

## The Effect of the Effectiveness of Application and Technical Capabilities of Siopskom Users on the Performance of AMC Officers at Yogyakarta International Airport

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### Abstract

AMC is the unit responsible for regulation and supervision of order, safety of traffic movement on the apron, and aircraft parking placement, managing all vehicle movements on the apron. To increase the effectiveness of AMC performance, it is necessary to have an information system, namely siopskom to help provide every work convenience for employees. The purpose of this research is to find out how much effectiveness the application has on the performance of AMC officers, to find out the techniques of using SIOPSKOM on the performance of AMC officers, and to find out how much is the effectiveness of the implementation and technical ability of the siopskom user on the performance of AMC officers at Yogyakarta International Airport. This study used a quantitative method with the variables of application effectiveness (X1), the technical ability of Siopskom users (X2) and the performance of AMC officers (Y). The data used are primary data, secondary data, and documentation. Primary data was obtained from distributing questionnaires to 15 AMC officers, secondary data was obtained from taking references from previous studies that were relevant to the research being carried out, and the documentation was in the form of pictures of filling out the questionnaire. Data analysis was used using multiple linear regression tests. The results of the study from the average value on the indicator of the effectiveness of implementation (X1) there is no significant effect between the effectiveness of the application on the performance of AMC officers at Yogyakarta International Airport. There is a significant influence between the Siopskom user's technical ability variable on the performance of AMC officers at Yogyakarta International Airport by looking at the t count value of 6.024 > t table of 2.160. Meanwhile, the effectiveness of the implementation and the technical ability of Siopskom users simultaneously affect the performance of AMC officers at Yogyakarta International Airport. Data analysis uses multiple linear so that it produces an f-count value of 24,944 > Ftable 0.263 and a significance of 000 < 0.05.

**Keywords:** Implementation Effectiveness, Siopscope User Technical Ability, and AMC Officer Performance



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### INTRODUCTION

The airport is the most important facility in air transportation services in various places, including in Indonesia, because its function is designated as a place for aircraft to depart and land, boarding and dropping passengers, goods (cargo) and post. Yogyakarta International Airport plays a very important role as a door or access for tourists to visit Yogyakarta province and is managed by PT. Angkasa Pura I (Persero). PT. Angkasa Pura I (Persero) is a State-Owned Enterprise (BUMN) company that provides air traffic and airport business services in Indonesia which focuses on services in the Central and Eastern parts of Indonesia. PT. Angkasa Pura I (Persero) or also known as Angkasa Pura Airports is determined to create a professional world-class company. Angkasa Pura Airports believes it can do its best by providing international standard security, safety and comfort services for its customers. The Apron Movement Control (AMC) unit according to the regulations of the director general of air transportation, Apron

Movement Control is the unit responsible for managing and supervising order, safety of traffic movement on the apron, and parking placement. aircraft, control of all vehicle movements on the apron.

Thus it is necessary to have a computerized information system to record and store all information on movements in the field such as information on the estimated landing time of the aircraft, estimated parking locations or parking stands, airline name, flight number, type of aircraft, aircraft registration number, origin and destination of the aircraft, time block on and block off the plane, the number of passengers getting off and on the plane, the amount of cargo on the plane. One of these information systems is SIOPSKOM (Operational and Commercial Information System) which is an information system used at airports to support airport officers in carrying out their duties, starting from the preparation of master data, pre-operational activities, operations, to the commercial billing system for the air.

By processing the system, it is hoped that the resulting data will be more accurate and reliable. The success of an application system will depend on the ease and use of system users for the technology in the system because technology will help individuals in completing tasks, one important thing that must be considered by companies that implement information technology is the extent to which the success of the system has a positive impact on improving performance both individually and as a whole group. Employee performance plays an important role in the operation of a company's information system. According to (Mangkunegara, 2016) good performance is optimal performance, namely performance that is in accordance with organizational standards and supports the achievement of organizational goals, and is said to be bad if otherwise.

