

# ANALYSIS OF THE PERFORMANCE OF APRON MOVEMENT CONTROL (AMC) PERSONNEL ON PASSENGER ORDERS AT THE APRON OF HUSEIN SASTRANEGARA BANDUNG INTERNATIONAL AIRPORT

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## ABSTRACT

*This research was conducted to determine the performance of Apron Movement Control (AMC) personnel on passenger order at the apron of Husein Sastranegara International Airport Bandung and to find out how passenger order at the apron of Husein Sastranegara International Airport Bandung. Supervision of order and safety at the apron is a task that must be carried out by Apron Movement Control (AMC) personnel. There are still passengers who do not comply with the markings to cross the apron of Husein Sastranegara International Airport Bandung when getting off or boarding from an airplane can have a major impact on safety. This happens because the supervisory function carried out by Apron Movement Control (AMC) personnel is not optimal. This research uses descriptive qualitative methods with data collection techniques are observation, interviews and literature studies. The results of this study indicate that the performance of Apron Movement Control (AMC) personnel at Husein Sastranegara International Airport Bandung still has to be improved, this can be indicated by the still found problems of order of passengers boarding and disembarking from aircraft that endanger flight safety and security at Husein Sastranegara International Airport Bandung. Success indicators were obtained to reduce passenger disorder in the apron in the form of optimizing digital banners, adding signage and reoperating the apron bus.*

**Keywords:** *Performance, AMC Personnel, Passenger Order, Apron.*

## 1. INTRODUCTION

Currently, air transportation is widely used by people around the world due to its safety, speed, and punctuality [1]. Indonesia is an archipelagic country, which makes air transportation quite popular among the Indonesian population [2]. The separation of islands in Indonesia necessitates a fast, effective, and efficient mode of transportation for moving from one place to another.

Increased service to the community makes a higher level of passenger confidence and time efficiency so that many people choose air transportation modes [3]. The increasing activity of air transportation modes causes an increase in passengers at the terminal and on the air side at an airport. The increase in terminals at an airport must have a supervisory function carried out by the Terminal Inspection Service (TIS) which has the task of ensuring operational activities at the terminal are running properly

[4]. As a result of the increase in passengers at the terminal, the airside has also increased so that supervision is needed on the airside carried out by the Apron Movement Control unit.

The authority of the Apron Movement Control (AMC) includes air traffic control, flight coordination, communication with pilots, slot management, navigation systems, and emergency handling within the region [5]. Apron Movement Control are airport personnel responsible for supervising flight operations in the airside area who have a license and rating [6]. Apron is an area that functions as an aircraft service including aircraft maneuvers and aircraft parking equipped with markings because the apron area is an active area with various types of aircraft and ground vehicle activities, so safety and security are the top priorities. Strict protocols and procedures are implemented to ensure operational safety, including access control to the apron area. The apron is

an important part of the airport infrastructure that supports aircraft operations and provides services for passengers, cargo, and the aircraft itself. Supervision carried out by AMC personnel to create order and security of airport operations on the airside. As the object of research, Bandung Husein Sastranegara International Airport is the focus of researchers located in the city of Bandung, West Java, this airport is one of the concerns in the study. During the author's On The Job Training (OJT) at the AMC supervision field, the oversight of service user orderliness at the apron still needs improvement, as illustrated by inadequate monitoring of passenger movements on the airside.

In this research, the author limits the issues raised so as not to expand and not get out of the context of the title, namely by focusing on the orderliness of passengers boarding and disembarking from airplanes at Husein Sastranegara International Airport Bandung.

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Based on the description above, there are several problem formulations that will be discussed, namely the performance of personnel at Husein Sastranegara International Airport's Apron Movement Control (AMC) and the orderliness of passengers on the apron at Husein Sastranegara International Airport in Bandung.

Based on the stated problem formulations, the author has the objectives of this research, which are to determine the performance of Apron Movement Control personnel at Husein Sastranegara International Airport in Bandung and to ascertain the orderliness of passengers on the apron at Husein Sastranegara International Airport in Bandung.

