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Analysis of Airport Operation Control Center (AOCC) Unit Services at Adi Soemarmo Boyolali International Airport

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Abstract

Airport Operation Control Center (AOCC) is the front line in supervising and controlling all problems and is the control center of Adi Soemarmo Solo International Airport operations in serving Airport Service Users. AOCC involves all stakeholders at the Airport by integrating the systems owned by each stakeholder so that they can operate effectively and efficiently. This study aims to determine how the AOCC unit service system is at Adi Soemarmo Boyolali International Airport and what factors can cause problems and solutions to AOCC unit service problems. This study uses a descriptive qualitative approach. The data used are primary and secondary data. Primary data is obtained from observation and interviews, while secondary data comes from literature studies and photographs related to the problems studied. The data analysis techniques used are data reduction, data presentation and drawing conclusions. To test the validity of the data, triangulation techniques are used. The research time is in August - September 2023. The results of this study indicate that a good service system was found by the Airport Operation Control Center (AOCC) Unit to service users starting from coordination with all parties, namely Airlines and Ground Handling, Air Traffic Control (ATC), Apron Movement Control (AMC), Information Unit, Aviation Security, Airport Operation Landside And Terminal (AOLT), Traffic Administration Office and Central Flight Schedule Office (CFSO) and the Airport Mechanical Unit. The service system uses the ACDM (Airport Collaborative Decision Making) system, namely with collaboration between stakeholders to share information between related parties in real time and make joint decisions in a win-solution manner. Factors that can cause problems are related to coordination between one and another so that it can harm several parties. The solution to various problems is to implement ACDM (Airport Collaborative Decision Making), where related units in airport operations synergize with each other, receive and share information from each unit, make proactive and appropriate joint decisions, anticipate unexpected events and provide the best quality of service, cohesiveness and unity of vision and mission.

Keywords: AOCC Unit, Services, Adi Soemarmo International Airport

INTRODUCTION

The development of the air transportation business currently shows very advanced prospects, both at the national and international levels. This is indicated by the increasing number of scheduled airlines and the increasing frequency of flights at Indonesian airports. The increase in traffic from year to year has an impact on the increasingly diverse operational dynamics of airports. This requires good and integrated supervision in a high-tech system. Therefore, the Airport Operation Control Center (AOCC) was built as a form of commitment from PT. Angkasa Pura as the airport manager to continue to improve the quality of service for airport service users through the implementation of information technology systems. In general, the AOCC functions as a control center to monitor operational activities on the airside and landside and covers all arrival and departure activities at the airport. The AOCC involves all stakeholders at the airport by integrating the systems owned by each stakeholder so that

they can operate effectively and efficiently. Integration and collaboration are the main keys in the implementation of this AOCC so that the realization of services that prioritize safety and security and are in accordance with regulations can be more effective and efficient. All stakeholders at the Airport consisting of 4A elements, namely Airport Operator, Airline Operators, Air Navigation, and Authorities such as customs, immigration, quarantine, police, and others. The presence of all stakeholder representatives in the same room has a positive impact on joint decision-making regarding various operational matters that can be taken quickly and accurately as the implementation of services at the Airport.

Related to the above, the responsibility of the Airport organizer in terms of the needs and services of passengers and airport service users is the Airport Operation Control Center (AOCC) unit which plays a role in the main Function of Airport Operations to provide services to passengers and Airlines. The Airport Operation Control Center (AOCC) unit is the front line in supervising and controlling all problems and is the control center for the operation of Adi Soemarmo Solo International Airport in serving passengers or airport service users. The AOCC unit is not only a control center in the operation of the Airport but the AOCC must also be a decision-making unit in any matter related to the operation of the Airport involving related units in the operation of the Airport. This study aims to determine the service system of the Airport Operation Control Center (AOCC) unit at Adi Soemarmo Boyolali International Airport and the factors that can cause problems and solutions to AOCC service problems.

In providing services, the Airport Operation Control Center (AOCC) unit has several job descriptions, including implementing the Resource Management System (RMS), a system used to allocate parking stands that will be consumed by ATC (via terminal view) and AMC (via the Apron Movement System/AMS). The Apron Movement System (AMS) is a system used by the AMC unit to input block on/block off aircraft, and remark maintenance data progress on parking stands. The Flight Management Module (FMM) is used to input flight data such as daily schedule/schedule airline, database (landing time, aircraft type), input data for check-in counter allocation, input data for boarding lounges and baggage conveyor belts, from the Flight Management Module (FMM) will correlate/connect to the terminal view display (consumed by ATC), RMS and AMS (consumed by AMC), and FIDS (consumed by passengers and other airport service users).

