



Readiness Analysis of Implementation of Online Ticketing Applications at Crossing Ports of Central Sulawesi Province

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Abstract. The Taipa Ferry Port is a commercial port that is very important in connecting Sulawesi Island with Kalimantan Island via waterways. The process of purchasing tickets at the Taipa Ferry Port still uses the manual method by queuing and waiting for a long time at the port counter, because the method is not yet used cashless as well as ticket applications on line. Apart from that, to improve the quality of services in ordering tickets to service users, and improve the safety and quality of crossing transportation, so that it is globally competitive. This research aims to determine the readiness of service users and port operators if a ticket application is implemented on line when purchasing tickets at the Taipa Ferry Port, Central Sulawesi Province. Based on the results of the analysis using the interview method and distributing digital questionnaires/google forms as a data collection tool with service user respondents, port operators and systems/IT from (service users and port operators), there are results with a percentage of 84.5% of service users and 81.1% of port operators who are ready if the application is implemented ticket on line at Taipa Ferry Harbor. For this reason, port organizers are expected to immediately implement ticket purchases using the ticket application on line and prepare ticket support facilities on line and socialize to the public regarding changes to the ticket purchasing system from manual to online using the ticket application on line.

Keywords: Application, Online, Tickets, Harbor.

1 Introduction

After the natural disaster that occurred in Palu City and Donggala Regency, Central Sulawesi on September 28 2018, many ports in Palu were damaged due to the impact of the earthquake which was accompanied by a tsunami which is now starting to be redeveloped. One of them is at the Taipa Ferry Port. As for the Taipa Ferry Port, the ticket purchasing system has not yet followed developments based on Minister of Transportation Regulation, PM Number 19 of 2020 concerning the Implementation of Electronic Ferry Transport Tickets so that the use of electronic media in purchasing tickets can be done at every port.

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Ticket purchasing activities at the Taipa Ferry Port use a manual ticket purchasing system, where service users purchase tickets through the ship operator. This makes many service users confused because ticket purchases are not managed in one ticket purchasing service managed by port operations officers. Apart from that, service users have to queue to buy tickets, because there are so many people using the crossing service.

One technology that is currently developing rapidly is internet technology. The internet can not only be used as a means to search for information, but can also be used as a medium for promotions, communication, transactions, etc. easily and quickly. This digitalization can improve the customer experience in the form of convenience, comfort, and a sense of security by providing standards for filling in complete personal data regarding insurance guarantees and completeness of crossing manifests. By expanding ferry ticket payment methods, we can form a world-class service commitment by providing excellent service to service users. Online ticketing "At the Taipa Ferry Port, Central Sulawesi Province."

2 Research Methodology

The research method used by the author in this research is a qualitative research method with descriptive data presentation, to describe and explain the research results at the Taipa Ferry Port, Central Sulawesi Province. This data consists of primary data obtained from survey results google forms with the system QR Codes and interviews with service users and organizers of the Taipa ferry port in Central Sulawesi province. Secondary data obtained from BPTD Class II Central Sulawesi, Central Sulawesi Central Statistics Agency and Central Sulawesi Class II Harbormaster and Port Authority Office.

The research instrument used by researchers is SOLAS (International Convention for the Safety of Life at Sea): SOLAS is a convention that regulates the safety of ships and lives at sea. It can also impact the temperature of the ship's main engines to ensure that the engine heating system operates safely and does not harm the crew or the environment.

The analysis carried out by the researcher is an analysis based on the research objectives which consist of factors that influence the readiness to implement the ticket application online, includes service user variables, systems/IT from service users and port operators, port operations and facilities/facilities that will be used as the basis for the concept of purchasing online tickets at Taipa Port, consisting of 4 variables, 3 sub variables, 2 sub system variables /IT service users and 27 research indicators.

Table of Variables, Sub Variables and Question Indicators

No.	Variable	Sub Variable	Indicator
		1. Satisfaction	1. Satisfaction with non-cash system ticket purchases.

