

The Implementation of Air Facilitation (FAL) Activities at Juanda-Surabaya International Airport

Ajun Dwi Handayani^{a,1}, Dinar Dewi Kania^{b,2} Suharto Abdul Majid^{c,2}

^a Departemen Perhubungan Republik Indonesia

^{b,c} Institut Transportasi dan Logistik Trisakti, Jakarta, Indonesia

^{1*} adjadj1058@gmail.com, ² dinar.insists@gmail.com, ³ samtrisakti1531@gmail.com

*corresponding e-mail

This is an open access article under the terms of the **CC-BY-NC** license

ABSTRACT

The purpose of this study is to determine the priority of improving the implementation of Air Facilitation (FAL) activities at CIQ (Customs, Immigration, and Quarantine) at Juanda International Airport, Surabaya. The analytical method uses AHP (Analytic Hierarchy Process) analysis. Data obtained through interviews with 5 (five) experts and questionnaires to 10 (ten) people consisting of 5 (five) experts and 5 (five) CIQ (Customs, Immigration, and Quarantine) officers at Surabaya International Airport. The results showed that the Air Facilitation (FAL) activities in the CIQ Section of Juanda International Airport in Surabaya had been going well, but specifically considering the limited space / place in the terminal, the implementation of the Facilitation function (FAL) at the Airport still need to be further improved. The results of the analysis process by AHP analysis based on data processing with expert choice software weighting on the customs sub-criteria (customs) contained in the departure facilitation at T1 (service and monitoring posts are too narrow and TPS is not available and the area for K-9 placement), Swallow Toilet and control room.

Keywords : *air facilitation; customs immigration; quarantine; airport*

A. Introduction

Air transport has become one of the important modes of transportation for travelling with medium and long distances and requires supporting infrastructure in the form of airports. The airports nowadays have been perceived as the gateway of an area, region and even country and have also become a symbol of its own prestige that will be remembered by both domestic and international airplane passengers. The quality of airport services has become a reflection of tourism services; considering airports as the

gates of passengers but also a means of recreation, entertainment, and a center for tourism information services.

In supporting the Implementation of International Aviation Activities at Juanda-Surabaya Airport, the airport needs Air Facilitation (FAL) activities. Air Facilitation (FAL) is a series of activities in the field of international civil aviation which involves the smooth handling of matters for airplane, cabin crew, passengers and their luggage, luggage, cargo and post as well as documents at international airports to

function optimally at international airports . The purpose of the Air Facility (FAL) itself is as a guideline in regulating the movement of people and goods in the border areas through certain monitoring procedures carried out by the competent authority namely CIQ (Customs, Immigration, and Quarantine) which have been regulated in Minister of Transportation Regulation of the Republic of Indonesia PM Number 61 Year 2015 referring to Article 226 of Law Number 1 Year 2009 concerning Aviation. Minister of Transportation Regulation Number: PM No. 61 of 2015 concerning Air Facilitation (FAL) is determined to meet international standards and recommendations listed in Annex 9 ICAO (International Civil Aviation Organization) on Facilitation in accordance with the International Civil Aviation Convention (ICAO Convention), and ICAO Document No. 9957 on the FAL Manual, so that in this study the researchers only focus on research about procedures and efforts to improve the implementation of Air FAL activities in the CIQ (Customs, Immigration, and Quarantine) Section of Juanda International Airport, Surabaya.

Air Facilitation Activities (FAL), PT. Angkasa Pura I (Persero) Juanda - Surabaya International Airport Branch under the auspices of the Ministry of Transportation which oversees the unit that functions as the person responsible for the allocation of port health, customs and excise, immigration and health quarantine offices in PT. Angkasa Pura I (Persero) Branch of Juanda International Airport - Surabaya in coordination with the Head of the Regional Airport Authority Office III - Surabaya, the Head of the Provincial Transportation Service, and other agencies responsible for the fields of immigration, quarantine (health, animals and plants and fish) and customs in accordance with Article 226 of Law No. 1 of 2009.

Juanda-Surabaya International Airport is currently serving scheduled domestic and international flight activities, as the airport manager serving the international route Juanda International Airport - Surabaya

should prepare airport support facilities that are in accordance with the provisions in dealing with growing passenger growth and readiness of Juanda International Airport which is included in the ASEAN Open Sky Policy agreement as a liberalization of the aviation industry market in ASEAN, where the policy is a multilateral cooperation policy among ASEAN member countries, without limiting flight frequency or tariff regulation. Besides liberalization that has positive impacts, the negative impact on liberalization is also very large, namely the possibility of increasing the number of illegal workers, drugs and the threat of infectious diseases / viruses.

