

Implementation of the Trans Tangerang Ayo Application in Improving Public Transportation Services in Tangerang City

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ABSTRACT

KEYWORDS

Trans Tangerang Ayo Application, Management Information System, DeLone and McLean Success Model, Public Transportation Services.

This study examines the implementation of the Trans Tangerang Ayo application in improving public transportation services in Tangerang City. Rapid urban development and increasing population mobility have intensified the demand for efficient, accessible, and integrated transportation systems. In response, the local government introduced a digital-based Bus Rapid Transit (BRT) service supported by the Trans Tangerang Ayo application to enhance service quality and user experience. The objective of this research is to analyze the effectiveness of the application using the DeLone and McLean Information System Success Model. A qualitative descriptive approach was employed, involving data collection through interviews, observations, and documentation with 11 purposively selected informants, including managers, staff, drivers, and users. Data were analyzed using the Miles, Huberman, and Saldana interactive model. The findings reveal that the application has generally improved public transportation services by providing real-time information on routes, schedules, and bus locations, thereby enhancing travel planning and reducing waiting times. However, several limitations persist, such as system instability, uneven accessibility, limited digital literacy among users, and inconsistencies in real-time data updates. In conclusion, while the Trans Tangerang Ayo application has contributed positively to service efficiency, user satisfaction, and mobility, further improvements in system reliability, inclusivity, and user education are necessary to optimize its overall effectiveness and sustainability.

INTRODUCTION

The progress of development in an area from time to time makes it what is needed by the community in carrying out daily activities. In the development that continues to develop in this era of globalization, the more advanced and developing the life of urban people, the level of community mobility in their social activities can also develop (Kusumawaty & Susilo, 2020). However, development developments can also make it attractive for the area. In general, development is one of the indicators of the progress of an area of Tangerang City, as heading in a better direction in the future.

The development of the transportation system in a region is influenced by various factors, such as demographic, geographical, and economic growth conditions. To support this development, adequate infrastructure development is needed. Good infrastructure will encourage smooth mobility and distribution, as well as be an attraction for investors to invest (Kartiasih, F. 2019). Investors tend to choose areas with a high level of accessibility, because it supports the growth of economic activities optimally. Therefore, in development in an area, the use of transportation itself is used to make it easier for humans to carry out daily activities.

In Sahara research, et.al (2023) seen from an economic perspective, this condition provides advantages so it needs to be supported by adequate transportation facilities and infrastructure, from the continuity of economic activities can also be closely related to social

activities, both of which need mutual support from the transportation system. Transportation itself is a form of public service that plays an important role in supporting the continuity of various activities in a city (Pratiwi et al., 2022). Therefore, every community activity will never be separated from mobility that requires support from a support system that can support the smooth running of this movement, namely the public transportation system. Because this in the existence of transportation itself has its main function as a system that allows the movement of people and goods from one place to another as a destination.

The Tangerang City Government strives to serve the community by offering transportation services, as it is known that public transportation is a public object, so the government's role is needed as one of the development of the public transportation system. In this case, the government has the responsibility to be able to provide a standardized form of public transportation, both in terms of facilities, safety, and reachable by the entire community. As stated in Law No. 22 of 2009 concerning Road Traffic and Transportation, there is such a policy. That the government, both central and provincial, in this case, the Tangerang City Government must be able to facilitate and supervise all forms of bus-based public transportation in the urban agglomeration area of Tangerang. Mass public transportation without administrative restrictions is called agglomeration urban transportation, to reduce traffic congestion that makes it the main access route to urban centers. The existence of this urban transportation agglomeration seeks to integrate mobility between regions, while the development of all urban transportation agglomerations can aim to provide access to people who can receive regional information as well as travel attractions in the Tangerang city area (Margaretha et al., 2025).

Basically, every human being needs service, both in service that cannot be separated in social life. The community demands quality services provided by the government, so that service activities have a great influence on the achievement of quality and smooth activities in society. However, this service provided is not only providing assistance to customer needs, but also providing good service to all customers as part of the needs in daily life in the community. The growth in the number of people in Tangerang City in recent years has had a direct consequence of the increasing need for physical mobility, which as a buffer city of the capital and center in economic activities, education, and settlements has experienced the dynamics of population movement that is getting higher every day (Ningsih, 2025).

Based on data from the Central Statistics Agency (BPS) of Tangerang City, the number of people in Tangerang City continues to grow from year to year. In 2020, there were 153,859 people, increasing to 165,575 people in 2023, and rising again to 166,324 people in 2024. This growth shows that Tangerang City is an urban area that continues to develop. However, the absolute population does not fully reflect the actual transportation needs, because these needs are more influenced by the level of community mobility, especially daily mobility across regions (commuters).

