



## Analysis of Optimization Waena Terminal Infrastructure, Jayapura City

Harmonis Rante

Master's Study Program in Regional and City Planning, Cenderawasih University

**Corresponding Author:** Rante [harmonisrante72@yahoo.com](mailto:harmonisrante72@yahoo.com)

---

### ARTICLE INFO

*Keywords:* Waena Terminal, Infrastructure, Transportation, Terminal Maintenance

*Received :* 12, November

*Revised :* 15, December

*Accepted:* 26, January

©2024 Rante: This is an open-access article distributed under the terms of the [Creative Commons Atribusi 4.0 Internasional](https://creativecommons.org/licenses/by/4.0/).



### ABSTRACT

A terminal is a part of land transportation which is the node point for various land transportation facilities (modes). The Waena Terminal has been equipped with terminal facilities and complementary buildings, but has not been used optimally, and even looks dirty and unkempt. This research aims to analyze the condition of the infrastructure, utilization and maintenance of the Waena Terminal. This research was conducted in Jayapura City, precisely at the Waena Public Transport Terminal which is administratively part of the Jayapura Municipal government area. Data analysis was carried out qualitatively. The research results show that the physical infrastructure at Waena Terminal is very complete when viewed against the standards set by the government. However, in terms of soft infrastructure, the Waena terminal has not been fulfilled, namely there is no terminal management by the related parties. The use and maintenance of the Waena Terminal has not gone well because it appears there is no terminal management.

---

## INTRODUCTION

Infrastructure is an important need in a country or region. Population growth should be followed by improvements in infrastructure such as housing, transportation, education, health and other social infrastructure. Therefore, regional planning to support population growth must be well planned in a comprehensive, sustainable manner, based on environmental and local cultural aspects, so that it can accommodate all aspects of life. Infrastructure development often does not pay attention to environmental aspects, so that environmental problems such as floods and landslides emerge, which ultimately lead to the emergence of social problems such as disaster management, refugees and trauma recovery. It can even impact economic problems.

In a developing city, transportation is one of the most important aspects to support economic activities and other social activities. Transportation is a human activity from one place to another or vice versa to carry out certain purposes. This activity also involves goods. So the meaning of transportation becomes increasingly complex, involving the movement of people and goods. Transportation is an important element in a region because with transportation, economic activities between cities and rural areas can occur. Transportation based on the route traveled can be divided into three modes of transportation, namely land transportation, sea transportation and air transportation. The most widely used mode of transportation is land transportation, where in land transportation there are several forms of transportation services. One of them is transportation in the form of public transportation (Sitompul et al., 2022).

Transportation is a vital element in national life and in fostering national unity and unity. Development in the transportation sector supports the development of other sectors in realizing national development targets in all regions, both in urban and rural areas (Research and Development Agency, 2017). Furthermore, The terminal is a nodal point for various means (modes) of transport which functions as a point of movement for passengers from one means of transport to another, as a place for regulating the movement of vehicles and passengers and is the starting point and ending point of a journey (Baktiani, 2018). In addition, the terminal is a road transport infrastructure and a source of generation. To support the smooth and orderly mobility of people, the flow of goods and integration between modes, terminals can be built in certain places. In essence, a terminal is a node in a road transport network system consisting of a passenger terminal and a goods terminal.

Republic of Indonesia Law No. 14 of 1992 articles 9 and 10 explain that terminals are a support for the smooth mobility of people and the flow of goods and for the implementation of intra and intermodal integration in a smooth and orderly manner, in certain places they can be built and operated terminal. Like other cities in Indonesia, the mode of public transportation most widely used by the people of Jayapura City is land transportation in the form of cars and public passenger buses, which the people of Jayapura City call taxis. Usually the city transport will pick up and drop off passengers at several existing terminals, including Jayapura Terminal, Entrop Terminal, Waena Terminal and Expo

Terminal. Apart from that, there are also several points that are usually used as unofficial terminals which people usually call shadow terminals, such as Padang Bulan, Abe Circle and Perumnas Tiga.

One of the terminals that is busy serving passengers is Waena Terminal, where this terminal is right on the border of the administrative area between Jayapura City and Jayapura Regency. This terminal was built to replace the Expo Terminal or Bayangan Terminal which previously operated only using the shoulder of the road. The Waena Terminal is located not far from the old terminal, namely the Expo Terminal.