A study carried out by Nurhayati (2011) suggests that Juanda Airport in Surabaya is one of the international airports that has an important role in transportation in Indonesia, especially air transportation, it is appropriate to provide maximum services both in terms of human resources and facilities including air-side facilities so that comfort, security and aviation safety can be achieved optimally by realizing the provision of good airport facilities, one of which is the need for the availability of air side facilities at airports with adequate quality and quantity, in accordance with the requirements / technical provisions issued by the Directorate General of Civil Aviation referring to on international regulation.

According to the Airport Cooperative Research Program (2010) in Cinantya (2015), within the airport terminal there are 13 facilities consisting of airline ticket counters (at Surabaya Juanda International Airport), passenger screening areas, waiting areas, concessions, baggage claim areas (for arrival terminals), circulation areas, airline offices, baggage handling facilities, baggage sorting facilities, international inspection services, support areas, special services, and building systems.

Since 2010, the bustle at the passenger terminal of Surabaya Juanda International Airport has occurred in the morning at 06.01–07.00 which reached 855 passengers and the peak hour of arrival occurred in the

afternoon at 17.01–18.00 which reached 846 passengers. While the total area of the existing passenger terminal is 8,904.81 m². The conditions seen in the field have indicated that the terminal's capacity cannot accommodate the existing number of passengers, especially during peak hours. (Wahyuniati et al., 2014). Airport facilities are a very related element for the level of satisfaction of service users. By having very adequate facilities, passengers will feel satisfied with the company's performance. Adequate facilities will attract prospective passengers to continue to use the company's services in the future continuously. The purpose of the development is to meet international criteria in terms of safety and also to attract the interests of world airlines to transit at the airport (Imaniar, 2016: 36).

In the Facilitation Activity (FAL) which has not been fully carried out in accordance with the National Air Facilitation (FAL) procedure as set out in PM No.61 of 2015, there are obstacles that occur in the field such as: inadequate provision of customs facilities such as the placement of sniffer dogs (K -9) which is not yet available, detention rooms that are not equipped with surveillance cameras (CCTV) at Immigration, and there is no quarantine bin at the Quarantine at the arrival terminal and there is no alert system that can be accessed by stakeholders holders at airports (airport authority offices, airport organizers, customs, immigration, and quarantine, and air transport companies serving related to international routes: potential passengers who may be refused to enter a certain country and are returned to Indonesia (NTL / Not to Land) and potential passengers who are fugitives Interpol, BIN (State Intelligence Agency), or BN PT (National Counterterrorism Agency) to suspected terrorism and / or other legal cases.

B. Research Methods

Analysis of the data in this study used Analytical Hierarchy Process (AHP) in which the steps of data analysis is performed in the Expert Choice software, a

software that supports collaborative decisions and hardware systems that facilitate group decision making that is more efficient, analytical, and which can justified being developed for AHP applications. AHP (Analytic Hierarchy Process) is defined as a representation of a complex problem in a multi-level structure where the first level is the goal, followed by the level of factors, criteria, sub criteria, and so on down to the last level of alternatives. (Saaty, 1993).

The data used are primary data obtained from interviews with experts who have an understanding of the issues discussed. The questionnaire was then compiled and proceed with filling out the questionnaire at the second meeting with the respondents. The selection of respondents in this study was conducted by considering respondents' understanding of the problem. In this study, the questionnaire was distributed to 10 respondents consisting of 5 (five) experts as informants in the analysis of the AHP method and practitioners as informants and 5 (five) CIQ Juanda Airport Surabaya staff. For the distribution of assessment through a questionnaire taken as a whole, namely 10 (ten) respondents consisting of 5 (five) experts and 5 (five) CIQ Juanda Airport Surabaya staff.

The stages of decision making in the AHP method in more detail are as follows:

1. Define the problem and determine the desired solution.
This first stage aims to determine the problem to be solved clearly, in detail and easily understood. From the existing problems will be able to determine a solution that might be suitable for the problem faced.
2. Create a hierarchical structure that starts with the main goal as the top level, followed by criteria that are suitable for consideration and assesses the alternative choices that want to be ranked. Each criterion has a different intensity. The hierarchy continues with sub-criteria (if needed).

