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A Study on the Implementation of the Smart City Concept in Indonesia, Study on the Capital City of Jakarta

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Abstract

Jakarta, as the capital city of Indonesia, shows its seriousness in implementing Smart City technology in its city, namely by building a Jakarta Smart City (JSC). Jakarta Smart City has six indicators that form the basis for the development of Smart City. The six indicators are smart economy, smart people, smart governance, smart mobility, smart environment, and smart living. This study discusses the implementation of the concept of smart city in Jakarta based on the successful of each indicator and discusses about the extent of Smart City in supporting Jakarta's vision and mission. This paper aims to provide an overview of the successful of smart city implementation in the city of Jakarta, as well as the improvements that needed to be done. This study uses the method of a study literature to get an early picture of the current conditions in Jakarta and Jakarta Smart City, then assessment using survey through interview and questionnaires, and qualitative analysis of descriptive. The result show that the six indicators of Smart City concept have been implemented successfully in the city of Jakarta and in line with the vision and mission of Jakarta. However, improvements in several aspects, as well as support from the citizens and government are deemed.

Keywords: Smart City, Jakarta Smart City, smart economy, smart people, smart governance, smart mobility

Abstrak

Jakarta, sebagai ibu kota Indonesia, menunjukkan keseriusannya dalam menerapkan teknologi Smart City di kotanya, yaitu dengan membangun Jakarta Smart City (JSC). Jakarta Smart City memiliki enam indikator yang menjadi dasar pengembangan Smart City. Enam indikator tersebut adalah ekonomi cerdas, masyarakat cerdas, tata kelola cerdas, mobilitas cerdas, lingkungan cerdas, dan gaya hidup cerdas. Studi ini membahas implementasi konsep smart city di Jakarta berdasarkan keberhasilan setiap indikator dan membahas sejauh mana Smart City mendukung visi dan misi Jakarta. Tujuan dari makalah ini adalah untuk memberikan gambaran tentang keberhasilan implementasi smart city di kota Jakarta, serta perbaikan yang perlu dilakukan. Studi ini menggunakan metode studi literatur untuk mendapatkan gambaran awal tentang kondisi saat ini di Jakarta dan Jakarta Smart City, kemudian penilaian menggunakan survei melalui wawancara dan kuesioner, serta analisis kualitatif deskriptif. Hasilnya menunjukkan bahwa enam indikator konsep Smart City telah berhasil diimplementasikan di kota Jakarta dan sejalan dengan visi dan misi Jakarta. Namun, perbaikan dalam beberapa aspek, serta dukungan dari warga dan pemerintah dianggap perlu.

Kata Kunci: Smart City, Jakarta Smart City, ekonomi cerdas, masyarakat cerdas, tata kelola cerdas, mobilitas cerdas

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INRODUCTION

Besides being known as the capital city of Indonesia, Jakarta is also known as a metropolitan city. Currently, Jakarta is the center of business, trade, office, government, and private activities. As the center of civilization, Jakarta is the city with the highest urbanization population in Indonesia. Jakarta has a very dense population. According to the projections of the DKI Jakarta Central Statistics Agency (BPS), the population of Jakarta in 2020 is around 10.64 million people (BPS Jakarta, "Badan Pusat Statistik Provinsi DKI Jakarta).

With these facts, Jakarta is faced with several risks and challenges such as congestion due to the imbalance of population mobility with existing infrastructure, economic risks due to high unemployment which will lead to a lot of crime, and government services to the community that are less than optimal due to the large number of people who must be served. The high desire of the community to obtain effective, efficient, transparent, and accountable public services require the government to be able to improve capabilities in the field of information and communication technology (ICT) to support the community service process.

At the same time, technological developments are also advancing. Currently, the new civilization of information technology has entered the era of digitalization. Various products. Recent developments began to emerge, causing the term modern society to shift and an expansion of meaning to become a digital society. Over time, the government began to look at the use of information technology to provide maximum public services. The implementation of information systems and communication technology is growing rapidly in the world of bureaucracy and companies.