The purpose of implementing the SIOPSKOM application system at AMC Yogyakarta International Airport is to help provide every work convenience for employees such as convenience and effectiveness when working so that the achievement of goals can be carried out according to the wishes of the company, so that SIOPSKOM can increase the effectiveness of the performance of AMC Yogyakarta International Airport employees related to important and very necessary tasks of an application. The effectiveness of the use of SIOPSKOM (Operational and Commercial Information System) in companies depends on their technical ability because technical skills greatly affect the performance of the user, the successful use of SIOPSKOM (Operational and Commercial Information System) in companies is closely related to human resources. So far there is research on the SIOPSKOM application system by Dini (2021) with the title Effect of the Effectiveness of the Use of Commercial and Operating System Application Programs (SIOPSKOM) on the Performance of AMC Employees at PT. Angkasa Pura I (Persero) Adi Soemarno Surakarta Airport which shows that running applications can support performance and decisions to achieve the goals desired by the company. The difference between the author's research and previous research lies in the title of the research and the author's more direct research on the influence of the effectiveness of the implementation and technical abilities of SIOPSKOM users on employee performance to support decisions to achieve company goals, another thing that distinguishes the place of research conducted at AMC Yogyakarta International Airport.

Based on the explanation above, the author feels interested in conducting research that has been done. This study aims to find out that there is an influence on the effectiveness of the application and the technical ability of users of the SIOPSKOM application program technology which has a positive influence on employee performance so that it does not take up a lot of energy and time. The success of using the SIOPSKOM application program in achieving company goals so that the SIOPSKOM application system can provide benefits for the accuracy and

accuracy of the performance of AMC employees at Yogyakarta International Airport. The purpose of the research: To find out how much the effectiveness of the application has on the performance of AMC officers at Yogyakarta International Airport? To find out how much effectiveness the technical ability of SIOPSKOM users has on the performance of AMC officers at Yogyakarta International Airport? To find out how much the effectiveness of the implementation and technical capabilities of SIOPSKOM users has on the performance of AMC officers at Yogyakarta International Airport?

## **Theoretical Basis**

### **Implementation Effectiveness**

According to Badudu etc (in Aprilia 2018) application is a thing, method or result. Meanwhile, according to Lukman Ali (in Aprilia 2018) to apply is to practice, to pair. Based on this understanding, it can be concluded that implementation is an action carried out both individually and in groups with the aim of achieving the goals that have been formulated. The implementation elements include: There is a program being implemented, There is a target group, namely the community that is targeted and expected to receive benefits from the program, There is implementation, both organizations or individuals who are responsible for managing, implementing and supervising the implementation process. The word effectiveness comes from the word effective which comes from English, namely effective. According to Beni (2016) effectiveness is the relationship between output and goals or it can also be said to be a measure of how far the level of output, policies and procedures is from the organization. According to Arens etc (in Dini 2016) defines effectiveness as follows: "Effectiveness refers to achieving a goal, while efficiency refers to the resources used to achieve that goal."

### **Usage Technique Ability**

According to Robbins (in Bara 2012) defining ability or ability is: "Ability refers to an individual's capacity to perform the various tasks an a job." or practice and desired to do something that is manifested through his actions. According to Robbins (in Bara 2012), user capabilities can be seen from how system users run existing information systems. Technical ability refers to individual certainty to perform various tasks in a particular job, the ability to perform job functions while applying/using important knowledge. Technical ability according to Sanusi (in Widya 2013) is the ability to use knowledge, methods, techniques and equipment used to carry out tasks as well as experience and training obtained. Meanwhile, Robbins (in Widya 2013) states that ability is proven through the activities/behavior needed to do the job. The ability of employees to analyze and express ideas, which is owned by each employee will increase self-confidence that affects the use of information systems because the ability to operate a user's system is needed.