Population mobility data shows significant dynamics. In 2019, the mobility rate was recorded at 12.40%, then decreased to 6.93% in the 2020-2022 period due to activity restrictions during the Covid-19 pandemic. After that, mobility increased again to 18% in 2023 and 18.20% in 2024. This increase indicates a recovery in community activities after the pandemic. When compared to population growth, it can be seen that the increase in mobility

goes hand in hand, but the two have different meanings, where the population describes the demographic aspect, while the mobility reflects the real movement of the community.

This condition shows that the challenges of transportation services in Tangerang City are not only caused by the growth of the population, but also by the increasing intensity of community movements. High mobility, especially during rush hour, puts great pressure on urban transportation systems. Therefore, a transportation system is needed that is not only adequate in terms of capacity, but also able to provide certainty, comfort, and ease of access for users.

In responding to these challenges, the Tangerang City Government presents innovations through the Trans Tangerang Ayo Bus Rapid Transit (BRT) service and the development of supporting digital applications. The presence of this service aims to improve the quality of public transportation that is more integrated, efficient, and modern. However, in its implementation, there are still several obstacles such as limited information, incompatibility of services in the field, and the lack of optimal use of applications. Therefore, continuous evaluation and development efforts are needed so that public transportation services in Tangerang City can be more optimal and able to meet the needs of the community as a whole.

METHOD

The type of research used in this study is a descriptive method with a qualitative approach. This approach was chosen because it was able to provide a comprehensive overview of the implementation of the Trans Tangerang Ayo application in improving public transportation services in Tangerang City. Through a qualitative approach, researchers can understand real conditions in the field based on empirical data obtained from interviews, observations, and documentation. Thus, this research not only focuses on the results, but also on the processes and phenomena that occur in the application of the application.

The population in this study is all parties involved in the implementation and use of the Trans Tangerang Ayo application, both from the management element and service users. The sample or informant was determined using the purposive sampling technique, which is the selection of informants based on certain criteria relevant to the research objectives. The number of informants in this study is 11 people, consisting of internal parties such as managers, heads of fields, IT staff, and external parties such as application users, officers, and BRT drivers. The selection of this informant aims to obtain in-depth, accurate, and in accordance with research needs.

The data collection technique in this study uses three main methods, namely interviews, observations, and documentation. Interviews are conducted in a structured manner with informants who have direct involvement in the application application, in order to dig up information in depth. Observation was carried out by directly observing conditions in the field related to the use of transportation applications and services. Meanwhile, documentation is carried out by collecting various supporting documents such as official reports, operational data, and other relevant sources, in order to strengthen and validate the data obtained.

The data analysis technique used in this study refers to the Miles, Huberman, and Saldana models which are carried out in an interactive and sustainable manner. The analysis process includes four stages, namely data collection, data reduction, data presentation, and conclusion drawing and verification. The data that has been collected is then selected and focused in

accordance with the purpose of the research, presented in the form of a descriptive narrative, and finally conclusions are drawn that have gone through a verification process to ensure the validity and credibility of the research results. With this technique, it is hoped that a clear picture will be obtained regarding the effectiveness of the application in improving public transportation services.

RESULT AND DISCUSSION

Research Results

The results of this research are factual data obtained in the field through data collection techniques in the form of interviews, observations, and documentation studies. The research analysis is based on the management information system theory according to DeLone & McLean (2003) which is used to assess the application of Trans Tangerang Ayo as a management information system in public transportation services. This theory includes several main indicators, namely: system quality, information quality, service quality, use, user satisfaction, and net benefits. This research can examine the performance and utilization of the features of the Trans Tangerang Ayo application and their suitability with operational conditions in the field.

1. System Quality

According to DeLone and McLean (2003), system quality is used to assess the extent to which the technical performance of an information system is able to support user needs. In the context of the implementation of the Trans Tangerang Ayo application in improving public transportation services in Tangerang City, the theory of system quality is related to the ease of application users, access speed, system stability, and the reliability of the available features. In this case, the quality of the Trans Tangerang Ayo application system is reflected in the ability of users to operate the application independently to access transportation service information, such as route search, schedule and estimated bus arrival time. A system that is easy to understand and rarely experiences technical glitches will help users in utilizing public transportation services more effectively. Therefore, the quality of the system is an important indicator in assessing the success of the implementation of the Trans Tangerang Ayo application, because a quality system will support the smooth running of services and improve the user experience in using public transportation in Tangerang City.

