
Analysis Of The Development Of The Sea Toll Information System (SITOLAUT) At PT Djakarta Lloyd Makassar Branch

Rifaldi¹⁾, Sitti Syamsiah²⁾, Nurul Hatifah³⁾

^{1,2,3)} Department of Port and shipping Management, Politeknik Ilmu Pelayaran Makassar

*Corresponding Author

Email : RIFALDI22.43.020@gmail.com

Abstract

The development of the SITOLAUT application was carried out as an effort to improve the effectiveness of the Sitollaut application, particularly in managing cargo bookings to maintain cargo monopoly. The changes made in the latest version of the application also changed the roles of users in the application, requiring adaptation from various users such as shippers, operators, and consignees. This study aims to identify the forms of development in the SITOLAUT application and analyse the impact of its use by operators at PT. Djakarta Lloyd's Makassar branch. The research method used was a descriptive qualitative approach with data collection techniques through direct observation and interviews with operators involved in using the application. The analysis was carried out through the stages of data reduction, data presentation, and conclusion drawing. The results of the study indicate that the development of the Sea Toll Information System Application (SITOLAUT) has proven to bring significant changes to the work processes of operators at PT. Djakarta Lloyd (Persero) Makassar Branch. This development includes the addition of export booking features, FCL/LCL search filters, and updates to the interface display to be more systematic and easy to use. Overall, the addition and improvement of these features have a positive impact on increasing the effectiveness and efficiency of operator work. This is reflected in improvements in aspects of system quality, information quality, service quality, system usage, user satisfaction, and additional benefits felt in supporting smooth operations. However, in the initial stages of implementation, obstacles were still encountered in the form of booking process failures due to changes in the role of the consignee, which requires an adaptation process from users. These findings indicate that the success of an information system is not only determined by improvements in technical features, but also by the readiness and understanding of users in operating the updated system.

Keywords: Application Development, PT Djakarta Lloyd, Use of The New Version of Sitollaut.

INTRODUCTION

The maritime sector plays a crucial role in Indonesia's economic development, given that the country is predominantly composed of territorial waters (Salamah, 2021). Efforts to optimize Indonesia's maritime potential have been further intensified through the implementation of the Sea Toll Program, which was designed to enhance interregional connectivity. The government has demonstrated greater commitment to this sector through the introduction of the Sea Toll Program in 2015 (Nainggolan, 2016). The program not only emphasizes the smooth distribution of goods but also serves as a key strategy for reducing price disparities of essential commodities across islands. Furthermore, the Sea Toll Program represents a strategic solution for regions facing logistical accessibility constraints, particularly disadvantaged, outermost, frontier, and border areas (3TP), as well as Eastern Indonesia Regions (KTI), which continue to lag behind in the sectors of education, healthcare, transportation, and communication (Utomo, 2025).

In its implementation, the Sea Toll Program requires the support of an integrated system capable of reaching all levels of society and delivering effective services. One of the innovations introduced to support this initiative is the Sea Toll Information System (SITOLAUT), which has been implemented since 2020. The application was redeveloped by the Ministry of Transportation to prevent cargo monopolization practices and improve the effectiveness of system utilization, resulting in changes to user roles through the addition of new features and interface updates. These changes require companies, particularly operators, to adapt to the new system, which may potentially affect the performance of operational staff. One of the issues that has emerged is the obstacle faced by operators at PT. Djakarta Lloyd in completing the booking process.

The urgency of this research arises from the application redevelopment that began to be implemented in February 2025. However, to date, there has been no study examining the impact of the application's use following its redevelopment. This research is therefore essential in providing an empirical overview of the implementation of the redeveloped SITOLAUT system. The findings are expected to serve as a reference for stakeholders in policy formulation and future system development.

Previous research conducted by Fahmi Faturrahman (2024) indicated that the SITOLAUT application, prior to its redevelopment, was sufficiently effective in contributing to the company's operational activities, although several operational challenges remained. In comparison with previous studies, the novelty of this research lies in its focus on the impact of application usage after the redevelopment process. This study is also supported by the author's direct experience as a SITOLAUT operator from August 2024 to August 2025, thereby providing an objective perspective based on firsthand field experience. Based on the explanation above, the author raises the research title: **“Analysis of the Development of the Sea Toll Information System (SITOLAUT) at PT. Djakarta Lloyd (Persero) Makassar Branch.”**

RESEARCH METHODS

This study employed a descriptive qualitative approach to analyze the implementation and impact of the latest version of the Sea Toll Information System (SITOLAUT) at PT. Djakarta Lloyd (Persero) Makassar Branch. The research focused on changes in features, interface design, and booking mechanisms, as well as their impacts on operators, including system quality, information quality, service quality, system usage, user satisfaction, and additional operational benefits. Data were collected through participatory observation conducted by the author as a SITOLAUT operator from February to July 2025, as well as interviews with operational staff serving as the main informant. Data analysis was carried out through stages of data collection, data reduction, qualitative data presentation, and conclusion drawing in order to obtain a comprehensive understanding of the effectiveness of the system redevelopment after implementation.

