

# ***Smart Governance Dimension Analysis Based on E-Government Indicators in Brebes District***

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## **ABSTRACT**

The rapid use of information technology in all aspects of life from the government environment to the community has encouraged several cities in Indonesia to apply the connectedness of the use of existing information technology in the form of integration of city elements to support the continuity of information technology-based urban life or can be called Smart City. Smart governance is an important thing needed in the development of a Smart City, the reason is because smart governance is the main foundation of a smart city. This study aims to determine whether Brebes Regency is ready to become a Smart City in terms of the dimensions of Smart Governance and its indicators. Indicators to measure the readiness of smart governance implementation are Openness and Public Participations, E-Governance, New Public-Private Collaboration, Guarantee System, Modern Processes of Public Management of The Municipal Budget, Modern System of Public Management of The Municipal Government, Transparency Auditing of The Government's Public Management, Local Government Staff. The method used in this study is a qualitative method. Research that is being carried out at this time includes descriptive research. The involvement of researchers in research (extent of research interference) consists of researchers who intervene in the data and researchers who do not intervene in the data. This study units analysis at the Group level. This research is included in the research with a longitudinal implementation time. The data in this study were obtained from interviews with 6 active Smart City development actors who carry out the smart governance development process. The data is then processed using source triangulation. Based on the results of the study, it can be seen that the Brebes district is currently in the process of implementing the initial stage towards Smart City. All interviewees agreed that currently the Brebes district and its OPD are committed both in terms of budget and program to direct their respective institutions to participate in carrying out the Brebes Smart City program in accordance with the master plan that has been discussed in 2022. Brebes Regency in its implementation has implemented e-governance indicators based on the standards set by PPID, unfortunately it is still not optimal or has not been carried out in other sectors or fields. For example, for the transportation sector, there is still no public transportation service that is directly managed by the region and integrated with the e-governance system like in Singapore.

**Keywords:** *E-government, Government, Smart City, Smart Governance, Brebes*

## **1. INTRODUCTION**

Brebes Regency, located in Central Java Province, is an autonomous region with an administrative area of 166,296 hectares. This regency consists of 17 sub-districts, 292 villages, and 5 sub-districts with a population that continues to increase every year. Based on data from the Central Statistics Agency (BPS), in 2016 there were 1,788,880 residents. The recorded population growth rate is that Brebes Regency experienced an increase of around 242 thousand people or an average of 24 thousand each year (Central Statistics Agency of Brebes Regency, 2020). In 2019, the population of Brebes Regency was recorded at 1,809,096 people, making it one of the regencies with the largest population in Central Java Province. This significant population growth certainly brings its own challenges for the government in its efforts to provide effective and efficient public services for all levels of society, especially in the context of managing and utilizing information technology. Therefore, to manage the ever-growing population, innovation is needed in the implementation of government and public services, one of which is through the effective application of information technology.

One of the concepts being developed in many cities and districts in Indonesia, including Brebes, is the implementation of Smart City. This concept integrates information technology with various aspects of city life to improve efficiency, transparency, and quality of life for the community. In this context, the implementation of Smart City is expected to improve public services by using advanced technology to build better and smarter infrastructure,

and accelerate access to services for the community (Essabela, 2016; Meijer et al., 2016). An important element in the implementation of Smart City is Smart Governance, namely technology-based government management to improve efficiency, transparency, and accountability in public services (Utomo & Hariadi, 2016; Sudarto, 2006).

The Brebes Regency Government has begun implementing the Smart City concept through various steps, including the implementation of e-government as part of Smart Governance. The use of e-government is expected to make it easier for the public to access government information and services online, which in turn can increase transparency and reduce inefficiency in government. Cooperation with the Ministry of Communication and Information of the Republic of Indonesia and other related agencies shows the commitment of Brebes Regency to implement Smart City and improve the quality of public services (Ngafifi, 2014; Prianto, 2018). Therefore, this study aims to analyze the implementation of Smart Governance in Brebes Regency based on e-government indicators, in order to evaluate the extent to which the implementation of Smart City can improve the quality of government and public services in the area.

## 2. RESEARCH METHODS

This research is qualitative research that is explorative-descriptive. There is no intervention to the data, the unit of analysis is the group, and it is carried out longitudinally (carried out over a certain period of time to see developments). This method is used to understand more deeply how smart governance is implemented based on indicators that have been studied previously. This study uses variables from previous studies related to smart governance, such as Openness and Public Participation, E-Governance, New Public-Private Collaboration, and others. Each variable has an indicator that is used as a guide in data collection and analysis is carried out systematically with several stages, including initial observation, interviews, secondary data collection, data analysis, and report preparation.