This is what gives rise to creative ideas and steps to create urban planning and community governance so that they can be managed effectively and efficiently, which is known as a smart city (Muñoz-Bullón & Sanchez-Bueno, 2011). Smart city is a term that can be interpreted as a city where information and technology are applied to improve the quality of human life, culture, economy and political processes that occur within the city. Several cities in the world have succeeded in implementing smart ways to make a city a better place to live, such as Amsterdam, Paris, or Singapore. The implementation of smart cities is expected to increase efficiency and city spatial planning while reducing costs and resource consumption while providing added value to the city's economy (Anthony Jnr, 2021) (Kirimtat, Krejcar, Kertesz, & Tasgetiren, 2020) (Supangkat, Arman, Nugraha, & Fatimah, 2018)

With the implementation of the smart city system in Jakarta, it is hoped that the quality of life and problems that exist in Jakarta can be addressed properly (Martinez & Masron, 2020). The forms of smart city implementation in Jakarta include e-government, e-budgeting, i-jakarta online library, and several other online and mobile-based services. In addition, it is also supported by a neater city arrangement and improved infrastructure in several public spaces, including the provision of internet access.

There are six indicators that can be used as a reference to assess the implementation of smart cities, namely smart economy, smart people, smart governance, smart mobility, smart environment, and smart living. This study aims to analyze the smart city of Jakarta based on these six indicators. The results of this study are expected to provide an overview of current smart city trends and input for future system development.

The main problems of this research are:

1. Is the implementation of smart city in Jakarta in line with the vision and mission of Jakarta?
2. Have the six indicators of smart city, namely smart governance, smart economy, smart people, smart

living, smart mobility, and smart environment been successfully implemented in Jakarta?

The objectives of this research are as follows:

1. Knowing the extent of the role of smart city in Jakarta in supporting Jakarta's vision and mission
2. Knowing the success of smart city in Jakarta based on the six indicators.

The benefits of doing this research are:

1. For the Community and the Provincial Government of Jakarta

   Provide views on the implementation of smart cities today and input for the future.

2. Field of education

   Contribute information and study results regarding the implementation of smart cities in Indonesia, especially Jakarta, which is expected to be a reference or input for similar research in the future.

Smart City

Smart city is a concept of developing, implementing, and implementing technology that is applied in an area as a complex interaction between the various systems in it. The goal of the smart city approach is to achieve integrated city management and information. This integration can be through digital network management of urban geography, resources, environment, economy, social and others.

Smart city is often associated as a smart city, digital city and information city which basically remains the same, namely putting ICT at the center. There are 6 main pillars that are indicators that a city has implemented the smart city concept, namely: smart governance, smart people, smart living, smart mobility, smart economy, and smart environment.

Boyd Cohen, a researcher and professor who studies entrepreneurship, resource sustainability, and smart cities at the Universidad del Desarrollo located in Santiago, Chile, created a diagram of a smart city, Cohen's Smart Cities Wheel that contains these pillars (Cohen, 2014).

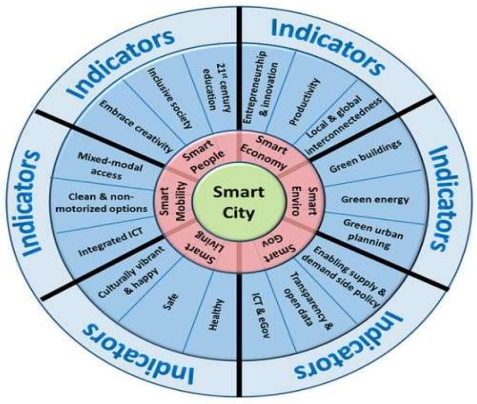

Figure 1. Smart City

One of the pillars of a smart city is the smart economy. According to the Cohen Diagram, these pillars include international events, development and research, and the development of new startups. These three components are the main support for the smart city economy.

For the pillar of smart governance, the important thing that becomes a concern for a smart city is the openness and ease of access to government data by the public. Information related to public interest is well socialized so that good communication can be established between the government and its citizens. Therefore, the provision of good internet access is very necessary. Human resources in government are also an important key to realizing smart governance.

In addition to smart government, smart citizens are also important to create a smart city. The main and most important thing is education. Supporting the realization of the smart people pillar is a healthy living environment, security, and guaranteed happiness. According to the Cohen diagram, these three things are included in the smart living indicator.

The characteristics and factors of smart city form the framework for the indicators and the following assessment a city's performance as smart city (Standardization, 2019).

