

SINGLE TICKET SYSTEM TO INCREASE THE NUMBER OF PASSENGERS ON THE SOETTA AIRPORT TRAIN IN THE POST PANDEMIC CHALLENGE

Soemino Eko Saputro¹ Yosi Pahala² Agus Nugroho³ Umar Gassing⁴

Institut Transportasi dan Logistik Trisakti, Jakarta, Indonesia

correspondence email: soemino.saputro@gmail.com

Abstract: Travel using air transportation is basically a multimodal transportation system, namely travel from a place (the city of Jakarta and its surroundings) using land mode to Soekarno-Hatta Airport, followed by flights to the next airport and finally with land transportation modes to the final destination. The airport train mode is one of the multimodal sub-systems. The airport train from Manggarai Station began to be operated since October 5, 2019, which is an operating extension of BNI City Station which previously had been operated since January 2, 2018. In order to provide the best service, the airport train has also created a comprehensive integration of physical infrastructure, both at Manggarai Station and BNI City Station, including providing a *city chek-in* system at Senayan. However, until now, the number of airport train users has only reached 13% of the available capacity. From the previous literature review and the development of theories that can be explored, the steps that must be handled to be able to increase the number of airport train service users need to be improved by the *single ticket* integration system for airport trains with potential Airland Airlines so that the ease and comfort of using airport trains is realized. In addition, it is necessary to increase the provision of several *city chek-in* locations in potential zones.

Keywords: *Multimodal transport, integrasi, city chek-in, single ticket*

Introduction

The journey of air transport users anywhere, is usually planned through 5 stages, namely: Planning about the trip to find alternative trips and accommodation, purchasing tickets to support the ease of travel from home to the place, travel from home to the airport, followed by a flight trip from the departure airport to the arrival airport and finally a trip from the airport arrival towards the final destination (Babić et al., 2022).

However, in the midst of the COVID-19 pandemic, all transportation trips have been restricted to reduce the number of COVID-19 positives, restrictions carried out by limiting the number of passengers in all

transportation so that the risk of spreading them can be minimized. For this reason, the health protocols imposed must be implemented for all transportation, be it land, air, or sea. Airport Rail Transportation enforces health protocols such as crossed seats so that they are not occupied to provide distance between users of transportation modes and other protocols such as checking body temperature, wearing masks and others. From the results of research conducted by (Malvin et al., 2021) it is concluded that the awareness of each passenger and officer at the station and train is the most important thing to remind each other in implementing health protocols and complying with regulations recommended by the government.

Air transportation users want the best service on road trips before flying, flight trips and road trips to their destinations, because in general they are dressed so they want comfort. Soekarno-Hatta International Airport has an integration with other land transportation systems to facilitate access from and to the city center, public transportation facilities that serve routes from and to Soekarno-Hatta International Airport, namely buses, taxis, and DAMRI with the main access in and out of the airport through the Prof. Sedyatmo Toll Road.

Nowadays, competition between industry competitors providing transportation services is getting tougher. The development of the transportation service industry currently plays an important and rapidly growing role in serving the community to get to their destination according to the route offered. Especially airport trains that are considered poorly known by the public, reaching consumers is the goal of every company including the transportation service provider industry such as PT Railink (Sitompul, 2017). A Marketing Communication Strategy that includes a promotional mix and a marketing mix should be designed in such a way as to produce a profound effect. The elements in the promotion mix and marketing mix are practiced directly to execute the right strategy. Therefore, it requires the right communication process and marketing communication strategy to be able to reach consumers in the midst of fierce market competition.

On February 2, 2008 Prof. Toll Road. Sedyatmo, which is the main access to and from Soekarno-Hatta Airport, experienced a terrible flood so that travel to and from Soekarno Hatta International Airport was closed (Zulkarnain, 2008). So since the incident began to think about the need for other modes of transportation that can provide connectivity as an alternative access to and from Soekarno-Hatta Airport, therefore, a mode of rail transportation was chosen, considering that rail transportation has many advantages, including having the ability to transport mass, smoothly, quickly, safely, land-saving, environmentally friendly and not knowing the term congestion. This mode of rail transportation is known as the Soekarno-Hatta Airport Train or *Airport Rail Link*, which is a passenger train that connects Soekarno Hatta International Airport with downtown Jakarta (Regulation of the Minister of Transportation concerning the National Railway Master Plan, 2011).

The condition of traveling through the highway from the city of Jakarta to Soekarno-Hatta Airport at this time has shown a high level of density and it is not even uncommon for traffic jams to occur, especially during peak hours or days leading to the holiday, so that the level of density / congestion makes it uncomfortable for air transportation users to Soekarno-Hatta Airport.

More than 130 airports in dunia have been connected to railway lines and there are many more airport designed to be connected by railway lines, both bandara for local flights and for international flights, thus the construction of the airport train is a keha rusan to be able to provide increased connectivity and accessibility for users of aviation transportation services (Babić et al., 2022).