RESULTS AND DISCUSSION

Results

The results of the research conducted by the author based on the research problem formulation are as follows:

What are the forms of changes/developments in the Sea Toll Information System (SITOLAUT) application?

Based on the author's findings, the development of the SITOLAUT application involved the addition and modification of features as well as changes in user roles within the system. The changes in the SITOLAUT application after its redevelopment were identified through observations supported by documentation. The results of the observations comparing the old and new versions of SITOLAUT are presented in the following table:

Table 1. Observation Results of Application Changes

No.	Old Version of SITOLAUT	New Version of SITOLAUT
1	Booking data had to be created manually for operational purposes.	A feature was added to export or download booking data directly from the application.
2	Search filters were limited to consignee and shipper names only.	Additional filters were introduced, including booking code filters and FCL/LCL search filters.
3	The interface only displayed consignee names, shipper names, and origin and destination information.	A new interface design was introduced to facilitate tracking of booking progress information.
4	There was no information regarding the active status of the consignee's integrity pact.	A new interface feature was added to facilitate monitoring of the consignee's integrity pact status.
5	Shippers were not limited by payment deadlines after completing the booking process.	Payment deadlines for booking transactions were introduced for consignees.
6	There was no limitation on the number of containers that could be booked per consignee.	The number of containers per booking was limited to a maximum of five containers for each consignee.
7	Booking payments and vessel bookings were handled by the shipper.	Changes in user roles were implemented, whereby booking payments and vessel bookings are now carried out directly by the consignee.

Source: Personal Documentation

Booking Data Export/Download Feature

The new version of SITOLAUT has been equipped with a feature that enables users to export or download booking data directly from the system. In the previous version, operators were required to manually record and recap booking data, which demanded greater time and accuracy. The display of the old version prior to the redevelopment can be seen in Figure 1, *SITOLAUT Booking Page*. The following documentation presents the booking data export feature:

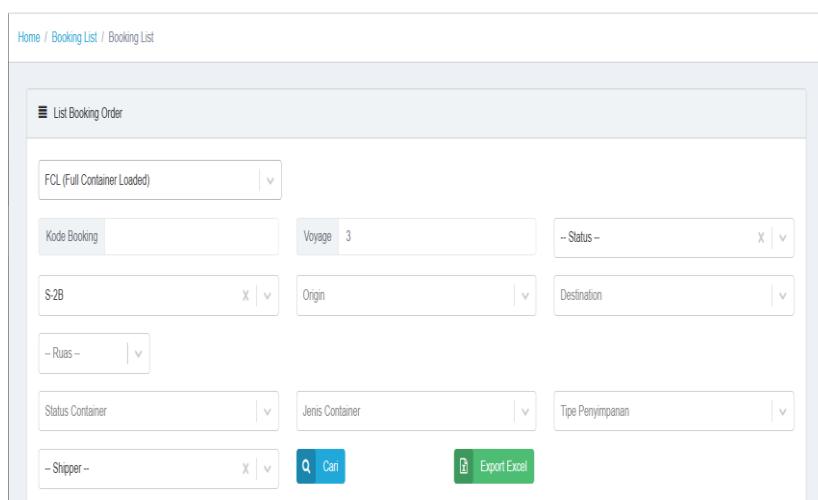


Figure 1. Booking Page After Redevelopment

Source: SITOLAUT Official Website

Addition of Booking Search Filters

The development of SITOLAUT was also marked by the addition of more comprehensive and specific search filter features, namely filters based on booking codes and cargo types, including FCL (Full Container Load) and LCL (Less than Container Load). The addition of these features aims to facilitate users in locating the required data more quickly and accurately, particularly as the volume and complexity of booking data continue to increase. In the previous version, data searches were limited to consignee and shipper names only, which often made it difficult for operators to trace data efficiently. With this enhancement, the search process has become more flexible and targeted, thereby improving the effectiveness of operators' work in managing booking data. The display of the previous version before the redevelopment can be seen in Figure 2, *SITOLAUT Booking Page*. The following documentation presents the booking data search filter feature:

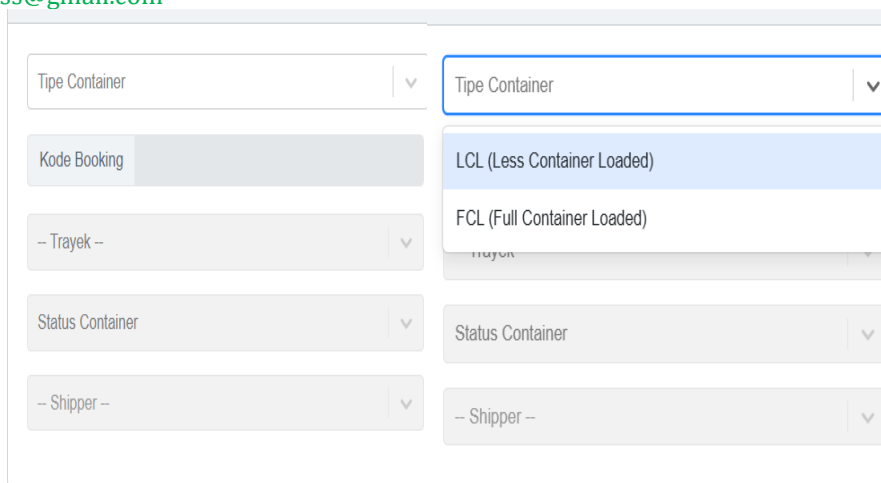


Figure 2. Booking Data Search Filter
 Source: SITOLAUT Official Website

Interface Changes for Booking Progress Tracking

In the new version of SITOLAUT, the application interface has been redesigned to make it easier for operators to monitor booking progress. Previously, the system only displayed basic information such as consignee name, shipper name, and origin and destination details. In the updated version, booking progress information can now be viewed more clearly and comprehensively. The following documentation presents the booking progress tracking interface:

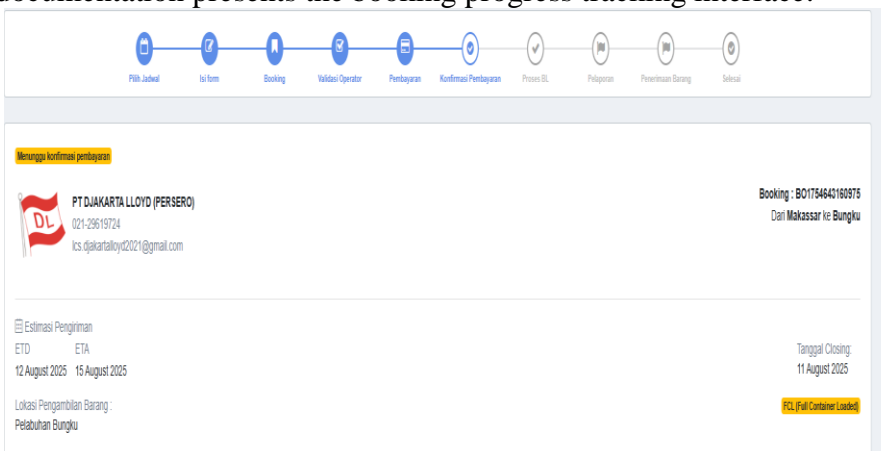


Figure 3. Interface Changes for Booking Progress Tracking
 Source: SITOLAUT Official Website

Information on the Active Status of the Consignee Integrity Pact

Another development introduced in the new SITOLAUT system is the availability of information regarding the active status of the consignee's integrity pact directly within the application. This feature enables operators to determine whether the integrity pact is still active or has expired without the need for additional checks outside the system. In the previous version, this information was unavailable, requiring operators to conduct separate verifications, particularly when booking failures occurred due to expired integrity pacts. With this enhancement, the validation process has become faster and helps reduce the potential for errors in decision-making. The display of the old version prior to redevelopment can be seen in Figure 4, *SITOLAUT Validation Page*. The following documentation presents the integrity pact status information:

SHIPPER : TOKO BANGUNAN CAHAYA BARU		
NPWP :	PIC Shipper	
JL. AHMAD HADIE, LAMBEREA, BUNGKU TENGAH, MOROWALI, SULAWESI TENGAH	BONDANANKY YASA	
	002377736449	
CONSIGNEE : TOKO CAHAYA BARU DUA		
	Status: aktif	
NPWP : 83.982.354.9-833.000	PIC Consignee	Pakta Integritas
TOKO CAHAYA BARU DUA	FITRIANI A DG PASABBI	Tanggal Expired Pakta Integritas : 06-02-2025
	082271491514	Status Pakta Integritas: Aktif

Figure 4. Information on the Active Status of the Integrity Pact
 Source: SITOLAUT Official Website

Implementation of Payment Time Limits

The new version of SITOLAUT implements a payment deadline policy requiring booking payments to be completed within three hours after the booking process is finalized. Unlike the previous version, which did not impose any payment time restrictions, this policy aims to improve the orderliness and efficiency of the booking process.

