Course framework	The aims, objectives, entry standards, staff requirements, teaching facilities and equipment, teaching aids, text books, IMO references, computer-based references and Internet website references.
Part B	General outline	Outline of lectures, demonstrations and exercises for the course and a suggested timetable is included.
Part C	Detailed teaching syllabus	Detailed outline and topics with specific learning outcomes (defined by standards of knowledge, understanding and proficiency) for Part B.
Part D	Instructor manual	Guidance notes and additional explanations to the instructor on the material that is to be presented during the course.
Part E	Evaluation and assessment	A generic guide for effective evaluation and assessment.
Appendix A	Activities	Detailed outline of the activities defined in Part C.
Attachment 1	Example of competence-based assessment	Ready-made templates for sample tasks/topics highlighting the possible methods of assessment to use and the related performance criteria.
Attachment 2	Guidance on the implementation of model courses	General guidance on the implementation of model courses.
Attachment 3	Instructor feedback on model course	Feedback format for comments and suggestions regarding the model course and its implementation.

Table 5.1: IMO model course 1.30 structure

5.5 Outline of the assessment process

The key steps for conducting an onboard assessment are shown in the flowchart below. Please refer to the IMO model course 1.30 for further details.

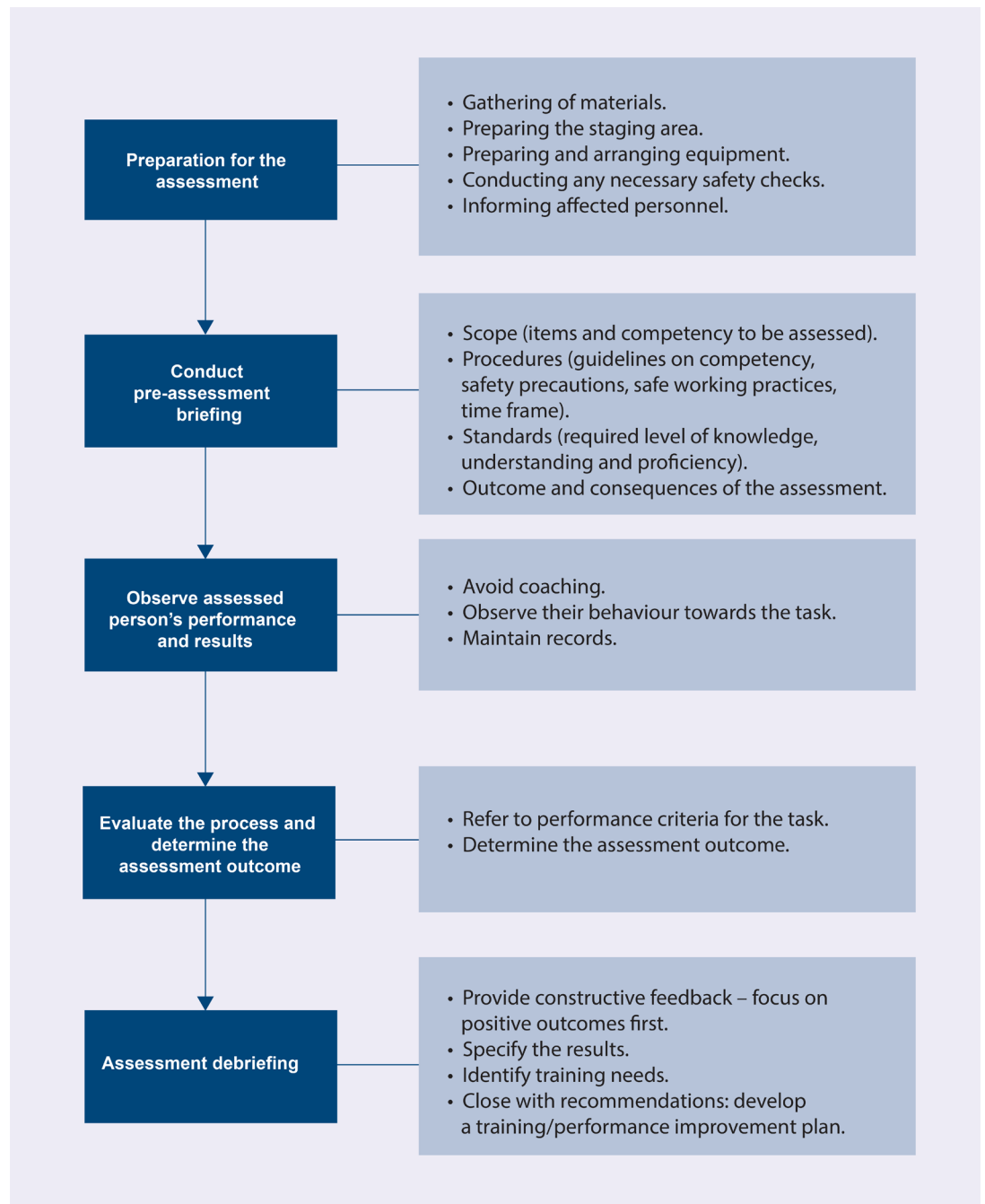


Figure 5.1: Outline of the assessment process

6 Implementation challenges

Care should be taken when implementing any new system and stakeholders at every level should be included in discussions. Several issues that organisations need to be aware of are:

- This system should be seen as a strategic tool for developing seafarers and should reflect both current and future needs.
- A phased introduction at the senior level first will help to iron out the main problems and encourage buy-in from staff in other roles, such as operational-level staff. This is part of good management of change practice and should prevent resistance to the new system. Not expecting perfection right away will help reduce the shock to existing structures and allow people time to adjust.
- As the system establishes, it is important to review and adjust to ensure it still fits with the company's vision and goals. It is also important to ensure particular groups are not being disadvantaged, and that safety is improving. Companies should consider integrating the behavioural competency system into the organisation's quality assurance and safety management processes. Implementing the system will also demonstrate the company's maturity in marine human resource management. The system could be open to auditing or external verification, and this could help satisfy third-party requirements and evaluations. It is recommended that vessel operators undertake a proper management of change process, including a risk assessment, prior to adopting and implementing the behavioural competency assessment system.

