CHAPTER III

RESULTS AND DISCUSSION

In this section, researcher describe the results of research that has been carried out related to the implementation of e-government on the Magelang Cerdas application in the city of Magelang. The results of the study can be based on interviews conducted with several informants and study documents relating to the object of study, the application of Magelang Cerdas applications.

3.1 Implementation of E-Government through the Magelang Cerdas application

E-government is an innovation in the governance system caused by developments in technology and information. Magelang is one of the city in Indonesia which seeks to integrate the technological developments in the governance. The government is committed to increasing public service through the integration of Magelang Cerdas application services.

Based on the research that has been done on the implementation of e-government in Magelang through Magelang Cerdas application can be seen based from three elements, namely, Support, Capacity and Value (Indrajit, 2002; Nugroho SA, 2017), as follows:

3.1.1 Support

The support element is the most crucial in the development of e-government which needs support or political will of public officials. It is so that the concept of e-government can be applied, without the various development initiatives, and the development of e-government can not be implemented.
3.1.1.1 Regulation as a Legal Basis in Implementation of E-Government

The government's commitment to the development of e-government to improve public services can be seen from the decision of Mayor Regulation No. 51 year 2019, below.

"Electronic based government system means government affairs that carried out by Magelang city government applied the use of information and communication technologies to support governance, so that there is a necessary of good governance related to information and communication technology."

Mayor as head of government would have a strategic role in determining the success in implementing the policy. This certainly will not be successful if the leader of the government is not committed to serve their communities. Through regulation of the mayor, it can be understood that the development of e-government to improve the quality of public services has received the full support of the government of Magelang city. This was confirmed by interviews with Wikan Kanugroho, the Chief of Technology Informatics Division as follows:

"For the government support, itu can be seen the hereditary from the centre to the stricken area of commitment which is not only explained verbally but also outlined in the regulations of the president and mayor regulation. It shows the full support of each layer of the governments."(Interview with Wikan Kanugroho, the Chief of Technology Informatics Division on 03 February 2020)

Wikan explained that the government support not only at the regional level but also from the central government through the president's decision which is a commitment as a form of support for the improvement of public services. E-government development in Magelang can not be separated from the role of government to disseminate to the public.

"to achieve success in carrying out this program, we need to socialize as a form of notice to the public in order to use the application. It already is run by using media such as brochures, posters, billboards which we place at points of public activity. "(Interview with Wikan Kanugroho, the Chief of Technology Informatics Division on 03 February 2020).
Based on the above interview, it was explained that the government of Magelang city in achieving the success of program activities to the public dissemination of Magelang is to exploit or use promotional media such as brochures, posters, billboards, so people know the application of public services provided by the government to improve the quality of service.

3.1.1.2 The Inclusion of E-Government Development in Magelang city Development Planning.

The Magelang city government in providing support to the e-government development program also contained in the Local Government Medium Term Development Plan for 2016-2021. The development plan states:

“At this time, all local government organizations in the Magelang City government already have an information system and a website. Following the target of the Regional Medium-Term Development Plan that every local government organization has an information system. There are already 26 regional government organizations that have websites. It is immensely facilitated for regional organizations in making websites because subdomains have been provided for local government organizations.”

In the preparation of local development plans, Magelang city government as the provider of public services to the community load of e-government programs in development plans. In the 2016-2021 Magelang city development planning, it also mentions the construction of hot spots in public open spaces. It is important because the demand for internet access for the public is very massive.

“Currently, in Magelang City, there are six hot spots installed in public open spaces, including in Magelang city square and Sejuta Bunga Culinary Park. The number of hot spots installed in Magelang already exceeded the target on 2015, which were five hot spots.”

With the planning development of hot spot areas in the public open space area in 2015 and has already been realized beyond the target, it can be said that the support of the Magelang city government in implementing e-government in public services is real.
Through the *Magelang Cerdas* public can access government-organized service needs of Magelang without having to visit the office or agency concerned. Communities can use the app to get various services from the municipality. As for the type of services that can be accessed through the application, as expressed by the informant Wikan Kanugroho, the Chief of Technology Informatics Division is as follows:

"*Magelang Cerdas* is expected to be a channel that can be used for community of Magelang city's public service needs. Launching the application since 2017, which was only a few regional organization are integrated. Until now there are more than 14 regional organizations integrated". (Interview with Wikan Kanugroho, the Chief of Technology Informatics Division on 03 February 2020).