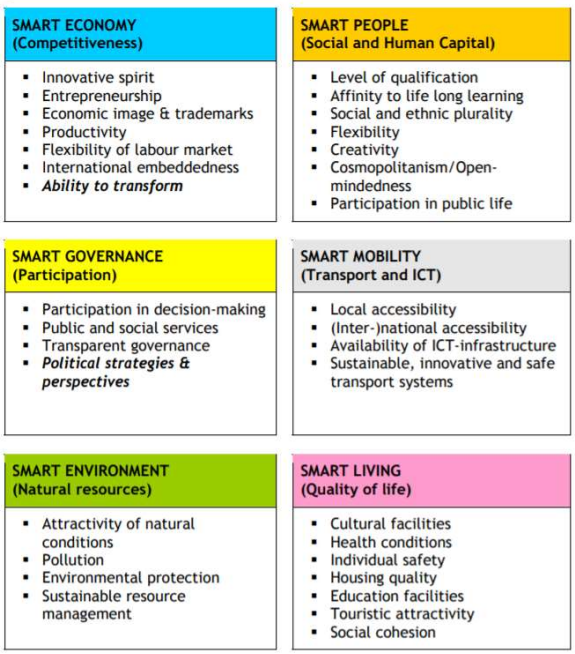

Figure 2. Indicators And the Following Assessment A City's Performance

DKI Jakarta City Overview

The regional leaders of DKI Jakarta for the 2017-2022 period are Anies Baswedan (Governor) and Ahmad Riza Patria (Deputy Governor). DKI Jakarta Province is divided into 5 administrative cities and one administrative district, namely: Central Jakarta, North Jakarta, West Jakarta, South Jakarta, and East Jakarta administrative cities, as well as the Thousand Islands Administrative District. DKI Jakarta Provincial Government has vision and mission[10].

Vision: Jakarta is a developed, sustainable, and cultured city whose citizens are involved in realizing civility, justice, and prosperity for all[11].

Mission:

1. Making Jakarta a safe, healthy, intelligent, cultured city, by strengthening family values and

providing space for creativity through leadership that involves, mobilizes, and humanizes.

2. Making Jakarta a city that advances public welfare through job creation, stability, and affordability of basic needs, increased social justice, acceleration of infrastructure development, ease of investment and business, and improvement of spatial management.
3. Make Jakarta a place for state apparatus to work, serve, serve, and solve various problems of the city and its citizens, effectively, with meritocracy and with integrity.
4. Making Jakarta a sustainable city, with development and living arrangements that strengthen environmental and social carrying capacity.
5. Making Jakarta the dynamic capital as the node of Indonesia's progress which is characterized by justice, nationality, and diversity[12].

Jakarta Smart City

Jakarta Smart City (JSC) is a unit under the DKI Jakarta Provincial Government's Communication, Information and Statistics Office. Jakarta Smart City adapts the smart city concept by optimizing communication information technology to identify, analyze, and control various kinds of data efficiently and effectively. That way, public services and sustainable development in Jakarta can be realized better.

Jakarta Smart City is the application of the smart city concept that optimizes the use of Information and Communication Technology (ICT) to identify, understand, and control various resources within the city more effectively and efficiently to maximize public services, provide problem solving solutions, and support sustainable development (Achsan, Suhartanto, Wibowo, Purnama, & Nindyati, 2019).

In accordance with the smart city wheel framework, Jakarta Smart City also has 6 indicators that must be achieved (Syalianda & Kusumastuti, 2021). Only 1 respondent said that he had used an application to monitor the Jakarta air pollution index.

Related Works

There are some related works about Smart City Concept. First research is Analisis Kota Jakarta sebagai Smart City dan Penggunaan Teknologi Informasi dan Komunikasi menuju masyarakat madani (Astutik & Gunartin, 2019). The problem in this research is Jakarta as a metropolitan city has implemented the smart concept city that utilizes technological developments for the progress of its city. The use of information and communication technology has advantages and disadvantages. The purpose is to provide an overview and descriptive analysis of the Smart City goal, to create a new, informative, transparent Jakarta with collaboration in the use of technology so that public services are better is the mission of Jakarta Smart City (JSC). The concept theory is analyzing a smart city implementation in Jakarta with 8 smart city indicators of 3 main dimensions are technology, people, and community.