Judging from the extent to which the people of Tangerang City know and understand the information system for public transportation services of the Trans Tangerang Ayo application. The following are statements from several informants related to system quality indicators: The first informant as the Business and Planning Manager of PT. Tangerang Nusantara Global provided a statement regarding the quality of the Trans Tangerang Ayo Application system in improving public transportation services in Tangerang City as follows:

"The Trans Tangerang Ayo application is designed as a public transportation service information system to facilitate use (user friendly), system reliability, and the availability of key features in accessing transportation service information. Application features are constantly updated so that the system continues to run optimally and is able to adapt to user needs and is considered quite effective. However, there are still challenges such as low user awareness of applications and limited access to technology devices in some communities. Therefore, we continue to strive to socialize and educate students and the general public to

increase the sustainable use of the application system. so that the quality of the Trans Tangerang Ayo application system can be more optimal in supporting public transportation services." (interview with the first informant as Business and Planning Manager of PT. Tangerang Nusantara Global on November 27, 2025).

In addition, from the statement above, it can be seen that the manager has a fairly comprehensive understanding of the quality of the Trans Tangerang Ayo application system. However, managers not only understand the function of the application as a medium of transportation information providers, but also view it as a public service information system that must have user convenience, reliability, and adaptability to user needs. In the update of features and socialization efforts, it shows that the quality of the system is seen as an aspect that must continue to be improved so that the application continues to run optimally and supports the improvement of public transportation services in Tangerang City.

Based on the above interview with the first informant, the Business and Planning Manager of PT. Tangerang Nusantara Global shows a good understanding of the importance of system quality in the implementation of the Trans Tangerang Ayo application, as emphasized in the success model of the management information system according to DeLone & McLean (2003). In line with the above statement, the second informant as the Head of Urban Transportation of PT. Tangerang Nusantara Global added that:

"The existence of the Trans Tangerang Ayo application program shows that the quality of the system has functioned quite well in providing basic information on public transportation services, such as route info, operational schedules, and the location of the nearest bus point. In the application system, it is considered to be quite easy for users to access in supporting public transportation services. However, the quality of the system still needs to be improved, especially related to the accuracy and updating of operational information in real-time, as well as the optimization of features that are still affected by infrastructure and budget limitations. Therefore, the development of the system in a sustainable manner is needed so that the application can support the improvement of public transportation services in Tangerang City more optimally." (The results of an interview with the second informant as the Head of Urban Transportation of PT. TNG on November 3, 2025)

From the results of the interview above by the Head of Urban Transportation PT. Tangerang Nusantara Global shows that the quality of the system, the Trans Tangerang Ayo application has been designed to provide transportation information services that are easily accessible and support the basic needs of users, such as route info, operational schedules and the location of the nearest bus point. The application system is considered quite good in terms of ease of use and accessibility of information. However, there is still a system quality that is not fully optimal, especially in the reliability and updating of operational information in real-time as well as the flexibility of service development which is still affected by infrastructure and budget limitations. This condition shows that improving the quality of the system is still needed so that the Trans Tangerang Ayo application can function more effectively in supporting public transportation services and community mobility in Tangerang City.

Another opinion conveyed by the third Informant as the Application and IT Staff of PT. Tangerang Nusantara Global stated the same thing as follows: "When viewed in terms of information systems, the Trans Tangerang Ayo application is indeed designed as a digital platform to support BRT services in Tangerang City to be more modern and integrated. This

application is made to be easy to use, responsive and accessible at any time by the public. In general, this app is quite helpful because its main features work well and are not difficult to operate. However, there are still some technical obstacles such as network outages, system maintenance, or delays in real-time data updates. In addition, differences in device quality and user internet stability also affect the user experience. Even in terms of ease of use and accessibility, this application is enough to support the needs of the community, it's just that socialization and education still need to be improved." (The results of the interview above with the ninth informant as the Application and IT Staff of PT. Tangerang Nusantara Global on February 25, 2026)

The fourth to ninth informants as the General Public of Trans Tangerang Application Users said about the understanding of the program as follows: "Regarding this program, the Trans Tangerang Ayo application provided by the government to help and facilitate access to bus service information, such as travel route information, the position of the nearest bus point in real-time, as well as estimated bus arrival time so that the trip can be planned more efficiently and there is less waiting in stop. In terms of ease of use and functionality, this application is considered to be quite helpful for various groups, but there are still problems with system quality obstacles in network stability, slow application response and limited route service capabilities for some users, so the benefits have not been felt evenly." (interview with the third to eighth informants as the General Public of Trans Tangerang Ayo Users, Tangerang City on November 14, 2025).