Its location is on the border of Jayapura City and Jayapura Regency, making this terminal very important for the public, especially those traveling to and from the two regions. Several factors causing the importance of this terminal are: Many residents live in Jayapura City but work in Jayapura Regency, and vice versa, Jayapura City's position as the capital of Papua Province, Government Activities, Educational Services, Social Services, The emergence of several economic centers such as shopping centers and shops along the main road, namely the Jayapura-Sentani section, and the airport that serves local flights to Papua and to several other provinces is in Sentani.

Looking at the level of service, the existence of this terminal is really needed by the community, so it demands a high level of functionality and effectiveness. However, based on facts on the ground, this terminal cannot function optimally as expected due to lack of terminal management. Currently, the Waena Terminal is equipped with terminal and complementary facilities in the form of other buildings. Conditions in the field show that these buildings have not been used optimally, and even appear shabby and poorly maintained.

Referring to the problems at the Waena Terminal as described, the author will conduct a study on making the function of the Waena Terminal more effective. Because there is not only one cause of the problem and on the other hand, the capacity of the Jayapura City government is also limited, it is necessary to prepare an analysis regarding the completeness of the infrastructure. In the context of this study, the author will conduct a study on the topic: "Analysis of Optimization Waena Terminal Infrastructure, Jayapura Municipality".

## **THEORETICAL REVIEW**

### ***Infrastructure***

The term infrastructure is often used in everyday conversation, where the word infrastructure usually appears when discussing various kinds of public facilities, both government and individual owned, such as roads, airports, public transportation, and various other types of public facilities. Infrastructure is a term used to describe a collection of facilities that are deliberately created to support human life activities. Infrastructure was deliberately built to help and facilitate certain activities such as transportation, population data collection, and various other activities (Adji, 2012).

### ***Transportation***

Transportation is a term that is certainly familiar to everyone's ears. In fact, this term cannot be separated from everyone's daily life. However, some people may still not understand what this term means. Referring to Abdi (2023), it is said that transportation is the transportation or movement of goods or people from one place to another. This movement or transportation is carried out using a vehicle driven by humans or machines. Abdi (2023) continued to say that transportation is used to make it easier for people to carry out daily activities. You are certainly familiar with these types of transportation. There is type of transportation land, sea transportation, and air transportation.

### ***Terminal Infrastructure***

Terminals are a very important part of the transportation system in a city, especially public transportation. But unfortunately many terminals do not function optimally due to very complex causes, which can be caused by locations that are difficult to reach, narrow terminal locations, lack of facilities available at a terminal or caused by other factors.

According to Warpani (2020), a terminal is an entry or exit point for passengers and goods from the transportation system network. In a transportation network system, a terminal is the first node in a transportation network that has many routes that meet as a whole. Thus, terminals are the main element in the transportation system, but are often also referred to as infrastructure for potential congestion points.

The definition according to the Joint Decree (SKB) between the Directorate General of Land Transportation and the General of Highways in 1981 (in Mustofa and Raidi, 2022) is as follows: a). A terminal is a spatial plan that has an important role in the efficiency of regional and city life. b). The terminal is a place for monitoring or controlling the licensing system for the flow of passengers and goods. c). The terminal is a passenger transportation infrastructure, a place for vehicles to pick up and drop off passengers, a place for exchange of types of transportation that occurs as a result of transportation efficiency demands. d). Terminals are road network system infrastructure to facilitate the flow of passenger and goods transportation.

## **METHODOLOGY**

Methods are important in conducting research (Ilham et al., 2021). This method is a tool used to answer research questions (Wambrauw and Ilham, 2023). Therefore, this research uses a qualitative approach. Data obtained from Observation, Interviews, and documentation. Any data obtained will be recapitulated and then described according to each type. Descriptions can be done in narrative, graphic display or sketch. The data obtained will be compared with the standards set by the government.

Next, the data analysis process is carried out through three stages of activities, first carrying out data reduction; secondly, presenting the data and finally drawing conclusions. Final conclusions will only be drawn after no further information is found regarding the case being studied. Then the

conclusions that have been drawn will be verified both as a form of the researcher's thinking framework and with existing field data until consensus is reached at an optimal level between the researcher and the information source and with the research team so that validity and accuracy can be obtained (Miles & Huberman, in Ilham et al ., 2020).