Limitation on the Number of Containers per Booking

In the latest version, the number of containers that may be booked is limited to a maximum of five containers per booking for each consignee. In the previous version, there was no restriction on the number of containers that could be booked.

The following documentation presents the booking results showing the five-container limitation:

No	Trayek	Jumlah kontainer	Nomor Order	Nama Kapal	Shipper	POL	POD
VOYAGE 5							
1	S-2B	5	B01741931957622	KENDHAGA NUSNTARA 15	PT ICHAL PUTRA MUTIARA	MAKASSAR	BUNGKU
2	S-2B	5	B01741939144536	KENDHAGA NUSNTARA 15	PT ICHAL PUTRA MUTIARA	MAKASSAR	BUNGKU
3	S-2B	5	B01742188906952	KENDHAGA NUSNTARA 15	PT ICHAL PUTRA MUTIARA	MAKASSAR	BUNGKU
4	S-2B	5	B01742189085952	KENDHAGA NUSNTARA 15	PT ICHAL PUTRA MUTIARA	MAKASSAR	BUNGKU
5	S-2B	3	B01742191569147	KENDHAGA NUSNTARA 15	PT. RESTU INDO SEJAHTERAH	MAKASSAR	KOLONEDALE
6	S-2B	5	B01742305341300	KENDHAGA NUSNTARA 15	TOKO PURNAMA BANGUNAN	MAKASSAR	BUNGKU
7	S-2B	5	B01742369259801	KENDHAGA NUSNTARA 15	TOKO BANGUNAN CAHAYA BARU	MAKASSAR	BUNGKU
8	S-2B	5	B01742370221848	KENDHAGA NUSNTARA 15	TOKO BANGUNAN CAHAYA BARU	MAKASSAR	BUNGKU
9	S-2B	5	B01742373669684	KENDHAGA NUSNTARA 15	TOKO BANGUNAN CAHAYA BARU	MAKASSAR	BUNGKU
10	S-2B	1	B01742448474436	KENDHAGA NUSNTARA 15	PT. Restu Indo Sejahterah	MAKASSAR	KOLONEDALE
11	S-2B	2	B01742459469556	KENDHAGA NUSNTARA 15	TOKO BANGUNAN CAHAYA BARU	MAKASSAR	BUNGKU
12	S-2B	3	B01742462871490	KENDHAGA NUSNTARA 15	TOKO "PURNAMA BANGUNAN"	MAKASSAR	BUNGKU
13	S-2B	5	B01742465750557	KENDHAGA NUSNTARA 15	TOKO BANGUNAN CAHAYA BARU	MAKASSAR	BUNGKU
14	S-2B	5	B01742469758084	KENDHAGA NUSNTARA 15	TOKO BANGUNAN CAHAYA BARU	MAKASSAR	BUNGKU
15	S-2B	1	B01742489154479	KENDHAGA NUSNTARA 15	PT PUNGTLUM SAMUDRA INDONESIA	MAKASSAR	BUNGKU
16	S-2B	2	B01742542532572	KENDHAGA NUSNTARA 15	TOKO "PURNAMA BANGUNAN"	MAKASSAR	BUNGKU
17	S-2B	5	B01742615258245	KENDHAGA NUSNTARA 15	TOKO "PURNAMA BANGUNAN"	MAKASSAR	BUNGKU
18	S-2B	5	B01742619351565	KENDHAGA NUSNTARA 15	TOKO "PURNAMA BANGUNAN"	MAKASSAR	BUNGKU
JUMLAH KONTAINER		52 TEUS					
JUMLAH TRANSIT DARI SURABAYA		4 TEUS					

Figure 5. Container Quantity Limitation

Source: Operational Data of PT. Djakarta Lloyd Makassar Branch

Changes in Payment and Vessel Booking Roles

Another significant change introduced in the new version of SITOLAUT is the shift in payment and vessel booking responsibilities. In the updated system, booking payments are made directly by the consignee, whereas in the previous version, both payment processing and vessel booking were handled by the shipper.

What are the impacts of using the SITOLAUT application for operators at PT. Djakarta Lloyd Makassar Branch after the redevelopment?