*Magelang Cerdas* application is a Magelang city government service to facilitate people in Magelang city, especially in the licenses or access public services. At first there were only three services and throughout at least 14 public services that can be accessed through the app. The regional data organization integrated with *Magelang Cerdas* application services are as follows:

**Table 5. The Names of Regional Organization Integrated to *Magelang Cerdas* Application**

<table>
<thead>
<tr>
<th>No.</th>
<th>Regional Organization</th>
<th>No.</th>
<th>Regional Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Department of Communication, Informatics, and Statistic</td>
<td>14.</td>
<td>Tidar Hospital</td>
</tr>
<tr>
<td>2.</td>
<td>Department of Education, Youth and Sports</td>
<td>15.</td>
<td>Dr. Soerojo Psychiatric Hospital</td>
</tr>
<tr>
<td>3.</td>
<td>Department of Agriculture, Fisheries and Forestry</td>
<td>16.</td>
<td>Harapan Hospital</td>
</tr>
<tr>
<td>4.</td>
<td>Department of Population and Civil registration</td>
<td>17.</td>
<td>Dr. Soedjono Army Hospital</td>
</tr>
<tr>
<td>5.</td>
<td>Department of Information and Documentation Management</td>
<td>18.</td>
<td>Islamic Hospital</td>
</tr>
<tr>
<td>7.</td>
<td>Department of Culture and Tourism</td>
<td>20.</td>
<td>Department of Regional Disaster Management</td>
</tr>
<tr>
<td>No.</td>
<td>Regional Organization</td>
<td>No.</td>
<td>Regional Organization</td>
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</tr>
<tr>
<td>10.</td>
<td>Minerals</td>
<td>23.</td>
<td>Department of Regional Archive</td>
</tr>
<tr>
<td>12.</td>
<td>Department of Public Health</td>
<td>25.</td>
<td>Central Java Bank</td>
</tr>
<tr>
<td></td>
<td>Department of Regional Planning</td>
<td></td>
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</tr>
</tbody>
</table>

Source: Department of Communications, Informatics and Statistics of Magelang Data, 2020

It can be seen from the table above, there are at least 26 regional organization which is already integrated into Magelang Cerdas in 2020. It can be used so that later on various forms of complaints that came to be handled or responded to by admins responsible following the duties that the agency will follow up further, the incoming complaints. In addition to the internal context of Magelang city government, Magelang Cerdas application system also integrates with regional development bank, insurance and social security, and taxation. Therefore, people can utilize these applications to all public services, and all will be given the appropriate response and follow-up their respective duties of government agencies in accordance with the rules of working hours which has been set.

3.1.2 Capacity

Capacity is the availability of the resources needed to carry out development and construction that aims to make the concept of E-government can be realized. In developing an integrated city through e-government, the Magelang city government makes it happen through the provision of financial resources such as special funds, information technology infrastructure, and competent human resources. The successful implementation of the following is an explanation regarding the stages do.
3.1.2.1 Availability of Sufficient Financial Resources

The first level is the preparation stages, at this preparatory stage, Magelang city government in its efforts to develop integrated e-government in Magelang do some preparation related funding in the development of e-government integrated with Magelang. Here is an interview with Noki Rachmanto, the Chief of Informatics Technology Division:

"The cost for the Magelang Cerdas application services is included in the cost of the development of e-government system that can be said is not small, due to the development of its IT systems, where in IT development it requires a server and network of other systems." (Interview with Noki Rachmanto, the Chief of Informatics Technology Division on 03 February 2020).

Based on the statement above by the procurement budget of Magelang city government contained in e-government development costs already covers all technology-based government services. The Magelang Cerdas application that allows people on the android smartphone is not a cost that little.

3.1.2.2 Availability of Information Communication Technology

Infrastructure

Furthermore, in terms of infrastructure and provision of infrastructure to the service of Magelang Cerdas application according to an interview with Noki Rachmanto, the Chief of Informatics Technology Division is as follows.