3. Assess the scoring of the criteria in the hierarchy by forming a pairwise comparison matrix that illustrates the relative contribution or influence of each element to each of the objectives of the criteria stated above. Comparisons are made based on the choices of the decision makers by assessing the level of importance of an element compared to other elements.
4. Define pairwise comparisons by determining priorities. After the hierarchy is created, each element contained in the hierarchy must know the relative weights of each other. The first step taken in determining priority criteria is to make pairwise comparisons, that is to compare in pairs the form of all criteria for each sub-system hierarchy. The comparison is then transformed in the form of a pairwise comparison matrix for numerical analysis. The numerical value charged for all comparisons is obtained from a predetermined ratio of 1 to 9.

In qualitative descriptive methodology as a research procedure that produces descriptive data in the form of written or oral words from people and observable behavior. The form of univariate analysis method is

used in this study, then, the characteristics of each variable in this study are explained, namely the frequency distribution and the mean (mean). (Bogdan & Taylor, 2007).

C. Results and Discussion

1. Analytical Heirarchy Process (AHP) Analysis Method

a. Compilation of the Hierarchy

After the problem is defined, the next step is to break the whole problem into its elements. The solution is also carried out on the elements until it is not possible to do further solutions to get accurate results. In the AHP method, criteria are usually arranged in the form of a hierarchy. The criteria and sub-criteria in this study are the criteria and sub-criteria used by Juanda International Airport in the implementation of the Juanda International Airport FAL activities, which were obtained from the results of preliminary interviews. The problem of selecting the implementation of Juanda International Airport FAL activities is arranged in three hierarchical levels as shown in figure 2. Level 0 is the objective, namely the implementation of Airport FAL activities (optimal), the first level is a criterion in the implementation of Airport FAL activities, level 2 is a sub-criteria which is a elaboration from the first level (criteria), while level 3 is an alternative, the implementation of FAL Airport activities.