## RESULTS AND DISCUSSION

### *Waena Terminal Physical Infrastructure*

Infrastructure is the minimum basic equipment needed to ensure the operation of a service system. Broadly speaking, infrastructure is divided into physical infrastructure (hard infrastructure) and non-physical infrastructure (soft infrastructure). In relation to the effectiveness of the Waena Terminal, the analysis carried out on the two types of infrastructure refers to the requirements set by the Ministry of Transportation through Minister of Transportation Decree No. 31 of 1995 concerning land transportation terminals.

Regarding the condition of the physical infrastructure, it can be said that the Waena Terminal is currently complete, both main infrastructure and supporting infrastructure. Ministry of Transportation through Minister of Transportation Decree No. 31 of 1995 concerning land transportation terminals, requires that the main facilities and supporting facilities be in the terminal.

Based on the results of observations of the physical infrastructure at Waena Terminal, main infrastructure data was obtained as shown in Table 1.

**Table 1.**  
**List of main physical infrastructure of Waena Terminal**

No.	Main Infrastructure	Description	
1	Public transportation departure lane	There is	There are permanent buildings and asphalt floors. Its function is as an anti-vehicle place
2	Public transportation arrival route	There is	There are permanent buildings and asphalt floors. Passengers are dropped off in the paved parking area.
3	Public transportation waiting area	There is	There are specifically permanent buildings but they are not equipped with benches.
4	Terminal office	There is	The office building is a permanent building but there are no staff.
5	Waiting place for passengers and delivery people	There is	There are specifically permanent buildings but they are not equipped with benches.
6	Track path	There is	The existing route is an asphalt road.
7	Ticket counter	There is	There are specifically permanent buildings but they are not yet

			functional.
8	Temporary resting place for vehicles (Parking Area)	There is	In the form of a large parking area, with an asphalt floor but unkempt and dirty
9	Warehouse or goods storage yard	There is	There are several empty buildings that can be used as warehouses
10	Signs or information boards	There is	In the form of directional signs, posted writing, and traffic signs.
	The amount of infrastructure fulfilled		10
	The amount of infrastructure that is not met		0

Source: Observation results

Of the ten types of main infrastructure required by the Directorate General of Land Transportation, nine are available at the Waena Terminal. There is one thing that is not yet available, namely the warehouse, but there are still several buildings that are not yet functional. So this building which is not yet in use can be used for warehouse purposes. This means that 100% is fulfilled. However, the specific space for the warehouse has not been marked with a nameplate. There are several empty rooms that can be immediately labeled and put into use immediately. Maybe because passengers entering and leaving the terminal do not carry large amounts of goods. In the author's observations, passengers generally only carry backpacks, hand luggage and several small suitcases. Their luggage does not need to be stored or left in the terminal. This condition shows that the fulfillment of the main infrastructure of the Waena Terminal is good.

The condition that actually needs to be considered and followed up is terminal maintenance. The existing infrastructure is not well maintained, is not functioning and is not used according to its function. Next, the conditions of each infrastructure will be described in detail.

### ***Public Transportation Departure Route***

Observation results show that at the Waena Terminal a building has been prepared to function as a departure route for public transportation. The building is roofed and paved with an excellent surface. This building provides certainty to passengers regarding their departure location and can provide shelter from heat or rain. The departure building is also equipped with vehicle route information boards. Due to the absence of officers from the relevant agencies, so far the operations have been managed by transport drivers themselves. Usually public transport drivers pick up passengers and leave their vehicles at the front public transportation waiting area.

With the terminal conditions are very good, so transport drivers pick up passengers at each departure point according to their route. Some of the

available departure routes are route departures to Entrop, Sentani, Abepura, Perumnas I, II and III.

### ***Public Transportation Arrival Route***

Waena Terminal has provided a specific arrival point for public transportation. There is a special lane for the arrival of public transportation, namely the lane between the parking lot and the waiting room. So passengers who get off can go straight to the waiting room for those who want to rest or wait. Apart from that, passengers who want to continue their journey can go straight to the departure lane because the departure lane is located next to the waiting room. On the other hand, drivers who want to rest can park their vehicles in the parking lot located next to the arrival route. In operation, arriving vehicles always head to the arrival lane. During field observations, passengers were seen being dropped off at the arrival lane provided.

