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Optimizing the Use of Android-Based Audio Visual Integrated System (AVIS) Application in Theory Exam of Driving License Service by Traffic Unit of Cimahi Resort Police

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A B S T R A C T

The innovation of the android-based audio visual integrated system (AVIS) online limited area application by the Cimahi police resort, which is relatively new, still requires a lot of improvement and refinement. This study aimed to determine the use of the Android-based limited area online AVIS application and how to optimizing of the AVIS application. This research was conducted with a qualitative approach, using descriptive analysis research methods, as well as data collection techniques by interviewing, observing, and document review. The study found that the use of AVIS application based on components of the law, facilities, infrastructure, internal control, and performance evaluation of executors has not met the standards. Influencing factors, namely innovation, communication channels, and social systems, are inhibiting factors. In conclusion, optimizing the use of the android-based limited area AVIS online application in the SIM theory test service by the Cimahi Police Traffic Unit based on the Public Service Improvement Theory by Kearns (2010) can be done through 4 strategies, namely growth strategy, efficiency increasing strategy, stability strategy, and collaboration strategy.

1. Introduction

POLRI (Indonesian national police) always improves from its weakness so that they are always ready to become a protector and servant for the people of Indonesia (Kurniawan, 2019). Some of POLRI's efforts can be seen through POLRI's current goal, which is to create a professional, modern, and trusted police (Promoter). This is spelled out in 11 priority programs by the Chief of Indonesian National Police. POLRI priority program point 2, which stated as "improvement of public services that are easier for the community and based on information technology," has become a strong driver for the POLRI to carry out several accelerated innovations, especially in technology and information (Nurrizaldy, 2021; Rahman et al., 2021).

Data from the Indonesian central statistics agency stated that the number of vehicles still operating throughout Indonesia in 2014 reached 114,209,260 units, then in 2015, it reached 121,394,185 units, and in 2016 it reached 129,281,079 units (BPS, 2018). The data shows a fairly high increase in vehicles' number from year to year. The increasing number of vehicles can occur due to the increasing number of its driver.

880

The increase in vehicles and their drivers certainly has an impact on increasing the number of driver's licenses.

The purpose of requiring the driver to have a driver's license is to control their competence. A driving license (SIM) requirement is also the preventive action for the emergence of traffic accidents due to the mistakes of users who are not yet competent in using vehicles. However, the large number of driving license requests in Cimahi has created new problems for the police, especially in the field of public services, due to several limitations that the police have in fulfilling public demands.

The opportunity for a large number of smartphone users in Indonesia was put to good use by the Cimahi Police, especially in the service of making SIMs. On April 25th, 2017, concurrent with the inauguration of the renovation of the Cimahi Police Driving License Administration Unit, the Cimahi Traffic Unit also launched the use of the android-based limited audiovisual integrated system (AVIS) online area application. This online application certainly answers the problems that exist in Cimahi, where the number of SIM applications by the Cimahi Police Traffic Unit has continued to increase over the past 4 years.

The android-based limited area AVIS online application is the first online application in Indonesia that helps SIM applicants carry out a theoretical test directly on the applicant's Android-based smartphone without the need to queue using a computer at the resort police. Applicants can download the application on the Cimahi Police website and use it in a limited area, in this case, in the theory exam room. Thus, the problem of limited computers for theory exams at the Cimahi Police, which only had 17 units for services for making all SIM classes, could be resolved.

The innovation of the Android-based AVIS Online Limited Area application by the Cimahi Police Resort, which is relatively new, still requires a lot of improvement and refinement. The innovations that have been made must be used more effectively so that what is expected from the creation of this online application can be achieved (Safitri et al., 2019). This study aimed to determine the use of the Android-based limited area online AVIS application and how to optimizing of the AVIS application.

2. Literature Review
Public service concept

Public Service standards are standardized measurements in the administration of public services that must be obeyed by providers and or recipients of services in Law No. 25 of 2009 concerning Public Services in article 21. The service standard components at least include; legal basis, terms and conditions, systems and procedures, completion timeframe, fees, service product, facilities, executor competency, internal monitoring, and executor performance evaluation. In this study, the concept of public service is used as a tool in discussing the first issue, how to use the android-based limited area AVIS online application at the Cimahi Police traffic unit.