Some of the statements from the informants, it can be seen that in terms of system quality for the Trans Tangerang Ayo application, it has been formed quite well, because they know the main function of the application as a means of obtaining information on travel routes, the position of the nearest bus gathering point, and the estimated time of bus arrival to facilitate and support travel planning more efficiently. Thus, this has shown that the application system has met the aspects of functionality and ease of use as a public transportation information system. However, the quality of the application system is not fully optimal because it is still influenced by technical constraints, such as network stability, application response speed in information accuracy, and the ability of users to operate digital technology, so that the benefits of the program have not been fully felt equally by all community groups. This condition shows that improving system quality is still needed so that the application can operate more reliably and consistently according to conditions in the field.

The Tenth Informant as an officer stated as follows: "The Trans Tangerang Ayo application is understood as a community service tool in facilitating access to information on bus routes, schedules, and positions, so that the trip becomes more planned. However, its use is still limited because it relies heavily on the internet and GPS networks which are sometimes less stable." (The results of the interview above with the tenth informant as the Trans Tangerang Ayo BRT Officer on November 15, 2025).

The eleventh informant as the driver stated the same thing: "The expansion of this application has become more effective and more interested are seen as a supporting media that can help passengers obtain certainty of information before using the BRT service. With this information, passenger waiting time can be emphasized, through this program it can be directed to all BRT users who use the application tend to have prepared themselves before the bus arrives, so that services at the bus stop run faster and more regularly." (The results of the

interview above with the tenth informant as the Trans Tangerang Ayo BRT Driver on November 15, 2025)

From the informant's statement, it can be seen that the system quality side of the Trans Tangerang Ayo application acts as a supporting information system that provides certainty of information for passengers before using the BRT service. There is information available about travel route info, operational schedules, and estimated bus arrival times to help users prepare for their trip better. So that waiting time at the bus stop can be minimized and the flow of services becomes more orderly. With this condition, it has been shown that this application system not only functions as an information provider, but can also support operational efficiency and service convenience through the utilization of available system features

The following interview results show that both the public and managers can understand the Trans Tangerang Ayo application as a transportation service information system designed to facilitate quick and structured access to information. In this understanding, it reflects that the quality of the application system has fulfilled the basic function in supporting BRT services. In addition, there are documentation results related to regulations on the Assignment to Tangerang Nusantara Global Limited Liability Companies in Urban Transportation Management which also strengthen the role of applications as part of an integrated public transportation service system. The presence of the Trans Tangerang Ayo application has brought a significant change in the implementation of Trans Tangerang Ayo BRT public transportation in Tangerang City, which is not only a means of information but also as a supporting instrument for the management of services that are more structured, responsive and oriented to user needs. However, in order for the quality of the system to run more optimally and in line with continuous development, efforts are still needed, especially in maintaining the reliability and consistency of application system performance.

Based on this understanding, it is in line with the results of the documentation of the Tangerang Mayor Regulation Number. 26 of 2020 concerning the Assignment to PT. Tangerang Nusantara Global in Urban Transportation Management. Through this regulation, the local government officially gave a mandate to PT. Tangerang Nusantara Global to organize urban transportation management oriented towards safety, smoothness, order, and integrated services. Thus, the image below can be explained that the existence of the Trans Tangerang Ayo application is not only a technical initiative, but is part of a regional policy that aims to strengthen public transportation services and support community mobility more effectively.

In the policy documentation above, the launch of the presence of this application can be in line with the Tangerang Mayor Regulation Number. 26 of 2020 concerning the Assignment to PT. Tangerang Nusantara Global in the management of urban transportation, which emphasizes the importance of safe, orderly and integrated public transportation services. Thus, the Trans Tangerang Ayo application can be understood as one of the instruments for the implementation of the policy, because it can help reduce the uncertainty of waiting times, to facilitate trip planning and encourage service regularity at bus stops and on buses. So that the quality of the application system as the main menu is arranged in a simple and easy-to-understand manner that reflects the aspect of user convenience, with key features such as e-tickets, travel route information, gathering points for the nearest bus location, operational hours, and estimated bus arrival waiting times that can be accessed directly by users. The existence of these features shows the reliability of the system in providing basic functions of

transportation information services. In addition, the menu structure that allows for feature updates may reflect the flexibility of the system, although development is still being done gradually. In terms of access speed, the main menu can be accessed relatively quickly, although information updates on some features are fully real-time.

