Analysis of E-Government Implementation towards Asahan Smart City

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Abstract

The purpose of this study was to analyze the institutional implementation of e-Government and the inhibiting factors in the governmental environment of Asahan Regency. This study used descriptive methods with a qualitative approach through data collection techniques in the form of interviews, observations and documentation related to the secondary data to support this research. The study results of the condition of e-government implementation in Asahan Regency can be said to be quite well based on the infrastructure of command center, institutions such as legal devices, regional financial capabilities, and human resources, although there are tasks that need to be renewed and improved as well as information system development across all regional devices that have not been fully integrated. Furthermore, the inhibitory factor in the implementation of the institutional e-Government, some systems have not been integrated due to the shortage of human resources to run the system and some of the information on technology systems and communication has not been perceived by almost all parties, especially regional official organizations in sub-districts and villages.

Keywords: *Command Center; E-Government; Institutional; Smart City*

Introduction

The urgency of the implementation of a smart city in various regions is motivated by the needs of the regions to answer the development of globalization that continuously evolves faster to form various issues not existing before yet becoming hot issues that attract the world's attention. It is not an easy task to build a smart city when the government is faced with a demand to be a government that is able to solve the problems in its region, therefore it requires the government to understand in-depth the concept of a smart city. One of the good government forms is embodying an e-Government system which is a kind of government efforts to improve and enhance the performance of the government to be faster, more effective and efficient in responding to any problem.

According to Utama Andri Arjita (2017), the foundation for developing a smart city is by implementing e-Government in a country. A characteristic of a good smart city is the existence of sustainability by creating a good e-Government through the use of good information technology and the improvement in public service. Thus eGovernment is only one of many supporting factors in developing a

city through the use of information technology and communication. The development of e-Government in Indonesia has been caused by the emergence of the triggering factors, namely the changes in this current era that have forced the government to do a re-position from internal to external, meaning that change the previous focus on fulfilling the needs of the country into a focus on fulfilling the human resources.

Asahan Regency as one of the regencies in Indonesia that are focusing on the implementation and development of e-Government to pursue or make the Asahan smart city into realization. The commitment held by the government of Asahan Regency is contained in the Rule of Asahan Regent No. 39 year of 2018 regarding three e-Government implementations in the governmental environment of Asahan Regency, saying that the utilization of information technology or IT in the process of smart government governance through e-Government will increase efficiency,effectiveness, transparency and accountability. The commitment was also disclosed by the Head of the Asahan Regency's Communication and Information Department to the media (Heta News, 2018), "the vision and mission of Asahan Regency government is to change Asahan into a smart Regency, means it can help various things about community activities, especially in developing and managing existing resources effectively and efficiently, as well as facilitate the people to get information through the access to an unearned source of information.

In establishing the readiness of a smart city system, thence thee first step to being prepared by the government of Asahan Regency is the readiness to the technology. The Directorate of e-Government of Kemkominfo RI (the Ministry of Communication and Information Technology of the Republic of Indonesia) Bambang Dwi Anggono (2018) explained that the convergence of e-Government as the backbone of Smart City means that e-Government is the foundation of the establishment of smart city with whom the government builds an integrated electronic ecosystem, exchanges data between regions, as well as builds a unified business process between electronic systems, not only between government agencies but all stakeholders. Currently,the Asahan Regency government has implemented the eGovernment system as a public service accessible through the official government portal of Asahan Regency, namely www.asahankab.go.id.

A wide range of government management systems based on information technology has been designed by Asahan Regency Government, one of the services of public information based on 5 online that holds public complaints is *e-Lapor*. Online-based applications that have been launched by Asahan Regency government are *e-Perizinan*, e-Planning, JDIH (Network of Documentation and Legal Information), LPSE, PPID, *siMaya*, *e-Buletin*, *e-Kliping*, *Smart Pajak*, SIOLA, e-Announcement, and some time ago the Asahan Regency government launched the ASADA application (Asahan One Data). Later on, some problems appeared on the official website of Asahan Regency government, namely the displayed information is still incomplete and some domains are inaccessible or still in progress. Moreover, each OPD (regional official organizations) as well as sub-district that have established the portal has not been fully accessible and still look empty or only display black start page. Some of the applications contained in the E-Gov domain, CCTV cannot be fully accessible and are still in the phase of the main page only. Therefore, the above problems have been the purpose of this study by the consideration that e-Government is the backbone for developing a smart city, so it is important to see to what extent of the government Asahan Regency in its institutional way is ready in implementing e-Government towards Asahan smart city.