As an illustration of how important and useful the bandara train line is as a support for connectivity and accessibility to bandara, at this time the Bangkok Airport trains have a number of passengers reaching more than 80 million per year so the bangkok airport train managers have to make a strategy of providing fare discounts and some other additional supporting facilities so

that passengers are willing to shift from peak hours to empty passenger hours. (Inmor, Kanitpong, and Jiwattanakulpaisarn 2021).

From the description above, it proves that rail transportation to support the smooth running of air transportation users is indeed very much needed.

In order to provide alternative connectivity and improve accessibility from the city of Jakarta to Soekarno-Hatta Airport, the Government is very appropriate to build an airport train from Manggarai to Soekarno Hatta Airport through Sudirman Baru (BNI City), Duri, and Batuceper stations. The inauguration of the first phase of the operation of the bandara train began from Sudirman Baru station (BNI City) on January 2, 2018, then the airport train operation continued to Manggarai Station on October 5, 2019. To provide the best service to service users, the airport train has realized an integration with other modes of transport both at Manggarai Station and at BNI City Station, thus both commuter train users, long-distance trains and buses Transjakarta dapat are well integrated in the two stasiun. Train bandara has also prepared a "*city chek in*" service at Plataran Senayan to provide comfort for passengers so that it is hoped that all luggage can be handed over to the "*city chek in*", thus passengers only need to bring a *boarding pass* on the way to Soekarno-Hatta Airport. One thing that has not been done by kereta bandara is to provide single ticket services, schedule synchronization, data sharing for the convenience and convenience of service users (KAI Bandara, 2022).

The Soetta airport train service *prepares* 10 train facilities (*rolling stock*) with a total of 272 seats per series. Rolling stock for services on the Soetta Airport train uses domestic products that are the result of karya son / daughter of Indonesia through the products of PT. INKA which is a collaboration between PT. INKA (Persero) with Bombardier Transportation. The facilities contained in the train include air conditioners, audio LED TVs, luggage racks specially designed for passengers' luggage, and also prepared mobile phone charging terminals (USB *ports*). For information services to service users, a *running text* is also prepared containing information about

the position of the train on the Soetta airport train line, CCTV and *priority* seats (KAI Bandara, 2022). The number of train trips per day is 42 trains with a travel time of 55 minutes.

To provide comfort and convenience at the station, it is also equipped with various facilities including *vending machines*, *tapping gates*, escalators, ATM galleries, *waiting lounges*, *commercial areas*, *meeting rooms*, toilets, and prayer rooms. For connectivity services from Soekarno-Hatta Airport Station to terminal 1, terminal 2 and also to terminal 3, APMS / *skytrain* is prepared (KAI BANDARA, 2022a).

In order to make it easier for airport train users to obtain tickets, the *Airport Railways Ticketing System* (ARTS) system has been developed, namely ticket transactions are carried out non-cash through *mobile* applications, internet *bookings* and *vending machines*, so that *vending machine* facilities have been prepared at each station (KAI BANDARA, 2022b) .

According to research by Vitriyana and Latifa, it is stated that the chances of an airport train being used to go to Soekarno-Hatta Airport are 14% and the remaining 86% choose to use road transportation. (Vitriyana & Latifa, 2019). The Airport Train has been operating since 2017 in DKI Jakarta and is operated by PT. Railink. The main purpose of the Airport Train was made to be the main mode of transportation to Soekarno-Hatta Airport. However, after 3 three years of operation, the occupancy rate of the Airport Train is still low at 32% throughout 2019, so it needs to be evaluated in terms of operational performance, namely: (calculating the intermediate time, waiting time, downtime, waiting time, operating speed, *load factor* or occupancy, and passenger volume of each station), and identifying the causes of the low occupancy value and determining factors for passenger needs. According to the results of research conducted by (Antony Robe & Hartanto Susilo, 2020) The determining factors for the highest increase in occupancy are cheaper prices and access to stations that need to be repaired.

However, the airport train price tariff factor is still very expensive, if the price is lowered, it is estimated that more and more people choose the Airport Train, additional stations are needed to adjust the route to make it easier for people to get to the Airport Train. The Airport Train is still the second choice after the DAMRI Bus compared to private vehicles that have shortcomings in the costs incurred are too expensive (Salsabila & Namara, 2020). In another research, he also said, Some of the problems complained by passengers, namely regarding ticket prices and facilities. In the study (Khairunnisa et al., 2019) Facilities and Perceptions of Ease of Transaction which are jointly felt, namely satisfaction of punctuality, satisfaction of completeness of facilities, satisfaction of price suitability, satisfaction of departure schedules, and satisfaction of functions and facilities.

(Viryananda et al., 2021) said that in determining public transportation rates, it is necessary to compare the value of *Ability to Pay* (ATP) and *Willingness to Pay* (WTP) soekarno hatta airport train users to pay a certain amount of money to pay for the services and facilities they receive. *Ability To Pay* (ATP) is the ability of people to pay for the services they receive based on income that is considered commensurate. Meanwhile, *Willingness To Pay* (WTP) is the willingness of people to pay for services if it is in accordance with what is provided by the service provider. From the results of research conducted by Viryananda, it shows that the ATP value is greater than WTP and the WTP value is smaller than the existing tariff. This data shows that the current rates are not commensurate with the services received.