### **Performance**

Performance can be defined as a work result that has been achieved by a person in carrying out the tasks assigned to him based on skills, experience and sincerity as well as timeliness Hasibuan (2016). Meanwhile, Fahmi (2016) states that defining performance is the result obtained by an organization, both the organization is profit oriented and non-profit oriented which is produced over a period of time, states that with the formation of strong motivation, it will be able to produce good results or performance as well as the quality of the work carried out. Mangkunegara (2017) states that performance is the result of work in quality and quantity achieved by an employee in carrying out his duties in accordance with the responsibilities given to him. Performance is the result of employee work seen from the aspects

of quality, quantity, working time, and cooperation to achieve the goals set by the organization (Sutrisno, 2016).

### **Siopskom**

SIOPSKOM (Operational and Commercial Information System) which is an information system used at airports to support airport officers in carrying out their duties, starting from the preparation of master data, pre-operational activities, operations, to the commercial billing system for the air side (in the article SIOPSKOM Inalix 2019). SIOPSKOM is used for recording data, calculating and recording all costs charged to each airline, such as landing fees, placement and storage of aircraft, and automatically calculates the costs to be paid for each airline, as well as providing information for fast and accurate decision making (Anisya, 2021).

### **Apron Movement Control (AMC)**

AMC (Apron Movement Control) According to the Regulations of the Directorate General of Civil Aviation, with Decree Number 21 of 2015 concerning Operational Techniques which are described in the Civil Aviation Safety Regulations section 139 (Advisory Circular CASR Part 139-11). Apron Movement Control (AMC) is a unit tasked with supervising all traffic movements of aircraft, vehicles/equipment and personnel on the airport apron to prevent incidents between the three traffic-forming elements on the apron so that activities that occur on the apron can run smoothly, where the supervision of the AMC unit includes aircraft parking placement services, regulation of the movement of vehicles and people in the airside area, ground handling agent arrangements, aviobridge operations and flight administration in the airside area. The activities of the AMC operational system include providing guidance and supervision of all vehicles, aircraft and personnel operating in the aircraft movement area (Anisya, 2021).

In addition, AMC employees are also tasked with providing assistance to aircraft to designated parking locations or aprons. Flight operational services carried out by AMC, namely monitoring the use, entry, and recording the process of aircraft arrival to aircraft departure, so as to provide information as a quick and accurate decision-making analysis. With this SIOPSKOM, AMC can more easily manage flight operational activities. Friday, 2020).

### **Definition of Airport**

According to the law of the Republic of Indonesia number 1 of 2009 Chapter 1 paragraph 33 concerning flights, an airport is an area on land and/or waters within certain limits that is used as a place for aircraft to land and take off, take off passengers, load and unload goods, and place intra and intermodal movement of transportation, equipped with basic facilities and other supporting facilities. According to Annex 14 of ICAO (International Civil Aviation Organization) an airport is a certain area on land or water (meaning buildings, installations and equipment) which is intended either in whole or in part for the arrival, departure and movement of aircraft. Based on the above understanding, it can be concluded that an airport is an area or area used for activities and movement of goods, aircraft equipped with all basic facilities and supporting facilities.

### **Relevant Research**

**Table 1. Relevant Research**

No	Name	Year	Title	Research Result
1	Septi Anisya Dini	2021	The Effect of User Effectiveness of the Operational	The results of the study stated that the effect of the effectiveness of the SIOPSKOM application program in each category was stated to be good as well as employee

