



Assessment of Vessel Services in Northern Cebu

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ABSTRACT

The key purpose of this research is to assess the vessel services in Northern Cebu in terms of safety, convenience, cost-effectiveness, and reliability. It utilized a descriptive quantitative design and a standardized questionnaire as the data collection tool. The study followed the linear input-process-output flow, where the input included independent and dependent variables, the process involved data collection, analysis, interpretation, implications, conclusions, and recommendations, and the output was an action plan. Based on the findings, the primary users of vessel services in Northern Cebu were mainly individuals aged 19 to 24, and a significant proportion of the respondents were married. In terms of safety, the vessel services were rated as outstanding, indicating a commitment to passenger safety through well-designed facilities and effective communication. Regarding convenience, the study revealed an outstanding service level, indicating that the vessel services in Northern Cebu were highly convenient for passengers. The aspect of cost-effectiveness also received an outstanding rating, suggesting that the services offered value for money and savings to passengers. Furthermore, the study found that the vessel services in Northern Cebu demonstrated an outstanding level of reliability. Passengers had positive experiences, emphasizing the importance of minimizing delays, conducting regular maintenance, and providing staff training on safety protocols to maintain this high level of reliability. Overall, the study identified the aspects of safety, convenience, cost-effectiveness, and reliability that could be developed and improved in vessel services in Northern Cebu. The results serve as a basis for creating an action plan to enhance the services provided, benefiting the passengers and ensuring their satisfaction.

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1. Introduction.

Cebu is a series of islands in the Philippines, boasting some of the most beautiful coastal views in the world. The islands rely heavily on vessel services for their transportation needs, but unfortunately, these services are often inadequate and unreliable. This is due to a lack of investment in modern technology, vessels, and infrastructure. Assessment of vessel services in Northern Cebu is important to ensure that these services remain reliable and efficient. Modern vessels with up-to-date safety features should be provided to ensure the safety of passengers.

The vessels should also be inspected regularly to ensure that they are in good condition and can handle the demands of transporting people. Additionally, proper maintenance must be done to ensure that vessels remain in good working order.

Recent maritime accidents, such as the collision in Jebel Ali in February 2015 or the collision in Norway in November 2018, emphasize the significance of vessel traffic service operator (VTSO) in marine safety, as it was made clear by the official reports. Since human mistake is the primary cause of marine incidents, understanding human factors is crucial to preventing them. Human factors have been a subject of study to increase the efficacy and efficiency of maritime transport ever since they first appeared in the naval sector at the end of World War II Grech et al., (2019). It must be acknowledged that this phrase is frequently used to refer to human error in the maritime industry, but it definitely has other meanings as well.

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The provinces of Cebu in the Philippines have been facing significant safety issues with vessel services. These safety concerns are a result of a lack of regulation and enforcement, combined with poor maintenance of vessels, inadequate training for crew, and overcrowding. This has resulted in numerous deaths and injuries due to maritime accidents. Furthermore, assessment of vessel services in Northern Cebu is essential to ensure high-quality standards. Additionally, vessel services are also important in many industries, but they are often overlooked. A recent study by the National Transportation Safety Board (NTSB) found that vessel service was a factor in over 60% of maritime accidents. This is an alarming statistic, and it's one that can't be ignored. Vessels need to be assessed for their potential to provide critical services during an emergency. The assessment should include factors such as safety, comfort, cost efficiency, and reliability in order to make sure that these vessels provide a safe and enjoyable experience for passengers.

Vessel services in Cebu have become increasingly overcrowded as a result of over-tourism and increased economic activity in Cebu. This has created an unsafe environment for passengers and crew as vessels are forced to carry more passengers than they can safely handle. The negative local impacts from the lack of safety regarding vessel services in Northern Cebu is undeniable. It is essential that authorities take steps to address this issue by implementing regulations and enforcing them strictly to ensure that vessels are properly maintained, crew are adequately trained, and passenger capacity is not exceeded. Doing so will help to prevent any future tragedies from happening on the seas around Cebu.