Furthermore, in the documentation of the bus gathering point map on the Trans Tangerang Ayo application below, it can show that the feature of bus gathering points can be presented in the form of a digital map on the spread of the BRT route network spread across various corridors marked with different color markers, as well as stop icons and the movement of bus positions that move in real-time, so that they are formed simply and easily understood by users who quickly know the location of the bus stop or point Nearest bus stop. Then in this information it helps users to see route choices, the location of the nearest bus stop, as well as estimate the most efficient trip. The presence of this feature emphasizes that the application not only functions as an information medium, but also as an instrument for service management to be more orderly, measurable, and easy to monitor. With a map visualization like this, the uncertainty of waiting time can be reduced, users are more coordinated to plan trips, and ultimately support the effectiveness of the implementation of BRT services in Tangerang City.

In addition, there is a real-time display of the bus position, there are operational schedules and routes in the documentation below, that the clarity of information in this documentation can strengthen the function of the application as an instrument in trip planning that each BRT corridor has been clearly regulated, starting from the name of the route, the start-end point of the bus, to the operating hours. Where users can not only see the presence of the bus directly, but also understand the available route options according to their mobility needs. Thus, the integration of structured route information and real-time bus monitoring can help reduce the uncertainty of waiting times, accelerate travel decision-making, and support the achievement of more targeted and accessible transportation services for the public.

The bus point feature from the nearest location in the documentation below in the Trans Tangerang Ayo application can complement the route information and operational schedule that has been available previously. Through this feature, users can find out the bus stop or boarding point closest to their position directly, as well as match it to the route that is currently operating at that hour. This integration between mapping nearby bus points, route lists, and operational schedules makes the trip planning process more efficient, as users don't have to wait randomly or guess the location of the stop. Instead they can choose a suitable route and make sure the bus is in operation, then head to the nearest point recommended by the app. This can show that the app not only provides information, but also serves as a mobility guide that helps reduce waiting times and increase people's travel certainty.

The results of observations on the use of the Trans Tangerang Ayo application, it can be seen that this application has been used by the user community to obtain transportation information more easily and in a more structured manner. Users can see travel routes, nearest stop points, operational schedules, and bus positions in real-time. So this condition can help people in planning trips, avoiding waiting times that are too long, and choosing the most efficient route. At some stop points, the public seems to be more directed because they already know the estimated arrival of the bus before arriving at the location. This shows that apps not only provide information, but also influence user behavior in making mobility decisions. In

addition, the integration of map and route info features makes the service more transparent and easy to understand.

The findings of this study are in line with the success model of management information systems according to DeLone & McLean (2003), especially in system quality indicators that can emphasize that a quality management information system can support the ease of use and utilization of the system by users in accordance with the planned goals. The Trans Tangerang Ayo application is considered to be able to help the community in preparing for trips through the provision of information on routes, schedules, and locations of transportation services, so that waiting times can be reduced and trips become more directed. However, the results of the study also show that the quality of the system is not fully optimal, especially related to system stability, limited internet networks, and inconsistent information updates. This condition causes some users to not feel the maximum benefits of the application. Thus, although the quality of the application system has supported the use of public transportation services, now there is still a need to improve the reliability and consistency of the system so that its use can be felt more evenly by all people of Tangerang City.

2. Quality of Information

In assessing the Trans Tangerang Ayo application, service quality indicators according to DeLone & McLean (2003) are an important aspect to see the extent to which the application is able to provide quality services to users. The quality of this service includes ease of access to information, system reliability, service accuracy, and application responsiveness in supporting people's travel needs. Good service will create certainty, comfort, and smooth mobility, while encouraging people's interest in using public transportation in their daily activities.

Based on the results of interviews with the management, the Trans Tangerang Ayo application is considered to have provided quite good transportation information services. This application is able to provide route information, schedules, and bus arrival estimates that help users plan trips more efficiently. These services have a positive impact on the smooth mobility of the community. However, the quality of service is not fully optimal because there are still limitations in the equal distribution of use and the suitability of features for all user groups, so continuous development is needed.

From the operational side, the implementation of this application also contributes to improving the regularity and efficiency of public transportation services. Digitization of services allows passengers to obtain certainty of travel information so that it can reduce waiting time at bus stops. In addition, the integration of information in one system makes it easier for people to access route, tariff, and schedule data without having to search from other sources. However, improvements are still needed in the aspect of service responsiveness, such as the speed of responding to user complaints and maintaining the reliability of the system so that the service is more optimal.

