

THE LOCA OPTIMIZATION OF FLIGHT PLAN DELIVERY IN KOTABARU UNIT LPPNPI PERUM

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Abstract

This final project describes the constraints faced by the author regarding the LOCA between the ATS RO unit and Wings Abadi Airlines regarding the delivery of the flight plan at Perum LPPNPI Kotabaru Unit. The absence of submitting flight plans using the Web Based Flight plan method resulted in a less than optimal process for submitting flight plans at the ATS RO unit, which resulted in flight delays. The research method used by the author is descriptive qualitative, data collection methods are in the form of observations and interviews regarding obstacles in sending flight plans which are still manual and according to researchers it is necessary to conduct a LOCA review to deal with them. The results of this study indicate that the LOCA between the ATS RO unit and the Airlines Operator at Perum LPPNPI Kotabaru Unit is not optimal, especially in the delivery of flight plans, so a review is needed by adding points containing regulations in the form of coordination steps related to this matter. problem into an existing LOCA. with the aim that flight plan delivery can be more optimal so that flight plan delivery is more efficient. and the results of this study the researcher reviewed the contents of the location between the ats reporting office and wings abardi airlines by adding points about flight plan delays with the aim that flight plan delivery could be more optimal.

Keywords: Airlines Operator, Air Traffic Service Reporting Office, Flight plan, Letter of Operational Coordination Agreement

INTRODUCTION

Surabaya Aviation Polytechnic is one of the academic institutions under the auspices of the Ministry of Transportation which functions as a professional workforce producer in the field of air transportation. Surabaya Aviation Polytechnic consists of 7 study programs namely Airport Electrical Engineering, Air Navigation Engineering, Runway Building Engineering, Aircraft Engineering, Air Transportation Management, Air Traffic and Aviation Communications. One of the study programs at the Surabaya Aviation Polytechnic is Aviation Communication, Aviation Communication is one of the study programs that makes cadets as ACO (Aeronautical Communication Officer) personnel.

ACO (Aeronautical Communication Officer) personnel have the task of providing information services aimed at safety and smooth flight traffic, besides that ACO (Aeronautical Communication Officer) personnel also manage Flight plans and ATS Messages "provisions for implementing the management of the Flight plan and ATS Message from Aeronautica information service personnel to air traffic personnel and flight communication guides" [1]. Especially in the ATS

Reporting Office (ARO) unit ATS Reporting Office is a unit that receives related reports, with air traffic services and flight plan submission. Air Traffic Management) ATS Reporting Office when receiving the Flight plan to do the following: (a) Checking the suitability of the format and data, (b) Checking/inspecting the completeness and accuracy of the data according to the Flight plan filling procedure, (c) If necessary take steps so that Flight plan Mesaage can be used for ATS services, (d) Provide a receipt of the Flight plan or changes to the Flight plan Message delivery [2].

In the world of aviation, all flights must have a flight plan. The Flight Operator, namely Wings Abadi Airlines, must send a flight plan or flight plan to the ATS Unit, namely the Aeronautical Reporting Officer (ARO). If the flight operator does not send a flight plan to the ARO officer, the aircraft cannot carry out the flight. At Perum LPPNPI the Kotabaru unit has 6-8 aircraft movements per day with flight schedules. Several times there were unscheduled flights from Batu Slipe airport and military flights which resulted in 10-12 traffic per day.

However, sending flight news to Perum LPPNPI Kotabaru Unit is not optimal because it has not used the

WBF (Web Based Flight plan) method so that the representative in this case is FOO (Flight Operation Officer) or Wings Abadi Airlines who are still sending flight plans manually or on paper to ATS. Reporting Office (ARO) Kotabaru Unit. Airlines Operator or flight operation officer (FOO) is a person appointed by a civil aviation company to carry out operational tasks to prepare for the departure of a flight (flight dispatch), dispatch or release a flight (dispatch release) and is responsible for monitoring the departed flight to its destination safely, comfortably and efficiently (ICAO Doc 7300) [3].

In this case sending flight news manually was inefficient and ineffective because FOO Wings Abadi Airlines had to walk from the office to provide flight news in the form of a form to the Kotabaru ARO Unit. However, what should have happened was that the FOO could send a flight plan from the Wings Abadi Airlines office online, which would make sending the flight plan more optimal.

