Performance Analysis in E-Government Management through *Pusat Informasi & Koordinasi* Covid-19 Jawa Barat (PIKOBAR) Aplication

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Abstract. The purpose of this study is to examine the Performance analysis in e-Government management through *Pusat Informasi & Koordinasi* Covid-19 *Jawa Barat* (PIKOBAR). PIKOBAR is an information service innovation related to the Covid-19 pandemic in West Java. However, this application still has problems in tern of providing information especially on application features. So that the delivery of information to the public regarding the Covid-19 pandemic is still an obstacle. This study uses a descriptive method with a qualitative approach. The results show that the performance aspect still has obstacles in product performance and response time.

Keyworad : the Performance analysis, e-government, PIKOBAR

1. Introduction

There are values of e-Government. Six values were Improved public services; improved administrative efficiency; Open Government (OG) capabilities; improved ethical behaviour and professionalism; improved trust and confidence in government; and improved social value and well-being. The value dimensions were thereafter generalized into three overarching, and also overlapping, public value dimensions of Improved Public Services, Improved Administration, and Improved Social Value. The improved public services dimension influences other dimensions[1]. E-Government performance influenced by government capacity. Government capacity and government performance were significant determinants of the perceived usefulness of e-government services. Government capacity was revealed to positively predict e-government performance. In addition, perceived usefulness of e-government services was found to be a significant predictor of the intention to recommend the adoption of e-government services. The implications of these findings on the implementation of e-government are discussed [2]

One example of the implementation of this e-government is the use of information technology through applications in providing information services. During the COVID-19 pandemic, the West Java provincial government built the PIKOBAR (Pusat Informasi & Koordinasi Covid-19 Jawa Barat) which functions as a provider of information about COVID-19 in West Java. PIKOBAR is an application that can be downloaded through the Playstore for free from an Android phone. The PIKOBAR application was

developed by Jabar Digital Service and community partners including Covid-19 volunteers, the Indonesian Cloud Computing Association, Prixa.ai, BSSN, Kita Bisa and Kawal Covid-19. West Java Digital Service is Unit Pelaksana Tugas Dinas (UPTD) dari Dinas Komunikasi dan Informatika (Diskoninfo) West Java provincial. This application also utilizes information from Jabar Saber Hoax and Base Labs.

The government uses digital media to convey information about COVID-19. The selection of digital media is very appropriate. Based on a survey conducted by the Association of Indonesian Internet Service Users in 2018, internet users in Indonesia have reached 80% of the Indonesian population [5]. So that digital media is a fairly effective means of delivering information. In addition, the characteristics of digital media are not shared by controversial media. In digital media, two-way communication that is not limited by space and time [6]. This character is important , where accurate information from the government is needed by the community.

The Pikobar application is a form of government service in terms of providing information services to the public. People need accurate information about COVID-19. In the condition of the COVID-19 pandemic, the West Java provincial government carries out risk communication, critical communication and emergency communication [4]. Communication during a pandemic is a combination of crisis communication and risk communication. Crisis communication generally conveys the current state of affairs. Meanwhile, risk communication conveys negative consequences if you do not follow the recommendations and the probability that someone can contract the disease [4]. Through PIKOBAR, the government provides information related to the latest developments regarding Covid-19, both the development of its spread and handling, information on instructions and advice so that the community does not get infected. The purpose of this study is to examine the Performance analysis in e-Government management through PIKOBAR.

2. Method

The method is a qualitative research method with a case study approach and descriptive analysis. Source of the data obtained is divided into primary and secondary data. Primary data is the type of data obtained directly from the sources used as research informants. Secondary data is data compiled from information literature, such as textbooks, journals, research results, reports and other documents.

Sources of information in this research by assigning competent informants using purposive. The informants are employees of Diskominfo West Java Province and Product Manager Jabar Digital Service. They are who know and manage about PIKOBAR. Data collection techniques used are: the study of literature, observation and interviews. We use three components of the analysis in data analysis techniques, namely reduction, presentation and conclusion.