From a user perspective, the Trans Tangerang Ayo application is considered to be quite helpful for mobility, especially for people who are used to using digital technology. Users feel the convenience of accessing clearer and more structured travel information. However, there are still challenges in reaching all levels of society, especially for users who are not familiar with technology. Therefore, it is necessary to increase socialization, education, and the development of simpler and more inclusive features so that the benefits of services can be felt more evenly.

Overall, the quality of Trans Tangerang Ayo application services has made a positive contribution to improving public transportation services in Tangerang City. This can be seen from the increasing regularity of passenger queues, the smooth travel process, and the ease of access to information that supports mobility planning. In addition, the support of services such as a cashless payment system also strengthens the efficiency and convenience of users. Nevertheless, improving service quality is still needed, especially in terms of system reliability, equal access, and service responsiveness so that applications can function more optimally and sustainably.

3. Quality of Service

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equal access, and service responsiveness so that applications can function more optimally and sustainably.

4. User Satisfaction

User satisfaction on the Trans Tangerang Ayo application is used to assess the extent to which this application is able to meet the needs and expectations of the community in using public transportation services. This satisfaction is not only seen from the existence of the application, but also from the ease of use, completeness of features, and benefits felt in supporting daily mobility. Through this indicator, it can be known how the user experience is in utilizing the application as a means of transportation information. Therefore, user satisfaction analysis is important to see the success of application implementation in improving the quality of public services.

Based on the results of interviews with the management, the Trans Tangerang Ayo application is considered to have provided a fairly good level of satisfaction for users. This application is able to help the public in planning trips more efficiently through information on routes, schedules, and bus positions. However, the level of satisfaction is not completely even because there are still limitations of simple features and not optimal access for people with disabilities. In addition, not all people take full advantage of the application, so it is necessary to develop features and increase socialization so that user satisfaction can increase.

From the user's perspective, this application is considered quite helpful in increasing the comfort and certainty of travel. Users can easily access important information before departure so that the trip becomes more planned. This application is also widely used by groups with high mobility such as workers and students. However, there are still obstacles in its use, especially for the elderly and people who are less familiar with digital technology. This shows that although the application has provided benefits, the level of utilization has not been evenly distributed across all levels of society.

Overall, the Trans Tangerang Ayo application has made a positive contribution to user satisfaction, especially in reducing waiting times and improving travel efficiency. However, further development is still needed, especially in providing more inclusive features for people with disabilities and increasing accessibility for the entire community. With continuous improvement and socialization, it is hoped that the level of user satisfaction can continue to increase and be felt equally by all public transportation users in Tangerang City.

5. Net Benefits

The indicator of net benefits in the Information System Success Model according to DeLone & McLean (2003) can be seen from the extent to which the implementation of the Trans Tangerang Ayo application is able to have a positive impact on individuals and organizations. In this context, the application contributes to making it easier for people to access real-time transportation information, improving travel planning, and encouraging the use of non-cash payment systems. This impact has implications for increasing the efficiency, order, and comfort of community mobility in Tangerang City. In addition, the net benefits can also be seen from the level of application utilization by users and the positive response to the ease of service provided.

Based on the results of interviews with the management, the implementation of the Trans Tangerang Ayo application has provided real benefits to the community. Easy access to travel information helps users plan their mobility more efficiently. In addition, the relatively

affordable service rates due to government subsidies make this service accessible to various groups. This helps increase people's mobility and supports daily activities to be more effective. However, these benefits still need to be optimized so that they can be felt more widely by all levels of society.

In terms of policy and management, the implementation of this application also has a positive impact on creating a more organized and planned transportation system. Real-time information about bus positions, more orderly services, and supporting programs such as free school transportation, make travel safer and more comfortable. However, there are still several obstacles such as limited budgets, resources, and low public awareness in using public transportation. This condition shows that the net benefits produced are not fully optimal and still require further development.

From a user's perspective, the Trans Tangerang Ayo application is considered to be able to provide positive changes in travel activities. Users feel that the trip becomes faster, planned, and more efficient because they can find out the schedule and position of the bus before leaving. In addition, this application also encourages people to switch from private vehicles to public transportation, thereby helping to reduce congestion and improve smooth mobility in Tangerang City. However, these benefits have not been felt equally by all users, especially for those who still face barriers to accessing technology.