RESEARCH METHODS

This study uses a descriptive qualitative approach. The data used are primary and secondary data. Primary data is obtained from observation and interviews, while secondary data comes from literature studies and photographs related to the problems studied. The data analysis techniques used are data reduction, data presentation and drawing conclusions. To test the validity of the data, triangulation techniques are used. The research time is in August - September 2023.

RESEARCH RESULTS AND DISCUSSION

Based on the observation results, it can be seen that the AOCC service has been implemented well, but there are several problems or obstacles from Airlines, Ground Handling and Mechanical in carrying out their duties that are not coordinated so that it can affect the service provided to service users which is also not good. There are obstacles when aircraft handling activities are delayed because the Ground Handling officers who are on standby at the parking stand are in the wrong place, this is due to the lack of coordination between the AMC unit at AOCC and Ground Handling in terms of information on changes to the aircraft parking

stand. Then the Mechanical officers who are not coordinated when carrying out facility inspections and maintenance so that they disrupt aircraft and passenger activities in the apron area. Problems occur when there is a lack of coordination between one unit and another, which affects the services provided. AOCC then held a concept of ACDM (Airport Collaborative Decision Making) which is a concept of collaboration between stakeholders at Adi Soemarmo Airport to share information between related parties in airport operations in real time and make joint decisions in a win-win solution for mutual interests and satisfaction. So that all units or parties at Adi Soemarmo Airport are given representatives to be in the AOCC room to share accurate information and take joint steps.

Good service is carried out such as the Avsec unit conditioning and arranging the use of the boarding lounge or waiting room for passengers and all changes so that passengers feel comfortable. Then the Avsec officer arranges and conditions the check-in room regarding the passenger queue line and serves the needs of passengers. The officer prepares the BCB (baggage conveyor belt) service and the Avsec unit supervises the baggage service in the Arrival room. Then Airlines or Ground Handling in the Lost and Found division carries and arranges all passenger baggage and handles problems related to lost, damaged, exchanged and left behind baggage. The AMC unit carries out aviobridge services for the needs of the Airline and passengers, then ATC and AMC coordinate with each other regarding handling aircraft with conditions (RTB/RTA/Divert), so that preparation and changes to the parking stand are always available. Every time the flight schedule changes, all related units always coordinate so that in plotting the parking stand, the delivery of information is carried out properly without any errors. Each unit is required to input and report on flight data every day, so that the service provided can be achieved optimally according to the company's expectations and vision and mission.

Discussion

Airport Operation Control Center (AOCC) unit service system at Adi Soemarmo Boyolali International Airport.

The AOCC unit in its operational services coordinates with other units such as the following:

1. Coordination with Airlines and Ground Handling Agents
   a. Coordination regarding aircraft parking, aircraft changes for both incoming and departing aircraft.
   b. Coordination regarding changes to regular (scheduled) and unscheduled (unscheduled) flight schedules.
   c. Instructing Flight Operation (Flops) to move aircraft in order to optimize the use of parking stands and Aviobridge.
   d. Coordination in terms of changing aircraft for international connecting flights from domestic flights and vice versa.
2. Coordination with Air Traffic Control
   a. Instructing parking stands for incoming aircraft, Return To Base (RTB), Return To Apron (RTA).
   b. Granting permission to use parking stands to Airline Operators.
   c. AOCC obtains information from ATC regarding ETA, RTB, RTA, Diver Flight via VDUF (pilot and ATC conversation radio monitor).
3. Coordination with AMC (Apron Movement Control)
   a. Provide information regarding the planned use of parking stands.

   b. Provide information regarding changes to aircraft on a flight, both aircraft registration and flight number.
   c. AOCC receives information from AMC regarding the situation and conditions of the use of parking stands and Aviobridge.
4. Coordination with Information Unit
   a. Confirming the plan to use the parking stand especially for VIP/VVIP flights.
   b. Providing flight data information via Public TV or Flight Information Display System (FIDS).
   c. Providing information regarding changes to flight schedules.
   d. Instructing the Announcer to make Announcements such as flight delays, calling passengers, Security Warnings and Extra Boarding Calls.
5. Coordination with Avsec (Aviation Security)
   a. Instruct passengers on the use of the Boarding Lounge and any changes.
   b. Assist the Avsec unit to ensure smooth passenger service when the X-Ray machine is not functioning.
6. Coordination with Airport Operation Landside and Terminal (AOLT)
   a. Confirm the condition of facilities and amenities in the Terminal such as Boarding Lounge, Air Conditioner (AC), FIDS Monitor and others.
   b. Delegate in the arrangement and use of Check In Counter and BCB (baggage conveyor belt) and other equipment.
   c. Back up data in case the CIS system is not functioning.
7. Coordination with Traffic Administration Office and Central Flight Schedule Office (CFSO). Providing a 24-hour recapitulation of flight data as support in billing to Airlines, while with CFSO it is to confirm flight data and update data.
8. Coordination with Mechanical. Regarding the condition of the building and runway as well as facilities such as Aviobridge, Boarding Lounge, and the repair and maintenance schedule.