In this qualitative research, we use social situations consisting of:

- Place: The research location is at the Brebes Regency Government Institution, specifically the Communication and Information Service.
- Actors: The actors involved in developing smart governance.
- Activities: Research activities such as interviews, observations, and secondary data collection.

This study uses a purposive sampling technique, where the informants are selected based on their active role in developing smart governance. A total of 6 informants were selected with the criteria as actors and developers of smart governance in Brebes Regency. With primary data obtained through in-depth interviews with selected informants and secondary data obtained from previous research, RPJMD reports, journals, and relevant websites. The data collection method was carried out by direct observation to the research location and in-depth interviews with smart governance development actors. Data validity is tested by source triangulation, which is comparing data from various sources to ensure validity. Triangulation is done by comparing observation results with interviews and comparing data from various sources. With data analysis techniques following the stages of Creswell (2013), namely preparing data (interview transcription, organizing data), reading the data as a whole to understand the main theme, coding (organizing data into categories), presenting data in narrative form, interpreting data to draw conclusions.

## 3. RESULTS AND DISCUSSIONS

### 3.1. Secondary Data from Best Practice and Brebes Regency

**Table 1.** Secondary data from Best Practice

No	Variables	Indicator	Singapore Best Practice Data	Brebes Best Practice Data
1	Openness and Public Participations	Of information related to Brebes Regency online	Having Gov.sg, Singapore government information portal (Gov.sg,2018)	Has a website <a href="http://www.brebes.go.id">www.brebes.go.id</a> as an information platform.
		Feedback mechanism by the community to provide suggestions	Having Gov.sg as a government information portal (Gov.sg, 2018; Tech.gov.sg, 2018)	Public complaint services are available on several Brebes Regency service websites ( <a href="http://dinsos.brebeskab.go.id">dinsos.brebeskab.go.id</a> , 2020)

No	Variables	Indicator	Singapore Best Practice Data	Brebes Best Practice Data
		and input		
2	E-Governance	Administration system for managing public services and facilities.	Bee Line app for public transport (tech.gov.sg, 2018)	Don't have a service management application yet, there is only the SAMBU application for monitoring
		Public access to public services and facilities.	The Bee Line application can be downloaded by the public. (tech.gov.sg, 2018)	Brebes still does not have sufficient facilities to meet the needs of the community.
3	New Public-Private Collaboration	Collaboration between government and private sector to improve public services	The Bee Line application collaborates with private parties such as Grab and Uber. (tech.gov.sg, 2018)	The collaboration carried out is in the form of physical assistance which can improve physical services to the community (CSR)
4	Smart Application	Storage of city data in a structured system.	Singapore data is stored in data.gov.sg (tech.gov.sg, 2018)	Brebes data is stored in the siapbang Application
5	Guarantee System	The existence of a guarantee of information systems from the city government.	Singapore already has data.go.sg which contains data in the form of the latest statistics. (tech.gov.sg, 2018)	Brebes Regency collaborates with BPS in providing statistical data
6	Budget Management	There is sufficient and measurable budget planning.	The annual budget is stored in data.gov.sg (data.gov.sg, 2018)	The smart city budget is included in the Brebes Regency masterplan (brebeskab.go.id, 2022)
7	Modern System of Public Management of The Municipal Government	System for measuring and managing government implementation.	Through cloudstore, the Singapore government fulfills the government's needs through the application. All the goods needed by the Singapore government are there. (tech.gov.sg, 2018)	Brebes Regency has prepared the siapbang application which can be used to find out and monitor government activities and the projects being worked on (brebeskab.go.id, 2022)
		Procurement system to organize and manage the government procurement process for goods and services.	Singapore has cloudstore. (tech.gov.sg, 2018)	Siapbang Application (brebeskab.go.id, 2022)
		Mechanisms or ways in which the public can monitor	Singaporeans simply need to open the Cloudstore application and there is a menu for ongoing	The public can find out about the processes and activities of the district government