The issues encountered on the Soekarno-Hatta bandara train at this time is that jumlah service users are still very small ranging from 12-14%, *city chek-in* for luggage services is still concentrated in Senayan, integration that still needs to be perfected. In addition to this, the use of *priority seats* does not run effectively, this is evidenced by the fact that there are still many airport train passengers who are not included in the four groups who still occupy *priority seats*. The results of the study conducted by (Aitisya et al., 2020) showed that of the five variables of passenger characteristics have a

significant influence on *self-awareness*, characteristic variables, namely gender, age, last education, income and frequency of using the Airport Train. Passenger characteristics that affect self-awareness have an influence value of 41.6%.

According to Peter Newman and Jeff Kenworthy, personal vehicle dependence is 10 myths, namely: *Wealth*, climate, space, age, *health and social problems*, *lifestyle*, *road lobby*, *land developers*, *traffic engineering*, and *town planning*. (Newman & Kenworthy, 2000)

Unlimited multimodal travel is the goal of ensuring that every mode is carried out in the most efficient way in terms of comfort, price, speed, reliability and flexibility, in order *to realize integrated door to door transport*. Airport train operators offer *city check-in* services for passengers to hand over their luggage at train stations or places prepared before the flight (Babić et al., 2022).

Integration is the formation of a total mobility chain, regardless of the mode (railway, road, air and water) operating in one seamless mobility chain. Integration includes infrastructure integration, mode integration and tariff integration (Sonar & Gaikwad, 2020).

According to Phil Charles (2014), understanding the essence of transport integration is the first step to building a successful transport system. For users, integration is all about ease of movement. It can be judged by finding out the time required in the trip, the level of comfort, smoothness and safety on the way, travel expenses, in information available to choose the mode of transport (Charles, n.d.).

The development of Rail Transit turned out to be very surprising because currently a new trend has emerged, namely the World Class Multi Airport system consolidating the pattern of rail transport development as the backbone of the distribution model, as a support for the emergence of a world-class urban agglomeration initiated by the French geographer "Jane Gottman". There are 6 class d urban agglomerations of unia, namely first agglomeration of urban shore pasific Japan with Tokyo as p usat, second

agglomeration of Perkotaan Delta Sungai Yangtze China withn Shanghai as the center, third europe northwest with Paris as its center, fourth United Kingdom with London as its center, fifth Pasifik Passisir Appointed American Association with New York as its center, sixth Great Lakes North America with Chicago as its center supported by a rail transportation system as its backbone. This *multi-airport* system must be supported by a *rail transit* system as the backbone of its ground transportation. (Wang & Wang, 2021)

Method

The methodology used in this paper is a *literature review* (*Literature Review*) because it does not have the opportunity to conduct research, but nevertheless to get a real picture in the field the author tried to travel using the airport train several times starting from Manggarai Station - BNI City - Duri - Batu Ceper - Airport Station to and from. From a review of the previous literature that examined the problem of the Soekarno Hatta airport train. it can be known that:

- a. By using the Importan Performance Analysis (IPA) and Customers Satifaction Index (CSI) methods, it turns out that airport trains have a positive impact on air transportation users.
- b. Using associative quantitative methods with samples used Nonprobability sampling with multiple regression to answer hypotheses as an analysis method obtained service quality greatly affects the satisfaction of airport train service users.

Discussion and Result

In order to solve this problem about the low number of Soetta Airport Train users, it is necessary to think comprehensively, the following is given a pattern of thinking.

Based on the background and study of the research literature, a Pattern of Thinking on Improving Airport Train Users can be compiled as follows:

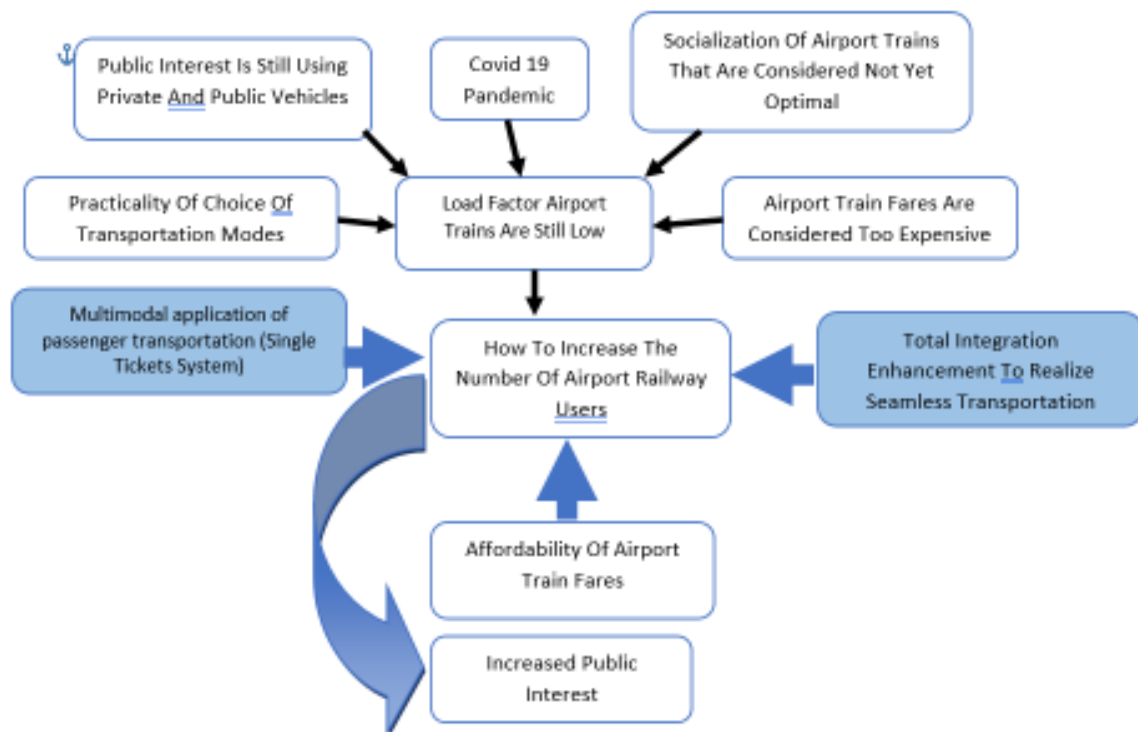


Figure 1 Patterns of Thought

According to Rizka, service users feel that they are good and satisfied. According to Anwar in the journal (Listifadah, 2021) the number of airport train passengers is only 13% of the capacity provided, while according to Vitriyana and Latifa (2019) there is a chance of airport train users of 14% of udara transportation users. Then Listifadah concluded that the existence of Stasiun Manggarai had a significant impact to passengers airport train, and having a *Customer Satisfaction Index* (CSI) = 0.8682 that means very satisfied. From previous research, it can be seen that airport train services are generally good, but it turns out that there are still few service users who take advantage of the existence of airport trains. In the research conducted by (Viryananda et al., 2021) that the current tariffs are not commensurate with

the services received. The sensitivity of the average ATP value of the Airport Train reaches 100% where passengers are able to pay, but the average WTP shows that passengers who are willing to pay the existing fare are now below. This shows that there is a need to improve services for the services provided so that passengers are willing to pay the current fare. Things like this can be said if passengers are not satisfied with what the service provider is currently providing because it is not worth the price spent. *Willingness to Pay* (WTP) is the maximum amount that a customer is willing to pay for a good or service. This makes the willingness to pay a very important role when determining the price on the product for both sellers and buyers. While *Ability to Pay* (ATP) is where a person's ability to be able to pay for the transportation services he uses based on the income he gets.

Based on research (Listifadah, 2021), what must be improved in terms of service is: information about travel that is easily accessible; ease of obtaining tickets; ease of changing other transportation (integration between modes); availability of facilities for pilgrims with special needs both at stations and on trains. And the use of social media needs to be increased to promote the existence of the Airport Train because based on the survey results, the majority of users know information about the airport train through social media.

The use of road vehicles has dominated transportation to and from Bandara Soekarno-Hatta, so that road conditions have reached high density and even at certain hours or days leading up to the holiday there are traffic jams. According to Peter Newman and Jeff Kenworthy, dependence on private vehicles is:(Newman & Kenworthy, 2000)

1. *Wealth* , namely car ownership, is a symbol of status, freedom, and prestige, especially in developing countries.
2. *Lifestyle* , namely motorized transportation, is seen as a simbul of modernity and development.
3. *Health and social problems* , namely the use of a car, feels more attractive because of mobility on demand, comfort, speed, convenience and individual status.

Therefore, it is necessary to be socialized and educated to users of private cars and taxis to switch to using public transportation that has been prepared by public transportation operators with excellent convenience, comfort, and safety.

Public transportation must be able to operate as an airport feeder completely, meaning that it must also play a role in facilitating the handling of *luggage*. Therefore, at the time of this study, the airport train perator had offered a *city check-in* service within the city for passengers with the aim of collecting *luggage* (*luggage integration*). Increasing the number of *city chek-in* locations spread in the vast city of Jakarta is a way to provide good service to users of airport train transportation services who will continue their journey by plane. At this time there is only one *city chek-in* location, namely in Senayan (Babić et al., 2022).