The impacts of using the SITOLAUT application for operators at PT. Djakarta Lloyd Makassar Branch after the redevelopment were identified through participatory observation and interviews conducted by the author. The findings are presented in the following table:

Table 2. Impacts of Using the New Version of the Application

No.	Use of the New SITOLAUT Version	New Impact
1	System Quality	The redevelopment of the SITOLAUT application improved the orderliness and ease of application use for operators, although changes in user roles required adjustments during the initial implementation stage.
2	Information Quality	The quality of information became more comprehensive and clearer, thereby assisting operators in monitoring the booking process more effectively.
3	Service Quality	The implementation of a five-container booking limit and changes in booking management roles encouraged more orderly and controlled services.
4	Users (Operators)	The frequency of application usage increased after the redevelopment due to the addition of new features that facilitated the completion of operational tasks.
5	User Satisfaction	In general, the redevelopment of the SITOLAUT application increased user satisfaction through improved usability and clearer information. Although adjustments to changes in payment and vessel booking roles still required an adaptation period, these changes did not reduce the primary benefits of the application redevelopment.
6	Additional Benefits	The limitation on the number of containers per booking improved service integrity and increased work effectiveness.

Source: Personal Documentation

In analyzing these findings, the author referred to the six dimensions of the Information System Success Model proposed by William H. DeLone and Ephraim R. McLean as the analytical framework to identify the impacts of SITOLAUT usage on operators after the application redevelopment at PT. Djakarta Lloyd (Persero).

System Quality

The redevelopment of SITOLAUT demonstrates improvements in system quality, particularly in terms of usability and adaptability. The addition of booking data export features, search filters, and interface redesigns has made it easier for operators to carry out their daily tasks, thereby increasing work speed and efficiency. In general, the informants considered the latest version of the application to be more supportive than the previous version, both in terms of its clearer interface and the completeness of features that facilitate operational activities.

On the other hand, the implementation of payment time limits, changes in payment responsibilities, and the transfer of vessel booking responsibilities to consignees indicate that the system has adapted operational workflows, particularly in efforts to reduce cargo monopolization. Informants generally stated that the addition of features such as booking data export and search filters greatly assisted in accommodating operational needs in the field and made operational processes more controlled.

Nevertheless, during the initial implementation stage, users required a substantial adaptation process. This was reflected in the increase in booking failures during the initial voyages after the redevelopment, which was caused by the lack of readiness and understanding among consignees regarding their new roles within the system. However, over time, as communication and user understanding improved, these obstacles gradually decreased. In subsequent voyages, the rate of booking failures declined, indicating that the system was progressively accepted and utilized more optimally. Overall, the redevelopment was considered to have a positive impact on system quality and operational work effectiveness.

The obstacles encountered were mainly caused by changes in user roles within the application, where consignees assumed responsibilities previously handled by shippers, such as payment processing and vessel booking. These changes required adaptation and readiness from consignees in

carrying out their new roles, which initially became one of the main causes of booking failures within the application. Informants also emphasized that user adaptation was a dominant factor influencing the smoothness of the booking process after the system redevelopment.

Efforts undertaken by operators to overcome these obstacles included maintaining active communication with consignees to assist in resolving unsuccessful bookings. Informants explained that direct assistance and communication became the most effective approaches in helping users understand the new workflow within the application. In addition, for failures caused by application errors or bugs, operators utilized the complaint-handling facility provided by the application developer, known as the HELPDESK. Informants stated that this feature was highly helpful in addressing technical issues, allowing problems to be resolved promptly and preventing prolonged disruptions.

Thus, based on the informants' explanations, it can be understood that the obstacles encountered originated not only from the system itself but also from user readiness. However, through intensive communication, guidance, and support facilities such as the HELPDESK, these barriers were gradually overcome, enabling operational processes to continue running effectively.

Information Quality

From the perspective of information quality after the SITOLAUT redevelopment, the author observed improvements in the completeness and relevance of the information presented. Information such as booking progress and the active status of consignee integrity pacts, which are now displayed directly within the system, provide convenience for operators in monitoring operational conditions in real time. Informants also considered the information available in the latest version to be more comprehensive than before, enabling data requirements to be fulfilled within a single system without the need for additional verification.

Furthermore, the information presented has become more structured and easier to understand, which has contributed to improved timeliness in the completion of booking processes. Informants explained that the clarity of displayed data, such as payment status and the validity period of integrity pacts, greatly assists in ensuring that every process complies with applicable regulations. With the availability of more comprehensive information, operators are able to work more efficiently and with fewer errors.

Moreover, informants stated that the availability of clear and integrated information within the system greatly facilitates operational decision-making. Operators no longer need to search for or confirm data from external sources, as all essential information is already available within the application. This has made decision-making processes faster, more accurate, and more responsive to operational conditions in the field.

Service Quality

The author found that changes in booking roles and the implementation of a maximum limit of five containers per booking affected service quality, particularly in terms of reliability and assurance. The implementation of these policies contributed to creating a more orderly, controlled, and equitable service process in cargo distribution. Informants also considered that the application changes supported improvements in operator performance through the introduction of new features, although an adjustment process was still required during the early implementation stage.