## 2. LITERATURE REVIEW

### 2.1. PERFORMANCE

The word performance is often equated with several other terms such as productivity, work achievement, performance, effort, initiative, morale, and loyalty [7]. Performance is a term that is often used, but there is no generally agreed definition. It is important to understand the use of the term performance in specific situations to get an accurate meaning [8].

Performance is when an employee has achieved a work result in carrying out assigned tasks based on responsibility [9]. Performance involves the execution of activities or programs/policies designed to achieve the goals, objectives, mission, and vision of the organization

in accordance with its planning strategy [10]. From the description above, performance can be defined as the ability of a person, team, organization, or system to achieve desired results or achieve predetermined goals. In general, performance refers to the extent to which a person or entity successfully carries out the tasks or work assigned with effectiveness and efficiency. The measurement of a person's performance, whether in the form of goods/products or services, is often used as the basis for assessing employees or related organizations, as a reflection of employees' understanding of their duties and responsibilities. The level of quality and quantity of work results increases in line with the increase in performance achieved.

### 2.2. EQUITY

Order is a situation where all activities run and function in accordance with existing provisions [11]. The meaning of the word order, namely order, comes from the root word "orderly". The meaning of the word order is a state of order and goodness [12].

Aircraft movements are regulated by airport personnel in the Apron Movement Control (AMC) section who have a license and rating to carry out supervision of order, safety, and security, and rating to carry out supervision of the order, safety traffic movement on the apron and determination of aircraft parking [13].

Order also means according to the rules. It can be concluded that order is a condition created by obeying all the rules and regulations that have been set.

### 2.3. APRON MOVEMENT CONTROL (AMC)

Airside is the area at an airport that encompasses all its supporting facilities and can only be accessed by personnel involved in flight operations, such as flight crew, aircraft maintenance personnel, emergency personnel, and airport security officers. This area has strict security arrangements to ensure flight safety [14]. AMC is the unit in charge of the airside area.

AMC is a unit that has the task of determining where to park an aircraft after receiving an *estimate* or estimated landing time from the *tower*. After determining the aircraft parking position, the AMC unit immediately communicates the information to the *tower*. After providing information to the *tower*, the AMC unit must coordinate with the airline or operator so that the loading and unloading process runs smoothly.

Flight movements are regulated by AMC personnel who are licensed to monitor order, safety related to traffic flow on the *apron*, and determination of aircraft parking [15]. AMC has AMC duties, namely [5]:

- a. Provide guidance to equipment/vehicle and aircraft personnel at the *apron*.
- b. Supervise and regulate traffic movements on the *apron*.
- c. Perform aircraft parking arrangements at the *apron*.
- d. Ensure cleanliness at the *apron*.
- e. Ensure the facilities at the *apron are* in good condition.
- f. Ensure the safe movement of equipment/vehicle personnel and aircraft on the *apron*.
- g. Analyze all activities on the *apron* during *peak hour/peak season*.
- h. Plan aircraft parking arrangements under abnormal/emergency conditions.
- i. Analyze and coordinate operational activities at the *apron*.
- j. Investigate *incident/accident* on the *apron* and report.
- k. Analyze, recommend and ensure that the *incident/accident* does not recur.
- l. Perform visual *monitoring of the aircraft stand*.

## 2.4. PASSENGERS

A passenger is an individual who is allowed to board and be transported by a company or entity responsible for organizing transportation, be it in an aircraft or other means of transportation [16]. Passengers refer to individuals who use transportation services, such as aircraft, trains, buses, or other vehicles, to travel, but not as part of the crew that operates or serves the trip [17].

To find out the advantages and disadvantages of transportation, it is necessary to monitor and evaluate the performance of transportation services. Therefore, it is expected to know the extent of transportation performance and operational problems of transportation implementation in the field, so as to improve services and increase accessibility of transportation [18].

From the above definitions, it can be concluded that a passenger is someone who gets into a vehicle or uses public transportation to travel from one place to another. In general, passengers refer to individuals who use transportation services to move from one location to another, such as airplanes, trains, buses, ships, taxis, or private vehicles .

Passengers can have a variety of travel purposes, including traveling for business, leisure, family visits, or other activities. They utilize available transportation services to meet their mobility needs.