Literature Review

Suhono Harso Supangkat (2018), as the founder of Smart City Initiatives Indonesia (SCII), has identified six models of smart city to create the success of a city/regency in implementing the smart city development, i.e. Smart Government, a smart government is the main key for establishing a smart city; Smart People, is a condition where all the existing human resources in a region are already fully

competent ones; Smart Economy, is the community empowerment done by the government either through SMEs and cooperatives so that they will be able to encourage innovation and anticipate business competitions, as well as to encourage the spirit of entrepreneurship; Smart Mobility, is the infrastructure management developed in the future as an integrated system to ensure the public interest; Smart Living, is a smart environment that can provide the feelings of comfort and safety to both physical and non-physical resources, to society and the public; and Smart Environment, is seen from the use of construction structures in order to not impact the damage to natural resources.

Smart City is a concept of a "smart" city that is able to manage its various resources effectively and efficiently to solve various city challenges through innovative, integrated, and sustainable solutions to provide infrastructure and deliver city services that can improve the quality of the lives of its citizens. It has a meaning that through the government, Smart City is an innovative form of sustainable development to solve problems and challenges. As a result, Smart City is described as a government that is able to sense the condition of its regions or cities, to have a deeper understanding about its regions, and to act based on those problems.

Presidential Instruction No. 3 of 2003 on National Policy and Strategy of e-Government Development and the Presidential Regulation Number 95 of 2018 concerning about Electronic-based Government System (SPBE) outline that the need for the implementation of utilizing information and communication technology in the process of good governance government will improve efficiency, effectiveness, transparency and accountability of the governance. E-Government can be applied to the legislative, judiciary, and public administrative with the aim to improve the quality of public services to the community as a form of democratic government.

According to Indrajit (2005), based on the theory on the application of e-Government indicators, there are some factors as indicators for implementing the e-Government concept, namely:

a. Infrastructure. In the implementation of telecommunication infrastructure such as hardware, the network becomes an external factor in the implementation of e-Government.
b. The level of connectivity and the use of information technology by government. It is necessary considering that the extent to which the Government in utilizing the technology in each government activity is the benchmark of government readiness in implementing the concept of e-Government.
c. The human resources quality of government apparatus. The main actors in the implementation of e-Government are essentially human resources who work in the government institutions so that the level of competence, understanding, and expertise becomes highly impacting e-Government performance.
d. Budget availability. Budget matters when the government conducts a program to implement.
e. Legal devices. In the application of e-Government concept, there must be a law umbrella relating to data disclosure, copyrights or security that should be protected by law in order to ensure the conducive mechanism of e-Government.

Methodology

The type of this research is a descriptive study with a qualitative approach. Research with descriptive methods is a study aimed at making descriptions, depictions or paintings systematically, factually and accurately on the facts, traits, and relationships among the phenomena being examined. The informants chosen were as follows, the head of Technology and Informatics, the section head of e-Government, the Head/Secretary of Bappeda (Regional body for planning and development), the Head of sub-field planning system (e-Planning), and Section Head of PHD, Secretariat of DPRD (Regional

People's Representative Council) of Asahan Regency. The Data Collection technique used was gathering primary data in the form of interviews and the literature studies used to support the research. The Secondary Data was indirectly collected through sources in written, pictures, or other media sources, as well as relevant scientific documents; and Observation, is a direct observance and systematic recording of the related elements of the study. As for the stage of Data Analysis, according to Miles and Huberman (in Silalahi, 2006), data analysis phase consists of several flows of activities that occur simultaneously, namely data reduction, triangulation, and conclusion drawing.