In addition, the active role of operators in providing guidance and assistance to consignees reflects the presence of empathy in service delivery. Informants explained that after the redevelopment of the application, operators more frequently provided assistance, particularly regarding payment and booking procedures, in order to ensure that service users did not encounter errors in using the system. This indicates that improvements in service quality originated not only from the system itself but also from the active involvement of operators in supporting users.

Regarding the limitation of a maximum of five containers per booking, informants stated that this policy did not become a significant obstacle, especially in regions with a large number of consignees. However, in areas where the number of consignees was limited and container demand was high, users were required to make repeated bookings to fulfill their needs. Despite this condition,

it did not significantly affect operators' workloads. Informants emphasized that this limitation was part of an effort to improve fairness in the distribution of sea toll subsidy quotas, and compared to the adjustments required for new features and interface changes, the policy did not substantially increase workloads.

System Use

The redevelopment of SITOLAUT influenced the pattern of application usage among operators. With the addition of new features and a more informative interface, both the frequency and intensity of system usage increased, as operators became increasingly dependent on the application in completing operational tasks. Informants stated that SITOLAUT is used almost every day, considering that all booking processes are carried out through the application.

Moreover, the application has become a highly important component of operational work. Informants emphasized that all data and processes are now integrated within SITOLAUT, resulting in a higher level of dependence on the system. The enhanced features available in the application were also considered highly beneficial in accelerating the completion of operational staff tasks, allowing work processes to become more efficient and well-organized.

User Satisfaction

The redevelopment of SITOLAUT increased operator satisfaction, particularly in terms of work effectiveness and efficiency. Processes that were previously performed manually can now be completed more quickly due to the availability of new features within the system. Informants stated that, overall, operators were satisfied with the application redevelopment because work processes became lighter, more structured, and more efficient in implementation.

Nevertheless, during the initial implementation stage, several challenges were encountered, such as booking cancellations caused by delayed payments related to changes in the consignee's role in payment and vessel booking processes, as well as the introduction of payment deadlines. Informants explained that these obstacles were a normal part of the adjustment process commonly experienced when a new system is first implemented.

Furthermore, informants emphasized that the obstacles encountered did not reduce the overall benefits of the system. Compared to the initial barriers, the benefits obtained were considered significantly greater. Over time, service users gradually understood the workflow and applicable regulations, resulting in a decline in operational issues. Ultimately, the redevelopment of SITOLAUT had a positive impact in improving work efficiency and creating more orderly and controlled operational processes.

Net Benefits

The redevelopment of SITOLAUT provided additional benefits for the company, particularly in improving service effectiveness and integrity. The implementation of a maximum limit of five containers per consignee, along with changes in booking responsibilities, contributed to a fairer and more equitable distribution of quotas. This policy also helped reduce the potential for monopolization by certain parties, thereby making cargo distribution processes more transparent and controlled. Informants stated that these changes positively affected the orderliness of service processes, which became more organized and structured.

In addition, the introduction of new features within the application improved the effectiveness of operational staff work. Informants explained that several tasks previously performed manually have now been accommodated within the system, enabling them to be completed more quickly and efficiently. This directly contributed to improvements in overall operational performance, as work processes became simpler, more integrated, and less prone to errors.

Therefore, based on the informants' statements, the redevelopment of SITOLAUT not only improved system and service quality but also provided tangible benefits in supporting work effectiveness and maintaining integrity within operational processes.

Discussion

Based on the findings of this study, which were formulated around the questions of what forms of changes or developments were introduced in the Sea Toll Information System (SITOLAUT) application and how the use of the SITOLAUT application affected operators at PT. Djakarta Lloyd Makassar Branch after the redevelopment, the results indicate that the SITOLAUT application development brought significant changes that affected operators' work processes. Overall, the modifications to the application, including the addition of export booking features, FCL/LCL data search filters, and the new interface design, contributed positively to operational activities. These findings are supported by previous research conducted by Faturrahman (2024), which stated that the previous version of the SITOLAUT application was already sufficiently effective in supporting operational activities, as well as by Salva et al. (2023), who found that the implementation of the SITOLAUT application at PT. Pelayaran Pelangi Tunggal Ika was successfully carried out. These studies reinforce the argument that the redevelopment and enhancement of the application have improved the effectiveness of operators' work at PT. Djakarta Lloyd Makassar Branch through the addition of new features.

However, during the initial stage of implementation, several obstacles were encountered due to changes in the consignee role within the application. The consignee role was assigned broader responsibilities, which resulted in numerous booking failures during the early phase of application usage. This finding differs from the previous study conducted by Faturrahman (2024), which identified booking failures in the pre-development version of the application as being caused primarily by delayed payment confirmations from shippers.