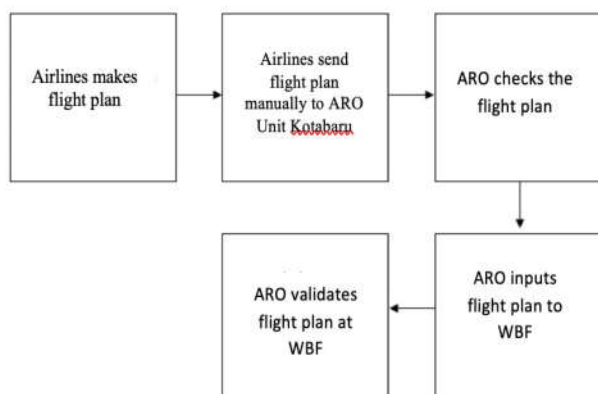


Figure 1. Manual flight plan submission flow

In Figure 1, it explains the flow of sending flight plans manually sent by the Airlines, namely Wings Abadi Airlines to the ARO Perum LPPNPI Kotabaru Unit which still does not use the Web Based Flight plan method.

The WBF (Web Based Flight plan) method is a system or procedure that functions to collect and distribute information in a flight plan. The flight plan implemented by AirNav Indonesia uses a special format from the International Civil Aviation Organization (ICAO). This system is controlled by AirNav Indonesia and integrated with other subsystems, including the Directorate of Air Transport of the Ministry of Transportation, which can issue flight route permits for an airline as well as approval for flight approval.

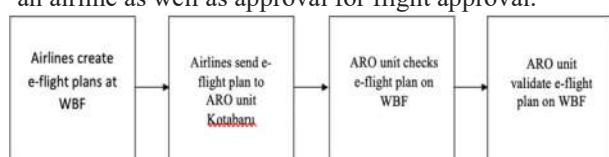


Figure 2. Flow of online flight plan submission

Figure 2 explains the flow of sending flight plans with the Web Based Flight plan method. With the Web Based Flight plan or E-FPL method, it is clear that the delivery of flight plans is more optimal because the Kotabaru ARO Unit no longer inputs flight plans from the form to the Web Based Flight plan system.

In the absence of the WBF method, the delivery of the flight plan was less than optimal, causing several delays in the movement of aircraft because the Kotabaru ARO Unit did not allow the aircraft to fly because FOO Wings Abadi Airlines was late in sending the flight plan. In accordance with Kotabaru AFS SOP, FPL can be sent 24 hours or no later than 2 hours before EOBT (Edition II-2). [3]

1. There was a delay in sending the flight plan to ARO.
2. Lack of quality flight plan forms from Wings Abadi Airlines which were submitted to the Kotabaru ARO Unit.
3. Sending forms every day can also cause a buildup of forms and have a risk of damage and loss of the flight plan.

In the LOCA between ARO Unit Kotabaru and Flight Operator regarding the authority of ATS Operation ARO Unit Kotabaru and Flight Operator Wings Abadi Airlines did the following things:

ATS Operation authorized:

1. Receive information on aircraft experiencing Emergency, Urgency, Hijacking and Communication Failure,
2. Respond to Flight Operators /Airlines to requests for Slot Time related to Runway Capacity,
3. Responding to Flight Operators/Airlines to Extend/Advance Operating Hour requests,
4. Forwarding news of RTA, RTB, Diversion and other important information,
5. Process Flight plans and provide Aeronautical Information in the form of Pre-Flight and Post Flight Information,
6. Processing NOTAM requests.

Flight Operators are authorized to:

1. Receive information on aircraft experiencing Emergency, Urgency, Hijacking and Communication Failure,
2. Aircraft operational arrangements to get Slot Time in Operation Hours,
3. Aircraft operational arrangements according to Extend/Advance operating Hours that have been approved,
4. Aircraft operational arrangements that experience RTA, RTB and Diversion.

5. Make an aircraft operational plan / Flight plan for each flight.
6. Get NOTAM information that is still valid

According to the Regulation of the Board of Directors of the Public Company (Perum) of the Indonesian Aviation Navigation Service Provider Number: Per.002/LPPNPI/11/2016 concerning Guidelines for the Preparation of Board of Directors Regulations, Decisions of the Board of Directors, Joint Agreements, Memoranda of Understanding, Joint Agreements, and Letters of Coordination Agreement (LOCA) within the Indonesian Aviation Navigation Service Provider Corporation. Letter of Operational Coordination Agreement (LOCA) is an agreement between two or more adjacent aviation traffic service units or between aviation traffic service authorities in different countries where aviation traffic services must be carried out by the parties concerned that states the conditions, methods and procedures used to organize cooperation or how to conduct special operations for aviation traffic services. LOCA is indispensable in aviation traffic services. LOCA itself is made as a guideline for the implementation of flight operational coordination in accordance with the Regulation of the Minister of Transportation of the Republic of Indonesia Number PM 65 of 2017 concerning Civil Aviation Safety Regulation Part 170 (Civil Aviation Safety Regulation Part 170) concerning Air Traffic Rules. If there is no LOCA, it can interfere with flight navigation services, flight safety and security.