Research Result
The Implementation of e-Government by Asahan Regency Government
The infrastructure of Information Technology

In today's developments of information technology, almost all circles, especially the local governments, have had their own government official website in public service. The government of Asahan Regency is one of many regencies that has applied the public service based on technology information and communication (e-government) as a way to support the quality and creativity of Asahan government. Based on the study result related to the secondary data collection, the researchers found the presence of priority program of Communication and Information Department related to official website of Asahan Regency, stating that this official website has been established since 2015, however in 2018, through the Rule of Asahan Regent No. 39 of 2018 regarding the implementation of e-Government in the governmental environment of Asahan Regency, therefore this Regency launched its official website of Asahan Regency government in new look.

Looking at the structure of power and management within the government institutions, it is clearly seen that there is a role of actors or leaders who have a major role in running a development program as well as spur on the objectives of policy implementation. This means that the policies issued by the regent of Asahan are also based on the fulfillment of the needs of the data and information from the command center will be realized in the public services as well as the published information either in the service applications or activities that can be accessed by the public in widely and easily ways. It is those easy facilities that are applied in the form of electronic services applications, even though not entirely can be done by the *Diskominfo* of Asahan district, but some regional governments have created and developed their own applications with their own infrastructure, such as the Office of Planning Board of Asahan Regency who has an e-planning application as part of its service. The e-planning is a service application created and developed by the Bappeda of Asahan Regency by utilizing the existing infrastructure, so, in this case, it requires a special team to take control of the entire applications established and owned from the beginning by some regional devices.

Level of Connectivity and Usage of IT
It is necessary to see the extent to which the government is utilizing technology in assisting in every governmental activity and this will show the government's readiness as well as the benchmark of government readiness in implementing e-Government concept. At the level of connectivity and the development of technological use in the environment of Asahan government is currently still said as well since based on connectivity to e-Government applications developed by the Asahan Regency government, some of them, namely 53 of them are only showing the main page information and have not been able to provide more detailed information. Human resources requirement becomes an important part of the development of technology and information in Asahan Regency. Such needs become very important considering that the development of the infrastructure should be balanced with the human resource building who can generally understand the technology in general.

Institutional Aspect of e-Government Implementation
Organizational Structure

The commitment of the leaders, both executives and legislative, determines the success of the organization, implementation, and development of e-Government systems. This commitment is related to policy-making by Asahan Regency government in order to achieve vision and mission, especially in realizing the governance of smart government or smart city. It is also necessary to give motivation and element of role modeling by the leader in utilizing the development of information technology in every administration, especially in Asahan Regency.

Although e-Government has been physically existed, such as the official website created in 2015, however at that time, it did not have a clear principal task, rather it needs the commitment as a leader. The commitment of Asahan Regency government began to be reflected in Local Government Regulation No. 12 of 2018 on the Amendment of Local Government Regulation No. 4 of 2016 on the Regional Medium-Term Development Plan (RPJMD) of Asahan Regency for 2016-2021 page 294, affirming that the government of Asahan Regency strives to realize the governance of smart governance towards the Asahan smart city, and firmly stated in the Rule of Regent No. 39 of 2018 on the implementation of e-Government in the Asahan Regency administration.55 In 2018, the government of Asahan Regency started to build the development phase for e-Government.

Legal Devices

In this case, the application of e-government concept is closely related to the creative efforts and also data or information distribution form one party to another, thereby if there is a violation, then it requires a strong legal device to regulate and protect copyright thus will create a good and conducive e-government mechanism and sanction against violations committed regarding the implementation of e-Government. The legal devices used can be in the form of regulation, decisions, instructions, and others that can be used as guidelines in carrying out various activities such as the implementation of e-Government in government agencies. The current condition is that the application of e-government in Asahan Regency has had the legal basis contained in the Presidential Instruction No. 3 of 2003 on national policy and strategy of e-Government development 60 and strengthened by the Rule of the Regent Number 39 of 2018 about the implementation of e-Government in Asahan Regency administration.

E-Government in the Asahan Regency administration has had a strong legal device related to its implementation. In the implementation of e-government in Asahan Regency administrative, as referred to the Rule of Regent No. 39 of 2018, is implemented by the Department of Communication and Information as the one in charge in conducting coordination with 61 regional devices, especially SKPD that has developed first a technology-based community service, therefore becoming the duty of communication and information service as the department in charge for coordinating both in the installation of network systems and the update of data and information.