In contrast, the findings of this study indicate that the obstacles experienced after the redevelopment were mainly caused by consignees requiring adaptation to the vessel booking process and the process of uploading payment proof, which consequently led to booking failures within the application.

Although the causes of the obstacles differ from those identified in previous studies, this research still shares similarities in terms of problem-solving approaches. While Faturrahman (2024) emphasized active communication in overcoming operational constraints, this study highlights the importance of assistance, effective communication, and coordination with the helpdesk in resolving issues. Therefore, this research expands the perspective of previous studies by demonstrating that post-development obstacles in the SITOLAUT application are no longer limited to delayed payment confirmations by shippers, but also stem from changes in the consignee's role. Furthermore, this study emphasizes that problem resolution can be achieved not only through effective communication but also through coordination with the helpdesk support system.

Overall, this study provides both theoretical and practical contributions. Theoretically, it enriches the discussion on information system development dynamics, particularly during the post-implementation and post-development phases. The findings indicate that system effectiveness is dynamic in nature and may fluctuate during the early stages of change before eventually reaching operational stability. Practically, this study implies that every system development process should be accompanied by adequate socialization strategies, training, and technical support to ensure that the transition process does not disrupt the company's operational activities.

Thus, this study not only complements previous research that focused on conditions prior to system redevelopment, but also presents new findings regarding the impact of changes in user roles within digital systems. The study confirms that the development of the SITOLAUT application represents a progressive step toward improving operational quality and preventing cargo monopolization practices. Nevertheless, its long-term success depends heavily on the organization's ability to manage user adaptation and provide sustainable support mechanisms.

CONCLUSION

Based on the research findings, the development of the Sea Toll Information System (SITOLAUT) application has proven to bring significant changes to the operators' work processes at PT. Djakarta Lloyd (Persero) Makassar Branch. The development included the addition of export booking features, FCL/LCL search filters, and interface updates that are more systematic and user-friendly. Overall, these feature enhancements and improvements have had a positive impact on increasing the effectiveness and efficiency of operators' work. This is reflected in improvements in system quality, information quality, service quality, system usage, user satisfaction, and the additional benefits perceived in supporting operational activities. Nevertheless, during the initial stage of implementation, obstacles were still encountered, particularly booking process failures caused by changes in the consignee role, which required users to undergo an adaptation process. These findings indicate that the success of an information system is determined not only by technical feature improvements, but also by the readiness and understanding of users in operating the updated system.

REFERENCES

- Fuady, M. S. (2023). *Evaluasi Kebijakan Tol Laut*. Journal of Law, Administration, and Social Science, 3(2a), 284-293.
- Faturrahman, F. (2024). *Analisis Penggunaan Sistem Informasi Tol Laut (SITOLAUT) di PT. Djakarta Lloyd (Persero) Cabang Makassar* (Skripsi, Politeknik Ilmu Pelayaran Makassar)
- Jenar, S. (2022). *Analisis Penetapan Daerah Tertinggal Tahun 2020-2024 Dan Rencana Aksi Nasional Percepatan Pembangunan Daerah Tertinggal Tahun 2020*. Indonesia Law Reform Journal, 2(1), 1-17.
- Juliartini, N. L. T., Wati, N. W. A. E., & Pratiwi, N. P. T. W. (2023). *Dampak Kecanggihan Teknologi, Kemampuan Teknik Personal, dan Pengalaman Kerja Terhadap Efektivitas Sistem Informasi Akuntansi di Lembaga Perkreditan Desa (Lpd) SeKecamatan Denpasar Selatan*. Hita Akuntansi dan Keuangan, 4(2), 76-83.
- Kemendag. (2025). *Sistem Informasi Gerai Maritim - Kementerian Perdagangan RI*.
- Kemendesa. (11 Mei 2020). *Kementerian Desa dan Pembangunan Daerah Tertinggal*.
- Kemhub. (2020). *Luncurkan Aplikasi SITOLAUT, Layanan Tol Laut Bisa Diakses Dengan Mudah*. Dephub.go.id.
- Korda, B. B., & Rachmawati, R. (2022). *Influence of organizational culture on employee performance mediated by job satisfaction and employee commitment*. Jurnal Organisasi Dan Manajemen, 18(2), 57-73.
- Krisdiyanti, F. F., Rianto, B., & Lubis, L. (2023). *Implementation of Sea Highway Policy*. JKMP (Jurnal Kebijakan dan Manajemen Publik), 11(1), 8-15.
- Kumparan. (24 Juli 2023). *Mengetahui Arti Tol Laut dalam Pembangunan di Indonesia*. Berita Terkini.
- Malisan, J., Sadjiono, I., Wibowo, T. A., & Djulis, S. (2017). *Kajian potensi pengembangan pelayaran rakyat sebagai sarana angkutan barang dalam rangka mendukung tol laut di Kawasan Indonesia Timur*. Meteor STIP Marunda, 10(1), 22-30.
- Mubarak, M., Nuralamsyah, N., & Hanif, M. R. (2019). *Analisa Kebijakan Tol Laut dan Dampaknya pada Efektivitas Tol Laut*. Riset Sains dan Teknologi Kelautan, 2(1), 124-128.
- Meilani, L., Suroso, A. I., & Yulianti, L. N. (2020). *Evaluasi Keberhasilan Sistem Informasi Akademik dengan Pendekatan Model DeLone dan McLean*. JURNAL SISTEM INFORMASI BISNIS, 10(2), 137.
- Nainggolan, P. P. (2016). *Kebijakan poros maritim dunia Joko Widodo dan implikasi internasionalnya*. Jurnal Politica Dinamika Masalah Politik Dalam Negeri dan Hubungan Internasional, 6(2).
- Nur, H. I., Achmadi, T. & Verdifauzi, A. (2020). *Optimalisasi Program Tol Laut terhadap Penurunan*