1.	Service Users	2. Readiness	<ol style="list-style-type: none"> 1. Approval if switching to tickets on line. 2. Readiness of admin costs in implementing ticketson line. 3. Readiness to learn about purchasing ticketson linethrough-
		3. Knowledge	<ol style="list-style-type: none"> 1. Infomation about ticket applicationson line 2. Use of mobile phones to purchase ticketson line 3. Has non-cash payments (e-wallet, E-toll, ATM)
2.	Systems/IT Service Users	1. Action	<ol style="list-style-type: none"> 1. Use of electronic devices 2. Use of digital transaction services.
		2. Readiness	<ol style="list-style-type: none"> 1. Availability network Internet service users 2. Connection In-ternet best accord- ing to service users.
3.	Party Systems/IT Organizer Harbor	1. Action	<ol style="list-style-type: none"> 1. Procurement of tools for- system equipment
		2. Readiness	<ol style="list-style-type: none"> 1. Internet connection at Taipa Harbor 2. Substitute for another power source
4.	Operational Harbor An Fa- cilities/Facilities- supporter	1. Satisfaction	<ol style="list-style-type: none"> 1. Profit if ticket applied on line 2. Internal officer satisfac- tion Helped activity Harbor.
		2. Action	<ol style="list-style-type: none"> 1. Reduction of officers 2. Collaboration with other company providers 3. Socialization to public 4. Have non-cash payments (e- wallet, E-toll, ATM, etc)

		3. Readiness	<ol style="list-style-type: none"> 1. Ticket sales operations using online ticket applications 2. Taipa Port facilities and infrastructure like availability of information about useboarding pass/independent counter 3. Availability of facilities boarding passes / Independent counter, non-cash payment tool for ship tickets, ship ticket barcode scanning tool, barcode receipt printing tool
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3 Result and Discussion

3.1 User Data Analysis Results Only

- a. The readiness aspect of service users with a total of 100 respondents is in the highest category with a percentage of 98% agreeing that online boat ticket booking should be implemented.
- b. The knowledge aspect of service users is at a percentage of 86% of service users who understand and have made transactions using applications/online.
- c. The satisfaction aspect of service users at the Taipa Ferry Port is in the percentage category of 77.5% who feel that there are difficulties in purchasing tickets such as the presence of touts, long queues and limited time to purchase tickets.

3.2 Results of System/IT Data Analysis of Service Users

- a. The system/IT action aspect of service users with a total of 100 respondents is in the highest category, namely with a percentage of 94.5% of service users using communication/electronic devices in the form of mobile phones, laptops, etc. Apart from that, service users stated that they often make online purchase and payment transactions.
- b. The system/IT readiness aspect of service users is at a percentage of 68.5%, stating that the internet connection that service users use is stable and frequently used.

3.3 Results of System/IT Analysis of Port Organizers

- a. The port organizer's system/IT readiness aspect with a total of 8 respondents was in the highest category with a percentage of 83.3% stating that they were ready if an online ticket purchasing system was implemented by providing tools for system equipment. There are alternatives available if the electricity goes out, such as generators and internet connections at the Taipa ferry port.
- b. The system/IT action aspect of the port organizer with a percentage of 75% stated that compared to the manual ticket purchasing system, if an online-based system is implemented, it is estimated that it will be faster and at Taipa port there will be fewer power outages.
- c. The port organizer's system/IT service aspect with a percentage of 75% stated that using transactions via the ticket application would be easier to manage than directly/manually.

3.4 Operations and Supporting Facilities at the Port

- a. Aspects of operational satisfaction and supporting facilities for port organizers with a total of 10 respondents stated that 85% of port organizers would be helped if there was an implementation of an online-based ticket system and it would be profitable and improve the quality of service for companies and ports.
- b. The action aspect states that the port organizer agrees that there is cooperation with the provider, socializing the online ticket system to service users and there is no need for reductions in officers/managers at the Taipa Ferry Port.
- c. Aspects of operational readiness and supporting facilities for port operators with a percentage of 85% stated that port facilities and infrastructure were adequate and port operators and ship operators were ready to operate ticket sales using online ticket applications.