According to Kearns in Towards Excellent Service, there are four kinds of strategies that can be used as a reference in improving the quality of public services, namely growth, retrenchment, stability, and collaborative strategy. Within the growth strategy, there are two strategic options, namely, a strategy that is focused on developing service delivery to existing service programs according to the portfolio (position and duties). This strategy is commonly called the concentration growth strategy. In addition, if service development is carried out by increasing the number and types of existing service programs in the portfolio, this strategy is called a diversification growth strategy.

In retrenchment strategy, there are three kinds of strategies: turnaround, divestment, and liquidation. The turnaround strategy is used when the organization's performance is declining, but the prospects for revitalization are still good, or it is still possible on the grounds that the service product is still on the right business path and is needed by the

881

community. The divestment strategy is carried out when the turnaround strategy is no longer possible because the service organization is no longer able to offer the correct portfolio of service programs. In contrast, the liquidation strategy is a strategy to terminate service activities formally. In general, this is done by selling as many assets as possible and distributing the process to creditors and stakeholders.

The stability strategy is designed to protect the position and existence of the organization in its environment. There are four variants of the strategy, namely a) the status quo strategy is used to maintain the status of the current direction of the organization, b) the captive strategy is used to protect the organization from an undermining environment, c) the pause strategy is used for appropriate adjustments due to efficiency growth or substantial organizational change, d) incremental strategy is used when the organization requires gradual changes.

The collaborative strategy consists of three types of strategies: a) resource sharing, the parties involved share the resources they have or will have to improve service efficiency. b) joint ventures, there is a commitment between two or more organizations to address community needs together. c) strategic alliances, there is a commitment by two or more organizations to unite their strengths which are directed toward a number of strategic issues in order to achieve the goals they want.

3. Methods

This qualitative study was conducted on March 2018 at Cimahi Resort Police Office, Indonesia. The informants consisted of the police resort chief, police traffic unit chief, resident unit, resident unit staff, application programmers, information and communications department staff, and SIMs applicants. Before recruitment, informed consent and the verbal ascent of each study participant were obtained. The participant that completed in-depth interviews were included in this study. The

'Consolidated criteria for reporting qualitative research checklist' was used to report the results.

In this study, observations were also made regarding the use of android-based limited area online AVIS applications. Furthermore, the documents used as supporting material in the writing of this research are reports on the making of SIM A and SIM C for the last 4 years, the Cimahi Police SATPAS budget, the CV of the driver's license theory test officer, and AVIS application innovation report by the head of a traffic unit. Records were transcribed verbatim, translated into English, and cross-checked by two researchers. Two researchers independently analyzed verbatim transcripts using deductive thematic content analysis, which was based on the literature and theoretical framework of this study. NVivo software version 12 was used to code, manage and analyze the data.

4. Results and Discussion

The standard components of a service, in this case, the service using the android-based limited area AVIS Online Application, will be explained below point by point using Law No. 25 of 2009 article 21.

Legal basis

The legal basis is a foundational element of the existence of services, so that good public services must have a good legal basis as well.

"Patents from the Ministry of Communication and Informatics (Kominfo) are very necessary, but this application actually still needs a lot of improvement. Perhaps the closest step is to wait for an answer from this innovation design plan that I have given to the National Police Traffic Corps. If you have received a positive response, it is clear that the next step is to apply for a Patent". (Interview with traffic unit chief on Cimahi police resort)

Term and condition

There are requirements that must be met by the community in order to obtain the right to service. In

terms of requirements, the use of the AVIS online application in a limited area based on android also has nothing to worry about. Users of this application only need to use an Android-based smartphone and have a registration number for the SIM applicant. There are no special conditions for using this application.