Human Resource Availability

The availability of human resources becomes the main role in the development and implementation of e-Government in a region since basically people who work in the government institutions, their level of competence and expertise becomes very influence on the performance of e-Government implementation. The availability of human resources in the Asahan Regency, especially in the Department of Communication and Information as of the executor of the e-government program, are 53 people in total. The availability of human resource apparatus in the Asahan Regency is still very minimal, because most of the institutions, except for the public service, only have 1 to 2 people who can handle computerized systems and networks. For example, in the e-planning system of Bappeda in Asahan Regency, is only handled directly by 2 staff 64 and the application system of JDIH in the Secretariat of DPRD of Asahan Regency is handled by only one person. It is also a challenge for Diskominfo as the implementation

executor of technology guidance related to e-Government in Asahan Regency.

The Aspect that Inhibits e-Government

In the implementation of public services of e-government in Asahan Regency, there are important aspects within, i.e. on the network infrastructures and human resources in the area of the local government of Asahan Regency. It can be said that the fulfillment of the needs related to infrastructure in realizing the electronic-based public services in the Asahan Regency is quite sufficient, although some weaknesses in the infrastructure that should be equipped with, for example, the procurement of special buildings that are called as the central command center as well as development of public service applications and several other infrastructures such as CCTV that currently has not been fully well-functioned. This has become a weakness for developing e-Government in Asahan Regency.

Moreover, in order to embody good governance, it requires professional and virtuous human resources in the environment of local government. The placement of human resources as a crucial determinant needs to be realized and developed very well, because the human resource position is not merely an adviser or supervisor and regulator, but also as a controller of the existing resources to achieve the objectives. Ironically, in the application of e-government in government institutions, especially the local governments with different conditions, are less supportive from the professional aspect as apparatus or incompatible with the expected qualifications, so that the practice of implementing e-government is less effective. The current condition in the government of Asahan Regency is that its human resources in the implementation of e-government are not adequate or not eligible. It is also evident that the fulfillment of human resources in running the e-government is still lack, even to the organization of the smallest regional apparatus such as in sub-district and village administrations.

Another inhibiting factor is budget limitation planned or proposed for developing the competency of all regional apparatus in Asahan Regency. The budget given by 72 governments to the Department of Communication and Information is around 10 billion, in which the realization carried out by the Dinas is more about the development and improvement of network systems and applications. In addition to the limited allocation of budgeted funds, information obtained by researchers from the interviews showed the lack of responsiveness of employees in utilizing opportunities for the development of apparatus resources, especially in the form of formal and informal education and training that enhances skills and expertise in technology and the lack of commitment and initiative to develop skills and proficiency to support routine activities.

Discussion

Given the rapid advances in communication and information technology and the potential provides many opportunities for quick and accurate access to process and utilize the information in large volumes. According to Presidential Instruction Number 3 of 2003 on the National Policy and Strategy of Developing E-government, the utilization of technology and information in the government process (e-Government) will be more efficient and effective, it requires government's accountability and transparency to maintain and conduct smart governance in the form of policy and strategy to apply and develop e-Government.

In embodying those things in the government institutions, therefore the government should be able to do various things to improve the effectiveness and quality of services provided to the community. The government of Asahan Regency currently has organized its services based on information technology in the environment of its administration in the form of e-Government. This is also to embody the national program to improve the service in the form of a smart city. Asahan Regency has built an infrastructure to support the e-government, in which this e-government itself is the initial foundation to make Asahan

Smart City into realization. Please note that, schematically, what has been formed is when the government implements public services in the form of e-Government and also conducts regular development and develops related applications, thence it will form a smart government. Smart Government is a transformation from e-government that is designed with several stages to creating a smart city since the smart government is a part of the Smart City.