2. Methodology.

This study utilized a descriptive quantitative design, employing a standardized questionnaire in assessing the vessel services in Northern Cebu. The primary objectives were to identify areas for development and improvement of various aspects by assessing the vessel services in Northern Cebu in terms of safety, convenience, cost-effectiveness, and reliability. Additionally, the selected research design was particularly appropriate for this study as it focused on investigating an existing situation such as refer to the statement of the problem. Overall, this research design enables a focused investigation into the various aspects of vessel services, facilitating data-driven recommendations for enhancing the overall quality and efficiency of these services in the region.

3. Results.

3.1. Safety Aspect.

This part of the study presents the aspects that can be develop and improve by assessing the vessel services in northern Cebu in terms of safety where the table below shows the weighted mean as well as the verbal description of the different gathered answers of the respondents.

Indicators	Weighted Mean	Verbal Description
The holding area in case of evacuation in the boat.	4.17	Excellent Service Level
The evacuation route from your own cabin is wide enough to pass by.	4.13	Excellent Service Level
The sound of the evacuation alarm is functional.	4.53	Outstanding Service Level
The life vests and other survival gear are accessible.	4.67	Outstanding Service Level
In the vessel, the instruction and guide are clearly stated for the passenger to use in times of need.	4.37	Outstanding Service Level
There is a first-aid equipment in the vessel.	4.63	Outstanding Service Level
TOTAL:	4.42	Outstanding Service Level

Source: Authors.

Legend:

4.21-5.00 = Outstanding Service Level.

3.41-4.20 = Excellent Service Level.

2.61-3.40 = Satisfactory Service Level.

1.81-2.60 = Fairly Satisfactory Service Level.

1.00-1.80 = Acceptable Service Level.

Table above shows the aspects that can be develop and improve by assessing the vessel services in northern Cebu in terms of safety. The table reveals that out of the six (6) indicators pertaining to passenger safety in a vessel services, there are four indicators that have a weighted mean of 4.53, 4.67, 4.37, and 4.63. These high weighted mean scores indicate that the vessel services in Northern Cebu have an “outstanding service level” in terms of keeping the life vests and other survival gear accessible, functionality of the evacuation alarm, the instruction and guide are clearly stated for the passenger to use in times of need, and there is a first-aid equipment in the vessel.

Furthermore, the indicators related to the holding area in case of evacuation, the width of evacuation routes which have a weighted mean of 4.17 and 4.13 indicates an “excellent service levels” among the vessel services in Northern Cebu. In general, the interpretation of the indicators related to the assessment of vessel services in Northern Cebu shows that the overall level of service in terms of safety measures is considered outstanding. The weighted mean scores for each indicator range from 4.13 to 4.67, with a total weighted mean of 4.42, indicating an outstanding service level.

These results suggest that the vessel services in Northern Cebu prioritize passenger safety by providing well-designed evacuation areas, wide evacuation routes, functional alarms, accessible safety equipment, clear instructions, and availability of first-aid equipment. More specifically, recent research has also focused on the role of personalization and relevance in safety communications. Johnson, R., & Williams, E. (2019) examined the effectiveness of tailoring safety messages to specific passenger demographics and their interests. Their study highlighted the positive impact of personalized and relevant content in increasing passengers' attention and engagement.

These findings highlight the commitment of service providers to ensuring the safety and well-being of passengers during their

journeys. Moreover, Chen, Y., & Meng, Q. (2018) conducted a systematic literature review on maritime safety management. The study emphasized the importance of integrating safety management systems into vessel services to improve safety performance. Key concepts such as risk assessment, safety culture, safety regulations, and accident prevention strategies were discussed.

Based on these outstanding service levels, it can be inferred that passengers can feel confident and secure while utilizing vessel services in Northern Cebu, knowing that appropriate safety measures and equipment are in place. This positive assessment provides valuable insights for service providers to maintain and further improve safety standards, ensuring a positive customer experience and reinforcing passenger trust in the service.

3.2. Convenience.

This part of the study presents the aspects that can be develop and improve by assessing the vessel services in northern Cebu in terms of convenience where the table below shows the weighted mean as well as the verbal description of the different gathered answers of the respondents.

Table 1: Top ten shipbuilding companies in the world in 2020.

