

# SOFT SKILLS FOR MARITIME STUDENTS: POSSIBILITY VERSUS NECESSITY

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**Abstract:** Issues of soft skills significance are rightly raised by researchers and representatives of various industries worldwide. In our quickly changing world of emerging technological advances and increasing interest in ethical and psychological aspects of human relationships to possess technical skills only seems insufficient, lacking some essential meanings by perceiving coworkers as performers obliged to do certain actions. Being a popular notion currently, soft skills help manage people in more efficient way in contrast to stiff way of organizing team activities. The intent focus on the lack of efficient interpersonal interaction in numerous work environments brings forward intense discussions and profound researches on the nature of soft skills. Despite general understanding that IMO regulatory documents, among them STCW Convention, do not directly address the necessity of implementing soft skills concepts, some maritime training institutions make efforts to deliver to students the importance of building soft skills as being foundational to kind leadership and increasingly sought by employers. To do that, Maritime English teachers need to determine the soft skills sets making the process of developing study programme easier and more flexible. The paper is aimed at presenting soft skills as an inherent element of English language course for maritime students at a higher education institution. Model Course 3.17 “Maritime English” provides some implications for the choice of soft skills required by the shipping industry nowadays. On completing a survey among teachers, the authors have grouped the selected soft skills into three sets: communicative (persuasion, negotiation, emotional intelligence), behavioural (leadership, teamwork, conflict management) and cognitive (critical thinking, problem solving, decision making). The article reveals the researchers’ ideas on the sequential order and ways of presenting and discussing modernity and elitism of soft skills to be accepted by students as their potential to become advocates of effective human and professional interaction.

*Keywords:* soft skills; maritime education and training; Maritime English study programme

## 1. Introduction

Soft skills necessity at workplace has lately gained unceasing attention as the employers seek for the personnel to improve the working atmosphere that enhances productivity. Having a decisive effect on the onboard crew psychological well-being during long voyages, the “softened” interpersonal relations are of great value in the shipping industry as they lead to considerable decreasing of accidents at sea.

The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) serves as the basic international convention addressing the maritime professionals’ core competencies. Without a formal requirement for the seafarers to necessarily possess soft skills, it acknowledges them indirectly, together with hard skills, to be of major importance in the shipping industry, among them effective communication in different situations, ability to apply effective resource management and decision-making techniques.

International Maritime Organization (IMO) Model Course 3.17 “Maritime English” (2015) provides some implications for the choice of soft skills required by the shipping industry nowadays which can be useful for designing a course with soft skills integrated.

The annual analysis of the maritime transport industry's performance and future trends conducted by the International Chamber of Shipping emphasises the need to make changes in professional training of future seafarers to ensure stable supply of human resources for the industry. These changes primarily relate to the need for identifying soft skills to be a learning objective at the same level as technical skills (The Key Role of Seafarers 2023).

The necessity for maritime education institutions to attach more importance to developing students’ soft skills dictated by current circumstances leads Maritime English teachers to becoming aware of the relevant strategy and

methodology. To implement the selected skills set successfully, teachers should come to their own choices in enriching the Maritime English course with new components.

## 2. Literature Review

A certain number of attempts have been endeavored in trying to take practical steps of making soft skills be part of study programmes. Those are dedicated courses at some training centres, educational institutions, and companies. Scientific and methodological substantiations of them are regrettably deficient.

The most explored research areas refer to general descriptive aspects of the necessity to determine optimal soft skills sets (Malykhin et al 2024) and to reconcile them with hard skills (Lamri & Lubart 2023), while the focus of our interest lies in methods of teaching soft skills as well as in Maritime English course design incorporating soft skills development at a higher education institution.

It has become obvious that higher education cannot be considered to study hard skills only, multiple recent articles and, additionally, reviews of publications on soft skills being true evidence for it (Espina-Romero et al 2023; Touloumakos 2020; Coelho & Martins 2022). The difficulty of defining this concept is repeatedly noted and the importance of including soft skills into the content of higher education is emphasised (Spirovska Tevdovska 2015).

Fairly enough, much attention is paid to the usage of cases for developing students' soft skills. It is stated that empirical results from applying the case study method show high percentage of satisfaction among the students with a slight "mind change" through the tested methodological approach (Lutzkanova 2022). The educational tools list includes group discussions, role-plays, simulations, structured exercises, games, video reviews and self-study which enhance the impact of learning.