- Disparitas Harga: Suatu Tinjauan Analisis*. Jurnal Penelitian Transportasi Laut, 22(1), pp.1–12.
- Peraturan Menteri Perhubungan Republik Indonesia Nomor 93 Tahun 2013 tentang Penyelenggaraan dan Pengusahaan Angkutan Laut.
- Peraturan Menteri Perhubungan Republik Indonesia PM 5 Tahun 2024 Tentang Penyelenggaraan Kewajiban Pelayanan Publik Untuk Angkutan Barang di Laut.
- Peraturan Presiden Republik Indonesia Nomor 63 Tahun 2020 Tentang Penetapan Daerah Tertinggal Tahun 2020-2024.
- Peraturan Presiden Republik Indonesia Nomor 27 Tahun 2021 Tentang Penyelenggaraan Kewajiban Pelayanan Publik Untuk Angkutan Barang dari dan ke Daerah Tertinggal, Terpencil, Terluar dan Perbatasan.
- Salamah, U. (2021). *Perlunya Optimalisasi Tol Laut sebagai sarana penunjang peningkatan pembangunan ekonomi Indonesia*. Jurnal Pena Wimaya, 1(1).
- Salva, F., Pujo, E., & Nasihah, A. (2023). *Implementasi Aplikasi SITOLAUT di PT Pelayaran Tunggal Ika Surabaya: Implementation of the SITOLAUT Application at PT Pelayaran Tunggal Ika Surabaya*. Jurnal Matemar: Manajemen dan Teknologi Maritim, 4(2).
- Selasdini, V. (2023). Dampak Program Tol Laut terhadap Ketersediaan Logistik di Wilayah Tertinggal, Terpencil, Terluar dan Perbatasan (T3P) di Indonesia. Berkala Forum Studi Transportasi antar Perguruan Tinggi, Vol.1, No.1, pp. 40-48.
- Trisno, I.B., Darmanto, D., & Elvianto, D.F (2022). Aplikasi Sistem Informasi Manajemen Pengiriman Barang PT. GST. *Jurnal Teknologi Informasi Dan Ilmu Komputer* 9(5)933.
- Undang-Undang Republik Indonesia Nomor 17 Tahun 2008 Tentang Pelayaran.
- Utomo, P. B. (2025). *Sistem Logistik Ikan Nasional: Quo Vadis?*. Nas Media Pustaka.
- Warkula, Y. Z. (2022). Analisis Dampak Pendapatan Asli Daerah 3T Terhadap Tingkat Pertumbuhan Ekonomi Dengan Variabel Retribusi Daerah Sebagai Variabel Moderating Periode 2018–2020. *Accounting Research Unit (ARU Journal)*, 3(1), 21-30.
- Wati,S. (2022). *Analisis Dampak Pembatalan Keberangkatan Jemaah Haji Tahun 2020 Di Kementerian Agama Kota Serang* (Skripsi, Universitas Islam Negeri Syarif Hidayatullah Jakarta)
- Yunianto, I., Iqbal Nur, H., Wahyu Ardhi, E., & Prima Adhitya, B. (2019). Optimalisasi Model Jaringan Rute MultiportTol Laut di Negara Kepulauan: Studi Kasus Evaluasi Rute di Maluku dan Papua Bagian Selatan. Jurnal Penelitian Transportasi Laut, 21(2), 83-95.