Systems and procedures

From the aspect of systems and procedures, the problems come from the smartphone' supporting system (android or iOS). However, the application interface is easy to use for android users. It only needs written approval from the traffic coordinator of POLRI for the use of an android-based limited area online AVIS application. According to the interview conducted by the head of the traffic unit, namely:

"This application system is actually the same as the application system on a PC. The only difference is the media that is used. The use of this application is based on android, so this application can only be used specifically on Android-based smartphones. Those who use iOS, of course, still can't. In the future, this application should be improved so that it can be used on iOS as well."

"Procedures already exist, but legitimacy has not yet been made on a national scale. However, brochures and pamphlets already exist. Because it doesn't exist elsewhere, I was a bit careful about making it. In fact, I have made submissions to Traffic Corps many times. However, we all know that the leadership often changes, so until now, there has been no reply

regarding the submission of SOPs and procedures related to the innovations that I made." (Interview with traffic unit chief).

Completion timeframe

Based on observation, there is a time limit for completing the SIM theory test. There are 30 questions, of which one question is given 30 seconds to work on. Overall, in one round, the process took about 30 minutes because the work was preceded by preparation and giving an explanation of how to use this application. There are 17 computers that function properly, so if, in one round, there are more than 17 queues, the applicant must wait for the next batch. Therefore, this restricted area online AVIS application should be utilized in these circumstances.

Driving license fees

A driving license fee is a cost that should be paid by the applicant to receive services. In making a new SIM according to regulation number 5 of 2012 concerning SIM, the rates charged are as presented in table 1. However, the costs incurred are, of course, the price of the service from the initial registration to obtaining the SIM rights. So that in carrying out the android-based limited area online AVIS theory test, there are no additional costs for applicants who want to use it. Based on observations, there were also no illegal levies made by SIM theory test officers in providing their services.

Table 1. The cost of a driving license application.

Driving license type	Cost
SIM A/general SIM A	IDR 120.000
SIM B1/general SIM B1	IDR 120.000
SIM B2/general SIM B2	IDR 120.000
SIM C	IDR 100.000
SIM D	IDR 50.000
International SIM	IDR 250.000

883

Service product

Based on observation, the use of the android-based limited area AVIS online application, seen from the aspect of service products, has met service standards because it is clear that the results of the theoretical test on smartphones are the same as those on PCs and applicants who use this application on android also have the same rights to get a print out of the same results as the one on the PC.

Facilities and infrastructure

Running the service of facilities and infrastructure is definitely the most important thing. In the following, a list of facilities is presented in the theoretical test room for those using a PC and in the enlightenment room for those using an Android-based smartphone (Tables 2 and 3).

Table 2. Facilities and infrastructure in the theory examination room.

Property	Condition			Total
	Good	Lightly damaged	Heavy damaged	
PC	17	1		18
Admin PC	2			2
Printer	2			2
Thermal printer	1			1
UPS	21			21
Table	3			3
Chair	23			23
AC	2			2
AC remote	2			2
Clock	1			1
Register book	1			1

Table 3. Facilities and infrastructure in the enlightenment room.

Property	Condition			Total
	Good	Lightly damaged	Heavy damaged	
Laptop	1			1
In-focus	1			1
Whiteboard	1			1
Waiting chairs	7	1		8
AC	1			1
AC remote	1			1
Chair	1			1

Executor competency

Executor competence is the skills possessed by officers in using this application technically. Indeed, there has been no formal training related to the use of this application, but an explanation regarding non-formal training related to the use of the Android-based limited area online AVIS application has been carried out, which was conveyed in an interview with the traffic unit chief.

"For the problem of providing skills related to the use of the application, it is clear that it has been carried out, but indeed it is only non-formal by technicians. Not formally yet. Because for non-formal training, in my own opinion, it is sufficient because the use of this application is very easy to understand and does not require a long understanding." (Interview from traffic unit chief).

Internal monitoring

Internal supervision was carried out either by the head of the unit or the head of the resident regarding the ongoing use of the AVIS Online Android-Based Limited Area application. As stated by the head of the resident unit in his interview follows;

"Clearly control and supervision should be routinely carried out". (Interview with the head of the resident unit).