This is reinforced by (Supangkat, 2016), as the inventor of a smart city in Indonesia, explaining that there are 6 (six) garuda smart city models developed to make the smart city into realization, namely smart environment, smart economy, smart living, smart people, smart mobility, and smart government. The research conducted by Utama Andri Arjita (2017), related to the e-government public service, explained that e-government is able to become a leading strategy in transforming the activities of government and improving public services. E-government is also able to save budgets and streamline public service programs. The implementation of e-government in Asahan Regency has been based on the principles of benefits, fairness and equalization, legal certainty, and security and ethics.

For Asahan Regency, the purpose of e-government is to embody governance that is clean, good, transparent, accountable, effective, and efficient in public service by utilizing light cost economic principles as well as facilitating people to obtain the public services. Therefore, with this purpose, it is also worth noting the indicators in the application of e-government as said by Indrajit (2005), which contains 6 (six) elements as follows: (1) telecommunication infrastructure, (2) the level of connectivity and the use of IT by the government, (3) The readiness of government apparatus resources, (4) the availability of funds and budgets, (5) Legal devices, and (6) Change in Paradigm. Thus it can be found the extent to which the implementation of e-government Asahan Regency. In the implementation of e-government public services in Asahan Regency, it needs the utilization of communication as well as information networks since it is related to community data. As a consequence, it requires cooperation among those relevant parties both the regional apparatus organization and the smallest-level government in order to improve the public service into faster and cheaper ones. Please note that in the implementation of e-government in Asahan Regency government, the application and management are performed by Diskominfo of Asahan Regency.

The responsibilities given by the government following the Rule of Regent No. 39 of 2018 are to do 75 coordination with regional instruments and to draft the master plan of regional e-government as well as the publication of local government activities. Related to the coordination with the regional or local instrument in the Asahan Regency, there are some regional instrument organization that have been earlier in making development related to the public services, even before the Asahan Regency issued a decision regarding e-Government services, so coordination is required, in addition to the development of applications also on the development of supporting infrastructures. The implementation and application of e-government in Asahan Regency on various public service systems required large infrastructure with strong technical capability. The establishment of a command center which is a form of policy as an infrastructure that serves to accommodate the entire system of e-government in both the internal of the local device and external such as the development of environment outside the government bureaucracy through the utilization of CCTV as part of prevention for accidents and street crimes. Infrastructure development is currently performed by the Diskominfo of Asahan Regency to make the smart government into realization through the utilization and improvement of technology use in the field of data center services, both from developing applications and Internet development services and public Internet access users, even though the development is not very significant but it is carried out so it can be a feedback for the provider as a comparison of before and after development.

Based on the theory by Indrajit (2005) thus the researchers tried to illustrate that initiatives built by regional leaders related to many change programmes will be meaningless without first initiated with a change in paradigm or viewpoint relating to public service. It means the bravery of the leader to redefine

his or her role and to take steps that are fundamental enough in improving the performance of his or her organization, that is known as change management. In the organizational process of government institutions, the government must divide itself into departments and divisions based on functional needs, so that it becomes the change maker of 80 professional government. Professional government is a government that is capable and strong in decision making, especially in building an intact information system that facilitates the management to make decisions. However, a problem arises where the integration of collected data, which is also the data from each of the regional instruments that sometimes in the form of duplicated data, make it difficult for the community to obtain the service. Therefore, given the integrated data system, the integrated data of each regional instruments becomes central data, so the community only needs to provide a single data to open the entire process of service.

Conclusion

it can be said the condition of implemented e-government in Asahan Regency is quite well, although some tasks need to be updated and improved, such as special budget for establishing a command center as the base for the entire systems in storing all components within the e-government itself, and also the development of friendly-user applications, which means that the developed applications will not complicate any party in access it, as well as the condition of connectivity in overall OPD dan Sub-district Offices, need to be improved in such a way or another way since the researchers found that some OPD systems could not be open and required some security steps to enter. Those are things that have made it difficult for the community to access the e-government in Asahan Regency. Furthermore, the main thing of all the infrastructures formed without adequate human resources, this is futility because human resources become the most important part of the implementation of a certain program. There is also lack of cooperation between all parties, more particularly OPD and sub-districts due to the adequate or ineligible human resources so that the whole development and implementation are only put on the Diskominfo and academics with the concept of contract personnel.

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