"Based on the regulations on government procurement of goods and services, service complaint must exist because we develop systems that require government procurement of goods and services based on Presidential Decree number 4 year 2015 in which there are some steps must be taken. It requires a system which cannot made by only the government itself, but should invite the private parties and buy the tools." (Interview with Noki Rachmanto, the Chief of Informatics Technology Division on 03 February 2020).
Based on the statement above, the procurement for infrastructure and facility infrastructures needed in the development of e-government in the city of Magelang is not only done by the government alone but also involves the private sector and others related to the service.

3.1.2.3 Availability of Human Resources

Final stages of preparation in terms of human resources are the provision by the recruitment of human resources in the preparation of mastering in engineering information and experience. Qualifications acceptance are namely system analysts, programmers, and database administrators. For some admin that exists today, based on interviews with Noki Rachmanto, the Chief of Informatics Technology Division is explained below.

"...there are 3 managers in the Departement of Communication, Informations, and Technology as the primary admins. In addition, there are 50 personnels in a regional organization and other offices. Thus, there are 53 admins or operators ini total." (Interview with Noki Rachmanto, the Chief of Informatics Technology Division on 03 February 2020).

The admin responsible sector departments who are integrated with Magelang Cerdas application consist of 56 personnel. Those include three personnel placed at the Department of Communications and Information Technology as the main admin and 53 personnel as admin on the regional organization in local government in the neighbourhood of Magelang city.

Stages of the second level are the stage of maturation. In the maturation stage further in cracking down on the preparation has been done, Magelang city government did ripening on three needs in terms of the provision of financial or funding. Later in the maturation infrastructure, the form of availability of computers that can be used to improve the quality of public services should be equipped with the capability to make sharing information with various fields to create a unified system of e-government
Magelang well integrated. This is also supported by the availability of other supporting equipment such as printers and scanners to support the implementation of the tasks and responsibilities in all regional organization in Magelang city.

Based on the research, there has been a local computer network or Local Area Network (LAN) and the Internet network that can assist the creation of Magelang integrated e-government with the ability to share data and information. The existence of computers, networks, and other supporting equipment has shown that the infrastructure meets the standards for the conduct of integrated application of e-government in the city of Magelang.

Recently the existence of maturation availability of appropriate human resources which can meet the needs of the execution and implementation of e-government in Magelang city are unnegotiable matters. The availability of adequate human resources will encourage the development and implementation of e-government and on the contrary if the available human resources do not meet the desired expectations, then this could hinder the development of e-government. Based on the presentation and during the preparation of human resource precedence, people master the technique even more information that has been experienced in this field in the implementation of into Magelang integrated e-government.

Magelang city itself in the realization the e-government integrated supplies 56 personnel as admin. Admin at the department of Communications, Informations, and Statistics are the main admin and 53 personnel are the admin in any regional organization contained in Magelang. *Magelang Cerdas* application has 53 total human resource roles as admin in responding various types of complaints, criticisms, suggestions and other matters that enter complaint channel on the application.
Stages of the third level are namely the stabilization phase. In the stabilization phase, Magelang city government undertakes the stabilization on maturation performed. The availability of funds is carried out in realizing integrated governance implemented or channeled into the programs that have been determined. This is to support every activity, because if there are no resources in terms of finance, performing the stabilization phase may not run properly.

Furthermore, there is a stabilization part of infrastructure availability, infrastructure is provided in an effort to meet the needs of each regional organization that is connected to both and public services that must be provided and carried out properly. Technically Department of Communications, Informatics, and Statistics has made an Application Programming Interface Manager, or in other words, the API Manager, where two or more applications can communicate, it is conducted in order to facilitate the integration process. This system is intended which cannot be downloaded by the public because it is the backend. Thus, it can not to be seen by the general public, so the process is behind the scenes.

Furthermore, there is the stabilization activity of human resources. Stabilization here has the sense of optimizing the availability of human resources that will be assigned an admin charge of Magelang Cerdas integrated services at each regional organization in the city of Magelang. The optimization is then carried out by providing training to master today's technology.

Stages of the fourth level are the utilization phase. At the stage of utilization, Magelang city government through the availability of the three aspects of capacity as an effort to support the e-government integrated. Utilization in terms of funding is expected to meet the target of achieving, through the development of communication, information and mass media. The utilization of the infrastructure itself is done by optimizing the
availability of all the tools available. The tool is then optimized so that every regional organization in Magelang city government is well connected and able to provide excellent public services.