7 Using competencies in promotion or recruitment

This section illustrates how the behavioural competency framework can be used for promotion or recruitment, and considers assessment methods and tools.

In order to assess a candidate for promotion or recruitment, a process needs to be in place that evaluates and validates their relevant technical and behavioural skills in line with a clearly defined job description.

The behavioural competency domains and elements to be assessed can be all or some of those described in this manual (see section 3), or different ones in line with each company's competency model.

7.1 Indicative assessment tools for evaluating technical and behavioural elements

The assessment process and methodology can use a variety of tools, depending on company needs and specifications.

7.1.1 Psychometrics: cognitive ability tests and personality tests

Cognitive ability tests may include verbal, numerical, spatial and logical reasoning ability tests. A psychometric personality questionnaire provides information on individual, work-related and personality attributes that do not depend on technical expertise or work experience.

Care should be taken when interpreting the results from a psychometric test and this should only be undertaken by trained professionals. Furthermore, psychometric testing is not always allowed in some countries due to personal data legislation.

7.1.2 Role play/simulation

Incident simulations can be designed to examine candidates' ability to deal with specific problems they may encounter in their role. They are designed to assess technical skills (specialist knowledge) as well as competencies, such as situation awareness, decision making, communication, priority setting and problem solving.

7.1.3 Group exercise

Candidates are asked to work collaboratively as a group to address a given topic in order to assess capabilities in leadership, teamwork, analytical skills and influence. Assessors will observe, for example, how information is shared and how the group divides tasks and processes.

7.1.4 Briefing exercise

A briefing exercise is a prioritisation exercise where a candidate is given a selection of tasks relevant to the role and is asked to create a schedule and present the results. The exercise tests a wide range of skills and knowledge including thinking and prioritisation competencies such as results focus; decision making; verbal presentation; the ability to react/respond and specialist knowledge.