In the context of aviation, passengers refer to people who board an aircraft for air travel. They buy a ticket, go through security checks, and take a seat inside the airplane for their journey [19].

## 2.5. APRON

*Apron* is an area or place at an airport that has been determined to place aircraft, unload and raise passengers, cargo, post, refueling and light maintenance of aircraft [20]. *Apron* is an area where aircraft park, refuel, load or unload passengers and cargo, and undergo maintenance [21]. *Apron* is an area or place at an air airport that has been determined to place aircraft, lowering and raising passengers, cargo and post, fuel, parking and aircraft maintenance [22].

The *apron* also includes the aircraft *maneuvering area* around the terminal, including taxi lanes and movement roads that are usually located near the terminal building. *Aprons* have an important role in organizing and providing efficient access between vehicles and terminal facilities, as well as facilitating various operational processes associated with air transportation [23].

## 3. METHOD

### 3.1 RESEARCH METHOD

This writing uses qualitative descriptive research methods with a survey approach. Qualitative research includes various theoretical approaches such as narrative research, phenomenology, action research, case studies, historical research, and content analysis [24]. This method focuses on an in-depth understanding of the phenomenon under study. On the other hand, descriptive research methods aim to provide an accurate description of the object of research in accordance with the existing circumstances. This descriptive research examines certain social phenomena, by collecting data from several sources, using direct observation or survey methods [25].

### 3.2 DATA COLLECTION TECHNIQUES

#### 3.2.1 Observation

Observation is a data collection technique that possesses distinct characteristics compared to other techniques. Observation also means obtaining information by directly observing an object, as well as a careful examination [26].

In this case the author conducted observations at Husein Sastranegara International Airport Bandung from October 2022 to December 2022.

#### 3.2.2 Interview

In this era, technological advances have made it possible to conduct interviews through

telecommunication media [27] so that interviews were conducted in the form of questions and answers via *google form* to AMC personnel at Husein Sastranegara International Airport Bandung by four AMC personnel who were taken based on the level of competence in the AMC unit as follows:

- a. Informant I : *Assistant Manager of Airside Operation*
- b. Informant II : *Airside Operation Officer*
- c. Informant III : *Apron Movement Control Supervisor*
- d. Informant IV : *Apron Movement Control Officer*

### 3.2.3 Literature Study

In writing, literature study is an important activity that aims to find data and information through various sources, such as research journals, the internet, books, e-books, and relevant literature [28]. The literature study conducted by the author is a regulation that is compared with the situation in the field.

## 3.3 SUBJECT AND OBJECT OF RESEARCH

### 3.3.1 Research Subject

The author takes data source subjects selected with certain considerations, namely individuals who are considered to have an in-depth understanding of what is expected or what is currently happening, totaling 4 people with positions namely *Assitent Manager of Airside Operation*, *Airside Operation Officer*, *Apron Movement Control Supervisor* and *Apron Movement Control Officer* AMC unit.

### 3.3.2 Research Object

Research Objects refer to the value, attributes or characteristics of a person, object or activity with a certain variation determined by the researcher to be studied and drawn conclusions [29].

In this study, the object of this research is passengers who are not orderly when getting on and off the airplane at the *apron* of Husein Sastranegara International Airport Bandung.

## 3.4 DATA ANALYSIS TECHNIQUE

Data analysis techniques are techniques with the aim of identifying what has been collected by researchers by analyzing the data [30]. This research uses observation, interviews and literature studies in analyzing data.

## 3.4 PLACE AND TIME OF RESEARCH

The research was conducted at Husein Sastranegara International Airport Bandung in the AMC unit.

## 4. RESULT AND DISCUSSION

### 4.1 RESEARCH ANALYSIS

AMC is a service provider at the airport to control the movement of air traffic on the *apron* [1]. The task of the AMC unit is to thoroughly monitor operations and service facilities on the airside in order to achieve flight safety. Among other things, such as checking security facilities, cleanliness, order in the *apron*, checking all parts of the airside, after checking then reporting any problems to related parties.



**Figure 1.** Passengers who are disorderly when disembarking and boarding from an airplane

Based on observations at Husein Sastranegara International Airport Bandung, the performance of AMC personnel is still not optimal. Judging by the fact that there are still events that can jeopardize flight safety and security.