A group of researchers working under the guidance of the International Maritime University confirm the important role of soft skills in improving technical skills and draw attention to the underestimation of human factor in professional maritime training. To that, they emphasise the need to amend STCW Convention and suggest a list of skills required for seafarers in the short, medium and long terms, including: 1) human resources management; 2) business communication; 3) quality and safety control; 4) critical thinking and analysis; 5) application of digital technologies; 6) stress resistance and flexibility; 7) leadership and initiative; 8) active learning; 9) personal abilities. This soft skills list covers the most important aspects of seafarers' professional activities with further detailing of their content.

A thorough analysis of the importance of soft skills aboard ships and methods for soft skills development in English classes with a focus on communication reveals task-based and problem-solving learning, case studies, discussions and debates, role-playing games, oral and poster presentations, and written tasks related to the future professional activities of students to be the most appropriate methods for incorporating soft skills into the English language classes (Sirbu & Georgescu 2023).

It is further concluded that problem-based learning as an instructional approach has a significant role in the development of soft skills among students (Deep et al 2020) This method seems to be more challenging for instructors requiring much more efforts on problem refinement, student coaching, performance evaluation, data gathering, and experience analysis when compared to a traditional instructor-centered learning approach.

Using gamification has the potential to benefit in the educational field, so progress of research into gamification in the context of higher education is clearly seen (Guerrero-Alcedo et al 2022). Nevertheless, research results on implementing this method in connection with soft skills are not available, though.

Wide-scale international projects on the issue hold our attention by being reliable resources.

The Intensive Study Program within the ISOL-MET (Innovative Soft Skills to Maritime Education and Training) project (Lekakou et al 2023) brought together leading maritime education institutions in Europe to propose practical approaches to integrating soft skills into the learning process through the analysis of purposefully developed and selected real-life accidents at sea. The Maritime Case Study Handbook as one of the project outputs containing the course programme and the teaching/learning methodology involved may undoubtedly be of great value for Maritime English instructors.

The findings of the SkillSea project (2023) include current requirements for the skills of maritime professionals. It is recommended to introduce a number of separate courses for the development of soft skills in

maritime education, namely: 1) digital technologies; 2) environmentally mature behaviour; 3) leadership, communication and teamwork; 4) conflict management. The project is a further attempt to identify and substantiate the soft skills that determine the sustainable development of the maritime transport industry.

Due to the specifics of working at sea, crew resource management is an extremely important skill. The Kind Leadership project implemented under the auspices of the UK Maritime Professional Council has put forward the idea of adding “Human Element, Leadership and Management” course into the curriculum with the aim of encouraging students to develop their leadership skills necessary to create positive working environment (Davis et al 2022).

All of the above-mentioned projects focus on designing a separate course. With our emphasis on incorporating soft skills into the current study programme of Maritime English, the available research deliverables provide us with the justifiable decision of continuing to explore the issue.

The purpose of this paper is to present soft skills as an inherent element of English language course for maritime students at a higher education institution.

### 3. Survey Analysis

In order to identify specific soft skills to be taught and effective teaching approaches, a survey has been conducted among Maritime English teachers of Kherson State Maritime Academy. The collected responses have been used for subsequent integration of soft skills into current study programmes and learning materials creation.

To gain deeper insights and provide broader access, “Teachers’ Perception of Soft Skills” questionnaire has been designed on Google Form App. It comprised open- and close-ended questions. The link to the questionnaire has been shared with the survey focus group represented by those who teach Maritime English to students of different fields of study.

The findings are based on the survey data collected from 23 respondents, who teach Maritime English to deck officers (11 respondents), marine engineers (8 respondents) and electro-technical officers (4 respondents). Most interviewees (17 persons) teach students who have already had some sea-going practice and been familiarized with routine life and work on board ships in hierarchical and multicultural environment.

The following questions were included into the questionnaire:

1. Which soft skills do you believe are crucial for seafarers?
2. How do you currently integrate or plan to integrate soft skills into study programmes?
3. What approaches do you believe are most effective for soft skills development?
4. What challenges do you foresee in implementing effective soft skills development?
5. What opportunities or innovations do you see for enhancing soft skills development in maritime education?