### ***Public Transportation Waiting Area***

For the convenience of prospective passengers waiting for public transportation, the Waena Terminal has provided a building for waiting for vehicles, namely the waiting room. It is located right between the departure and arrival lanes of vehicles. This building is a permanent building that is integrated with other buildings in this terminal, has a ceramic floor and is equipped with several seats. However, there are still not enough seats available, so many visitors sit on the floor or use makeshift stands. This space is also equipped with a public toilet which is quite clean because someone takes care of it. This place is provided for passengers to wait for public transportation.

### ***Terminal office***

Waena Terminal is equipped with a terminal office in the form of a permanent building placed at the front of the terminal. The building is permanent but gives the impression of being empty of staff. The office is open but there is no visible activity of officers from the relevant agencies. So in terms of operations, this terminal is running as is. This condition is not good for a terminal, because with a terminal office, terminal management is expected to run well. This condition needs to be immediately improved in order to provide effective services to the public who use transportation.

### ***Waiting Place for Passengers and Delivery Persons***

Waiting rooms for passengers and delivery people are needed to ensure comfortable conditions while waiting for the arrival or departure of transport. Several advanced terminals provide passenger and delivery rooms in the form of closed buildings equipped with supporting facilities, such as entertainment and telecommunications facilities, so that people who pick up or drop off passengers do not get bored while waiting. This building is very important so that the pick-up person or delivery person can comfortably wait or take shelter from the hot sun and rain. In the Waena Terminal, there are no buildings specifically used to pick up or drop off passengers. In terminal activities, the room for waiting for passengers and delivery people is integrated with the

waiting room. So far, the function of this building has been integrated with the vehicle waiting area.

### ***Track path***

There is a specific vehicle track in the Waena Terminal. This route is an asphalt road with a good surface.

### ***Ticket counter***

Waena Terminal has a ticket counter, especially for collecting fees. However, it is not operated so it doesn't work. There are no relevant officers on duty. As a result, vehicles enter and leave the terminal without paying fees. This building is located at the front of the terminal on the terminal entrance route.

### ***Temporary Rest Area for Vehicles (Parking Area)***

The parking area for vehicles is quite spacious using the parking area that has been provided. The parking lot is accompanied by the necessary signs and is paved. It just looks dirty and not well maintained. Basically, there is already an arrangement and provision of facilities for parking purposes and there are already directions for getting in and out of vehicles. The shape is still in the form of an asphalt parking lot but it is not maintained, it can even be seen that some parts have started to grow grass, as shown in the following figure:



**Figure 1. Temporary Rest Area for Vehicles (Parking Area)**

### ***Warehouse or Goods Stacking Field***

There are no specific rooms yet marked with Warehouse names, but there are several empty rooms that could immediately be used as Warehouses if needed. Actually, this facility is not really needed considering that the new Waena Terminal is a passenger terminal which is of course dominated by passengers. Their belongings were only what they had made or bought from the market.

**Signs or Information Boards**

Waena Terminal is equipped with adequate signs or information boards. Observation results show that information boards have been installed on every lane in the Waena Terminal.

Apart from providing requirements for the main terminal facilities, the Directorate General of Land Transportation also provides limitations for terminal supporting facilities. Regarding terminal supporting facilities, the survey results at Waena Terminal are as shown in Table 2.

**Table 2.**  
**List Waena Terminal supporting facilities**

No	Supporting Facilities	Information
1	Toilet / Bathroom	There is
2	Musola	There is
3	Treatment room	There is
4	Public telephones and kiosks	There isn't any
5	Kiosk or canteen	There is
6	Information space	There is
7	Park where goods are stored	There isn't any
8	Administration room	There is
	Amount that meets	0

Source: observation results

Of the several supporting facilities required for a terminal, none of them are fulfilled by the Waena Terminal. This shows a serious lack of infrastructure. If the condition of the Waena Terminal infrastructure is reviewed against the standards set by the government, it can be said that compliance with the main and supporting physical infrastructure is very low. It was found that only five of the ten main facilities were fulfilled or only 50% were fulfilled and none of the eight supporting facilities were fulfilled or 0%, as shown in Table 1 and Table 2.