#### 4.1.1 Observation

Based on the observations made by the author, he found passengers who were not orderly following the markings on the *apron* because there were no *airline* personnel on duty at the *apron* as a regulator of the flow of passengers from the aircraft to the terminal building. The author also found violations on the air side which is the responsibility of AMC personnel in carrying out the task of supervising all traffic on the *apron*. Violations that occur in the form of passengers passing through the *break down area* when getting off the aircraft. These violations can certainly jeopardize the safety and security of flights at Husein Sastranegara International Airport Bandung.

#### 4.1.2 Interview

The author also conducted research through interviews using *Google Form* as a medium of question and answer to AMC personnel at Husein Sastranegara International Airport Bandung. This interview was conducted with four informants, namely informant I as *Assistant Manager of Airside Operation*, informant II as *Airside Operation Officer*, informant III as *Apron Movement Control Supervisor*, and informant IV as *Apron Movement Control Officer*.

The performance of the AMC unit at Husein Sastranegara International Airport Bandung in terms of competence, expertise and knowledge in general related to the main function of the AMC unit personnel has been learned and applied but still needs to be improved supervision and service on the air side due to lack of personnel on duty.

Passing places for passengers in the *apron* area of Husein Sastranegara International Airport Bandung are appropriate because there are already passenger path markings and markings that are applied to facilitate pax from / to the aircraft, namely zipper line markings but for parking stands one to five there are no *passenger path* markings because along the area or land is an Air Force area where there are Air Force VIP buildings, Air Transport Service and *Fire Station*.

The AMC unit and the airline always coordinate in determining and parking patterns of aircraft, mechanical constraints of aircraft, controlling passengers in passing on the *apron* and directing the placement of *Ground Support Equipment* (GSE) that will serve aircraft on the ground contained in the *Letter of Operational and Coordination Agreement* (LOCA) between the AMC unit and the airline and ground handling where one of the points contains passenger arrangements on the air side, and has been agreed both from the airport manager (EGM, *Manager Operation, Assistant Manager Of Operation*) and from the airline and *ground handling*.

The airline has been cooperative in regulating passenger order on the *apron* of Husein Sastranegara International Airport Bandung by placing two to three airline or ground handling officers to maintain order and safety of passengers on the *apron* to the terminal building or vice versa if the airline is not cooperative then AMC personnel will take action based on applicable regulations.

Given the limited layout/dimensions of the Bandung Husein Sastranegara International Airport *apron*, facilities in the form of *apron* buses are needed to transport large-scale passengers or the provision of minibuses to transport passengers with special needs or during rainy conditions in accordance with PM 185/2015 article 28.

To reduce the problem of passengers who do not follow when boarding/d disembarking aircraft on the *apron* of Husein Sastranegara International Airport Bandung, namely in the form of educational videos on *digital banners in the* airport waiting room, announcements related to walking order from the airline before landing at Husein Sastranegara International Airport Bandung or placing safety signs/walking directions on the air side and always being consistent in supervision and placing

personnel to regulate and direct passengers according to the available markings.

Compliance with applicable rules is not carried out consistently, making the *key performance* indicators agreed upon by the company for the AMC unit unachievable and with the current limited AMC personnel, AMC personnel must participate in monitoring the movement of every passenger on the *apron* which affects the supervision of vehicle and goods movements.

#### 4.1.3 Literature Study

Through the literature study, the author analyzed relevant regulations to evaluate the factors that could cause the problem, and studied the guidelines and references related to solving the problem. This desk research used regulations and guidelines related to the topic as the main reference sources as follows:

- a. Peraturan Menteri Perhubungan Republik Indonesia Nomor PM 30 Tahun 2021 Tentang Standar Pelayanan Minimal Penumpang Angkutan Udara.
- b. Surat Keputusan Direktur Jenderal Perhubungan Udara Nomor SKEP/100/XI/1985 Tentang Peraturan Tata Tertib Bandar Udara.
- c. *Letter of Coordination Agreement* (LOCA) between AMC and *airline* regarding the service and supervision of passengers from the aircraft to the terminal building or vice versa.