Overall, the implementation of the Trans Tangerang Ayo application has resulted in significant net benefits, both for users and transportation service managers. These benefits can be seen from increased operational efficiency, ease of coordination, reduced passenger buildup, and increased punctuality and travel comfort. In addition, the use of digital systems such as QRIS and e-money also supports the modernization of transportation services. Nevertheless, continuous development and evaluation efforts are needed so that the benefits produced can be more optimal and felt equally by the entire community.

Based on the results of the informant interviews above, it can be strengthened by the data on the increase in passengers using the Trans Tangerang Ayo BRT in Tangerang City over the past 8 years.

Table 1 Data on the Increase in Trans Tangerang Ayo BRT Passengers in Tangerang City

Year	Province	Kabupaten/Kota	The Number of Increased Passengers of BRT Trans Tangerang Ayo
2018	Banten	Tangerang City	323,645 Passengers
2019	Banten	Tangerang City	489,118 passengers
2020	Banten	Tangerang City	468,816 passengers
2021	Banten	Tangerang City	663,957 passengers
2022	Banten	Tangerang City	763,819 passengers
2023	Banten	Tangerang City	832,784 passengers
2024	Banten	Tangerang City	1,092,159 passengers
2025	Banten	Tangerang City	1,147,829 passengers

Source: Tangerangkota.go.id website (accessed December 2025)

Based on the image above, it can be explained that the number of passengers on the Trans Tangerang Ayo BRT shows an increasing trend from year to year. In 2018, the number of Tayo BRT passengers was 323,645 passengers. Then in 2019 there were 489,118 passengers who

used the Tayo BRT. Then in 2020 there were 468,816 passengers, which decreased slightly due to the pandemic. Then in the following year it increased again in 2021, 2022 and 2023. At that time, BRT Trans Tangerang Ayo had four active corridors that were operated every day to serve the community in Tangerang City, namely the Poris Plawad-Jatake, Poris Plawad-Cibodas, CBD Ciledug-Tangcity Mall, and Cadas-Pintu M1 Soekarno Hatta International Airport. This increase will continue until 2024 and 2025, where the number of passengers will reach the highest number, namely in 2024 1,092,159 passengers and 1,147,829 passengers in 2025. So, in this case, there is an increase in the number of passengers, showing that the Trans Tangerang Ayo BRT service is increasingly in demand by the public as a means of public transportation that is easier, more affordable, and more efficient. Overall, this trend gives an idea that people are starting to trust and get used to using public transportation as an alternative to daily travel.

DISCUSSION

In this study, a discussion and analysis was carried out to answer the Application of Trans Tangerang Ayo in Improving Public Transportation Services in Tangerang City. In this study, the descriptive research method with a qualitative research approach is discussed and analyzed based on indicators using the theory of Management Information Systems according to DeLone and McLean (2003): 1) System Quality, 2) Information Quality, 3) Service Quality, 4) User Satisfaction, 5). Net Benefits which will be explained as follows:

1. System Quality

Based on the results of the system quality indicators, it can be stated that the Trans Tangerang Ayo application is designed as a digital service platform that supports the Trans Tangerang Ayo BRT urban transportation transportation service system, especially in facilitating public access to public transportation services organized by the Tangerang City Government. The existence of this application shows the efforts of service providers in building an integrated and technology-based system. However, based on the results of observation and documentation, it is still found that the quality of the system has been used effectively by the community in supporting access to BRT public transportation services in Tangerang City. This can be reflected in the ability of the application system to provide an integrated, accessible, and functional digital service platform for users' basic needs, such as bus position monitoring and departure schedules. Although there are still limitations in the aspect of the ease of use of the feature as a whole and the understanding of the public has not been evenly distributed, in general the quality of the application system has been able to carry out its main functions reliably and sustainably, so that it can contribute positively to the improvement of public transportation services. If associated with the results of the documentation, the Tangerang City Government has actually provided a clear institutional foundation through the Tangerang Mayor Regulation Number 26 of 2020 concerning the Assignment to PT Tangerang Nusantara Global in Urban Transportation Management. This regulation emphasizes that PT Tangerang Nusantara Global is mandated to manage urban transportation services, including the development of service support systems, one of which is through the use of digital applications to improve access to information, operational efficiency, and service quality for the community. Normatively, the existence of the regulation shows that the Trans Tangerang Ayo application program is not only a technical innovation, but part of a structured regional policy.

However, its implementation in the field of system quality has not been fully followed by intensive and sustainable socialization efforts. This condition affects the perception and ability of the public to utilize the application system optimally, especially for new users, elderly groups and people with disabilities. Although technically the application system has functioned and is used effectively for the basic needs of users, the limited understanding of the available features can show that the aspects of ease of use and accessibility of the system still need to be improved.