However, in this case, the LOCA between the Kotabaru ARO Unit and the Flight Operator has no regulatory cooperation related to the creation and delivery of flight operational plans or flight plans using the WBF method which can optimize the delivery of flight plans to the Kotabaru ARO unit. Therefore, the LOCA review related to the authority of Wings Abadi Airlines Flight Operators to make WBF-based flight plans for each flight is one of the solutions to optimize Flight Traffic Services. With the online delivery of flight news, it helps ACO personnel to be more efficient and effective in validating flight plans. In this case the researcher intends to make a Final Project with the title The Analysis Of Loca Ats Reporting Office And Wings Abadi Airlines Kotabaru Branch On The Optimization Of Flight Plan Delivery In Kotabaru Unit Lppnpi Perum.

Based on the background above, in this case you can take these problems to provide solutions to related parties. The formulation of the problem that can be raised is How to optimize flight plan delivery between ATS Reporting Office and Wings Abadi Airlines at Perum LPPNPI Kotabaru Unit?

METODE

The method used in analyzing for writing this Final Project is descriptive qualitative. Qualitative descriptive analysis techniques are data collection methods that appear in the form of words or symbols, which are obtained through observation, interviews, and documents that are arranged into expanded text. According to Arikunto, the qualitative descriptive method emphasizes natural descriptions and what they are, so by their nature this is demanded direct involvement in the field in conducting observations.

In the research conducted by researchers, it is an interactive variable, namely the delivery of flight plans in optimizing flight traffic services at Perum LPPNPI Kotabaru Unit, by taking a population with respondents, namely ACO Unit Kotabaru personnel and Wings Abadi Airlines personnel. with the respondent population, namely 2 ACO Kotabaru Unit personnel and 3 Wings Abadi Airlines personnel and 5 Poltekbang Surabaya cadets majoring in Aviation Communication who had OJT (On The Job Training) at LPPNPI Kotabaru Unit. where the object of this research is to examine the flow of coordination between ARO Kotabaru Unit and Wings Abadi Airlines on flight navigation services at Perum LPPNPI Kotabaru Unit.

With data collection techniques observation of the condition of service delivery at ARO Kotabaru Unit to Wings Abadi Airlines when operational implementation is less efficient in sending flight plans, which requires LOCA review so that it can optimize the provision of air navigation services and conduct interviews by distributing questions containing 8 lists of questions about related problems at Perum LPPNPI Kotabaru Unit.

This study also uses the SWOT analysis technique, with the aim The main researcher can find the crucial strengths, weaknesses, opportunities and threats experienced by a company. These four aspects are useful for increasing strengths, reducing weaknesses, building better opportunities, and avoiding threats that may occur in the future. SWOT analysis is a strategic planning analysis method used to monitor and evaluate the company's environment both externally and internally for a particular business goal. SWOT is an acronym for strengths (S), weaknesses (W), opportunities (O), and threats (T). SWOT is a tool often used to analyze the internal and external environment in order to achieve a systematic approach and support for decision making.

IFAS	STRENGTHS (S)	WEAKNESSES (W)
OPPORTUNITIES (O)	STRATEGI (SO)	STRATEGI (WO)
TREATHS (T)	STRATEGI (ST)	STRATEGI (WT)

Figure 3. Albert Humphrey's SWOT Analysis Matrix

RESULTS AND DISCUSSION

In this discussion, the researcher sees from several sides, namely from the side of observing the conditions that occur in the operational field and then presented in the form of data conducting surveys by interviewing operational personnel involved in the implementation of the Flight plan. Accuracy in implementing LOCA (Letter of Operational Coordination Agreement) which is used as a reference for optimizing the delivery of Flight plan news.

The results of observations made on the conditions faced by the ACO personnel of the Perum LPPNPI Kotabaru Unit during the researcher's research from November 2021 to June 2023 were in terms of delays in sending flight plans that were not in accordance with the Kotabaru AFS SOP.

From the results of researchers taken from the Logbook at the ARO unit (ATS Reporting Office) at Perum LPPNPI Kotabaru Unit to prove that Wings Abadi Airlines experienced delays in sending Flight plan news. One case is WON1393 on March 20, 2023 with the route Kotabaru (WAOK) to Banjarmasin (WAOO) with ETD or estimated departure at 06.35 UTC or around 14.35 WITA, but Wings Abadi Airlines only sent 06.43 UTC or around 14.43 WITA, this shows that it is not in accordance with the SOP AFS Kotabaru Unit that Flight plan delivery should be at least a maximum of 120 minutes before departure and a minimum of 24 hours before departure.