			and Commercial Information System Application Program (SIOPSKOM) on the Performance of AMC Employees at PT Angkasa Pura I Adi Soemarno Airport, Surakarta	performance in each category which was stated to be good. The effectiveness of the application program has a positive effect on employee performance at PT Angkasa Pura I (Persero) Adi Soemarno International Airport Surakarta, as evidenced by the results of a basic test of decision making based on probability (sig. value) of 0.000 less than 0.05 ( $0.000 < 0,05$ ). So thus $H_a$ is accepted. As well as the R square value on the output result of 0.961 it can be said that the effectiveness of the SIOPSKOM application program has a 96.1% influence on the performance level of AMC employees at Surakarta International Airport while 3.9% AMC employee performance is influenced by other variables not examined.
2	Chandra	2018	The Influence of Program A Operational and Commercial System (SIOPSKOM) System on Employee Performance at PT Angka Pura I (Persero) Juanda International Airport Surabaya	The results of the study stated that the effect of the SIOPSKOM System application program in each category was stated to be good as well as employee performance in each category which was stated to be good. This application has a positive effect on employee performance at PT Angkasa Pura I (Persero) Juanda International Airport Surabaya, as evidenced by the results of the basic test for decision making based on probability (sig. value) of 0.000 with a significant level of 5% which means $<0.05$ ; then $H_0$ is rejected and $H_a$ is accepted, the probability value (sig) at 0.000 means that there is influence between the two variables with an influence level of 53.0%, the remaining 47.0% is influenced by other factors. Keywords: Application, SIOPSKOM System, programs, employee performance.
3	Sabatini Tobing Intan	2022	Evaluation of the Operational and Commercial Information System (SIOPSKOM) at the Apron Movement Control Unit at Zainuddin Abdul Madjid International Airport Lombok	The most important point in this research is to evaluate SIOPSKOM at the Apron Movement Control Unit at Zainuddin Abdul Madjid International Airport Lombok. Then it aims to find out the operating procedures for the Operational and Commercial Information System (SIOPSKOM) and the constraints on the output results in SIOPSKOM recording. The type of research used is descriptive qualitative research with data collection methods of observation, interviews, and literature study. It can be seen that the Operational and Commercial Information System (SIOPSKOM) is an information system used at airports to support airport officers in carrying out their duties, starting from the preparation of master data, pre-operational activities, operations, to commercial billing systems. In general, SIOPSKOM users are grouped into several units (groups), namely, the AMC (Apron Movement Control) Unit, the Information Unit and the Commercial Unit.

## RESEARCH METHODS

### Research Design

In this study using quantitative methods, according to Ghazali (2018) quantitative research analyzes data using a mathematical procedure called statistics. Analysis breaks data into small parts to answer research questions. Statistical procedures such as comparing individual scores provide information to answer research questions and hypotheses. Meanwhile, Sugiyono (2018) argues that quantitative data is a research method based on positivistic (concrete data), research data is in the form of numbers that will be measured using statistics as a counting test tool, related to the problem under study to produce a conclusion. Because this research is in the form of numbers and analysis using statistics to measure and obtain research results through questionnaires. The purpose of quantitative research is to



obtain an explanation of a theory and laws of reality. The quantitative method is called the traditional method, this is because this method has been used for a long time. This method is a concrete (empirical) scientific method, namely research conducted based on facts in the field tested by other people or other parties.

### **Place and Time of Research**

This research was conducted at Yogyakarta International Airport. This research was conducted for two weeks from January 25 2023 to February 8 2023, and the research location was at Yogyakarta International Airport.

### **Population and Sample**

There are several people interpreting the definition of the population but basically it is the same, therefore the authors take the notion that the population is a generalized area consisting of certain objects or subjects that have certain qualities and characteristics set by researchers to study and then draw conclusions (Sugiyono, 2019). The population in this study were all AMC employees who were known to be 15 people at Yogyakarta International Airport. According to Sugiyono (2019) the sample is part of the number and characteristics possessed by this population. If the population is large and it is impossible for the researcher to study everything in the population, then the researcher can use samples taken from that population. What is learned from the sample, the conclusions will be applicable to the population. The sampling technique used is non-probability sampling, with the type of census/total sampling. According to Sugiyono (2019) total census/sampling is a sampling technique in which all members of the population are sampled. Research conducted on populations under 100 should be carried out by means of a census, so that all members of the population are sampled as subjects of study or as respondents who provide information. The sample used in this study were AMC employees at Yogyakarta International Airport.