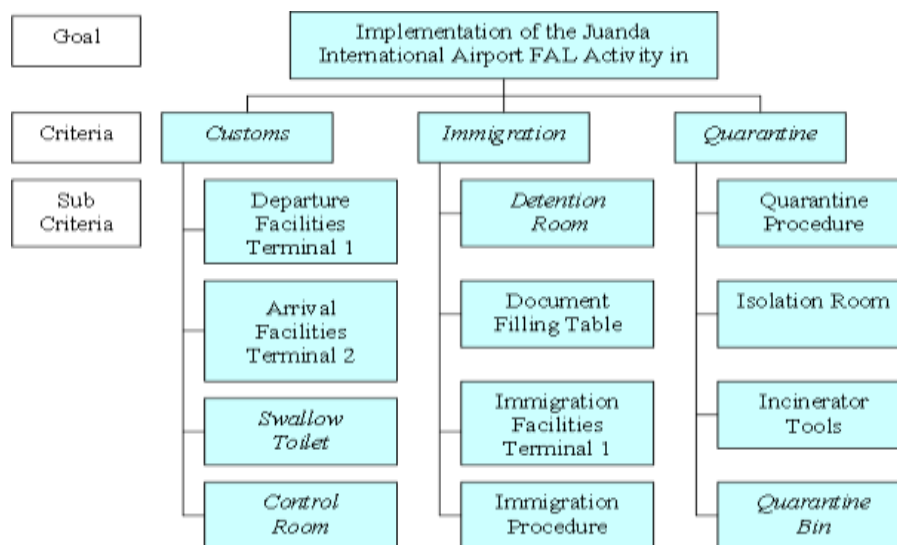


Figure 1 Hierarchy Structure

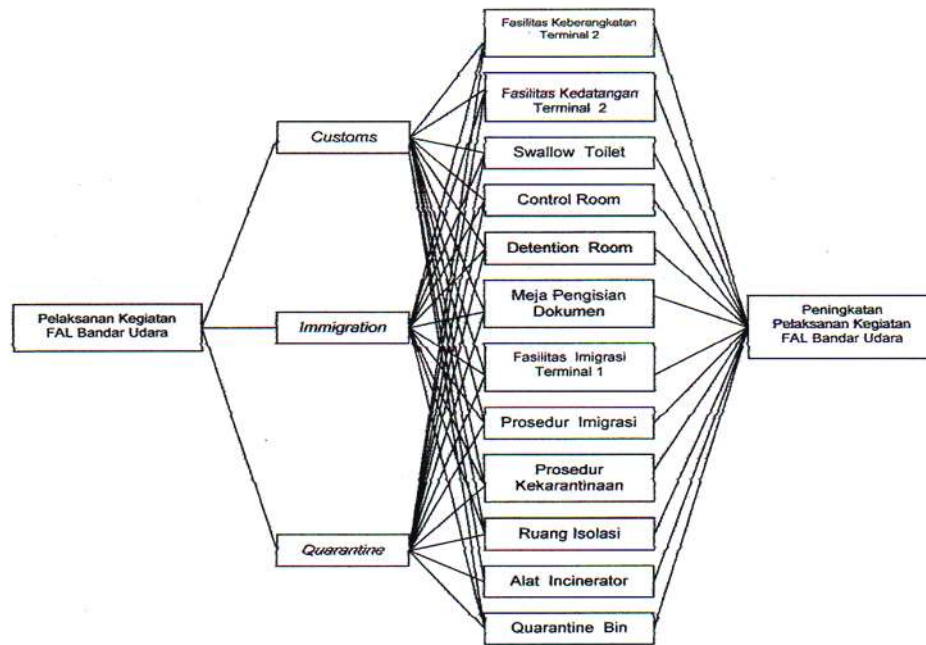


Figure 2 AHP Network Model

1. Make a pairwise comparison matrix that illustrates the relative contribution of the influence of each element to each of the objectives of the same level above
2. Pairwise Comparison Matrix for Each Criteria in Improving the Implementation of Juanda Airport Surabaya FAL Activities. In this study there are 3 (three) criteria, namely customs, immigration and quarantine, and the results are as follows:

Table 1 Priority Value Criteria for Improved Implementation of Air Facilitation Activities (FAL) at Juanda Airport

No	Improvement of the implementation of FAL activities	Priority Score
1	<i>Customs</i>	0.62
2	<i>Immigration</i>	0.26
3	<i>Quarantine</i>	0.12

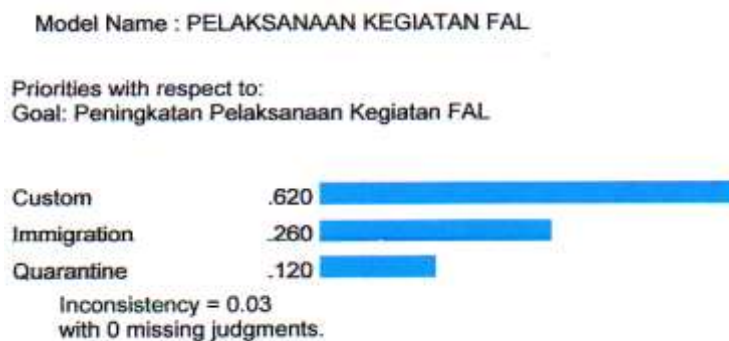


Figure 3 Criteria Priority Score (Expert Choice)

Based on Table 1 and Figure 3 above, the order of priority score for improving the implementation of the Surabaya Airport Air Facilitation (FAL) according to the key person is Custom, which has the highest weight value, with a score of 0.620, then Immigration has the second highest weight value with a score value of 0.260, third is the Quarantine criterion with a priority score of 0.120. The value of the Inconsistency ratio on these criteria is 0.03 which shows that the

results of the Analytical Hierarchy Process (AHP) can be accepted because the Inconsistency ratio value is less than 0.1.

i. Pairwise Comparison Matrix Sub-Criteria of Each Criteria in Improving the Implementation of Juanda Airport Surabaya FAL Activities

The criteria in this study are 3 (three) criteria, namely customs, immigration and quarantine with the results as follows:

Table 2 Priority Score on Custom Sub Criteria

No	Improvement of the implementation of FAL Activities Sub Criteria Custom	Priority Score
1	Departure Facilities Terminal 1 (H1)	0.45
2	Arrival Facilities Terminal 2 (H2)	0.29
3	Swallow Toilet (H3)	0.20
4	Control Room (H4)	0.07