2. Quality of Information

Based on the results of observations found by interviewing the informant, the quality of information provided through the Trans Tangerang Ayo application in general has been able to support the basic needs of users in accessing BRT public transportation services in Tangerang City, such as the schedule and the nearest bus situation which is considered quite accurate, relevant and easy to understand by most users, so that this application can be used effectively in supporting community mobility. However, in terms of completeness and accessibility of information, limitations are still found for groups of users who are not familiar with smartphone-based technology, such as the elderly and people with disabilities. The available information is considered not to be fully comprehensive and inclusive, especially related to complaints of disability-friendly users, such as clearer choir access information. This shows that although the quality of information in the application has been effective for most users, it is still necessary to distribute information equally and develop more inclusive content so that the benefits of the application can be optimally felt by all levels of society.

3. Quality of service

Based on the results of observations and documentation on service quality, in general, the Trans Tangerang ayo application has run well and can be said to be effective used by the community. This is reflected in the ability of application services to provide public transportation operational information in a relatively timely manner and responsive to user needs. Although this condition can still be tempered it does not fully reflect the situation in the field, the fully operational BRT system uses a headway system that is influenced by various external factors that are difficult for managers to control, such as congestion, road repairs, weather conditions and vehicle technical disturbances and there is passenger density at certain stops. However, these limitations cannot reduce the main function of application services as a means of supporting community mobility. The trans tangerang ayo application continues to provide service guarantees to users through the provision of bus route information, operational schedules, payment systems, and real-time bus arrival estimates. The existence of this service is able to increase the sense of certainty and trust of the public in using public transportation, so this application is considered effective in supporting the improvement of services and mobility of public transportation users in Tangerang City.

4. User Satisfaction

After observation and documentation, basically user satisfaction with the Trans Tangerang Ayo application has shown positive results. So users consider this application to be able to meet their main needs in obtaining public transportation information and supporting smooth daily mobility. The presence of QRIS-based digital payment features and e-money has provided ease of transactions, which reduces the use of cash can speed up the payment process, as well as increase the sense of comfort and efficiency in using public transportation services

in Tangerang City. This user satisfaction can be reflected in the perception of benefits to the information available in the application, such as bus routes, operational schedules, estimated arrival times, and other support services that help users plan trips more regularly and efficiently. Although there are still some people who have not fully felt the optimal level of satisfaction due to the limited understanding of the application features and the uneven socialization to all levels of society, some users still choose to use conventionally in accessing the Trans Tangerang Ayo BRT. Overall, the trans tangerang ayo application is considered to have been effectively used by the community and has a positive impact on increasing user satisfaction in public transportation services in Tangerang City.

5. Net benefits

Based on the results of observations and documentation, basically related to the net benefits of the implementation of the Trans Tangerang application has had a real positive impact on the community, that this application provides convenience in obtaining travel information, such as the position of the nearest vehicle point and the estimated arrival time of the bus, so as to help users plan trips more purposefully and efficiently. In terms of cost and accessibility, this application service is considered affordable and easy to use by various levels of society, and is able to support increased mobility and smooth daily activities. Although the manager still continues to evaluate and improve services on an ongoing basis based on user input to optimize the benefits produced.

CONCLUSION

Based on the results of the study, it can be concluded that the evaluation of the Trans Tangerang Ayo Application Program in Tangerang City using the information system success model of DeLone and McLean (2003) shows that this application has generally been quite effective, but not completely optimal. From the aspect of system quality, the application has been able to support BRT services through the integration of travel information, although there are still obstacles to ease of use and accessibility, especially for new users, the elderly, and people with disabilities. In terms of information quality, the application has provided information that is quite accurate and easy to understand, but it still needs to be improved in terms of completeness and inclusivity. Meanwhile, the quality of service is considered quite good because it is able to provide responsive operational information, although sometimes it is not fully in accordance with the actual conditions in the field.

From the indicators of user satisfaction and net benefits, the Trans Tangerang Ayo application has a positive impact on the community, such as ease of access to information, efficiency in planning trips, and affordable service costs. However, user satisfaction levels still need to be improved through a better understanding of features and equitable socialization. Therefore, continuous efforts are needed from various parties, such as increasing monitoring and evaluation by managers, optimizing socialization by related agencies, and active participation of the community in providing input. Thus, this application is expected to continue to develop and provide more optimal, inclusive, and sustainable public transportation services.

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