Utilization in terms of human resources is the existence of human resources have been recruited and trained to conduct the responsibility as an administrator in the service of Magelang Cerdas integrated with all regional organization. The duties include in answering complaints, questions, suggestions and others from the community in the channels of Magelang Cerdas complaint.

3.1.3 Values

Element value is the benefit obtained by the government as a service provider and the community as a recipient of e-government services. When talking about whether there are benefits gained by the city government of Magelang with services such as Magelang Cerdas application Noki Rachmanto, the Chief of Informatics Technology Division stated that:

"The system can be said giving an impact for the government, because we are helped and our workload is lessened by the involvement of this technology. All data or the needs of society can undoubtedly be processed quickly." (Interview with Noki Rachmanto, the Chief of Informatics Technology Division on 03 February 2020).

It could be seen that the benefits of integrated e-government development in Magelang city have an impact on the effectiveness of the public official's performance in providing service. The government, as a public servant is more responsive in completing their tasks. Responsive an activity or a change in a person's pattern of behaviour as a result of changing environmental circumstances in which the implementation should be able to serve all stakeholders. Average effectiveness is activeness, efficiency, and suitability in the activities undertaken. On the development of e-government in Magelang, Magelang integrated itself has excellent responsiveness and effectiveness.
"By using Magelang Cerdas Application, anything can be measured, whether the complaints are handled in how many days and the response of the problem. For example: the message displaced within 30 days, later the regent could reprimand why the message was not followed up." (Interview with Noki Rachmanto, the Chief of Informatics Technology Division on 03 February 2020).

Their incoming messages or complaints must be immediately followed up by each of the relevant agencies in Magelang city government. Therefore, what is a problem in the scope of Magelang city can be overcome and do not make people lose confidence in responsibility provided by the government. In the development of e-government in Magelang integrated considered to have a pretty benefit for the local government or the people themselves.

The number of complaints came in Magelang Cerdas with the fewest number was January to 60 incoming messages. Then the complaints that have been addressed are 622 out of a total of 960 messages incoming complaints or 64.8% of complaints resolved. Meanwhile, the complaints that have not been addressed from the incoming message to the whole institution that is integrated with Magelang Cerdas is as much as 338 messages or 35.2% complaints.

Although there are still complaints that have not been addressed by the city government of Magelang, one of which is hampered by the procurement budget system. However, overall the service of Magelang Cerdas application is still relatively new and has provided substantial benefits to people who want to give the aspirations and criticisms or suggestions more quickly to the government of Magelang city. In Magelang Cerdas application itself can be seen almost every day people upload messages they want to convey about the city of Magelang to the city governments.

Regarding the implementation of the operational improvements of Magelang city government in providing services to the public and stakeholders based on interviews with the Noki Rachmanto, the Chief of Informatics Technology Division:
"We can work more effective, efficient, transparent and measurable. So with this application, we can work smarter." (Interview with Noki Rachmanto, the Chief of Informatics Technology Division on 03 February 2020).

It can be said, the service made by municipal government services of Magelang, is to realize an improvement of technology-based service that allows people to access and provide feedback to the government in public. Therefore, the service complaints of Magelang Cerdas application by the municipal government can be said to have improved the communication within the government, either the government with the private sector or the government to the public, because the integrated system between various agencies and the easiness access to communication and provides feedback between government and society. As Noki Rachmanto, the Chief of Informatics Technology Division said that:

"Magelang Cerdas application is the result of the vision and mission of the city which integrated e-government. Supposing Magelang Cerdas application was already part of the integrated e-government. With the Magelang Cerdas application, people can be connected, as well as between the government can also be connected," (Interview with Noki Rachmanto, the Chief of Informatics Technology Division on 03 February 2020).