### **Data Collection Technique**

1. Primary data is a data source that directly provides data to data collectors (Sugiyono, 2018). To collect data in this study the researcher used the questionnaire method, (Sugiyono, 2019) stated that a questionnaire is a data collection technique that is carried out by giving a set of questions or written statements to respondents to answer. Likert scale in the questionnaire:
2. Secondary data is a data source that does not directly provide data to data collectors (Sugiyono, 2018). Secondary data was obtained through literature study, namely the author took data to support theories related to research by taking references from books (library) related to the problems studied. In addition, the authors also take references from previous studies that are relevant to the research conducted.
3. Documentation is a method used to obtain data and information in the form of books, archives, documents, written numbers and pictures in the form of reports and information that can support research. Documentation is used to collect data and then reviewed (Sugiyono, 2018).

## **RESEARCH RESULTS AND DISCUSSION**

### **Effect of Implementation Effectiveness on AMC Officer Performance**

Based on the results of statistical analysis using the partial test (t test) obtained, it is known that there is a positive and significant relationship between effectiveness and performance of AMC officers. Testing the effect of the implementation effectiveness variable on the performance of AMC officers can be identified by looking at the t-count value of  $1,677 < t$ -

table 2.160 and a significance value of  $0.119 > 0.05$  which indicates that there is no significant effect between the implementation effectiveness variables on the performance of AMC officers at international airports Yogyakarta. The results of this study prove that there is no significant effect on the effectiveness of the application on the performance of AMC officers at Yogyakarta International Airport. Because in the table the average value of the X1 indicator for the second respondent is 0.39. The average value can be seen in Appendix 2. Data implementation effectiveness variable.

### **The Influence of the Siopskom User Engineering Camp on the Performance of AMC Officers at Yogyakarta International Airport**

Based on the results of statistical analysis using the partial test (t-test) obtained, it is known that there is a positive and significant relationship between the Technical Ability of Siopskom Users and the Performance of Amc Officers. Submission of the influence of the Siopskom User's Technical Ability variable can be known by looking at the t count of  $6,024 > t$  table of 2.160 and a significance value of  $0.000 < 0.05$  which indicates that there is a significant influence between the Siopskom User's Technical Capability variable on the Performance of AMC Officers at Yogyakarta International Airport .

### **The Effect of Implementation Effectiveness and Technical Capability of Siopskom Users on the Performance of Amc Officers**

Based on the results of the simultaneous test (Test F) it shows that the Fcount value is 24,944. This value is greater than the Ftable of 0.263 with a probability of  $0.000 (0.000 < 0.05)$  which means the effectiveness of the application and the technical ability of Siopskom users simultaneously affects the performance of AMC officers at the airport. Yogyakarta International. And based on the test the coefficient of the determinant  $R^2$  is 0.806, which means that the two independent variables together influence the dependent variable by 76.4% and the remaining 23.6% are affected by other variables not present in this study. Based on the results of this study, it proves that the effectiveness of the application and the technical ability of the Siopskom user has an effect on AMC officers.

The results of this study are in line with previous research conducted by Septi Anisya Dini (2021) with the results of the study stating that the effect of the effectiveness of the SIOPSKOM application program in each category is stated to be good as well as employee performance in each category which is stated to be good. The effectiveness of the application program has a positive effect on employee performance at PT Angkasa Pura I (Persero) Adi Soemarmo International Airport Surakarta, as evidenced by the results of a basic test of decision making based on probability (sig. value) of 0.000 less than 0.05 ( $0.000 < 0, 05$ ). So thus  $H_a$  is accepted. As well as the R square value on the output result of 0.961 it can be said that the effectiveness of the SIOPSKOM application program has a 96.1% influence on the performance level of AMC employees at Surakarta International Airport while 3.9% AMC employee performance is influenced by other variables not examined.