**Table 1.** Literature Study

No.	Applicable regulations	Existing condition	Expected condition
1.	Peraturan Menteri Perhubungan Republik Indonesia Nomor PM 30 Tahun 2021 Tentang Standar Pelayanan Minimal Penumpang Angkutan Udara.	Passengers are not orderly when disembarking and boarding an airplane	The regulation explains that when passengers get off the airplane. Scheduled Commercial Air Transportati on Business Entities are required to provide officers in charge of directing passengers from the

			aircraft to the airport arrival hall.
2.	Surat Keputusan Direktur Jenderal Perhubungan Udara Nomor SKEP/100/XI/1985 Tentang Tata Peraturan Tata Tertib Bandar Udara	Passengers passing through the <i>break down area</i> when disembarking an aircraft	The decree explains that when passengers pass through the <i>apron</i> area on foot, the Airlines are responsible for supervising and ensuring that they can walk safely, without being disturbed by moving vehicles on the <i>apron</i> . In addition, passengers are expected to walk in organized groups and not scattered, and each group must be accompanied by one or more officers from the Airline Company who have knowledge of the applicable regulations at the Airport.

3.	<i>Letter of Coordination Agreement (LOCA) between AMC and airline.</i>	Passengers are not orderly when disembarking and boarding from an airplane	<i>The airline is responsible for the service and supervision of passengers from the aircraft to the terminal building or vice versa.</i>
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#### 4.2 PROBLEM SOLVING

During the research, the author can provide several solutions to overcome existing problems, namely:

1. Optimizing the use of *digital banners* in the waiting room as educational media to passengers in the form of a video or photo about the flow of passenger boarding from the waiting room to the aircraft.
2. The addition of signage in the direction of the passenger lane in the airside pedestrian area to direct passengers who will board the aircraft to follow the existing markings when there are no officers as stated in PM 30 of 2021 "The availability of information or instructions that direct passengers to the arrival terminal of the destination airport."
3. The direct supervision function in the field carried out by AMC personnel and emphasis on the *airline* to provide officers to manage passengers to the aircraft and vice versa has been implemented or not as stated in the *Letter of Coordination Agreement (LOCA)* between AMC and *airline* regarding the service and supervision of passengers from the aircraft to the terminal building or vice versa.
4. Re-operate the *apron* bus so that passengers are orderly when getting off the airplane. This is useful to make it easier to manage the movement of passengers going to the terminal and vice versa. The *apron* bus is also very helpful for passenger order when in rainy weather conditions so that *airline* personnel do not need to provide umbrellas for aircraft passengers.

#### 5. CONCLUSIONS

From the results of research relevant to the title and problems previously described, the author can conclude the following:

1. The performance of AMC personnel at Husein Sastranegara International Airport Bandung supported by *Airside Operation Standard Operating*

Procedures and *Letter of Coordination Agreement* (LOCA) with the *airline* is still not well implemented because there are still unruly passengers found on the airside which is the responsibility of the AMC unit as a supervisory function on the airside.

2. Passenger order at the *apron* of Husein Sastranegara International Airport Bandung has not been running well such as:
  - a. There are still passengers who do not follow the existing markings.
  - b. It is still found that there are no *airline* personnel to direct passengers from the plane to the terminal building or vice versa, which can affect safety and security at Husein Sastranegara International Airport Bandung.

Based on the research results and conclusions that the author has described above, the author provides several suggestions, as follows:

1. Improve the performance of AMC personnel towards the surveillance function at the *apron* of Husein Sastranegara International Airport Bandung as follows:
  - a. Provide guidance to *airline* personnel to create awareness in the form of scheduled socialization.
  - b. Providing strict sanctions on violations committed by *airline* personnel in the form of reprimands in accordance with existing procedures.
2. Improve passenger order at the *apron* of Husein Sastranegara International Airport Bandung as follows:
  - a. Optimizing *digital banners* in the waiting room as a medium of education to passengers about the flow of passenger *boarding* from the waiting room to the aircraft.
  - b. The addition of *signage* in the direction of the passenger lane in the airside pedestrian area to direct passengers who will board the aircraft to follow the existing markings.
  - c. Re-operate the *apron bus* so that passengers are orderly when getting off the airplane.

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