Of course, this condition is very worrying considering that Waena Terminal is one of the busiest terminals in Jayapura City. Apart from that, Waena Terminal is also: 1). Transit point for changing transportation, especially residents coming from Koya and Keerom Regency who want to go to Sentani, 2). The terminal related to trading activities at the Shock Market in front of the Expo. Passenger activity was quite busy, both those coming to sell and those shopping, 3). Waena Terminal is located on the side of the national road that connects districts, namely Jayapura Municipality and Jayapura Regency.

Seeing the very importance of activities at the Waena Terminal and the very lack of existing physical infrastructure, of course it requires the touch of the Jayapura City Government to improve and complete the terminal facilities.

### ***Waena Terminal non-physical infrastructure***

Non-physical infrastructure focuses more on terminal management systems and mechanisms to fulfill the elements of smooth, comfortable and safe traffic. One example is how to manage existing transportation facilities such as terminals, parking lots and other buildings. Field observations show that: 1) Infrastructure arrangements already exist, namely in the form of signage and information for each section of the terminal. Some of them include arrival and departure information. This will make things easier for terminal visitors. 2) There are no terminal officers yet to direct and control terminal activities. Impressed that the Waena Terminal runs by itself. The result is that several buildings seem unkempt and the condition of the terminal looks dirty on several sides.

### ***Public Transport Routes***

The level of demand for transportation services in Jayapura City, including public transportation within the city, outside the city and rural areas, really requires an increase in transportation infrastructure to support community transportation activities. Considering that transportation is a supporter and stimulus for socio-economic activity and city development, it is very necessary to fulfill transportation infrastructure. In its activities, Waena Terminal serves three types of public transportation, namely intra-provincial city transportation, city transportation (angkot) and rural transportation.

Rural transportation is transportation from one place/village to another place within a district/city area that is not included in the city route in the district/city capital area using public transportation that is tied to the route. However, no rural transportation enters the Waena Terminal. Rural public transportation, which serves rural communities in Jayapura City, is served by only 1 transportation route, namely the Koya/Skow route but does not enter the Waena Terminal. This transport enters at Youtefa Terminal and then passengers connect with the route that goes to Waena Terminal. Meanwhile, other transportation that serves rural areas is Route Arso, but this is classified as Inner Provincial City Transportation because Arso is already in Keerom Regency.

Another type of public transportation that enters the Waena Terminal is city transportation that serves residential areas in Jayapura City. Some of the residential areas served are Route Entrop, Perumnas One, Perumnas Two, Perumnas Three, Abepura and Pasar Youtefa. Meanwhile, passengers who want to go to the Kotaraja area will take the Abepura route and connect with the Kotaraja route. Meanwhile, the route that serves between districts is the Sentani Route which serves routine community activities and Sentani airport passengers.

### ***Traffic Characteristics at Waena Terminal***

In accordance with data obtained through interviews with public transport (taxi) drivers, it is known that traffic conditions at the Waena terminal are not good because many public transport pick up passengers for quite a long time, namely almost an hour or more. Some public transportation does not park

in the terminal parking area, but outside the terminal so that they can pick up passengers before the passengers enter the terminal. Usually they park around the Expo because there is a shock market in that area.

The movement network system is an element that helps shape the spatial structure of the city because it plays a role in connecting service centers and city activity units. The transportation conditions in Jayapura City which connect between regions are basically very adequate. The condition of the roads both in the city and to the village is very good. Everything is paved and equipped with drainage. The component that needs to be improved is terminal services, especially supervision and maintenance of the Waena Terminal. Apart from that, the maintenance system also needs to be improved, such as repairing potholes, maintaining road shoulders and cleaning drainage.

One thing that should not be forgotten is the development and adaptation of the transportation system to city development. An infrastructure system that is adequate, effective and has maximum utilization is something that is highly desired by all transportation users. To achieve this, local governments must prepare regulations regarding transportation to create connections between land transportation modes and terminals. It would be best to make Regional Regulations regarding land transportation and terminals. In this case, the role of local government is: 1) Encourage regions to develop land transportation plans that are synergistic with national transportation plans, 2) Adjustment of national transportation plans with regional transportation planning policies, 3) Become a guide for regional transportation planning, 4) Encourage and facilitate the formation of inter-regional cooperation forums regarding national transportation planning.