The first question intends to specify the profession-oriented soft skills needed to be developed purposefully at Maritime English course. The respondents were suggested to select appropriate skills from the list of 13 and add their own, if available.

Figure 1 visualizes the language teachers’ perspectives on the soft skills that have the potential to help students succeed in their future careers.



Figure 1. Soft Skills Ranging by Respondents.

The analysis shows all the teachers (100%) understand the importance of communication skills in education and ways they can help students achieve success in their professional careers. Meanwhile, ability to persuade and negotiate, being integral parts of successful communication, has been selected as significant by 5 respondents only (23%). That means that there is an essential necessity to define communication skills in general and clarify the essence of effective communication indicators.

According to the survey results, most respondents perceive higher order thinking skills as high priority for future seafarers. Critical thinking goes along with problem solving, decision making and situation awareness, but the latter has been selected by 14 respondents.

The survey illustrates that while most respondents appreciate teamwork skills (96%), conflict management and leadership skills have been chosen by 55% and 64% of the respondents respectively.

The second question focuses on the respondents' experience of teaching soft skills. Embedding soft skills into study programmes is considered by them to be essential to overcome challenges the students may face in the maritime industry. Most respondents have already taught soft skills at their classes by implementing case studies, group discussions, scenario-based simulations and group projects. The teachers have promoted collaborative learning environment by utilizing active learning strategies, such as peer-coaching and reflective writing that motivates students to provide feedback, think critically, and cultivate their leadership and teamwork abilities.

The next question proposes selecting most effective approaches to developing future seafarers' soft skills. According to our survey, 20 out of 23 respondents have reported that case studies are most effective. The authenticity of real-life situations motivates and encourages students to apply their knowledge and evaluate their attitudes. Group discussions as a widely used technique have been chosen by 18 teachers while simulations, interactive workshops, and role-plays have been chosen by 16, 15, and 11 respondents respectively. Those activities are recognized as enabling students to apply their knowledge for completing meaningful tasks. Only 4 respondents have selected mentorship as an effective method to accelerate the transfer of professional knowledge and personal skills. In their opinion, mentoring shows great promise in guiding and supporting newcomers.

The fourth question is aimed at discovering difficulties the teachers have encountered working on soft skills in their teaching practice. It has been stressed that achieving success in this process necessitates ongoing efforts from both teachers and students along with a long-term perspective on the anticipated learning outcomes. Absence of teaching materials to train particular skills discourages some teachers from participating in this initiative. Some students are described as reluctant to being engaged in active learning online. In addition, isolated learning environment, lack of live communication, and cultural differences can cause misunderstanding and discourage from utilizing innovative teaching and learning approaches.

Despite those challenges most respondents underscore the importance of soft skills development for their students. The analysis illustrates the current need to integrate soft skills into the education process of future seafarers either by dedicated courses design or embedding them into academic study programmes.

#### 4. Soft Skills Sets

Upon completing the survey, several soft skills have been identified as essential for designing Maritime English study programme that focuses on developing 21st-century competencies for future maritime professionals. A possible taxonomy may group such soft skills into three sets: communicative, behavioural and cognitive (Figure 2).



Figure 2. Soft Skills Sets.

##### 4.1. Communicative Set

The communicative set of soft skills includes persuasion, negotiation and emotional intelligence. Students should be taught multiple aspects of communication.

Persuasion is a valuable soft skill that can significantly contribute to safety of crew, ship and marine environment, as seafarers need to interact with each other on board as well as with various parties involved in shipping, namely, port authorities and superintendents, cargo owners and charterers. Being able to persuade others and influence their actions or performance is crucial and should be practiced regularly in English language classes. Students learn how to identify differences between facts and viewpoints, provide reasoning and persuade their groupmates to accept an idea or commence an action.

Negotiation plays an essential role in effective communication as it assists in reaching compromise and influencing another person or party to support a specific idea or behaviour. To negotiate a mutual agreement, students practise active listening skills to understand the speaker's needs and identify how to fulfill them. Mastering negotiation skills takes time and practice. It requires a high level of language proficiency to prevent students from feeling discouraged to participate actively due to their limited vocabulary or grammar.