Model Application system single ticket (SST) train api airport (KAB) get views at picture next:

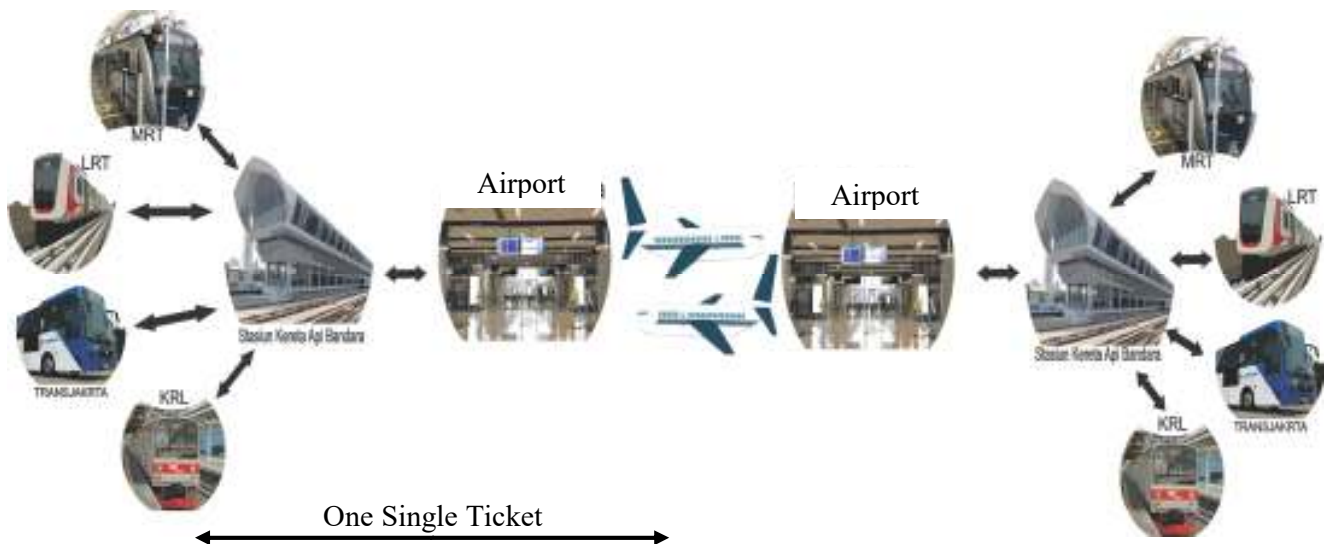


Figure 2 Single Ticket System

Air transportation is multimodal, namely travel by land and travel by air so that it can be considered as a *door to door system* transportation. This embodiment will be obtained efficient and effective transportation that presents comfort, safety, speed, affordable prices, constraints and flexibility.

For airport trains, until now, it has not implemented a single ticket service system (*single ticket basis*), so it has not created the expected convenience. By adhering to the handling of this *door to door* system, it can be developed into a single ticket service (*single ticket basis*) (Babić et al., 2022).

Based on the picture above, it can be seen that the use of SSTKAB combines various modes of transportation that are integrated with each other with airport destinations such as Soekarno-Hatta Airport Station is a class I *airport raillink station* located at Soekarno-Hatta International Airport. This station is connected to an integration building that serves the soekarno-hatta airport elevated train passenger transport mode, connecting this station with the three existing airport terminals.

There are several Airport Train Stations that are connected / integrated with the Soekarno-hatta Airport station, as follows:

a. Manggarai Airport Train Station

Manggarai Station, located on Jalan DR. Saharjo 1 which is integrated with *the Commuter Line* Station (KRL) and Transjakarta bus stop. The travel time from Manggarai Airport Train Station to Soekarno-Hatta Airport Train Station is about 50 minutes. With vending *machine* facilities, self *check-in* machine, train arrival and departure schedule information board, *waiting lounge*, toilet, prayer room, clinic, nursery.

b. BNI City Airport Train Station

Located in the area of Jl. Jenderal Sudirman makes this station easily accessible from the capital's business area. There is integration between transportation modes in the Dukuh Atas Area, BNI City Airport Train Station which is integrated in the Upper Dukuh Area connected to the MRT station, Stray / KRL rail station and Transjakarta bus stop. The travel time from BNI City Airport Train Station to Soekarno-Hatta Airport Train Station is about 40 minutes.

c. Duri Airport Train Station

Duri Station, located on Jalan Duri Utara which is integrated with *the Commuter Line* Station. Duri Airport Train Station started serving

passengers since December 20, 2018. With *vending machine* facilities, self *check-in* machines, commercial areas, train arrival and departure schedule information boards. Waiting lounge, toilet, prayer room, clinic, nursing room (*nursery*). The travel time from Duri Airport Train Station to Soekarno-Hatta Airport Train Station is about 27 minutes.

d. Batu Ceper Airport Train Station

Batu Ceper Station, located on Jalan KH Agus Salim which is integrated with *the Commuter Line* Station. Batu Ceper Station itself is a station passed by the *Commuter Line* / KRL connecting Tangerang - Duri. In order to facilitate the transfer of passenger flow from the commuter line (KRL) to the Airport Train, or vice versa, PT. Kereta Api Indonesia (Persero) provides *skybridge* facilities at Batu Ceper Station.