No	Variables	Indicator	Singapore Best Practice Data	Brebes Best Practice Data
		government processes	procurement of goods and procurement of goods that have been completed. (tech.gov.sg, 2018)	through the Siapbang application (brebeskab.go.id, 2022)
8	Transparency Auditing of The Government's Public Management	Government transparency index to support work	The Singapore government also issues indexes such as the environmental index, citizen participation index, and health index, reports of which can be seen in Singapore data. (tech.gov.sg, 2018)	The Brebes government's service and transparency index was carried out through the RB RI Assessment Team and Bappeda (bappeda.brebeskab.go.id, 2022)
9	Efficiency	Level of efficiency of government services	Apps like Singpass, Myinfo and Citizen Connect increase efficiency (Tech.gov.sg, 2018)	The smart city budget is included in the Brebes Regency masterplan (brebeskab.go.id, 2022)
10	Coordination and Integration	Integration of all SKPD units for data and system needs.	Singapore has the WOOGA application for government data integration (Tech.gov.sg, 2018)	The smart city budget is included in the Brebes Regency masterplan (brebeskab.go.id, 2022)
11	Participation and Coproduction	Exchanges that occur between SKPD units and other institutions.	Singapore has a Standard Operating Environment (SOE), an application intended for the exchange of information for Singapore government agencies. (tech.gov.sg, 2018)	Brebes adopted the e- office system from the city of Tangerang in 2021 in order to prepare for a smart city (tangerangkota.go.id, 2021)
		Reliable systems and information exchange.	Standard operatingenvironment (SOE) platform for public officials to access government resources and work-related data securely from any location to support government employee performance (tech.gov.sg, 2018)	This e-office system is considered to be able to improve the performance of Brebes district government employees, because it is systemically integrated (tangerangkota.go.id, 2021)
12	Local Government Staff	The ability to use information and communication technology of employees who manage the system.	Singapore had a Civil Service Computerisation Programme (1980-1999). The computerisation programme	Brebes district government employees through Brebes Regency Regulation No. 82 of 2020 to run an online administration system
		Capacity building program to support performance and assessment in smart governance for employees.	Improving employee capabilities in the smart city sector by following the road map provided by the Singapore government. (tech.gov.sg, 2018)	It is not yet known whether there is internal training for Brebes district employees regarding this system.

### 3.2. Implementation of E-Governance Dimensions in Brebes Regency

Brebes Regency has implemented e-governance in data collection and public services through various website-based applications, such as SIPBM and SAMBU. However, implementation is still limited, especially in the transportation sector which has not been integrated with e-governance. In addition, existing applications do not support access via mobile.

### 3.3. Development that has been implemented

The Brebes Regency Government has developed several technology-based service applications, including:

1. Brebes SIPBM

- An information system that presents community development index data in Brebes Regency.
- Website-based, can be accessed by the public and related institutions after registering.
- Used by Baperlitbangda as a basis for regional development planning.

2. Social Assistance Visit

- An application that provides information on social assistance recipients in Brebes Regency.
- The public can apply for social assistance, SKTM, and report social assistance that is not targeted properly.
- Developed to improve the accuracy and validity of social assistance recipient data.

3. SAMBU (Regent's Visit to Marang)

- Official portal for public complaints regarding government programs and services.
- Since 2020, we have served hundreds of complaints and suggestions from the public.
- Functions as a tool for community monitoring of local government performance.

4. Comparison with Singapore E-Governance

- The Singapore government has a more integrated e-governance system through Gov.sg .
- All public services can be accessed through one main portal.
- More advanced digital infrastructure supports the implementation of e-governance to the fullest.
- Brebes Regency still has several stand-alone service systems that have not been integrated into one platform.

### 3.4. Supporting and Inhibiting Factors for E-Governance Implementation in Brebes Regency

Brebes Regency is considered capable of transitioning into a Smart City based on support from the central government. However, there are still several obstacles that need to be overcome. The following are supporting and inhibiting factors for the implementation of e-governance in Brebes Regency:

**Table 2.** Supporting and inhibiting factors for the implementation of e-governance in Brebes Regency

Supporting Factors	Inhibiting Factors
Budget – Special funding support from the central government.	COVID-19 Impact – Smart City implementation delayed until 2022.
Technology Infrastructure – Availability of servers and communication networks.	Lack of OPD Integration – The systems between OPDs are not well connected.
Regulation – The existence of Regent Regulations and Regional Regulations that support the implementation of Smart City.	Application Overlap – Some applications have similar functions.
	Limited Public Infrastructure – Digital transportation services are not yet available.
	HR Readiness – Employees are still lacking in mastery of technology and application maintenance.

#### 4. CONCLUSION

Secondary data search found that Brebes Regency has implemented Smart City, especially in the smart governance dimension. This study compares Brebes with Singapore, which has the highest ranking in the Global City Index and has become a smart nation. Brebes has implemented e-governance according to PPID standards, but it is still limited to several sectors. For example, public transportation has not been integrated with the e-governance system like in Singapore. Several applications that have met PPID standards in Brebes include SIPBM Brebes and Sambang Bansos. Although the Smart City program has been implemented according to plan, challenges still exist, such as limited mechanisms, human resources, and the impact of COVID-19. However, budget support and regent regulations are the main supporting factors for the development of Smart City in Brebes.

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