### ***Terminal Comfort and Security***

Visitor comfort in the Waena Terminal environment can be said to be uncomfortable. The discomfort conditions at Waena Terminal are not being handled by the local government. Of course, this greatly affects the effectiveness of the Waena Terminal function. Some problems related to comfort at Waena Terminal are:

1. Terminal it has been equipped with rubbish bins placed behind the terminal but you can see rubbish still strewn about in the terminal. Temporary waste disposal sites (TPS) have been provided, namely containers which are usually transported by rubbish trucks. However, rubbish is still scattered in the terminal. This is because there is no awareness among visitors about throwing away rubbish in the rubbish boxes available in places where passengers are active. Garbage is dumped in any place which is generally dominated by plastic packaging, cigarette packs, plastic bottles and areca nut spit, as shown in the figure below. Apart from that, the rubbish at the TPS is also scattered and not picked up by the City Cleaning Service.



**Figure 2. Garbage conditions at Waena Terminal**

Source: Observation results

2. There are no janitors who are responsible for the cleanliness of the terminal. Apart from the rubbish problem, most of the terminal area is overgrown with grass because it is not cleaned. Due to the large amount of grass, it can attract animals such as snakes. Of course, this is something that is very unexpected, because the presence of snakes in the terminal can be annoying and can endanger terminal visitors. Apart from that, the grassy and bushy condition of the Waena Terminal will spoil the view and give the impression of an unfavorable environment. This condition shows one side of terminal maintenance that is not carried out well.
3. The condition of the terminal is less clean, both the floor and drainage. This situation shows that the Waena Terminal lacks maintenance.
4. There are no officers responsible for the care and maintenance of terminal facilities. Several facilities such as buildings and parking lots are poorly maintained and chaotic. The condition of the Waena terminal infrastructure does not appear to be well maintained. The conditions are chaotic and it gives the impression that people are free to use the existing infrastructure, for example to sell or park anywhere. Apart from that, the back of the terminal also looks very dirty and has never been cleaned, neither the rubbish nor the grass. The lack of care and maintenance of Waena Terminal infrastructure can accelerate the damage to existing infrastructure and also give the impression of being rundown. Of course, this will be very detrimental to the government and to the public who use the terminal. Terminal users will feel uncomfortable and ultimately people will be reluctant to enter the terminal and drivers too. This condition could cause another shadow terminal to form in front of the Waena Terminal.
5. There are no officers to regulate and supervise activities in the Waena Terminal. As a result, vehicles are parked as they please and visitors use the terminal facilities as they please without paying attention to cleanliness. There should be an officer who organizes and directs all

activities in the terminal. Be it vehicle activity or passenger activity. The presence of terminal staff is very necessary, considering that unhealthy actions often occur at the terminal, such as queue jumping, random parking, gambling activities, alcohol and passenger brokering. Apart from that, crimes such as robbery and theft often occur.

The security conditions of passengers or potential passengers and drivers while in the terminal is a factor that needs to be taken into account. Observation results show that the security situation at Waena Terminal is quite conducive, in the sense that there is no theft, confiscation and criminal acts. However, to be safer, the Waena Terminal should also be equipped with a police guard post.

The availability of facilities in a terminal for services to public transport, potential passengers and terminal passengers, is very important. Waena Terminal is one of the important terminals in Jayapura City and is equipped with proper infrastructure. However, facts on the ground show that many of these facilities are not well maintained and their operational arrangements seem unsupervised, so that the Waena Terminal cannot function as effectively as it should. However, its service as a land transportation terminal runs quite well considering that the terminal's visitors are not too busy. It just seems that it is not well maintained and runs as is.

## **CONCLUSIONS AND RECOMMENDATIONS**

Provide some conclusions and the implementation of the research results.