In order to realize convenience, comfort, speed and reduction in travel time, a complete integration system must be realized. Integration is the formation of a total mobility chain, regardless of the mode (rail, road, air and water) operating in one seamless mobility chain for the benefit of transportation service users. Integration includes the integration of infrastructure, the integration of modes and the integration of tariffs. Physical integration in the field must be realized intermodal connectivity and facilities in terminals, feeder services, and operational integration regarding the integration of tariffs, tickets and information between modes. The benefit of good integration, for service users is a smooth journey, with different modes, connected in close proximity both time and space, within a reasonable time from the door to the door.

The integration of all modes of public transport is necessary to facilitate greater mode choice, accessibility and reduced waiting time and travel time. Effective integration is possible through a triple process. The most important thing is institutional integration with coordinated planning. Second, there must be physical integration; ensuring spatial connectivity of

the network through intersections and hubs, thus providing a seamless travel experience. Finally there must be a unified operation achieved through the integration of information and tariffs.

A Public Transport System consists of three kinds of integration in journals (Sonar & Gaikwad, 2020):

- a. Integration infrastructure, which consists of dedicated transport infrastructure, such as park-and-ride facilities, junction stations, Priority Line buses:
- b. Integration capital, which consists of the possibility to use different types of modes of public transport (buses, trains) in a coordinated schedule;
- c. Fare integration, which allows passengers to use different modes and services of transport with the same ticket.

System integration has three levels, namely, institutional, physical, and operational according to (Kumar et al., 2010), as follows:

a. *Institutional Integration*

Institutional integration consists in the formation of a body that has a regulatory institutional framework that coordinates between the different modes of transport and its providers in such a way that the entire system

public transport should be perceived by the user as a single, seamless means of transport. Institutional integration includes the management of financial, operational and development aspects covering various agencies involved in the context of the network

b. *Physical Integration*

The physical integration of mass transportation includes two important aspects such as the availability of an interconnected transportation infrastructure network and the modes of public transportation that run on the network. The integration of transportation infrastructure networks is the first step towards physical integration. The next step is the integration of various modes running on the network. Public Integrated transport network from the

perspective of a planner is an interrelated network, nodes being the basic components of the network in which the paths are interconnected with intermodal intermodal interchanges that arise through previously separate transport systems (Ambrosino & Sciomachen, 2006).

c. *Operational Integration*

As emphasized by Pawan Kumar, the provision of feeder services for various modes of transportation is an important aspect of integration. The integration of the feeder bus system into other modes requires the design of travel routes, schedules, travel speeds, their frequency and coordination for the operational integration of public transport modes.

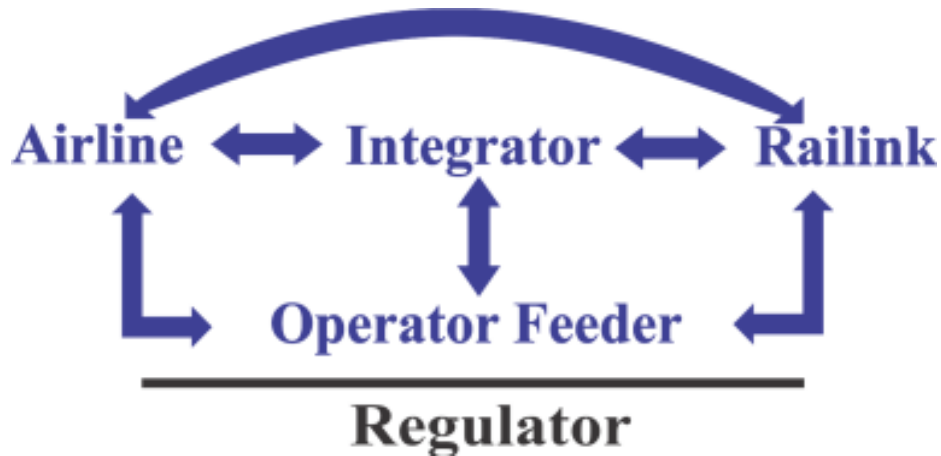


Figure 3 Collaboration between regulators, integrators, airline operators and feeders

Pt. Railink which is the result of a *collaboration (joint venture)* between two SOEs, namely PT Kereta Api Indonesia and PT Angkasa Pura II where both are Persero while the Regulator in this case is the Ministry of Transportation. The implementation of the Soekarno-Hatta Airport railway is an effort to support the main principles of Law No. 23 of 2007 concerning railways, namely multi-operator and multimodal systems. Airport trains require integrators or connectors in integrating starting from the schedule system with airlines and feeder operators as well as payment systems to support the *Single Ticket* system, *Single ticket* is the movement of people

from one place to another / destination by using more from one mode of transportation on the basis of paying for one travel ticket. While the feeder operator in the *Single Ticket* system is another mode of transportation such as MRT, LRT, KRL, TransJakarta and others connected to the Airport Train in this case is Railink which of course has received support from the Regulator / Government so that it can be trusted by feeder operators in connecting with airlines flight.