The AOCC Unit at Adi Soemarmo International Airport in its service system uses the ACDM (Airport Collaborative Decision Making) system, this service system is a concept and collaboration process between stakeholders at Adi Soemarmo Airport to share information between related parties in airport operations in real time and make joint decisions in a win-win solution for mutual interests and satisfaction. This ACDM concept is useful for improving the quality of airport resources and reducing the level of delays without requiring new technology. Where this concept prioritizes decision making or policy making by involving related units in flight operations activities, so that every action or decision making can be agreed upon and get the right results and do not harm each other related units and can even identify a problem, find a joint solution to make a solution implementation and evaluate a solution to provide the best performance improvement for performance and service at Adi Soemarmo Airport.

Factors that can cause problems and solutions to service problems of the Airport Operation Control Center (AOCC) unit at Adi Soemarmo Boyolali International Airport.

The previous problem was the problem of poor coordination between related units, which affected the quality of service provided to users of Adi Soemarmo Boyolali Airport.

1. Airlines. Lack of coordination between Airlines and AOCC regarding information on changes to parking stands. So the solution to the problem is to change the coordination system based on the concept of Airport Collaborative Decision Making, the Airlines input into the AOCC room to anticipate information on all.

2. Ground Handling. There was a delay because the Ground Handling officers who were on standby at the parking stand were in the wrong place, due to the lack of coordination between Ground Handling and the AOCC unit regarding information on changes to the parking stand. So, the solution to the problem is to add Ground Handling officers to the AOCC unit with the concept of Airport Collaborative Decision Making coordination, so that they can share information in real time easily and accurately.
3. Mechanical Unit. Conducting inspections or repairs in the parking stand area without any quick coordination with related units and AOCC. This changes the arrangement of aircraft parking allocations, ultimately harming related parties and disrupting flights at Adi Soemarmo Airport. With the implementation of Airport Collaborative Decison Making, the Mechanical officers on duty at AOCC will provide information on the schedule or schedule of checks or repairs to AOCC and related units so that they can be anticipated by diverting aircraft parking arrangements to other parking stands, this is also if problems are found in the airside area that have the potential to disrupt flight activities, it can be reported directly so that further action can be taken immediately. 4. Apron Movement Control (AMC) Unit There is a delay in the response of AMC officers to serve passengers with special needs using the Ambulance. This is also due to the late information about the existence of passengers with special needs with the Ambulance which ultimately results in a decrease in the quality of service to passengers by the AMC unit. With the implementation of Airport Collaborative Decison Making, AMC officers are given a place to work in the AOCC room to share information in real time, the concept of Airport Collaborative Decison Making also benefits related units if there is current or latest information.

So, with the presence of representatives from each unit or stakeholder in the AOCC unit of Adi Soemarmo Boyolali International Airport, it provides several benefits, including:

1. Improving the Performance of Each Unit. In the use of resources, the Improvement of Work Performance of each unit involved is getting better, this happens because all decision-making involves all units and data that supports the performance of all related units is available and updated at all times.
2. Decision Making. Decision making in a particular incident or problem at the airport is better, because coordination between each unit can be done quickly and precisely, all because each unit is in one room. So that small meetings and decision making are carried out quickly.
3. Anticipation. In terms of anticipation, the AOCC unit must anticipate unexpected events from the service system at Adi Soemarmo Airport, in terms of influencing Technical and Non-Technical factors in flight.
4. Providing the Best Quality of Service. In providing the best quality of service, the compactness and unity of the Vision and Mission of the AOCC unit and related units ultimately have an impact on improving the quality of operations and workers, which directly improves the quality of service for passengers at Adi Soemarmo Boyolali International Airport.

CONCLUSION

A good service system by the Airport Operation Control Center (AOCC) Unit to service users starting from coordination with all parties, namely Airlines and Ground Handling, Air Traffic Control (ATC), Apron Movement Control (AMC), Information Unit, Aviation Security, Airport Operation Landside And Terminal (AOLT), Traffic Administration Office and Central Flight Schedule Office (CFSO) and the Airport Mechanical Unit. The service system uses the

ACDM (Airport Collaborative Decision Making) system with collaboration between stakeholders at Adi Soemarmo Boyolali Airport to share information between related parties in real time and make joint decisions in a win-solution manner. Factors that can cause problems are related to coordination between one and another so that it can harm several parties. The solution to various previous problems, Adi Soemarmo International Airport implements ACDM (Airport Collaborative Decision Making), where related units in airport operations synergize, receive and share information from each unit, make proactive and appropriate joint decisions, anticipate unexpected events and provide the best quality of service, compactness and unity of vision and mission.

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