Indicators	Weighted Mean	Verbal Description
Availability of seating options on board.	4.43	Outstanding Service Level
The restroom facilities are clean and easily accessible on board.	4.33	Outstanding Service Level
The boarding process is efficient and well-organized.	4.40	Outstanding Service Level
Level of customer service provided by the crew members.	4.23	Outstanding Service Level
The boarding and disembarking processes simple and convenient.	4.30	Outstanding Service Level
The vessel maintained in a clean and orderly fashion.	4.17	Excellent Service Level
TOTAL:	4.31	Outstanding Service Level

Source: Bizvibe Blog, 2022.

Legend:

4.21-5.00 = Outstanding Service Level.

3.41-4.20 = Excellent Service Level.

2.61-3.40 = Satisfactory Service Level.

1.81-2.60 = Fairly Satisfactory Service Level.

1.00-1.80 = Acceptable Service Level.

Table above presents the assessment of vessel services in Northern Cebu in terms of convenience for passengers. The table above reveals that out of the six (6) indicators related to convenience, five indicators received high weighted mean scores of 4.43, 4.33, 4.40, 4.23, and 4.30. These scores indicate that the vessel services in Northern Cebu have achieved an "outstanding service level" in terms of the availability of seating options on board, cleanliness and accessibility of restroom facilities, efficiency and organization of the boarding process, satisfaction with customer service provided by the crew members, as well as

the simplicity and convenience of the boarding and disembarking processes. These findings suggest that the vessel services in Northern Cebu prioritize the convenience and comfort of their passengers.

Furthermore, the indicators related to maintaining the vessel services clean and orderly fashion which have a weighted mean of 4.17 indicates an "excellent service levels" among the vessel services in Northern Cebu. In general, the interpretation of the indicators related to the assessment of vessel services in Northern Cebu shows that the overall level of service in terms of convenience measures is considered "outstanding". The weighted mean scores for each indicator range from 4.17 to 4.43, with a total weighted mean of 4.31, indicating an outstanding service level.

Additionally, based on these findings, the service providers can build upon their strengths in convenience to further improve the passenger experience. This could involve continuous efforts to maintain cleanliness, convenience of boarding procedures, provide attentive customer service, and explore additional convenience-enhancing measures. By prioritizing convenience, vessel services in Northern Cebu can attract more passengers and retain their loyalty, ultimately leading to a positive impact on the overall success of the services provided.

Moreover, based on these findings service providers can continue to emphasize and maintain the convenience factors that received high scores. This may involve regular inspections and cleaning of facilities, ongoing training for crew members in customer service, and ongoing efforts to streamline boarding and disembarking processes. Furthermore, the definition of convenience in vessel services has evolved with changing consumer expectations and technological advancements. Researchers, such as Chen and Chen (2019), have expanded the traditional dimensions of convenience to include aspects like digital convenience, personalized experiences, and multi-channel access. The contemporary definition emphasizes the ease of use, seamless interactions, and tailored services that enhance customer convenience. By consistently prioritizing convenience, vessel services in Northern Cebu can attract and retain more satisfied passengers, leading to positive word-of-mouth recommendations and increased customer loyalty.

3.3. Cost-Effectiveness.

Indicators	Weighted Mean	Verbal Description
The pricing of vessel services is reasonable.	4.17	Excellent Service Level
The vessel services provide cost-effective solutions for our needs.	4.30	Outstanding Service Level
There is significant reduction of the costs due to the vessel services.	4.23	Outstanding Service Level
The cost of onboard amenities (food, drinks, entertainment) was reasonable.	4.03	Excellent Service Level
The price of a ticket aligns with the quality of service provided by the operator.	4.50	Outstanding Service Level
TOTAL:	4.25	Outstanding Service Level

Source: Authors.

Legend:

4.21-5.00 = *Outstanding Service Level*.
 3.41-4.20 = *Excellent Service Level*.
 2.61-3.40 = *Satisfactory Service Level*.
 1.81-2.60 = *Fairly Satisfactory Service Level*.
 1.00-1.80 = *Acceptable Service Level*.

This part of the study presents the aspects that can be develop and improve by assessing the vessel services in northern Cebu in terms of cost effectiveness where the table below shows the weighted mean as well as the verbal description of the different gathered answers of the respondents.

Table above shows the aspects that can be develop and improve by assessing the vessel services in northern Cebu in terms of cost-effectiveness. The table reveals that out of five (5) indicators pertaining to the cost-effectiveness of a passenger in a vessel services, there are three (3) indicators that have a weighted mean of 4.30, 4.23, and 4.50. These high weighted means indicate that the vessel services in Northern Cebu have achieved an "outstanding service level" in terms of providing cost-effective solutions for passenger needs, significant reduction of costs due to the services provided, and aligning ticket prices with the quality of service.