Based on the results of the analysis that has been carried out regarding the Waena Terminal, several things can be concluded, including: 1) The completeness of the physical (hard infrastructure) and soft infrastructure at the Waena Terminal is very complete when viewed against the standards set by the government, namely, all of the ten main facilities specified are fulfilled. However, in terms of the soft infrastructure of the Waena Terminal, it has not been fulfilled, namely there is no terminal management by the related parties. 2) Utilization and maintenance of the Waena Terminal is not running well because it appears there is no terminal management. As a recommendation, referring to the problems that cause the less than optimal function of the Waena Terminal, several things are recommended, including: 1) The Jayapura City Regional Government should immediately make improvements to the management of the Waena Terminal, namely equipping staff and routinely carrying out maintenance on the terminal infrastructure which has existed. 2) The regional government of Jayapura City should immediately deploy officers from the relevant agencies to carry out regulation and supervision. as well as levy collection at the Waena Terminal. 3). Apart from improvements by the Jayapura City Government, the public, both passengers and transport drivers, are expected to increase awareness regarding the cleanliness and safety of the Waena Terminal.

## **FURTHER STUDY**

This study was only carried out at the Waena terminal, Jayapura City. So it is important to carry out similar research at other terminals or several

terminals. This aims to obtain a comparison regarding the optimization of Infrastructure Terminals in Jayapura City

## ACKNOWLEDGMENT

The author would like to thank all parties involved in this research. Starting from the data collection stage, preparing reports, writing articles, until the results of this research can be published in the Formosa Journal of Science and Technology (FJST).

## REFERENCES

- Abdi, Husnul. (2023). Transportasi Adalah Pengangkutan Barang atau Manusia, Kenali Jenis dan Fungsinya. <https://www.liputan6.com/hot/read/5377774/transportasi-adalah-pengangkutan-barang-atau-manusia-kenali-jenis-dan-fungsinya?page=4>. (Accessed January 28, 2023).
- Adji Adisasmita, Sakti. (2012). *Regional Transportation Infrastructure Planning*. Yogyakarta: Graha Ilmu.
- Badan Penelitian dan Pengembangan. (2017). Transportasi Sebagai Pendukung Sasaran Pembangunan Nasional. <https://dephub.go.id/post/read/transportasi-sebagai-pendukung-sasaran-pembangunan-nasional>. (Accessed January 27, 2023).
- Baktiani, Linda (2018) *Evaluasi Lokasi Terminal Willy Ananias Gara (W.A Gara) Kota Palangka Raya*. S2 Thesis, Uajy.
- Ilham, I., Korwa, F. Y., Idris, U., & Muttaqin, M. Z. (2020). Analisis Potensi Dan Strategi Pengembangan Objek Wisata Pulau Asey Besar Danau Sentani Kabupaten Jayapura. *Jurnal Pariwisata Pesona*, 5(2), 142-155.
- Ilham, I., Frank, S. K. A., Flassy, M., Muttaqin, M. Z., Idris, U., & Yunita, D. I. (2021). Hjiir Mentuk: Potensi Kuliner Lokal Olahan Masyarakat Kampung Tobati Sebagai Daya Tarik Wisata Di Kota Jayapura. *Jurnal Pariwisata Pesona*, 6(2), 95-104.
- Mustofa, A. D., & Raidi, S. (2022). Identifikasi Green Terminal Tirtonadi. *Siar Iii 2022 : Seminar Ilmiah Arsitektur* .
- Pemerintah Indonesia. (1992). Undang-Undang Nomor 14 Tahun 1992 tentang Lalu Lintas dan Angkutan Jalan.
- Pemerintah Indonesia. (1995). Keputusan Menteri Perhubungan Nomor 31 Tahun 1995 Tentang Terminal Transportasi Jalan.
- Sitompul, R. A., Rante H., & Rusim, D.A. (2022). Analisis Optomalisasi Infrastruktur Terminal Waena Kotamadya Jayapura. *Jurnal ELIPS*, 5(2), 56-64.
- Wambrauw, O. O. O. (2023). Conditions and Management Strategies for Mangrove Ecosystems as an Effort to Improve the Economy of Youtefa Bay Coastal Communities, Jayapura City. *Formosa Journal of Science and Technology*, 2(4), 1049-1062.
- Warpani, P. Suwardjoko (2002). *Pengelolaan Lalu Lintas dan Angkutan Jalan*. Bandung