So, integration of transportation modes can be interpreted as a whole the integration of the type or form (transportation) used to move people and / goods from one place (*origin*) to another (*destination*). There are several multimodal concepts of public transportation (Juniati, 2020), as follows:

a. *Connecting Modes*

The connecting mode is defined as the link before and after the main mode that is being used. The before mode or "access mode" is defined as the mode used from home to public transit stops (busstop/station/terminal) such as walking, bicycles, cars or motorcycles, and taxis. After mode or "egress mode" is defined as the mode used from the bus-stop/station/terminal to the destination.

b. *Main Modes*

The main mode is usually the one used in the longest and longest journey of the other modes.

c. Jaringan Multimoda (*Multimodal Network: Main Route, Feeder Route*)

The most basic thing about multimodal components is the availability of a unified network between modes. The main characteristic of a multimodal network is to have a network that is connected between types (modes) and recognizes the difference in levels or levels of the network. The highest level of network is for high speed and limited access while the lowest level is for short distances, the presence of access to higher networks, low speeds, higher network density. How to create an efficient multimodal network, how multimodal influences on the design of transportation networks. The main factors affecting multimodal transport

are the length of the trip, the area to which it is going and the purpose of the trip.

d. *Transfer Point Facility*

The mode switching facility is also very important to attract private transport passengers who can integrate with public transport.

e. *Intermodal Transfer Point Facility*

The Intermodal Transfer Point facility is very important because it is a connecting point between two types of modes of two different types of networks.

Soekarno-Hatta International Airport is located in the tangerang city area, Banten, which is the largest and grandest airport in Indonesia. Operating with three terminals, namely Terminal 1, Terminal 2, and Terminal 3, Soekarno Hatta Airport (Soetta Airport) serves around 200,000 airplane passengers per day. To keep up with the growth of passengers that occurs every year, it is necessary to increase the need for airport train travel in order to create transportation that is in accordance with the needs of passengers who are integrated with each other (Darmadi & Riski Wiryawan, 2021).

Good integration results in economically viable transportation of reliable quality. (Sonar & Gaikwad, 2020) Therefore, the integration system on airport trains still needs to be improved so that service to service users can be realized with great *excellence*. Integration efforts towards public transport system planning should focus on integration at the institutional, physical and operational levels. Physical integration involves establishing connectivity between different infrastructure networks and the mode of transportasi that runs on it. This should be done through the provision of multimodal interchanges. It further involves the optimal design of routes, schedules, headways. Operational integration includes fare integration, *ticketing*, and an integrated passenger information system.

Conclusion

Until now, airport train operators have tried various steps to be able to provide the best service so that service users can increase, but from research, the occupancy of bandara trains has only reached 13%-14% (Anwar, 2019). In order to increase the number of service users, from the description above, the steps that must be implemented are:

- a. Providing education to private vehicle users through a marketing system to be willing to go to public transportation for trips to Soekarno-Hatta Airport.
- b. Opening several *city chek-ins* spread across Jakarta as a potential user of airplane travel.
- c. Offering *single tickets* for airport train tickets and airplane tickets at potential airports so as to provide convenience to service users.
- d. Provide several promotional offers/discounts for commuters who use the Airport Train. Because based on data, manggarai-Soekarno Hatta Airport train users are not only passengers going to Soekarno-Hatta airport or vice versa, but commuters who travel shuttle.
- e. Establish connectivity between infrastructure networks and information integration to passengers

References

- Aitisyah, E., Amirulloh, & Leliana, A. (2020). ANALYSIS OF THE CHARACTERISTICS OF AIRPORT TRAIN PASSENGERS TOWARDS SELF-AWARENESS IN THE USE OF PRIORITY SEATS FOR MANGGARAI-SOEKARNO HATTA RELATIONS. *Proceedings of the Symposium on Intercollegiate Transport Studies Forum*, 23–24.
- Ambrosino, D., & Sciomachen, A. (2006). Selection of modal choice nodes in urban intermodal networks. *WIT Transactions on the Built Environment*, 89.
- Antony Robe, M., & Hartanto Susilo, B. (2020). Airport Train Operation Performance Evaluation (Route: Manggarai Station-Soekarno-Hatta