### **CONCLUSION**

Based on the results of the research and discussion of the data that has been described regarding the effect of the effectiveness of the implementation and technical abilities of the Siopskom user on the performance of AMC officers at Yogyakarta International Airport. Then the conclusions are drawn as follows: It can be seen that the implementation effectiveness variable (X1) has no positive and significant effect on the performance variable of AMC officers at Yogyakarta International Airport (Y). The results of computerized data processing using the

SPSS version 22 program obtained a t value of  $0.101 < t \text{ table } 2.160$  and a significance value of  $0.921 > 0.05$ . It can be seen that the technical ability variable of the Siopskom user (X2) has a positive and significant effect on the performance variable of AMC officers at Yogyakarta International Airport (Y). The results of computerized data management using the SPSS version 22 program obtained a t count of  $6,024 > t \text{ table of } 2.160$  and a significance value of  $0.000 > 0.05$ . The effectiveness of the application and technical capabilities of the Siopskom user simultaneously influence the performance of AMC officers at Yogyakarta International Airport. Data analysis uses multiple linear so that it produces an f-count value of  $24,944 > F \text{ table } 0.263$  and a significance of  $000 < 0.05$ .

Suggestions for Companies: Based on the research that has been done, the results show that the implementation effectiveness variable does not affect the performance of AMC officers at Yogyakarta International Airport. And the technical ability of Siopskom users influences the performance of Amc officers at Yogyakarta International Airport. So to improve the performance of AMC officers at Yogyakarta International Airport, companies must often provide motivation through directions, actions and words that can properly shake the abilities, skills, knowledge of duties and work functions of officers. For the author, it is hoped that this research can be used as a guideline for further researchers. If there are deficiencies both in words and data management, hopefully it can be evaluated to be even better.

## **BIBLIOGRAPHY**

- Anisya, D. S. (2021). Pengaruh Efektivitas Penggunaan Program Aplikasi Sistem Informasi Oprasi dan Komersil (SILOPSKOM) terhadap Kinerja Pegawai AMC PT Angkasa Pura I Bandar Udara Adi Soemarno Surakarta, Dissertation, STTKD.
- Fahmi, I. (2016). Manajemen Sumber Daya Manusia. Jakarta: PT. Bumi Aksara.
- Ghozali, I. A. (2018). Aplikasi Analisis Multivarian dengan Program IBM SPSS .Semarang: BPFE Universitas Diponegoro.
- Hasibuan, M. S. (2016). Manajemen Sumber Daya Manusia Edisi Revisi Cetakan Kesembilan Seles. Jakarta: PT. Bumi Aksara
- Indrasari, M. (2017). Kepuasan kerja dan Kinerja Karyawan Tinjauan dari Dimensi Iklim Organisasi, Kreativitas Individu dan Karakteristik Perkerjaan. Yogyakarta: Indomedia Pustaka.
- Jumlad , W. (2020). Analisis Kinerja Unit Apron Movement Control Terhadap Safety di Bandara Internasional Husein Sastranegara, Jurnal Manajemen Drigantara.
- Kasmir. (2016). Manajemen Sumber Daya Manusia (Teori & Praktek). Medan: Rajagrafindo Persada.
- Lian, B. (2017). Kepemimpinan Dan Kualitas Kinerja Pegawai. Palembang: Noer Fikri Offset
- Mangkunegara, A. (2016). Evaluasi Kinerja SDM, Cetakan Ketuju. Bandung : PT. Refika Aditama.
- Mangkunegara, A. P. (2017). Evaluasi Kinerja SDM Cetakan Kedelapan. Bandung: PT. Refika Aditama.
- Muasaroh. (2010). Aspek-aspek Efektifitas studi Tentang Efektifitas Pelsksanaan Program Pelaksanaan PNPM-MP. Malang: Universitas Brawijaya Malang.
- SIOPSKOM User Guide Inalix. (2019, Desember Senin 18 Pukul 10:35:00 WIB). SIOPSKOM Inalix.
- Sugiyono. (2018). Metode Penelitian Kuantitaif, Kualitatif, dan R&D. Bandung: Alfabeta.
- Sugiyono. (2019). Metode Penelitian Kuantutatif, Kualitatif, dan R&D. Bandung: Kencana.
- Sutrisno, E. (2016). Manajemen Sumber Daya Manusia, Cetakan Ke-8. Jakarta: Kencana Prenada Med