Emotional intelligence entails an ability to understand and manage one's own emotions in addition to noticing and interpreting the emotions of others. To understand the importance of emotional intelligence, it is crucial to consider the global character of the maritime industry, where individuals from diverse cultures collaborate and communicate during emergencies. Despite emotional intelligence is perceived as one of innate personality traits, it can be consciously developed by means of self-analysis, empathy and social skill development.

##### 4.2. Behavioural Set

The behavioural set comprises leadership, teamwork and conflict management.

Leadership as a soft skill encompasses the ability to inspire, motivate, guide, and influence others to achieve common goals. It is particularly critical in the maritime professional domain. Cultivating these skills involves developing several attributes and behaviours that enable future maritime professionals to operate and manage competently. Strong leadership can improve work productivity, enhance safety procedures, and promote high moral standards within the crew. By developing leadership as a soft skill, seafarers can navigate the complexities of their roles more adeptly, ensuring the success and well-being of their crews.

Teamwork is not just a soft skill but a fundamental component of maritime professionalism. By fostering teamwork, seafarers contribute to safer voyages, operational excellence, and supportive onboard environment. Enhancing teamwork skills among crew members is essential for ensuring sustainability of the maritime industry.

Conflict management is a crucial soft skill for seafarers who face the dynamic and often challenging environment on a regular basis. At sea, where crews live and work in small communities for long periods, conflict management can significantly impact safety, crew unity and operational efficiency. By developing conflict

management skills seafarers can mitigate interpersonal challenges, contribute to harmonious working environment, and ensure the successful execution of shipboard operations.

#### 4.3. Cognitive Set

The cognitive set is presented by critical thinking, problem solving and decision making. In sequential order, they logically follow each other.

Critical thinking is a professional ability to analyse available facts or observations about a certain situation, process, state or certain relations which require being thought about and resolved. The skill (rightly called a life-skill) is of primary importance for seafarers as they work in small crews onboard ships and frequently encounter unpredictable situations that require contending against imminent dangers.

Problem solving, as the next step, means the process of exploring possible options for coming to a rational solution of those matters. It is closely related to critical thinking because the ability of being impartial and unruffled in hazardous situations becomes worthwhile.

As the last step in this chain, decision making concerns the process of choosing the best alternative to form a judgement and communicate it. The possibility to avoid incidents, fatal in some instance, comes with the working environment where misdoings are welcomed to be reported and analysed in order to come forward with the best decision for similar processes in future and where open sharing of information is stimulated.

Thus, all those soft skills sets, being closely connected, may be addressed to separately or together depending on students' level of understanding soft skills as well as the necessity to be able to adapt to the changing circumstances in the workplace.

### 5. Integration into Maritime English Study Programme

Integrating soft skills into Maritime English study programme involves a strategic approach to enhance communicative, behavioural and cognitive skills alongside language proficiency.

An analysis of Maritime English study programme to assess the opportunities for incorporating sets of soft skills into thematical modules has been conducted. This effort is aimed at facilitating more comprehensive development of soft skills crucial for a successful maritime career. To obtain more reliable information, it has been decided to analyze some modules of the undergraduate (bachelor) programme, specifically the second and third years.

Table 1 outlines integration of the soft skills sets in the content of Maritime English study programme. The second year of study comprises modules “Bridge Equipment”, “GMDSS Communications”, “Anchoring”, “Mooring” and “Ship Security”. Each module is evaluated for its potential to develop specific soft skills, categorized into communicative, behavioral, and cognitive sets.

Table 1. Soft Skills in the Content of Maritime English Study Programme (Year 2).

Module	Soft Skills Sets		
	Communicative	Behavioural	Cognitive
<b>Bridge Equipment</b> Characterize working principles of bridge equipment			
<b>GMDSS Communications</b> Comprehend and participate in GMDSS communications accurately			
<b>Anchoring</b> Exchange information on anchoring procedure			
<b>Mooring</b> Exchange information on mooring procedure			
<b>Ship Security</b> Describe measures for ensuring ship security			

Module “**Bridge Equipment**” primarily focuses on cognitive skills, specifically understanding the working principles of bridge equipment. Enhancing communicative skills could improve the ability to convey technical details effectively. In module “**GMDSS Communications**” the emphasis is mostly on communicative skills which are crucial for accurate participation in ship-to-ship and ship-to-shore communications. Both modules “**Anchoring**” and “**Mooring**” highlight the importance of communicative skills for clear information exchange during these shipboard operations. Additionally, incorporating behavioral skills such as teamwork would provide deeper understanding and execution of some specific orders and commands. The cognitive aspect is emphasized in module “**Ship Security**” focusing on understanding and describing security measures. Communicative skills for reporting and behavioral skills for proactive security measures would also enhance performance effectiveness. Table 1 shows that in the second year of study the primary emphasis is on communicative skills in all the modules with behavioural or cognitive skills addressed to secondarily in a few modules only.