Furthermore, the indicators related to the reasonable pricing of vessel services and the cost of onboard amenities (such as food, drinks, and entertainment) received weighted mean scores of 4.17 and 4.03, respectively, indicating an "excellent service level" among vessel services in Northern Cebu. In general, the interpretation of the indicators related to the assessment of vessel services in Northern Cebu shows that the overall level of service in terms of cost-effectiveness measures is considered outstanding. The weighted mean scores for each indicator range from 4.03 to 4.50, with a total weighted mean of 4.25, indicating an outstanding service level.

These findings suggest that the vessel services in Northern Cebu offer passengers cost-effective options that meet their needs. The outstanding service level in terms of cost-effectiveness implies that passengers perceive the services as providing value for money and contributing to savings. This is evident in the positive assessment of cost-effective solutions, reduced costs, and the alignment of ticket prices with service quality. In addition, strategic pricing and revenue management practices contribute to cost-effectiveness in vessel services. Research by Zhang and Li (2021) emphasizes the importance of dynamic pricing, yield management, and ancillary revenue generation. By optimizing ticket pricing based on demand, effectively managing capacity utilization, and offering value-added services, vessel service providers can maximize revenue and improve cost-effectiveness.

Furthermore, these findings also indicate that vessel services in Northern Cebu are successful in providing passengers with cost-effective options. The excellent service levels in terms of reasonable pricing and affordability of onboard amenities demonstrate that service providers are meeting passengers' expectations regarding fair pricing and value for money.

Based on these findings, service providers can continue to focus on cost-effectiveness to enhance the passenger experience. This can involve initiatives such as offering competitive

pricing, providing discounted fares or loyalty programs, optimizing operational costs to pass on savings to passengers, maintaining transparency in ticket pricing, reasonable pricing of vessel services and the cost of onboard amenities (such as food, drinks, and entertainment). By emphasizing cost-effectiveness, vessel services in Northern Cebu can attract more passengers, retain their loyalty, and establish a positive reputation for offering affordable and valuable transportation solutions.

3.4. Reliability.

This part of the study presents the aspects that can be develop and improve by assessing the vessel services in northern Cebu in terms of reliability where the table below shows the weighted mean as well as the verbal description of the different gathered answers of the respondents.

Indicators	Weighted Mean	Verbal Description
Experiencing delays or cancellations when traveling on passenger vessels	3.93	Excellent Service Level
Encountered mechanical issues or breakdowns during voyage.	3.93	Excellent Service Level
I can always depend on passenger vessels to get me to my destination safely and on time.	4.30	Outstanding Service Level
I trust the staff and crew of passenger vessels to assist me during my journey.	4.30	Outstanding Service Level
Passenger vessels provide a secure and reliable environment for travelers.	4.50	Outstanding Service Level
The staff of passenger vessels are knowledgeable about safety procedures and protocols.	4.20	Excellent Service Level
I feel secure when traveling on a passenger vessel, as all safety measures are strictly followed by the crew members onboard.	4.44	Outstanding Service Level
The maintenance and upkeep of passenger vessels ensures smooth sailing throughout my travels.	4.47	Outstanding Service Level
TOTAL:	4.27	Outstanding Service Level

Source: Authors.

Legend:

4.21-5.00 = *Outstanding Service Level*.
 3.41-4.20 = *Excellent Service Level*.
 2.61-3.40 = *Satisfactory Service Level*.
 1.81-2.60 = *Fairly Satisfactory Service Level*.
 1.00-1.80 = *Acceptable Service Level*.

Table above shows the aspects that can be develop and improve by assessing the vessel services in northern Cebu in terms of reliability. The table reveals that out of eight (8) indicators pertaining to the cost-effectiveness of a passenger in a vessel services, there are five (5) indicators that have a weighted mean of 4.30, 4.30, 4.50, 4.44, and 4.47. The high weighted means obtained from the assessment of vessel services in Northern Cebu indicate that the services have achieved an outstanding level of performance in terms of several important aspects. These include the dependability of passenger vessels in ensuring safe and timely travel, the trust passengers have in the staff and crew to assist them during their journey, the provision of a secure and reliable environment, the sense of security felt by passengers as a result of strict adherence to safety measures by the

crew, and the effective maintenance and upkeep of passenger vessels to ensure smooth sailing.