On completion of the assessment, each candidate is scored on their performance (with scores totalled across all the different tools). Once all the scores have been gathered, the assessor completes a report. The candidate is entitled to feedback regarding their performance, regardless of whether or not they were successful.

Appendix

Examples of observation opportunities/ scenarios in the four operational areas

A1 Example with management and operational levels

A Team Working		
A1 Participation A2 Inclusiveness and consideration of others A3 Supporting others A4 Conflict resolution		
Operational Area	Management Level	Operational Level
Navigation	The chief officer relieves the second officer and coaches them on Electronic Chart Display and Information System (ECDIS) features beyond those required for shipboard familiarisation.	The Officer of the Watch (OOW) actively participates in watchkeeping during increased bridge watch levels by providing timely information to the con according to their instructions.
Cargo operations	During start of load/discharge operations, the chief officer ensures all watchkeepers are fully engaged, with a common understanding of all operational requirements, by going through the checklist aloud.	After successfully completing a specific function, e.g. hose connection, the OOW communicates their appreciation to relevant watch ratings.
	The chief officer demonstrates respect for all watchkeeper regardless of rank by addressing them courteously and acknowledging their input to the discussion (either verbally or non-verbally).	The OOW invites further information when a watch rating reports a potential problem, e.g. a mooring line requires attention, and thanks them for the information.
Mooring	Before mooring operations, the chief officer ensures that all personnel are fully engaged and are encouraged to provide input to the mooring plan by asking them to repeat their understanding of what the plan is and their role in it.	The officer in charge demonstrates awareness and consideration for the needs of the other mooring stations throughout the mooring process; for example, by simply asking, "All OK?" and asking again if no reply received.
Engineering	The 2nd Engineer successfully resolves a disagreement within the team assigned for maintenance work.	The 3rd Engineer cooperates effectively with engine ratings and gives them guidance during routine maintenance work.
	During a major repair, the Chief Engineer encourages teamwork, monitors and evaluates engine officers and ratings, assists them in case of difficulties and increases their morale by giving praise and encouragement. Ensures that tasks are fairly divided between team members and responds positively to suggestions from team members.	The 3rd Engineer encourages feedback from juniors and cadets and has a constructive attitude to any changes suggested by responding positively, e.g. "That's a good idea".

B Communication and Influencing		
B1 Shared understanding B2 Style of communication B3 Feedback B4 Persuasion		
Operational Area	Management Level	Operational Level
Navigation	The Master asks for opinions and feedback from bridge officers at any stage of the passage plan execution to verify understanding.	The OOW respects cultural diversity and communicates information simply, directly and comprehensively. Requests clarifications and further explanations whenever a vague order is received.
	The Master conducts briefings during critical stages of passage plan execution; e.g. thinks aloud to ensure watchkeepers share understanding.	Handover process is effectively followed by both officers, having communicated all essential elements and confirmed the relieving officer's understanding.
Cargo operations	The chief officer conducts a pre-cargo operations meeting with the watch team in a clear, concise and unambiguous way.	During a cargo watch, the OOW clarifies and challenges plans and decisions.
	During pre-cargo operations meeting with terminal representative, the chief officer challenges and questions all areas of concern.	OOW conducts clear radio communications with watchkeepers, and positive feedback is actively used to ensure understanding and acceptance.
Mooring	The Master conducts a pre-mooring operations meeting and briefing with all key shipboard personnel in a clear, concise and unambiguous way.	At the mooring station, the officer in charge positively ensures that his team all understand the mooring plan by asking each in turn whether they have questions or things to add.
	During the mooring operation, the Master's instructions are clearly conveyed to the mooring stations.	OOW clearly communicates messages received from the bridge to the mooring team and uses positive feedback to ensure understanding and acceptance.
Engineering	The Chief Engineer organises meetings to discuss maintenance work. Encourages sharing of ideas and experience with engine crew and confirms a shared understanding of how the work will be done; for example, by pausing after asking a question, or letting the team do the talking (but without talking over one another).	The engineering officers clarify and ensure all ratings know and are familiar with their assigned duties during operations. They give good and detailed explanations of all aspects of operation to ensure that ratings understand their duties and who to contact for assistance.
	During a bunkering operation, the Chief Engineer ensures that communication between everyone involved is clear and that everyone affected has been correctly notified and kept up to date.	