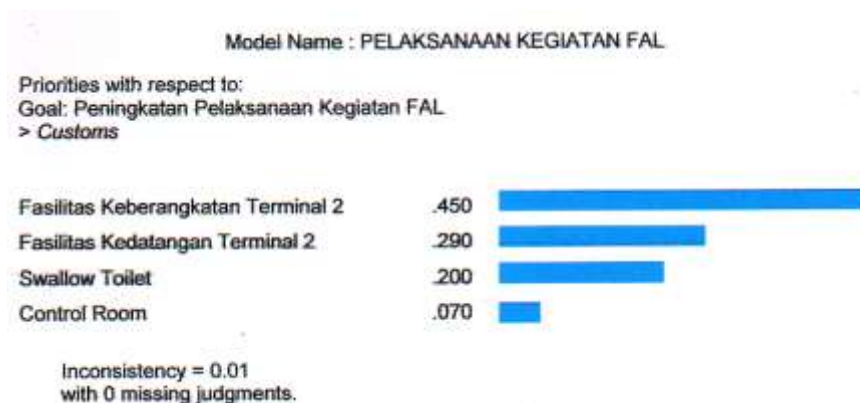


Figure 4 Priority Score Custom Sub-Criteria (Expert Choice)

Based on Table 2 and Figure 4 above, the order of priority scoring criteria for improving the implementation of the Surabaya Airport Air Facilitation (FAL) activity according to the key person is Terminal 2 departure facility which has the highest score value, with a score of 0.450, then the terminal 2 departure facility has the second highest score value. with a score value of 0.290, the third is the criteria for swallow toilet with a priority score of 0.200, the fourth is a control room with a priority value of 0.070. The value of the inconsistency ratio on these criteria is 0.01 which indicates that the results of the Analytical Hierarchy Process (AHP) can be

accepted because the Inconsistency ratio value is less than 0.1.

Table 3 Priority Score on Immigration Sub-Criteria		
No	Improvement of the implementation of FAL activities Sub criteria <i>Immigration</i>	Priority Score
1	<i>Detention Room (Q1)</i>	0.50
2	Document Filling Table (Q2)	0.30
3	Immigration Facilities Terminal 1 (Q3)	0.33
4	Immigration Procedure (Q4)	0.05



Figure 5 Priority Score Sub Criteria Immigration (Expert Choice)

Based on Table 3 and Figure 5 above, the order of priority weighting criteria for the improvement of the implementation of the Surabaya Airport Air Facilitation (FAL) activity according to the key person is detention room which has the highest score value, with a score of 0.502, then the immigration facility terminal 1 has the second highest score value with a score value of 0.330, the third is the criteria for

document filler facility facility with a priority score of 0.302, the fourth is the immigration procedure criteria with a priority score of 0.050. The score of the Inconsistency ratio on these criteria is 0.01 which indicates that the results of the Analytical Hierarchy Process (AHP) can be accepted because the Inconsistency ratio value is less than 0.1.

Table 4 Priority Values in the Immigration Sub-Criteria		
No	Improvement of the implementation of FAL activities Sub criteria <i>Immigration</i>	Nilai Prioritas
1	Quarantine Procedure (S1)	0.43
2	Isolation Room (S2)	0.32
3	Incinerator tool (S3)	0.28
4	<i>Quarantine Bin (S4)</i>	0.27



Figure 6 Priority Score Quarantine Sub-Criteria (Expert Choice)

Based on Table 4 and Figure 6 above, the priority score criteria for improving the implementation of the Surabaya Airport Air Facilitation (FAL) activity according to the key person is the quarantine procedure which has the highest score, which weighs 0.430, and then the isolation room has a score the second highest with a score of 0.320, ranked third was the incinerator tool criteria with a priority score of 0.285, the fourth was the Quarantine Bin criteria with a priority score of 0.272. The value of the Inconsistency ratio on these criteria is 0.01 which indicates that the results of the Analytical Hierarchy Process (AHP) can be accepted because the Inconsistency ratio value is less than 0.1

b. Logical Consistency

i. Criteria for the Improvement of FAL activity at Juanda Airport - Surabaya.

Consistency ratio (CR) = 0, then $CR \leq 0.1$, the results of calculations on improvement FAL activities in Juanda Airport - Surabaya with the criteria Customs, Immigration and Quarantine can be justified.

ii. Customs Sub-Criteria

Consistency ratio (CR) = 0, then $CR \leq 0.1$, the results of calculations on customs criteria with sub criteria for terminal 1 departure facilities, terminal 2 arrival facilities, swallow toilet and control room can be justified.

iii. Immigration sub-criteria

Consistency ratio (CR) = 0, then $CR \leq 0.1$, the results of calculations on customs criteria with detention room sub criteria, document filling tables, terminal 1 immigration facilities and immigration procedures can be justified.

iv. Quarantine Sub-Criteria

Consistency ratio (CR) = 0, then $CR \leq 0.1$, the results of calculations on customs criteria with sub criteria of quarantine procedures, isolation rooms, incinerator devices and quarantine bin can be justified.