The results of this research show that the four variables (Service Users, Service User Systems/IT, Port Organizer Systems/IT, Port Operations and Supporting Facilities) have a partially positive and significant influence on the implementation variable of online ticket purchases, when scoring/assessing. The higher the given value, the better prepared the Taipa Ferry Port will be to implement online ticket purchases.

Based on the results of the data collected through distributing Google Form questionnaires, the general results of the analysis are as follows:

Question Aspect Analysis Table

No.	Variable	Sub Variable	Indicator Average (%)
1.	Service Users	1. Satisfaction	77.5
		2. Readiness	98
		3. Knowledge	86
2.	Service User System/IT	1. Action	94.5
		2. Readiness	68.5
3.	Systems/IT Party Organizer Harbor	1. Action	75
		2. Readiness	83.3
		3. Service	75
4.	Operational Harbor An Supporting facilities/facilities	1. Satisfaction	85
		2. Action	83.3
		3. Readiness	85

3.5 Discussion

From the data presentation and data analysis above, a proposed solution or solution to the problem was obtained, namely the readiness of service users in implementing the ticket application on line. Based on the presentation and analysis of the data above, the service user and system/IT service user variables are reviewed from various aspects resulting in 84.5% of service users understanding the ticket purchasing system and transactions online. online, have a stable internet connection so that service users can easily access or use the ticket application on line to carry out ship ticket purchase transactions at the Taipa Ferry Port wherever and whenever.

Readiness of the port organizer (port operations and supporting facilities at the port) in implementing the ticket application on line. Based on the presentation and analysis of the data above, 81.1% of the port operators, in terms of various aspects, are ready if there is an online ticket application implementation. Many people understand and understand transactions on line as well as ordering ship tickets directly on line is one of the advantages for the Taipa Ferry Port in preparing ticket applications on line, develop and implement ticket sales on line, as well as during the ticket application socialization process on line to the public through mass media such as: newspapers, radio, media on line, brochures and outdoor media. Then, it is necessary to update the system for ordering tickets and tools such as barcode scanner as a place to issue ship tickets. In this case, the system/IT from the port organizer is ready if online ticket booking is to be implemented on line.

4 Conclusion

4.1 Conclusion

Based on the research results from the data obtained, the conclusions that can be drawn from this research are as follows:

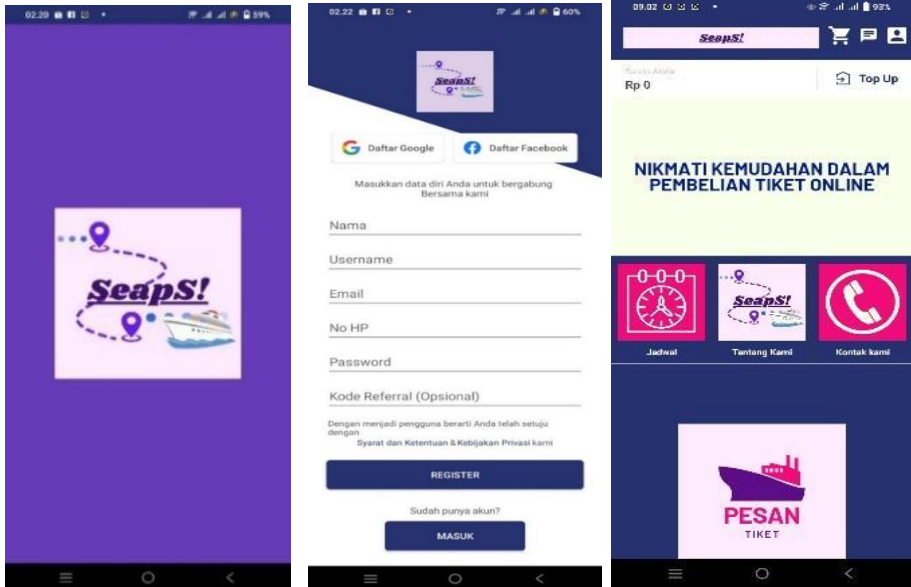
1. The readiness of service users in implementing the online ticket application has a positive effect on the level of readiness of service users and system/IT service users at a percentage of 83.2%. Knowledge of service users in the use of electronic tools and online transaction systems at presentation is 86%. Service user satisfaction with services at the Taipa ferry port is 77.5%. The action aspect of service users states that they often make online transactions/purchases using electronic devices with the highest category at a percentage of 94.5%. The results of data analysis from various aspects are 84.5% readiness to implement the online ticketing application from service users.
2. The readiness of the port organizers, consisting of systems/IT as well as port operations and supporting facilities at the port, in implementing the online ticket application has a positive influence with the readiness level in the 84.1% category. The actions of the port organizer in implementing the online ticket application had a positive effect with the readiness level in the 79.1% category. The satisfaction of the port organizers at a percentage of 85% states that the port organizers will be helped if there is an implementation of an online-based ticket system and will profitable and improve the quality of service for companies and ports. From the system/IT service aspect, the port organizer stated that using transactions via the ticket application would be easier to use compared to direct or manual purchases. As for the results of data analysis from various aspects, 81.1% of the port organizers are ready to implement the online ticketing application.