C Situation Awareness		
C1 Awareness of vessel systems and crew C2 Awareness of external environment C3 Awareness of time		
Operational Area	Management Level	Operational Level
Navigation	The chief officer monitors, plans and responds appropriately to changes in machinery status (engine, steering, etc.) relevant to prevailing navigational conditions (traffic, shoals, etc.).	The OOW verifies navigational equipment status during handover process, ensuring full understanding of the bridge team and monitoring any changes throughout their watch.
	The Master ensures collision avoidance manoeuvring is exercised well in advance, taking into consideration all available factors and sources of information (traffic, manoeuvring characteristics, weather, etc.).	The OOW verifies information received from navigational aids with actual visual observations and takes action in a timely manner if needed.
Cargo operations	During a critical ‘topping off’ operation, the chief officer maintains awareness of other operations, e.g. taking stores on board.	During routine cargo watch, the OOW retains awareness of vessel moorings and gangway security watch.
	During cargo operations, the chief officer is able to identify and react to potential changes in cargo plan due to unexpected influences, e.g. deteriorating weather.	The OOW assesses a changing situation, e.g. an unplanned stoppage of loading, and takes action as appropriately.
Mooring	The Master monitors the coordination of pilot, bridge team, mooring teams and tugs during mooring operations and reacts to potential changes.	The officer in charge anticipates the potential effect of a passing vessel or changes in tidal height on the mooring operation and takes action as appropriate.
Engineering	Following a full or partial crew change, the Chief Engineer maintains awareness of the engine crew’s skills and experience, especially regarding their knowledge and experience with the equipment on board the vessel.	In anticipation of a vetting inspection, the 3rd Engineer will familiarise themselves with the starting and operate procedures for emergency systems, such as the emergency generator and emergency fire pump.
	During an emergency situation that requires a vessel’s stoppage, the Chief Engineer is aware of risks and can identify potential hazards, e.g. traffic and weather conditions. Can quickly assess the situation and advise the Master on the best course of action in both the short and medium term.	Engineers carrying out maintenance are aware of the limitations imposed by equipment being taken out of service and communicate any potential delays in returning equipment to service in a timely manner and to all those affected.

D Decision Making		
D1 Problem definition and diagnosis D2 Option generation D3 Risk assessment and option selection D4 Outcome review		
Operational Area	Management Level	Operational Level
Navigation	The Master evaluates all information collected by the bridge team to consider alternative solutions, and shares the decision with the rest of the bridge team.	Bridge team members are familiar with equipment operations and limitations, allowing them to clearly state or define a problem and possible solutions and make appropriate decisions.
Cargo operations	When a problem is encountered with stripping a cargo tank, the chief officer gathers information and listens to the advice of team members.	Cargo line pressure feedback radioed in from a watch rating is inconsistent with other readings. Before a decision is made, the OOW verifies the questionable reading.
	When a problem is encountered with a shore cargo hose connection, the chief officer makes a full evaluation with the terminal representative and considers all risks.	The gangway watch reports an unexpected visitor at the gangway. The OOW verifies the visitor's arrival with the relevant senior officer before deciding to allow the visitor onboard access.
Mooring	During the mooring operation, and following a change in the external environment, the Master gathers information and listens to the advice of other team members when making a decision; for example, by asking, "Is there anything I have overlooked?"	The deck watch reports a winch brake unexpectedly rendering. The OOW calls for appropriate assistance to quickly evaluate the reasons and to determine the most appropriate course of action.
Engineering	During an unexpected total loss of power, the Chief Engineer gathers information and listens to others' opinions while continuing to filter and analyse information to determine the root causes of the problem. The Chief Engineer makes a timely decision to resolve it.	In case of a developing problem, such as a noisy electrical motor, the Engineering Officer decides on the best immediate course of action by evaluating the risks of taking the equipment out of service.
	When routine onboard oil analysis shows a small increase of water content of an auxiliary engine, the Chief Engineer evaluates the condition, determines the cause of the water contamination and takes appropriate counter-measures.	When working under a permit, for instance in an enclosed space, the Engineering Officer reacts decisively to any changes in conditions that might affect the validity of the permit.