The research method that the author uses is a qualitative approach, using data collection methods. The primary form is interviews and focused discussions with interested officers who are met in the field, as well as direct observations. The results of the study show that the implementation of

Jakarta Smart City components such as smart mobility, smart government, smart economy, smart environment, smart living, and smart people have been going well and are very integrated with the use of information technology. Democracy, tolerance, pluralism have also seen, social justice is being realized with the attention of the DKI Provincial Government towards the people. The current development of Jakarta Smart City is good, the relationship with the use of Information Technology is very close, while the drawback of Jakarta Smart City is that the development of information technology innovation is faster than regulation, meaning that if there is a recent technological innovation that cannot be implemented immediately, it must go through system budget regulation. The civil society order in the city of Jakarta has been seen by the many signs of the development of large public areas and free politics without any pressure. The government, the private sector and the community have established cooperation in the development of Jakarta more innovative and transparent. There is also research A Comparison Study of Smart City in Taipei and Surabaya (Alamsyah, Susanto, & Chou, 2016).

The research problem is many cities in the world are competing to become smart cities and each city has its own way to develop their smart city. The purpose is comparing smart city development initiatives in Taipei and Surabaya to generate references for other cities in Indonesia in developing the smart city concept. The theory concept is looking at the four main domains of smart city: government, society, business, and the environment. The methodology used in this research is Systematic Literature Review: abstract, introduction, literature review, problem identification, analysis and discussion, conclusions, and suggestions. Knowing how these two cities have developed their smart city concept, especially smart mobility. Also known information how both overcome congestion, by providing easy access, and improve their public transportation system. The result of this research is Taipei is superior in providing technology-based services compared to Surabaya. Surabaya builds IT-based services based on most urgent needs. While Taipei is a developed city, so it is more stable in providing services. However, these two cities have had a positive impact on their communities.

METHOD

The scope of research in this paper is in DKI Jakarta area. The scope of the discussion focusses on the implementation of Smart City concept in Jakarta. The research method used is the research method descriptive qualitative, by collecting data and information from various sources. The below picture shows the flow research methodology. Qualitative research is research using a scientific background to interpret phenomena that occur through available methods, such as interviews, observations, and use of documents (Sukiman & Subadi, 2017).

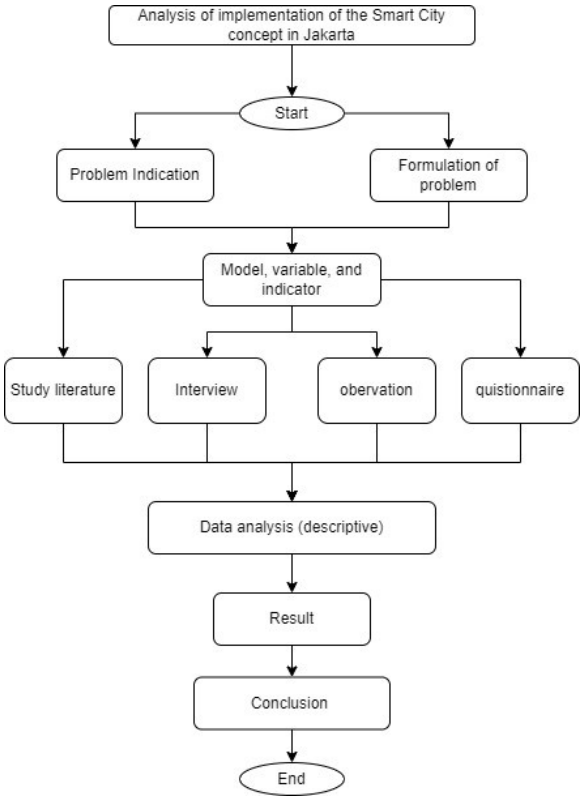

Figure 3. Analysis of Implementation of the Smalrt City Concept In Jakarta

Data Collection

The data sources of this research consist of various kind types, including documents, places, activities, and people as source person. Based on these various data sources, Various techniques are used to collect data for answer research problems. Techniques used in data collection includes both interactive and non-interactive techniques. Non-interactive techniques include analysis documents (content analysis), and questionnaire (open questionnaires), while the interactive techniques include in-depth interviewing, observation role (participant observation) (Hasibuan, 2010)(Heryana & Unggul, 2018).

For interview technique, the author has prepared two sets of question based on the background of interview participant. For open questionnaire technique conducted by using Google Form and shared to all the participant, who live or work in Jakarta. This questionnaire consists of ten parts, namely Introduction Part, Profile Respondent, Smart City Jakarta, Smart Governance, Smart People, Smart Mobility, Smart Economy, Smart Living, Smart Environment, and the last is the Closing part. Some of the parts are the indicator of smart city concept. These parts consist of questions based on the area of indicator itself.

The author also does an observation by visiting the Jakarta Smart City Centre Lounge office.