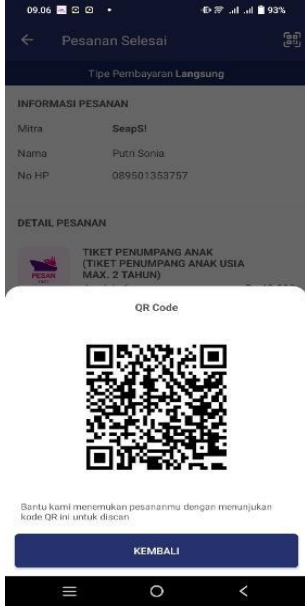
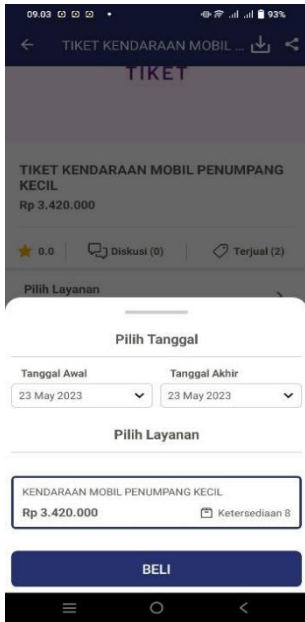
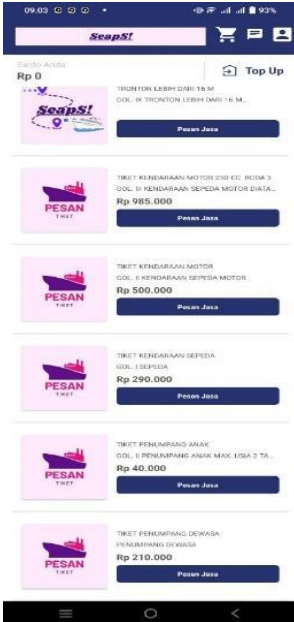
4.2 Suggestions

The suggestions that can be taken based on problem solving and conclusions from this research are as follows:

1. For service users
Service users should start preparing to study and search for information about online ticket ordering so that when it is implemented they can easily access online ticket orders at crossing ports independently. Apart from that, so that service users avoid illegal levies or brokers in the ticket purchasing process at the Taipa Ferry Port
2. For Port Operators
The port organizer, consisting of Systems/IT, operations and supporting facilities at the port, should start making submissions to the central government regarding a movement to change the non-cash ticket ordering system to online ticket ordering at the Taipa Ferry Port, in accordance with the questionnaire survey that has been distributed by the author and stated that he was ready to implement online tickets. For port operations and supporting facilities, it is

necessary to collaborate with other company providers in online innovation carried out at Taipa Port with applications that will be used and conducting outreach to the Taipa community about technology and online ticket ordering. Then, system updates are needed for ordering tickets and tools such as barcode scanners as a place to issue ship tickets. In this case too, the researcher prepared an online Ticketing Application, which the researcher created for the Taipa Ferry Port. The application is “Seaps!” Here is a picture of the application Seaps! :





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