E Results Focus		
E1 Initiative E2 Determination E3 Flexibility E4 Emotional toughness E5 Accountability and dependability		
Operational Area	Management Level	Operational Level
Navigation	The Master stays focussed and calm with sound judgement in critical stages of passage execution, without being distracted by any other external influences.	The relieving shows up with enough time to allow for familiarisation and adapting to prevailing conditions before taking over the watch.
	The Master properly identifies the resources required to adequately crew the bridge according to prevailing conditions and company requirements.	The OOW takes initiative to report any fact or ambiguous situation, regardless of whether this falls within the range of their responsibility.
Cargo operations	The vessel experiences a cargo pump malfunction. The chief officer explores all possibilities to maintain effective pumping and meet the vessel's estimated time of departure while also considering all risks.	The OOW fully understands the cargo plan and is focussed on maintaining the cargo discharge rate to achieve the vessel's schedule.
	During completion of the pre-cargo operations checks, the chief officer verifies each requirement before proceeding.	The OOW maintains regular communication with other watchkeepers to ensure watch-related priorities, e.g. mooring and gangway safety, are being addressed and achieved.
Mooring	The Master proactively suggests alternative ideas to pilot during berthing if he sees a potentially better solution.	The officer in charge at a mooring station remains focussed during an extended mooring operation taking place outside of their usual hours of work.
	The Master remains calm and focussed when the mooring operation deviates from the plan.	The OOW maintains regular communication with watch ratings to ensure watch-related priorities, e.g. mooring and gangway safety, are being addressed and achieved.
Engineering	The vessel encounters a problem with the main engine in a high-risk area. The Chief Engineer remains calm, focussed and takes the necessary measures in order to maintain propulsion and exit the high-risk area.	The 4th Engineer reacts positively to changes in tasks assigned or work programme and suggests ways in which new targets for completion of maintenance tasks, for instance, can be met.
	When unexpected problems occur during main engine maintenance that might delay sailing, the Chief Engineer takes initiative to try to meet deadlines. With safety paramount, the Chief Engineer acknowledges commercial pressures and takes responsibility, but does not take actions that would put the crew or the vessel at risk.	The 3rd Engineer accepts responsibility for a specific range of duties, e.g. auxiliary engine maintenance, and requires minimal supervision. Develops new initiatives and is not afraid to challenge the way things have been done in the past.

F Leadership and Managerial Skills		
F1 Setting direction F2 Empowerment F3 Authority and assertiveness F4 Providing and maintaining standards F5 Planning and coordination F6 Workload management		
Operational Area	Management Level	Operational Level
Navigation	The Master strictly follows the agreed passage plan and documentation required (checklists, cards, etc.) without allowing shortcuts or unjustified changes.	The OOW delivers tasks within predefined and agreed time limits. (e.g. passage plan ready for appraisal before anticipated departure time).
	The presence of the Master on the bridge does not dissuade the BTM from performing their duties, e.g. free use of navigational equipment as deemed necessary.	The OOW involves and promotes active participation of deck ratings to enhance navigational effectiveness, e.g. lookout information provided.
Cargo ops	The chief officer spends time with the OOW during the operation to clarify and explain all operational decisions and changes to ensure the OOW has a full understanding.	At all times during the cargo operation, the OOW takes time to effectively listen to their watch team.
	The Master effectively liaises with the cargo operations team to understand the latest situation and workload, and to offer guidance/support as required.	When carrying out a routine cargo tank atmosphere test, the OOW includes other personnel in order to develop their skills.
Mooring	The Master provides opportunities for the chief officer and other officers to practice and experience ship handling techniques during mooring operations.	The officer in charge thanks the team for their contribution at the end of a successful mooring operation.
	The Master challenges the Pilot's decision if he is unsure or unclear of the action proposed.	The officer in charge intervenes if an unsafe action is performed by terminal staff.
Engineering	The Chief Engineer delegates specific duties to others while setting realistic and challenging targets and ensuring that standards are maintained. Empowers subordinates but monitors progress and assists if necessary.	Engineers are assertive and challenge unrealistic or potentially unsafe instructions from superiors. They also intervene in a positive way if the work of juniors does not meet the required standard.
	The Chief Engineer follows up on defects by detecting and reporting. Targets are set for rectification, with proper planning and workflow management, including rescheduling of other planned work.	The engine crew intervenes if an unsafe action is performed by appointed sub-contractors onboard.