Respondent Determination method

The main respondent in this study is all the person who involved in interview and questionnaire

activity. There are two interviews conducted in this study. The first is an interview with the staffs of Jakarta Smart City Centre Lounge, and the second is an interview with a representative from MRT company. There are also citizens of DKI Jakarta consisting of several age backgrounds, regional origins, education, and occupations who participate in questionnaire activity.

RESULTS AND DISCUSSION

Result

In the data collection stage, both interviews activity was conducted virtually by using Zoom and WhatsApp during June until September 2021. The first interview was conducted with Jakarta Smart City's team, involving five staffs and one admin (guide and set all the activity from WhatsApp). The five staffs are:

1. Muhammad Okky Ibrohim (Data Analyst Kajian) from Development and Product Analyst department.
2. Fidan Safira (Data Analyst Kajian) from Development and Product Analyst department.
3. Clarissa Febria Finola (Data Scientist Junior) from Data Analyst Department.
4. Irfan Dwiki Bhaswara (Data Scientist Junior) - from Data Analyst Department.
5. Ilman from Jakarta Smart City team as moderator.

The second interview was conducted with a staff from MRT company, namely Taskia from Station Service division.

The questionnaire activity has been started from June 2021 and the latest data is November 2021, but the questionnaire is still opened for the ongoing research needs. Current data consists of twenty respondents consisting of women and men with working status, with an age range of 17-56 years old.

Measurement of the success of implementing the smart city concept is carried out using the indicators contained in the smart city concept. Therefore, the discussion during the interview and the questions in the shared open questionnaire focused on evaluating the implementation of the smart city concept in the city of Jakarta and assessing Jakarta residents and non-Jakarta residents working in the city of Jakarta on their experiences in using the facilities provided by the application of the smart city concept. The assessment results from these citizens are also compared with secondary data from public data that has been provided by official websites such as jakarta.bps.go.id, jakarta.bpk.go.id, smartcity.jakarta.go.id, diskominfotik.jakarta.go.id, and so on. From all these data collection activities, the author groups the results of data collection into seven groups based on indicators of the smart city concept itself.

Smart Governence

The study literature result for smart governance indicator say that this indicator aims in creating governance that is transparent and informative and responsive to community needs, as well as increasing public participation through complaint channels. The application of Smart Governance can be applied

through the Electronic-Based Government System (SPBE). SPBE is a government administration that utilizes information and communication technology to provide services to SPBE users. SPBE is a continuous effort in the development of the state apparatus to create a competitive nation (Rozikin & Sofwani, 2022).

There are four well known applications provided by JSC related to smart governance program, which can help citizens to get the transparent information of the governance of Jakarta, and as the media for citizens to complain to governance. The four applications are e-budgeting (A'yun & Hartaman, 2021), CRM/QLUE for online complaint service, one-stop integrated service (PTSP), and JAKI application. Apart from this there are also some applications related to JSC and governance (Mauliansyah, Rendi, Rosita, Iqbal, & Assulamy, 2023).

From questionnaire result, four of twenty respondents never know nor use the application of JSC program for Smart governance. Other respondents have experienced in using application PTSP, CRM/Qlue, and JAKI.

According to the interview with JSC's staff result, these applications data is not directly come in to JSC database but stay in the application's vendor itself which has collaboration with each service unit in Jakarta City government. But JAKI application, is a super apps, which integrates all the applications from regional devices in Jakarta.

Smart People

This pilar aims is improving the quality of human resources through 12 years of education, providing a decent quality of life, increasing the life expectancy index, and increasing access to public information.

According to the interview with JSC's staff result, JSC has one program namely JSC Academy, which has activity like training and internship, to develop the skill of digital talent. Apart from that program, there is also governor program which held by JSC, namely Jakarta Smart Card, as known as KJP (Kartu Jakarta Pintar), which has collaboration with education department.

Based on the questionnaire result, there is 1 respondent who admits that all residents in the area where he lives have received education, but there is another respondent who says that 80% of residents in the area where he lives have not received education. There were 9 respondents who admitted that <10% of the residents in their neighborhood had no education. The main reason is the cost so that some choose to work as laborers only. Other respondents said they did not know about this information. One in 20 respondents admitted that they had accessed public information from Jakarta residents to seek development information but said that the available information was not updated. One in 20 respondents also admitted to having accessed books and literature online, such as from the i-jakarta application. However, other respondents claimed to have never accessed this service.