D. Conclusion

The implementation of Air Facilitation (FAL) at Surabaya International Airport with the highest priority score based on the results

of the Analytical Hierarchy Process (AHP) based on expert choice data processing is Customs with a priority weight reaching 62.0% (ECM). This can be seen with the maximum fulfillment of terminal 1 facilitation, terminal 2 arrival, Swallow Toilet and Control Room.

Matters related to the availability of facilities (facilities and infrastructure) to encourage the facilitation activities (FAL) such as the provision of facilities for customs inspection / supervision so that they become a priority for airport management and must be in accordance with Regulation of the Director General of Civil Aviation Number: KP 541 of 2014 about the Facilitation Activities Facility (FAL) at the Airport.

In general, although the functions and operations of the Facilitation (FAL) have been running well and have met the minimum service requirements for Air Facilitation (FAL) at Juanda International Airport in Surabaya, in accordance with ICAO Annex 9-Facilitation, KM 61 of 2015 concerning Facilitation (FAL) Air and Director General of Civil Aviation Regulation number KP 541 of 2014 concerning Facilitation Activity Facilities (FAL) at the International Airport, however, considering the limited space / place in the terminal, the implementation of the Facilitation function (FAL) at the Airport still needs to be improved further, so that airport managers coordinate with relevant agencies (CIQ) in order to accommodate / facilitate all facilities and infrastructure needs for the smooth implementation of tasks (avoiding rooms overhaul).

E. References

- Bogdan & Taylor. (2007) *.Metodologi Penelitian Kualitatif*. Bandung: Remadja Karya
- Brodjonegoro, B.P. (2010). *AHP, Inter_University Centre, Economics, University of Indonesia, Jakarta*

- Herjanto, E. (2009). *Sains Manajemen: Analisis Kuantitatif Untuk Pengambilan Keputusan*. Jakarta, Grasindo
- Martono, K dan Sudiro, A. (2012), *Hukum Udara Nasional dan Internasional Publik (Public International dan National Air Law)*, Jakarta. Raja Grafindo Persada
- Miles, M.B, Huberman, A.M, dan Saldana, J. (2014). *Qualitative Data Analysis, A Methods Sourcebook, Edition 3. USA: Sage Publications. Terjemahan Tjetjep Rohindi Rohidi, UI-Press*
- Nasution, M.N. (2010). *Manajemen Transportasi*, Jakarta: Ghalia Indonesia.
- Saaty, T.L. (1993). *The Analytical Hierarchy Process: Planning, Priority, Setting, Resource Allocation*. Pittsburgh: University of Pittsburgh Pers
- Salim, A. (2012). *Manajemen Transportasi*, Jakarta: Raja Grafindo Persada
- Suharsimi, A. (2010). *Prosedur Penelitian : Suatu Pendekatan Praktik*, Edisi Revisi VI, Jakarta : Rineka Cipta
- Cinantya, C. 2015. *Analisis Tata Letak Terminal Keberangkatan Bandar Udara (Studi Kasus pada Bandar Udara Internasional Juanda Surabaya)*. Vol.7 No. 4 Juni 2011: 11-23, Unair, Surabaya
- Imaniar, D.A. (2016), Analisis Pengaruh Kondisi Fasilitas Land Side Terhadap Kepuasan Penumpangmaskapai Penerbangan Di Bandar Udara Internasional Ahmad Yani Semarang. *Jurnal Ground Handling Dirgantara*, 3(1).
- Nurhayati, Y. (2011). Evaluasi Perawatan Fasilitas Sisis Udara (Air Side) di Bandara Juanda Surabaya. *Jurnal Penelitian Perhubungan*, 37(2).
- Annex 9 ICAO *tentang Facilitation*
- ICAO (International Civil Aviation Organization) No. 9957 *tentang FAL Manual*
- Peraturan PM 61 tahun 2015 *tentang Fasilitas (FAL) Udara*.
- Peraturan KP 541 tahun 2014 *tentang Fasilitas Kegiatan FAL (Facilitation) di Bandar Udara Internasional*

Halaman Ini Sengaja Dikosongkan.