However, the results of an interview with the SIM applicant is as follows;

"There is no explanation about this application, even though there are some pamphlets in the theory test room. However, I didn't really understand and had a long queue to test the theory using a PC because there are so many applicants waiting for examination." (Interview with SIM applicants).

The android-based program, although it has been implemented routinely, is still not detailed and optimal. Because even though supervision and control are carried out, the officer does not explain the mechanism for using this application to the applicant, even though, at that time, the theory test was in a queue.

Executor performance evaluation

Evaluating the performance of executors is one of the most important endings in every service. In using the Android-based limited area AVIS online application, it is necessary to evaluate the performance of the implementer. Even though supervision and control are carried out every day by the Resident Head Unit, there are no reports on the results of using the application every day, every week, or every month. The absence of this report certainly causes no evaluation analysis.

In order to optimize the use of the AVIS application, there are several strategies that could be used from

Kearns in Public Service Quality Improvement Theory, which are growth, retrenchment, stability, and collaborative strategy. Optimization that has been carried out by Traffic Services regarding the use of the AVIS Online Limited Area Android-Based Limited Area application will use a concentration growth strategy because development will be focused on providing services to existing service programs according to their portfolio (position and duties), including the use of the Enlightenment Room is a dual-function room where apart from being a space to give explanations, it is also a space for doing theory exams for those who use android because of course the existing theory test room is full. Actually, it has been assessed as sufficient. What needs to be considered is that there are still many applicants who do not bring earphones, so officers often have to lend their earphones so that applicants can carry out their exams comfortably.

In optimizing the use of the Android-based Limited Area AVIS Online Application, Traffic Unit could use a turnaround strategy because, in this case, it was found that organizational performance had decreased, but the prospects for revitalization were still good. Some of the revitalization related to the decline in organizational performance has been carried out for officers, in this case, both the leadership and executor elements. From the theory test officer elements, the turnaround strategy is always conveying and promoting this limited area online AVIS application to SIM applicants so that applicants can find out about this application, considering that the pamphlet board related to this application is not posted in front of the security guard and installed in the theory test room and on the web. In addition, at the end of the service, as a condition for providing good service, it is mandatory for officers to provide opportunities for applicants to submit suggestions and criticisms regarding how this application is in accordance with public service standards regulated in Law No. 25 of 2009 concerning Public Services in Article 21 where one component of public service standards is the

885

handling of complaints, suggestions, and criticism. From the leadership element, the implementation of supervision and control. Because until now, there has been no implementation report, so the leadership certainly cannot see the development/progress of this innovation periodically, whether it is getting better or not.

In optimizing the use of the Android-based Limited Area AVIS Online Application, the resort police use a status quo strategy where even though the use of the limited area AVIS online application is still not optimal because it is considered to be a new thing. However, it is clear that this innovation is the first in Indonesia, so this is a brand from the Cimahi Police that should be proud of. So, of course, this innovation must be maintained and optimized so that it can continue to provide the best service, as evidenced that the monthly internet and intranet services are still budgeted.

In optimizing the use of the Android-based Limited Area AVIS Online Application, the Traffic Unit uses a resource-sharing strategy, in which case the Head of the Traffic Unit plans to cooperate with the Resident Unit (Dikyasa). So, the Dikyasa Unit can help spread innovations using the AVIS Online Limited Area Android-Based application by sending safety messages to the public in general and especially high school students in particular because the majority of new SIM makers are clearly high school students. So that the resource-sharing strategy carried out by the Regident unit is to plan the dissemination of this application innovation after giving traffic safety messages because, at least in February 2018, there were active community education activities 24 times if things were optimized, of course, the spread of innovation. This can be quickly and certainly efficient.

5. Conclusion

The results of the study showed that there were 4 out of 10 standard components that had not been fulfilled, so this showed that the use of the Android-based limited AVIS Online Area application was still not optimal. Components of service standards that have been met are requirements, systems and procedures, fees, completion period, service products, and executor competency. While the components of service standards that have not met the standards are the legal basis, facilities, internal control, and executor performance evaluation.

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