Twelve out of 20 respondents claimed to know and have used co-working space facilities in Jakarta and admitted that the facilities are very comfortable, and the prices are also relatively affordable.

Fourteen out of 20 respondents admitted that Betawi as the original culture of Jakarta has not

synergized with other multicultural cultures to create a modern city with culture. The use of ondel-ondel, which is an original Betawi art, is often misused for singing which disturbs the comfort of residents or visitors to the city of Jakarta. There was one respondent who said that Jakarta was already a modern city but not yet cultured. So far, Betawi culture has only been shown in the form of visual entertainment, while tours for Betawi culture experience are very few. Which is a lot of historical tours only.

Smart Mobility

Smart Mobility pilar has program to build a transportation integration system and provide information technology infrastructure that can encourage sustainable economic development, and a high quality of life.

Based on the interview with JSC's staff result, there are some applications provided by them to provide service to citizens, namely JakLingko which is just launched in 2021. This is a mobile app for Transjakarta/KRL/MRT, and an integrated mode of transportation, which has function for traffic management monitoring. Currently the data has not stored in JSC database yet, but in future, this application will be integrated with JAKI application.

From questionnaire result, of the 20 respondents, all claimed to have used public transportation in Jakarta, even most said they used it very often. The types of transportation that are often used are Transjakarta, KRL, MRT, JakLingko (replacement for metromini and kopaja), as well as online transportation. All respondents claim that this public transportation is convenient with the cheap price and only takes an average of 15 minutes to wait for the arrival of the transportation. 6 respondents claimed to have used a mobile application to monitor public transportation used in real time, such as JakLingko and MRT-J. the rest claimed to have never used certain mobile applications.

Smart Economy

Smart economy is aims to foster entrepreneurship and the spirit of innovation to the community to achieve high productivity. These include fostering small and medium enterprises, expanding employment opportunities, and increasing regional competitiveness.

According to the interview with JSC's staff result, there are some applications provided by them to provide service to citizens, namely JakOne mobile application and JakPangan. These applications have collaboration with Pasar Jaya. Pasar Jaya is a local company owned by the government of DKI Jakarta Province that perform public services in market management sector, empower the market traders, assist to price stability and the swift distribution of goods and services. According to the source person, these applications also will be integrated with JAKI in the future.

Questionnaire result said that all respondents admitted that no one had ever used or accessed JakOne or the JakPangan website daily. Gojek, Tokopedia, Ovo, Sophee, and other well-known online shops are mentioned as the response to what startup questions are known to respondents located in Jakarta. Most of the respondents acknowledged that the existence of this startup has provided convenience in terms of transportation, transactions, and delivery of goods or food. The existence of

this startup has also greatly helped improve the economy of the city of Jakarta.

Smart Living

Realizing Jakarta as a healthy and livable city and facilitating access to health information, tourism, and security facilities.

From the interview with JSC's staff result, one of the programs of JSC for this indicator is hold a covid-19 vaccination for Jakarta residents. All the administration and rules for this activity can be accessed from JAKI, such as the registration, schedule, location, type of vaccine, etc.

The questionnaire results said that none of the respondents lived in flood-prone areas. 3 out of 20 respondents admitted that their area of residence was equipped with CCTV, while the others had not. All respondents claimed to be comfortable living in the area where they lived and only 1 respondent admitted that there had been a crime incident in the area where he lived.

Smart Environment

Creating a healthy quality environment through sustainable natural resource management to make Jakarta a livable city, as well as encouraging green building programs and environmentally friendly development.

From the interview activity with JSC's staff result, there is a program from JSC for smart environment, namely JakExpo. This application is conducted to measure the level of air cleanliness in Jakarta and monitor flood areas in Jakarta. This application also integrated with JAKI.

From the questionnaire result, 20 respondents claimed that it was easy to get clean water and that garbage disposal locations were also available in the area where they lived. Not a single respondent knows that Jakarta has a Jakarta Recylce Center (JRC) program that recycles waste in the city of Jakarta.

Discussion

Based on the result of interview activity with staff team from Jakarta Smart City Centre, JSC is part of the government. JSC was built under DISKOMINFOTIK; The Department of Communication, Information and Statistics of the DKI Jakarta Provincial Government which is the organizer of government affairs and has duties in the fields of Communication and Information, Statistics and Encryption. The Department of Communication, Information and Statistics of the DKI Jakarta Provincial Government is led by a Head of Service who is under and responsible to the Governor through the Regional Secretary (Rivelino, 2022).