3. Results And Discussion

The PIKOBAR application is a form of government service in terms of providing information services to the public. People need accurate information about COVID-19. Performance analysis is the ability to complete tasks quickly so that goals can be achieved immediately. Performance analysis is measured by throughput and response time of a system. Throughput is the amount of work that can be completed during a certain time. The response time is the speed in completing the work.

The PIKOBAR application has more than two forms of collaboration between twostakeholders. At the performance level, the manager of this application, namely Jabar Digital Service, collaborates with the West Java Provincial Health Office (Dinkes West Java), in scanning data for cases of the spread of the

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Covid-19 pandemic. Mapping of the pandemic has been carried out in Indonesia from the existence of social restrictions. This social restriction with zoning is related to the frequency of the spread of Covid-19 in Indonesia. Followed by the mapping of zoning that has been exposed to Covid-19, this zoning is a mapping of the points of sufferers of the Covid-19 pandemic in West Java. In the mapping, each zoning is divided into 4 areas, namely the green zone, yellow zone, red zone, and black zone.

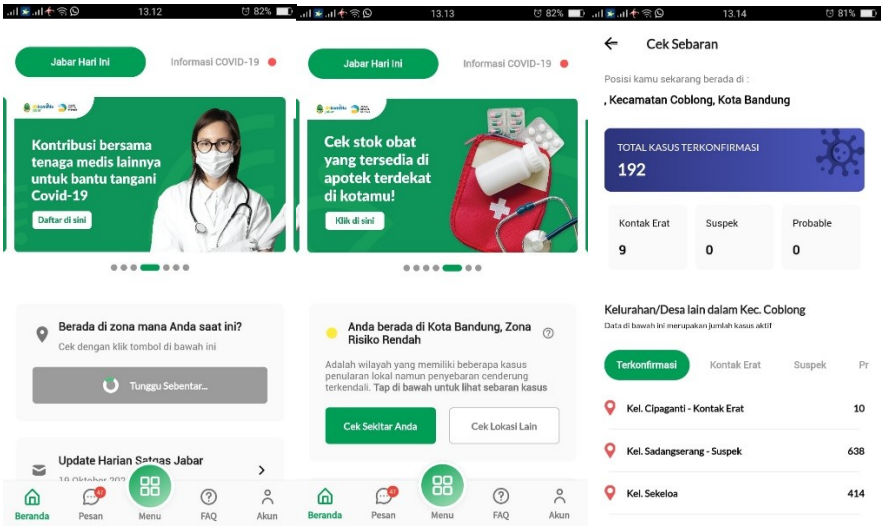
The green zone is a zone in an administrative area that is still minimal even without confirmed cases of Covid-19. However, in the green zone, it is still necessary to increase public awareness. Especially in education and socialization efforts related to the virus and minimizing the transmission of the Covid-19 disease. A quick response also needs to be recommended to test for symptoms that may already be present in the zone because Covid-19 itself takes 14 days until the maximum condition of an individual can be said to be exposed to Covid-19.

The yellow zone is an area zone with the status of the number of mild infections such as cases of local transmission. Efforts are being made to minimize the case of the yellow zone by carrying out all responses in the green zone. Contract tracking of confirmed status in the yellow zone is recommended for self-isolation monitoring. And urged residents to avoid non-essential gatherings and provide maximum protection to medical staff on duty in yellow zone areas.

The red zone is a zone with severe cases of spread and an area close to the black zone. In this zone, the effort that must be made is the application of all the efforts made in the previous zones by implementing personal protection. This includes wearing masks, postponing and canceling non-essential meetings and events. Carry out disinfection (cleaning germs or viruses) in public area facilities. In red areas, a rapid test or even other tests are required to determine the potential spread of Covid-19.

The black zone is the most dangerous zone. This zone is visualized spatially with a dark Hue. This shows that there is a high level of distribution frequency associated with the transmission of Covid-19. In this zone crowded areas should be closed. Advice not to leave the house except in urgent conditions in critical conditions. Lockdown rules are in place as an effort to prevent the spread of Covid-19.