- Airport Station) Operation Performance Evaluation of Airport Train (Route: Manggarai Station-Soekarno-Hatta Airp. *Civil Engineering Study Program, Trisakti University, September*, 345–349.
- Anwar, M. C. (2019). *Airport Train Transports 15,000 Empty Seats Per Day*. CNBC New Zealand. <https://www.cnbcindonesia.com/news/20190726115541-4-87794/duh-kereta-bandara-angkut-15000-kursi-kosong-per-hari>
- Babić, D., Kalić, M., Janić, M., Dožić, S., & Kukić, K. (2022). Integrated Door-to-Door Transport Services for Air Passengers: From Intermodality to Multimodality. *Sustainability*, 14(11), 6503. <https://doi.org/10.3390/su14116503>
- Charles, P. (n.d.). *What is successful transport integration?* Transport Futures Institute.
- Darmadi, & Riski Wiryawan, M. (2021). ANALYSIS OF TRAVEL NEEDS FOR PASSENGER DEMAND FOR THE SOEKARNO HATTA AIRPORT TRAIN. *Headway Journal of Civil Engineering-Architecture*, 20(1), 53.
- Inmor, T., Kanitpong, K., & Jiwattanakulpaisarn, P. (2021). *Passenger Behavioral Response to Off-Peak Fare Reduction in Airport Rail Link, Bangkok, Thailand*. 61–97. https://doi.org/10.1007/978-981-15-5979-2_4
- Juniati, H. (2020). Integration of Benoa Port and Trans Sarbagita in order to improve urban transportation services in Denpasar Bali. *Journal of Multimodal Transport*, 17(2). <https://doi.org/10.25104/mtm.v17i2.1323>
- KAI Airport. (2022). *Railink | Airport Railways*. PT Railink. <https://www.railink.co.id/trainstation/id>
- KAI AIRPORT. (2022a). *Connectivity to APMS (Skytrain)*. PT Railink. <https://www.railink.co.id/train/id>
- KAI BANDARA. (2022b). *Railink - Airport Railway Ticketing*. PT Railink . <https://reservation.railink.co.id/pages/service>
- Regulation of the Minister of Transportation on the National Railway Master

- Plan, 74 (2011).
- Khairunnisa, Yoeliastuti, Y., & Wibowo, E. W. (2019). Analysis of Ticket Prices and Transaction Facilities towards Passenger Satisfaction of Soekarno Hatta Airport Train. *Journal of Business Lanterns*, 8(2), 59. <https://doi.org/10.34127/jrlab.v8i2.292>
- Kumar, P., S. S. Jain, S.Y. Kulkarni, & M. Parida. (2010, July). *Multi Modal Transportation System*. NBM&CW. <https://www.nbmcw.com/article-report/infrastructure-construction/project-management-arbitration/multi-modal-transportation-system.html>
- Listifadah. (2021). Evaluation of the performance of the Manggarai-Soekarno Hatta airport train service based on the perception of service users. *Journal of Land Transport Research*, 22(2), 180–193. <https://doi.org/10.25104/jptd.v22i2.1668>
- Malvin, M., Linggasari, D., & Lift, H. (2021). Analysis of Passenger Behavior of Manggarai – Soetta Airport Train During the Pandemic and Its Effect on Travel Patterns. *JMTS: Journal of Civil Engineering Partners*, 4(2), 353. <https://doi.org/10.24912/jmts.v0i0.10453>
- Newman, P., & Kenworthy, J. (2000). The Ten Myths of Automobile Dependence. *World Transport Policy & Practice*, 6(1), 15–25. http://worldcarfree.net/resources/freesources/ad_myths.pdf
- Salsabila, D. N., & Namara, I. (2020). CHARACTERISTICS AND PREFERENCES OF USERS OF TRANSPORTATION MODES TO SOEKARNO - HATTA AIRPORT (Case Study: Terminals 1 and 2 of Soekarno-Hatta Airport). *SNITT- Balikpapan State Polytechnic*, 278–290.
- Sitompul, E. E. (2017). PT Railink "Kualanamu International Airport Train" in reaching consumers. The purpose of this study is to see how marketing communication strategies are. *FLOW Journal of Communication Science*, 3(9), 1–10. <https://garuda.ristekbrin.go.id/journal/view/4127?page=4>
- Sonar, S. G., & Gaikwad, A. B. (2020). Global Efforts Towards Integrated Public Transportation Planning : A Brief Review. *International Journal*

of Engineering Research & Technology (IJERT), 9(11), 9–13.

- Viryananda, C., Linggasari, D., & Lift, H. (2021). Atp-Wtp Analysis of Passengers of the Lintas Manggarai-Soekarno Hatta Airport Train. *JMTS: Journal of Civil Engineering Partners*, 4(1), 53. <https://doi.org/10.24912/jmts.v0i0.10452>
- Vitriyana, D., & Latifa, E. A. (2019). Analysis of the selection of transportation modes to Soekarno Hatta Airport using passenger cars and trains. *Journal of Poly-Technology*, 18(1), 117–126. <https://doi.org/10.32722/pt.v18i1.1299>
- Wang, Y., & Wang, C. (2021). Rail transit development experience of world-class multi-airport system at abroad. *IOP Conference Series: Earth and Environmental Science*, 621(1). <https://doi.org/10.1088/1755-1315/621/1/012170>
- Zulkarnain. (2008, February). *flooding on the toll road prof dr ir sedyatmo jakarta* - *DATATEMPO*. <https://www.datatempo.co/foto/detail/P0302200800056/banjir-di-jalan-tol-prof-dr-ir-sedyatmo-jakarta>