Table 2 demonstrates the potential of the modules of the third year study to develop specific soft skills. In module “**Bridge Procedures**” the focus is mostly on behavioural skills, emphasizing teamwork on the bridge. Effective bridge operations require strong communication skills as well, so integrating communicative skills would enhance the ability to exchange information within the crew. Communicative skills are highlighted in module “**VTS**” as they are crucial for clear interaction between the bridge team and VTS personnel. Incorporating cognitive skills to understand VTS operations and behavioural skills for coordinated actions would provide a more comprehensive approach. Module “**Pilotage**” focuses on cognitive skills, ensuring that students understand the principles of collaboration between the pilot and bridge team. To enhance practical application, integrating communicative skills for interaction with pilots would be beneficial. Cognitive skills are emphasized in module “**Meteorology**”, focusing on the interpretation of weather data to ensure safe navigation. In Module “**Navigation Challenges**” the focus is on decision making process as a component of cognitive skills required for watchkeeping in challenging conditions. In addition, behavioural skills to maintain composure under stress would improve overall preparedness. Table 2 shows the primary emphasis on cognitive skills for each module, with communicative and behavioural skills addressed to only in some of them.

Table 2. Soft Skills in the Content of Maritime English Study Programme (Year 3).

Module	Soft Skills Sets		
	Communicative	Behavioural	Cognitive
<b>Bridge Procedures</b> Exchange information on effective bridge teamwork			
<b>VTS</b> Speak about the responsibilities of VTS and bridge team in VTS area			
<b>Pilotage</b> Describe basic procedures of pilotage			
<b>Meteorology</b> Define a safe passage for the ship by reading weather maps and NAVTEX messages			
<b>Navigation Challenges</b> Describe watchkeeping duties of the OOW in different challenging conditions			

Each of soft skill sets listed in Tables 1 and 2 can only be developed through interpersonal communication. Soft skills play an important role in the content of Maritime English study programme, ensuring a comprehensive approach to developing essential competencies of students. This approach would ensure that future maritime professionals are not only knowledgeable but also effective communicators and team players, capable of handling multiple operational challenges.

## 6. Methods

Methods of developing soft skills should generate students' motivation for in-depth understanding of interpersonal relations. Based on this research, case studies, discussions, video reviews, brainstorming sessions, job interviews, thinking hats and role-plays have been chosen as most effective. Besides those activities teachers have an ample choice of strategies to involve their students into active learning. Among them are group strategies (think-pair-share, quescussion), reasoning strategies (debate, four corners), and instructional strategies (Socratic questioning). Various types of reflection – self-assessment, feedback on groupmates' performance, reflective thinking and writing – are also meaningful and applicable techniques for this purpose (Kudryavtseva et al 2021).

Three methods are presented as an example from our experience.

**Case study.** To implement soft skills successfully, teachers need to be well practiced in using communicative methodology as well as triggering students' higher order thinking that requires skills of analysis, assessment and creation.

Needless to specify, cases serve as a perfect tool in the process of developing soft skills. Their major benefits are:

- detailed description of real-life situations at sea;
- presentation of interpersonal relations dynamically;
- feasibility of analyzing misdoings and correct actions;
- chance to differentiate between hard and soft skills;
- opportunity to create alternatives.

Several years of experience have led us to believe that it's beneficial to start using cases from the very first month after students' enrollment. With the four-year course of Maritime English for the bachelor degree, students are initially taught to work with sea stories during three semesters. The regular set of tasks consists of:

- introductory discussion;
- comprehension check;
- exchange of opinions on possible reasons for the behavioural tendencies, and
- extension task.