To measure the value obtained from the implementation of e-government in the public service system in the city government of Magelang, conducted using 6 aspects based on Indonesia's Ministry of Administrative and Bureaucratic Reform Decision No. 15 of 2014 concerning Public Service Standards, namely:

3.1.3.1 Requirements

Based on Indonesia’s Ministry of Administrative and Bureaucratic Reform Decision No. 15 of 2014 requirements are (documents or goods/anything else) to be met in the maintenance of a type of services, both technical and administrative requirements. Terms of service as an obligation that must be met, in the process of service delivery under the provisions of the legislation. It includes documents or goods/something else, depending on the needs of each type of service.
What can be done in identifying service requirements is to look at the needs whatever is needed for the completion of the service process. To simplify the process of preparing an existing standard service, which can be used as a reference. In the process of service requirements identifications, it needs to consider whether the requirements that must be delivered at the beginning, at the end or in stages according to the needs. As expressed by Haafiz Fachrisyah Widyarix, the Programmer Technical Staff below:

"For the public services, because of the integration, is performed regularly, the relevant information requirements within a ministry would also be periodically adjusted. Thus, we often focus on serving the needs of society in general." (Interview with Haafiz Fachrisyah Widyarix, the Programmer Technical Staff on 03 February 2020).

Based on the above information, the dissemination of information to the requirements governing the service of department, Haafiz explained that it is done regularly due to the integration among institution also periodically. Further, Haafiz Fachrisyah Widyarix explained as follows:

"visits to the actual public services can be seen in terms of the implementation of the procedure for online tax reports. There are technical measures that must be filled by people, more or less I think like that." (Interview with Haafiz Fachrisyah Widyarix, the Programmer Technical Staff on 03 February 2020).

The informant explained that the requirements referred to in an indirect service had been described from the service procedure that must be filled by the public when using the service through the application of Magelang Cerdas application. Technically in the utilization of such applications, the public will be asked to fill the needs of the information required by related organizations in meeting the needs of society.

1.1.3.2 Service Procedures

Procedures or stages of the use of service in Magelang Cerdas application on android phone is the first we can download or get it for free on the Play Store app in android smartphone. The steps can be carried out as follows:
1. People can download it on PlayStore in handphone based on Android;

   **Figure 5. Display search of Magelang Cerdas Applications on Google Play**

2. Once downloaded the application will appear as follows.

   **Figure 6. Views of Magelang Cerdas applications Home**

3. Then after the main menu flickered on Magelang Cerdas application, people can choose what has required service menu consisting of Information compiled, among others; 1) News of Magelang, 2) Important Telephone, 3) Healthcare, 4) Economic Services, 5) Travel,

1.1.3.3 Completion Time

In public services, the services provided must be better. This will increase the efforts needed to meet or exceed the expectations of the community as recipients of services under the requirements of needs. *Magelang Cerdas* application services conducted by the Magelang city government as one of the efforts that must be presented to be able to get community interaction starting from complaints. Complaints and appreciation from the public can be given directly to the government bridged by technology-basis.

1.1.3.4 Service Charge

Cost is an amount that has to be paid to the recipient of service in receiving services from providers as determined by agreement among organizers and public. This cost information should be quantified, and an exception can be imposed as it can be free of charge with a certain written condition to avoid those with less proper behaviour. This identification process is carried out on each type of service. Results are expected at this stage are:

1. Total expenses charged to the customers of each type of service (for services provided free of charge);
2. The amount of the fees charged to the service management unit; and
3. A list of services provided free of charge to the customer (in the case of its services free of charge).
According to Haafiz Fachrisyah Widyarix, the Programmer Technical Staff, related service fees are as follows:

"For the public services in using the precise application, is free, nothing at all costs. However, it is more based on service licensing request and depends on the needs of the community" (Interview with Haafiz Fachrisyah Widyarix, the Programmer Technical Staff on 03 February 2020).

The informant explained in the implementation and the use of services of Magelang Cerdas application which the community does not require any fees. Only the use of the application and licensing services will be adjusted to institution policy. It can be seen in each form of submission administration or licensing required by the community.

1.1.3.5 Product Service

Service products are the results of services provided and received following the stipulated conditions. It may in a form of goods, services and administration products which is given and received by service user in accordance with the regulation determined. The process of product identification services could be performed based on the output generated from each stage of the service. The result of the service procedure is the "product" of a type of service.

According to Haafiz Fachrisyah Widyarix, the Programmer Technical Staff, related service products are as follows:

"We are aware of the limitations that we have both the financial, technological and human resources. Therefore, we have priorities on some issues of community needs, for example, to access education, healths, and others." (Interview with Haafiz Fachrisyah Widyarix, the Programmer Technical Staff on 03 February 2020).