Another case is WON1392 on May 15, 2023 with a route from Kotabaru (WAOK) to Makassar (WAAA) with ETD or estimated departure at 03.20 UTC or around 11.20 WITA, but Wings Abadi Airlines only sent the Flight plan at 03.30 UTC or around 11.30 WITA, this can show that there is no compliance with the Kotabaru AFS Unit SOP, namely the delivery of the Flight plan is at least a maximum of 120 minutes before departure and a minimum of 24 hours before departure.

From the results of indirect interviews with 2 ACO personnel, 3 Wings Abadi Airlines personnel and 5 Poltekbang Surabaya cadets majoring in Aviation Communication who had OJT (On The Job Training) at LPPNPI Kotabaru Unit via google form by asking 8 questions via google form to find out the impact and how to optimize LOCA between the ARO unit and Wings Abadi Airlines regarding the Flight plan delivery process at Perum LPPNPI Kotabaru Unit.

with the result that the flight plan sent by Wings Abadi Airlines is still not optimal because the flight plan delivery has not implemented the Web Based Flight plan method. So that there have been several delays in sending flight plans and causing aircraft not to be authorized to fly because the Kotabaru ARO Unit has not received a flight

plan from Wings Abadi Airlines. In this case, it is also not in accordance with the SOP of AFS Kotabaru in sending flight plans that exceed EOBT time. In addition, this problem can occur because there is no FOO (Flight Operation Officer) from the Airlines at Gusti Sjamsir Alam airport, so that Wings Abadi Airlines cannot create a Web Based Flight plan account. The absence of FOO has an effect on the impact of flight services, so that the wings cannot create a WBF account and the existing LOCA between the Kotabaru ARO Unit and Wings Abadi Airlines, especially in sending flight plans, is a problem for flights in the field.

Based on the SWOT analysis of the problem of sending flight plan forms, researchers chose the right strategy by determining the (WO) strategy as an option. Strategy (WO) is the most appropriate strategy as a solution by paying attention to weaknesses, namely:

1. not utilizing the sophistication of information technology;
2. the effectiveness of the work has not been achieved.
3. the speed of information has not been achieved.
4. the speed of the report procedure has not been achieved.
5. data documents are still manual.
6. the level of confidentiality and security has not been guaranteed.
7. data documentation cannot be presented quickly if needed.

By paying attention to the weaknesses that exist in the SWOT analysis, opportunities arise to get benefits. The opportunities to get benefits are as follows:

1. an account is needed for Web Based Flight Plan.
2. the effectiveness of flight plan delivery can be achieved with Web Based Flight Plan.
3. flight plan based on system data.
4. data reports by online.
5. the level of confidentiality and security of documents can be controlled by the system.
6. can display data quickly if needed.

From the results of data collection in the form of observations, interviews, related to the sub-optimal LOCA for flight plan delivery at Perum LPPNPI Unit Kotabaru, the following conclusions are obtained:

1. To increase the effectiveness of flight services to always be optimal, it is necessary to send a flight plan using the Web Based Flight plan method by Wings Abadi Airlines.

2. There is no FOO (Flight Operation Officer) at Gusti Sjamsir Airport Alam Kotabaru so that Airlines cannot create Web Based Flight accounts.
3. The LOCA between the ARO Unit and Wings Abadi Airlines is not optimal because there is no procedure for flight plan delays and the Web Based Flight plan method has not been used.

From the research above, to increase comfort and optimize services in flight plan delivery, researchers provide alternatives to these problems in order to create a more optimal service.

1. ARO Unit Kotabaru and Wings Abadi Airlines implement delivery flight plan using the Web Based Flight plan method.
2. Wings Abadi Airlines would like to add more human resources have a FOO (Flight Operation Officer) license.
3. Review the LOCA (Letter Coordination Of Agreement) or agreement cooperation between Airlines and Perum LPPNPI Unit Kotabaru with added the use of the WBF (Web Based Flight plan) application in flight plan delivery and flight plan delivery delays.

CONCLUSION

Based on the results of the research that has been done, researchers can conclude that:

1. The flight plan delivery process at Perum LPPNPI Unit Kotabaru has not yet been completed optimal.
2. Wings Abadi Airlines' HR (Human Resources) is inadequate because SDM does not yet have a FOO (Flight Operation Officer) license.
3. In LOCA there are no regulations governing delays delivery of flight plans.

Suggestion

Based on the results of research that has been done researchers can provide the following suggestions:

1. ARO Unit Kotabaru and Wings Abadi Airlines will apply immediately flight plan delivery using the Web Based Flight plan method.
2. Wings Abadi Airlines will immediately add human resources to have license FOO (Flight Operation Officer) and Airlines immediately create an account Web Based Flight plans.
3. Immediately review existing LOCAs and add them regulations governing flight plan delivery delays.

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