In the PIKOBAR application, we can check the zoning where we are currently. By clicking check risk zoning, the zoning information will appear where we are currently. This can be seen in the following figure:



Source: research result (2021)

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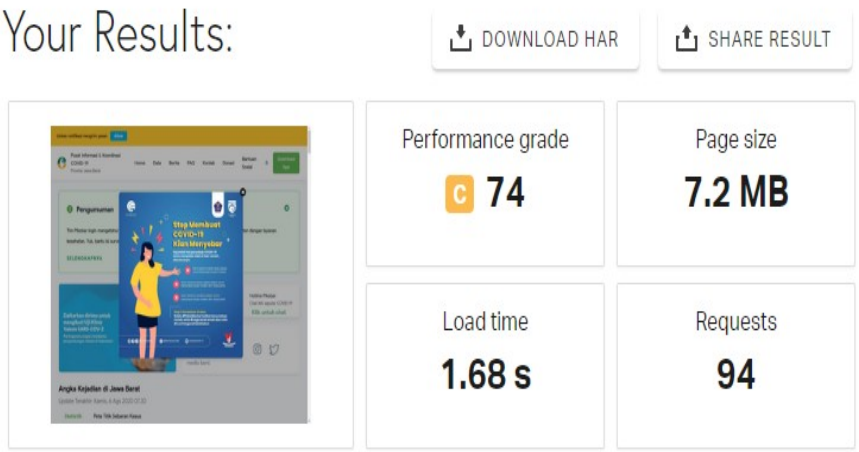
Figure 1. The Display of the Spread of COVID-19 on the PIKOBAR Application

In the figure 1, we can see the distribution of the number of people infected with COVID-19 each district where we are. The data is sourced from the West Java Provincial Health Office and is updated every 24 hours.

Determining the response time of PIKOBAR, in the study in 2020, the pingdom tool was used. This tool is used to measure the speed or loading of a website with a certain size. The results of the PIKOBAR measurements can be seen in following figure :



Source: research result (2020)

Figure 2. The measurement results of the PIKOBAR application by the pingdom tool in 2020

The results of the PIKOBAR application test using the Pingdom Tool above with a load time of 1.68s page size 7.2mb via a wifi network. This tool is not only judged by its size and response time. Pingdom Tools has 12 different Performance Grades that sites must have in order to get a score of 100. Performace Grade PIKOBAR in 2021 : the grade of compress components with gzip: 0, the grade of add express headers: 0, the grade of make fewer HTTP requests : 48, the grade of reduce DNS lookps: 65, the grade of use cookies-free domains: 95, the grade of avoid empty src or hret: 100 and the grade of put javascript at bottom: 100. This can be seen in following figure:

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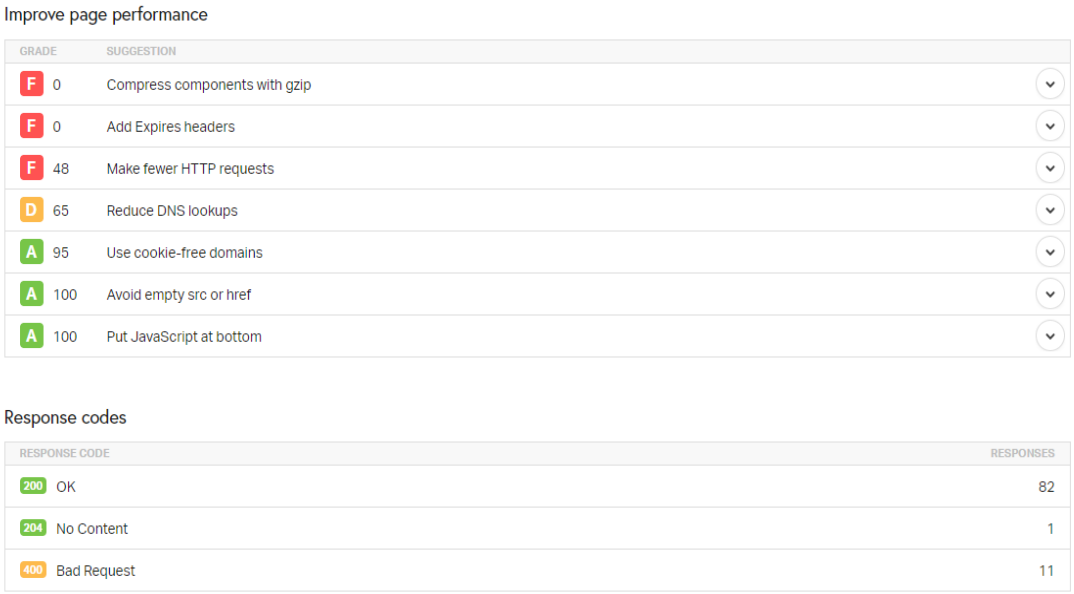
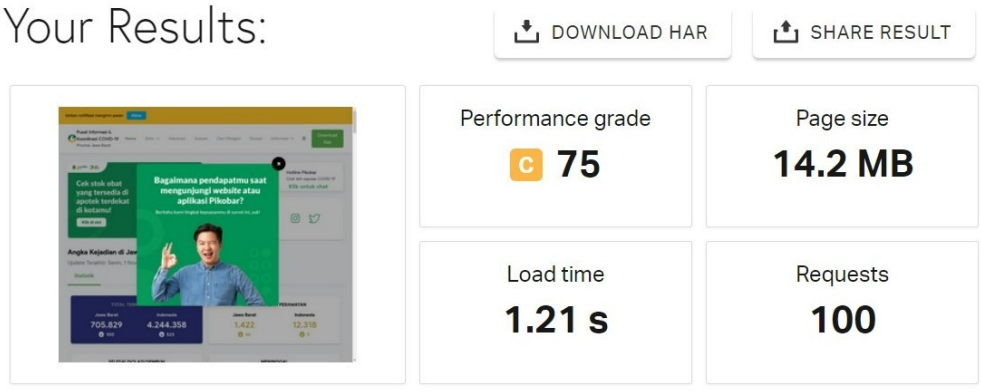


Source: research result (2021)

Figure 3. Performance Grade of PIKOBAR

100 is the ideal value and should be the maximum speed a site can achieve. However, the test results on the PIKOBAR site are the fastest when accessed from a browser at 74/100. The purpose of measuring the response time of the PIKOBAR application is to determine the performance of this application. Because the site is too heavy, it will take a long time to open the application and it will reduce the number of people who will visit the application. In 2021 there is an increase in PIKOBAR performace. The results of the PIKOBAR measurements in 2021 can be seen in following figure :



Source: research result (2021)

Figure 4. The measurement results of the PIKOBAR application by the pingdom tool in 2021

In 2021, the results of the PIKOBAR application test using the Pingdom Tool above with a load time of 1.21s page size 14,2mb via a wifi network. This illustrates that there is an improvement in PIKOBAR application. There is an increase in loading time from 1.68s page size 7.2mb in 2020 to 1.21s

page size 14,2mb in 2021. Based on this analysis, the PIKOBAR application is still not perfect. The test results show that the PIKOBAR application is still at level in performing its performance. So that the community in its use will experience a lack of satisfaction.

However, in 2021, many improvements have been made in the PIKOBAR application. Improvements can be seen from data updates that are carried out every 24 hours for certain data. The latest information regarding the spread of COVID-19. Performance analysis of a web application requires serious and updated testing, this is considering that every web application develops according to user needs [7]. The appearance of the application has an influence on the performance of the application itself. This was discovered by Suryana Putra etc in their research. Based on the initial test, we found five problems. There are the size of the writing is less large, the placement of menus, buttons, icons, the color of the writing is not in contrast, the display is less dynamic, and there are still bugs in the application [8]. The launch of the PIKOBAR application is an effort made by the West Java provincial government to create agile governance in the midst of this dynamic environmental condition[3].

4. Conclusion

The PIKOBAR application is a form of government service in terms of providing information services to the public. People need accurate information about COVID-19. Performance analysis is the ability to complete tasks quickly so that goals can be achieved immediately. Performance analysis is measured by throughput and response time of a system. Throughput is the amount of work that can be completed during a certain time. The response time is the speed in completing the work. The performance aspect still has obstacles in terms of production performance and response time. However, in 2021, many improvements have been made in the PIKOBAR application. Improvements can be seen from data updates that are carried out every 24 hours for certain data.

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