Based on the above information above, it is known that in preparing the product, the government’s services of Magelang city have priority to the major needs of the community. It is conducted because the Magelang government realize the limitations of
its resources in the form of financial, technological and human resources. In general, the type of services that exist on Magelang Cerdas application are as follows:

1. News Portal

Figure 7. News Portal Features on Magelang Cerdas Application
2. Important Phone Number

Figure 8. Important Call list on Magelang Cerdas application

Menampilkan informasi telepon-telepon penting Kota Magelang, seperti pemadam kebakaran, Ambulans, Kantor Polisi, dan lain-lain.

3. Health Services

Figure 9. Health Service Features on Magelang Cerdas Application

Menampilkan informasi layanan kesehatan, seperti lokasi fasilitas kesehatan dan jadwal poliklinik RSUD Tidar.
4. Economic Service

**Figure 10. Economic Service Features on Magelang Cerdas Application**

5. Location Information

**Figure 11. Location Information Features on Magelang Cerdas Application**
6. Event Information

Figure 12. Event Information Features on Magelang Cerdas Application

7. Education Services

Figure 13. Education Service Features on Magelang Cerdas Application
8. Local Tax Services

Figure 14. Local Tax Features on Magelang Cerdas Application

9. Licensing Services

Figure 15. Licensing Service Features on Magelang Cerdas Application
10. Statistics Service

Figure 16. Statistics Service Features on Magelang Cerdas Application

11. Public Service

Figure 17. Public Service Features on Magelang Cerdas Application
12. Gallery

**Figure 18. Gallery Feature on Magelang Cerdas Application**

- Galeri menampilkan daftar foto yang telah diunggah oleh pengguna Magelang Cerdas.
- Pada detail foto, terdapat jumlah yang menyukai dan berkomentar.

13. CCTV

**Figure 19. CCTV Features on Magelang Cerdas Application**

Pengguna Magelang Cerdas dapat streaming CCTV yang sudah terintegrasi dengan aplikasi.
3.1.3.6 Complaints Service

*Magelang Cerdas* application is a form of improvement in the e-government system which is integrated into Magelang city. This service provides convenience and quickness for people who wish to report or provide any complaint about around Magelang city. One form of the renewal of the service innovation is the *Magelang Cerdas* application that allows people to complaint through android smartphone. The service complaints of *Magelang Cerdas* application in Magelang society can be used in many ways that can be selected itself, as interviews with Haafiz Fachrisyah Widyarix, the Programmer Technical Staff:

"*Magelang Cerdas application was a complaint service system. In the Magelang Cerdas, there are some several canals and doors can be selected by communities in the pit. Communities can choose from Magelang city government web. Then people can choose via SMS, can choose via the android application, and can even come here."* (Interview with Haafiz Fachrisyah Widyarix, the Programmer Technical Staff on 03 February 2020).
In the selection of platforms, people are free to choose based on their convenience. As for the reason why the government of Magelang city perform a variety of channels in the system by expressed by Haafiz Fachrisyah Widyarix, the Programmer Technical Staff:

"We created a wide variety of ways for the government to provide accessible, affordable, and fast services. Thus, the society can choose what they need according to available features." (Interview with Haafiz Fachrisyah Widyarix, the Programmer Technical Staff on 03 February 2020).

Innovations on Magelang Cerdas application service complaint system exists in various channels in the application to avoid overload. It provides the public in the pit by giving opinions and even provide comments and suggestions to the government.

Precisely, it is designed to assist communities in bringing more useful government services. In the process of follow-up on complaints that came to Magelang Cerdas application based on interviews with Haafiz Fachrisyah Widyarix, the Programmer Technical Staff is explained below.

"For the scope of complaint management, it must be followed up because it is a part of the government's responsibilities." (Interview with Haafiz Fachrisyah Widyarix, the Programmer Technical Staff on 03 February 2020).

All the complaints and aspirations given by society will always be responded and given a proper follow-up. Considering the complaint channels on Magelang Cerdas application, it has several admins who have the capability to respond and follow-up the complaints and aspirations directly from complaint channel given by people.