The pioneer in development this Jakarta Smart City is the mature and stable of Electronic-Based Government System (SPBE) in Jakarta. A catalyst for a region can apply for a smart city if the SPBE is running well. When the smart city concept is begun to develop, then the pillars should be determined in aims to create a solid ecosystem.

In carrying out its programs and work, JSC does not differentiate its teams or divisions based on the six pillars of Smart City. However, when they decide to run a work program, they must analyze whether this work program is related to the six pillars. Whatever is the work program of JSC, it must be based on these six pillars and the entire team that works at JSC together to realize the achievement

of the six pillars of Smart City.

The role of the JSC is to make all programs from several divisions in the Jakarta city government smart, in one hand (one super apps), namely JAKI. So JSC has responsibility to integrate all these programs and services, but for the record, not all JAKI programs are JSC program. JSC integrate the programs in JAKI with collaboration with the collaborator (can be with internal JSC development team, or with Start Up). Meaning that JSC as the integrator, but programs come from the services unit in Jakarta. Not all the data from applications stored in JSC database. The data only come in to JSC database based on the aims and needs, and if the cooperation agreements with collaborators allow data to be shared.

In the interview session with JSC staff, Jakarta Smart City has four own products to provide their service to citizens. The four products are:

1. JAKI (as super apps, to integrate all service applications).
2. CRM (Cepat Response Masyarakat) to integrate all the society complaint channel by fast response app such as Qlue, social media of Jakarta governance (Twitter, Instagram, Facebook). There are 14 complaint channels integrated in CRM, and all the data in CRM are stored and processed in JSC.
3. Website for Covid-19 channel and Monitoring.
4. Website for flood channel and Monitoring

JSC has a Google Analytic system to monitor the user of their application products. According to the google analytic result, their applications are well known by the society and used actively. It can be proofed by the number of JAKI application download, about two million user who download this application. They also mentioned that people also active using CRM application, and it can be seen from the number of complaints that come into JSC, there are about tens of thousands of complaints that come in per month from about 6000-7000 different users. Apart from this, the program service for covid-19 vaccination provided in JAKI also get many attentions from the Jakarta citizens, even non-citizens of Jakarta (who live in Jakarta, but their ID card is in another city). The user use JAKI to access this service and can get vaccinated successfully. Meaning the enthusiasms of the citizens are extremely high with this JSC's product services.

Apart from citizens, JSC also needs the support from governance. The government's role in supporting the running of the JSC program is to assist in the regulation, policy, and collaboration with third parties. So far, the government has shown its full support to JSC. A real example is when there is a Covid-19 Vaccination program that requires a lot of regulation and collaboration with several parties such as the health department, KOMINFO, etc. That moment the government is very quick to help JSC so that all data can be integrated with JAKI.

So far, the achievements of JSC are the number of active JAKI and CRM application users who can channel their aspirations through the application directly to the government. This proves that the massive service from the government to the community through JSC has been realized quickly and on target. Feedback from the public about this application is also very satisfying, and always responded

positively.

In addition, there are also achievements from the international field. JSC won the runner up position at the World Summit on Information Society (WSIS), participated in IDC, and won several other international competitions. All the information is posted in JSC Instagram feed for detail. The target or future of JSC is to follow the governor's instructions regarding digital transformation, which is to integrate all applications from regional organizations in the city of Jakarta. In addition, it also integrates all important data such as population data, health data, education data, into one system, namely Master Data Management. This system is expected to help provide significant services through the JAKI application.

JSC expects the active role of Jakarta residents to jointly address the problems that exist in Jakarta, by submitting complaints on the complaints channels that have been provided.

CONCLUSION

Based on the characteristics that have been analyzed from each aspect of the smart city indicator in Jakarta regarding the success rate of the application of the smart city concept obtained from primary and secondary data, the application of the smart city concept in Jakarta is categorized as successful with notes. Basically, Jakarta can be said to have successfully implemented the smart city concept in terms of accessibility, connectivity, and the use of information and communication technology. However, socialization to the community still needs to be improved so that all people can play an active role in supporting the Jakarta Smart City program for a more advanced, sustainable, and cultured Jakarta whose citizens are involved in realizing civility, justice, and prosperity for all. This is in accordance with the vision and mission of the city of Jakarta which wants to be a safe, healthy, intelligent, and cultured city.

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