Additionally, the indicators related to experiencing delays or cancellations when traveling on passenger vessels, encountering mechanical issues or breakdowns during the voyage, and the knowledge of the staff about safety procedures and protocols received weighted mean scores of 3.93, 3.93, and 4.20, respectively, indicating an “excellent service level” among vessel services in Northern Cebu. These findings indicate that passengers have a positive experience when it comes to the reliability of vessel services in Northern Cebu. The excellent service level in terms of minimal delays or cancellations, limited occurrences of mechanical issues or breakdowns, and the knowledge of the staff regarding safety procedures and protocols contributes to a reliable and smooth travel experience.

In general, the interpretation of the indicators related to the assessment of vessel services in Northern Cebu shows that the overall level of service in terms of reliability measures is considered outstanding. The weighted mean scores for each indicator range from 3.93 to 4.50, with a total weighted mean of 4.27, indicating an outstanding service level.

The implication of these outstanding service levels in reliability is that passengers can trust the vessel services in Northern Cebu to provide dependable and hassle-free transportation. The low incidence of delays, minimal mechanical issues, and the staff’s knowledge of safety procedures enhance passenger confidence and contribute to a positive travel experience. Additionally, research consistently demonstrates that reliability significantly influences customer satisfaction in vessel services. Studies by Wang and Zeng (2018) and Yang et al. (2020) highlight that passenger place a high value on reliable schedules, minimal delays, and predictable service operations. Reliability creates a sense of trust and confidence among customers, leading to increased satisfaction, repeat business, and positive word-of-mouth recommendations.

To maintain and further improve the outstanding service levels in reliability, service providers can continue implementing measures to minimize delays, ensure proactive maintenance and monitoring of vessels, and provide regular training for staff members on safety protocols. By prioritizing reliability, vessel services in Northern Cebu can continue to meet passengers’ expectations, enhance customer satisfaction, and strengthen their reputation as a reliable transportation option in the region.

3.5. Summary of the Result.

1. The findings of this study about the aspects that can be develop and improve by assessing the vessel services in Northern Cebu in terms of safety reveals that the indicators related to accessibility of life vests and survival gear, functionality of evacuation alarms, clear instructions for passengers, and availability of first-aid equipment received high weighted mean scores, signifying an “outstanding service level” with a weighted mean of 4.53, 4.67, 4.37, and 4.63. Additionally, the indicators pertaining to holding areas and width of evacuation routes were rated at an “excellent service level” with a weighted mean of 4.17 and 4.13. Overall, the weighted mean scores

for each indicator range from 4.13 to 4.67, with a total weighted mean of 4.42, indicating an “outstanding service level” for passenger safety in a vessel service in Northern Cebu. These results highlight the commitment of vessel services in Northern Cebu to prioritize passenger safety through well-designed facilities and effective communication.

2. The findings of this study about the aspects that can be develop and improve by assessing the vessel services in Northern Cebu in terms of convenience reveals an “outstanding service level”. The indicators related to seating options, restroom cleanliness and accessibility, boarding efficiency, crew member service, and boarding/disembarking convenience received high weighted mean scores of 4.43, 4.33, 4.40, 4.23, and 4.30, indicating a focus on passenger comfort and an “outstanding service level”. Additionally, the indicator for maintaining a clean and orderly vessel received an “excellent service level” rating with a weighted mean of 4.17. These findings suggest that vessel services prioritize convenience for their passengers and can further enhance the passenger experience by maintaining cleanliness, improving boarding procedures, and providing attentive customer service. By consistently prioritizing convenience, vessel services in Northern Cebu can attract and retain more satisfied passengers, leading to increased customer loyalty and positive word-of-mouth recommendations.
3. The findings of this study about the aspects that can be develop and improve by assessing the vessel services in Northern Cebu in terms of cost-effectiveness indicates an outstanding service level. The indicators related to providing cost-effective solutions, significant cost reduction, and aligning ticket prices with service quality received high weighted mean scores of 4.30, 4.23, and 4.50 and indicates an “outstanding service level”. Additionally, the indicators for reasonable pricing and affordability of onboard amenities received “excellent service level” ratings received a weighted mean of 4.17 and 4.03. These findings suggest that vessel services in Northern Cebu offer passengers value for money and savings, meeting their cost-effectiveness expectations. Service providers can further enhance the passenger experience by emphasizing competitive pricing, offering discounts or loyalty programs, and maintaining transparency in ticket pricing and onboard amenities. By prioritizing cost-effectiveness, vessel services can attract and retain more satisfied passengers, establishing a positive reputation for affordability and value.
4. The findings of this study about the aspects that can be develop and improve by assessing the vessel services in Northern Cebu in terms of reliability indicates an outstanding service level. The five (??) indicators, including the dependability of vessels, trust in staff and crew, provision of a secure environment, passengers’ sense of security, and effective vessel maintenance, received high weighted mean scores of 4.30, 4.30, 4.50, 4.44, and 4.47, respectively. Additionally, indicators related to minimal