During the final three semesters, students work upon maritime accident reports (MARs). Testified by our team, the effective structure of a MAR-study lesson on soft skills is as follows:

1. Brief introductory discussion on soft skills implied;
2. Case analysis (Why could the accident have happened? What seems to be the major problem? What alternatives might be suggested?);
3. Role-play / simulation "Debriefing";
4. Flowchart "Crucial points of soft skills evidence".

Case studies require flipped classroom approach in which students read cases or maritime accident reports beyond the lesson in order to take enough time for comprehension of the text and the tasks to be discussed at the forthcoming lesson.

**Video Review.** It is evident that watching videos is an integral part of modern life due to the increasing accessibility of technology. Moreover, it has become a popular teaching method as it provides enthusiasm and satisfaction for students. The video review encourages reasoning, persuasion and problem solving by enabling students to process the obtained information, comprehend issues, and determine optimal solutions, thereby enhancing their understanding of professional concepts, skills and procedures.

The video review method includes several stages. To provide an example, in the course of working on the module "Pilotage" the video review may be organized in the following way:

**Video Selection:** Choose videos that depict proper and improper examples of interaction between pilots and bridge teams.

**Pre-Watch:** Before viewing, discuss the importance of clear communication and shared decision-making on the bridge.



Viewing 1: Watch videos without interruptions.

Interactive Elements: Engage students in a discussion about the observed interactions and decisions.

Viewing 2: Watch videos, pausing at key points to let students take necessary notes on important details.

Group Analysis: Divide students into small groups. Assign roles to students (Master, Pilot, OOW, Helmsman, Lookout). Provide each group with specific questions to guide their analysis. Have each group present their analysis to the class.

Assessment: Ask students to evaluate their group performance.

Reflection: Collect feedback and suggestions for improvement.

The video review method ensures comprehensive understanding of video content, encourages active participation, and reinforces soft skills through practical application.

**‘Thinking Hats’.** This learning technique helps realize that each person may normally have differing opinions about the same situation. For a small working community as an onboard crew such circumstances require negotiations to make an appropriate decision. ‘Thinking hats’ require group discussion and individual thinking the type of which is indicated by different colours of hats: white – informative, red – positive, black – negative, green – creative, yellow – optimistic, blue – conclusive. By seeing a problem from multiple perspectives and resolving it students acquire skills of critical thinking, decision making, negotiation, and persuasion.

‘Thinking hats’ are used for discussing narrative texts containing a specific problem. Students shall read the text prior to the lesson.

At the lesson students:

1. Choose cards to be arranged in pairs or small groups depending on the size of the group; pairs/groups can have the same colour hats or different ones;
2. Discuss the text from their ‘colour’ perspective;
3. Share their opinions;
4. Rank the available decisions;
5. Reflect on the process of group work, focusing on students’ ability to use reasoning and persuasion.

‘Thinking hats’ method fosters creativity and helps understand other people’s logics. It stimulates critical thinking, generates new ways to solve problems and make decisions by considering risks, benefits, and alternatives in detail. Besides, this brainstorming activity develops students’ soft skills in the course of their interaction.

All the methods can be utilized to engage students in language mastering, enhance their collaboration, and create more efficient learning environment to hone soft skills which help build better relations and accomplish shared tasks.

## 7. Conclusion

Under circumstances of uncertainty when, on the one hand, soft skills need to be developed in order to work more successfully in the modern environment, but on the other hand, there are no approved guidelines or model courses for maritime education institutions, our experience reveals the possibility to integrate their acquisition into Maritime English study programme.

The survey proves the teachers’ awareness of soft skills value for seafarers to be successful in their future career. The experience shared illustrates that the process of integrating soft skills is underway, with a variety of teaching techniques being utilized in Maritime English classes.

The Maritime English study programme samples exemplify our approach to meeting the industry demands for soft skills development, ultimately enhancing the quality of education and equipping students to effectively fulfill their professional duties in the challenging conditions of the maritime world.

Implementing the above-mentioned methods and techniques to enhance higher order thinking and motivate students’ meaningful interaction, deepening learners’ awareness of interpersonal relations are feasible tasks to help students understand the importance and increasing significance of soft skills for their future professional careers.

Among the main tasks planned for the near future is to design Guidance Tool for English teachers. It is meant to describe methods for working with various types of tasks, as specified in the paper, and outline recommendations on assessing the learning outcomes related to soft skills.

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