A2 Example with combined levels

B Communication and Influencing	
B1 Shared understanding B2 Style of communication B3 Feedback B4 Persuasion	
Operational Area	Combined Management Level and Operational Levels
Navigation	During a real-time navigational audit when approaching a port, the assessor can observe and assess communication between the Master and bridge team members, including how orders are given, understood and followed; how traffic information is communicated and shared; how passage plan monitoring is reported; communication with the engine room and via VHF radio with other vessels, pilots, Vessel Traffic Service (VTS), the team on deck, etc.

A3 Example with combined domains

Engineering		
<p>The vessel is idle and awaiting orders at safe anchorage one Thursday. The operations department confirms to the Master that there is no indication of when it will be fixed. The fleet superintendent steps in and instructs the Master to liaise with the Chief Engineer to proceed with the Diesel Generator (D/G) no.1 overhaul, since is already overdue and since the other D/G is shortly due and only two D/Gs serve the vessel's power management. The Master wants the vessel readily available as soon as voyage orders come, but still the Chief Engineer should take this opportunity for D/G no.1 overhaul. The 3rd Engineer will do the job with a fitter and under the supervision of the Chief Engineer. The 2nd Engineer will be occupied with the oiler and electrician on routine main engine and boiler maintenance.</p>		
Management level	Operational level	KPIs
Observing the Chief Engineer as leader of the 2nd and 3rd Engineers for maintenance tasks.	Observing the 3rd Engineer as leader of the maintenance team (oiler, fitter).	
During the planning meeting the Chief Engineer remains calm and defines the task in an accurate and simple way, due to time constraints and commercial pressures. The Chief Engineer asks open questions and discreetly invites silent team members to contribute their views on options for planning (pre-planning) or evaluating performance (post-meeting).	During the planning meeting, the 3rd Engineer defines the task in an accurate and simple way, asks open questions and discreetly invites silent team members to contribute their views on options for planning (pre-meeting) or evaluating performance (post-meeting).	F1, F2, F3 B1, B2 D1, D2
During the pre-meeting the 2nd Engineer proposes that they remove all cylinder heads at once so that the oiler can deal with the cylinder heads overhaul, while the other two will dismantle and assemble the pistons cylinder by cylinder, so that they will finish earlier. The Chief Engineer appreciates the feedback from team members, while putting forward his position for maintaining and assembling cylinder by cylinder and adjusting it so that the team is convinced of the way forward for this task, as well as highlighting the HSE and time elements due to the uncertainty of voyage orders and time for sailing.	During the pre-meeting the oiler proposes that they remove all cylinder heads at once, so that he can then deal with the cylinder heads overhaul, while the other two will dismantle and assemble the pistons cylinder by cylinder, so that they will finish earlier. The 3rd Engineer appreciates the feedback from the oiler, while putting forward the position agreed with the Chief Engineer and adjusting it so that team is convinced of the way forward, as well as highlighting the HSE and time elements due to the uncertainty of voyage orders and time for sailing.	F3, F4, F5 B2, B3, B4 C1, C2, C3 D1, D2 E1, E2



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