delays or cancellations, limited mechanical issues, and staff knowledge of safety procedures received “excellent service level” ratings received a high weighted mean of 3.93, 3.93, and 4.20. These findings highlight the positive experience passengers have with the reliability of vessel services in Northern Cebu. To maintain this high level of reliability, service providers can focus on minimizing delays, conducting regular maintenance, and providing staff training on safety protocols. Prioritizing reliability will enhance customer satisfaction and establish a strong reputation for dependable transportation.

Conclusions.

The study demonstrates that vessel services in Northern Cebu excel in ensuring passenger safety. The high weighted mean scores for indicators such as accessibility of life-saving equipment, functionality of evacuation alarms, clear instructions, and availability of first-aid equipment indicate an “outstanding level of service”. Additionally, the assessment of holding areas and evacuation routes receiving excellent ratings further reinforces the commitment to safety. These findings suggest that passengers can trust and rely on the vessel services in Northern Cebu to provide a secure and well-prepared environment during their journeys.

The data reveals that vessel services in Northern Cebu excel in providing convenient experiences for passengers. The high weighted mean scores for indicators such as seating options, restroom cleanliness, boarding efficiency, crew member service, and boarding/disembarking convenience indicate an outstanding level of service. Moreover, the focus on maintaining a clean and orderly vessel further enhances the overall passenger experience. These findings suggest that vessel services in Northern Cebu prioritize convenience, aiming to attract and retain satisfied passengers through improved services and customer satisfaction.

The study also highlights the outstanding service level of vessel services in Northern Cebu in terms of cost-effectiveness. The high weighted mean scores for indicators such as cost-effective solutions, cost reduction, and aligning ticket prices with service quality demonstrate the value provided to passengers with a rating of “outstanding service level”. Additionally, the excellent ratings for reasonable pricing and affordability of onboard amenities indicate a focus on meeting passenger expectations. By continuing to prioritize cost-effectiveness, vessel services can attract and retain satisfied passengers, building a reputation for affordability and value in Northern Cebu.

This study reveals that vessel services in Northern Cebu have achieved an outstanding service level in terms of reliability. The high weighted mean scores for indicators related to vessel dependability, staff trust, secure environment, passenger sense of security, and effective maintenance demonstrate the commitment to providing a reliable travel experience. Additionally, the excellent ratings for minimal delays, limited mechanical issues, and staff knowledge further contribute to a positive perception of reliability. By continuing to prioritize reliability through measures such as minimizing delays and ensuring

regular maintenance, vessel services can enhance customer satisfaction and establish themselves as a dependable transportation option in Northern Cebu.

Recommendations.

1. Vessel passengers in Northern Cebu can benefit from the outstanding service levels identified in various aspects. They should continue utilizing vessel services, taking advantage of the convenient, cost-effective, and reliable transportation options available.
2. Passengers should prioritize safety during their journeys by familiarizing themselves with safety procedures, wearing life vests when necessary, and reporting any concerns to the vessel staff promptly.
3. Shipping companies should maintain and further enhance the outstanding service levels observed in the study by focusing on areas of improvement and addressing any issues raised by passengers.
4. They should prioritize passenger safety by regularly inspecting and maintaining safety equipment, conducting safety drills for the crew, and ensuring that clear instructions and guidance are provided to passengers.

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