

Electronically-based governance system for public services: implementation in the Special Region of Yogyakarta, Indonesia

**Rini Rachmawati^{*1,3}, Dayang Fitri Anjani^{1,3}, Amandita ‘Ainur Rohmah^{2,3},
Tika Nurwidiani^{2,3}, Hidayah Almasari^{1,3}**

¹*Department of Development Geography, Faculty of Geography, Universitas Gadjah Mada, Yogyakarta, Indonesia*

²*Graduate Program on Regional Development, Faculty of Geography, Universitas Gadjah Mada, Yogyakarta, Indonesia*

³*Smart City, Village, and Region Research Group, Faculty of Geography, Universitas Gadjah Mada, Yogyakarta, Indonesia*

The Electronically-Based Governance System (*Sistem Pemerintahan Berbasis Elektronik/SPBE*) deals with public services for the internal regional government and the public. This research aims to identify public services and their implementation, analyse the success and constraints in implementing public services, and elaborate recommendations. Secondary data were obtained through the local government website. Primary data were obtained through questionnaires filled out by staff in charge of technical SPBE at the Communications and Information Office in the Special Region of Yogyakarta and cities and districts in the region. Meanwhile, in-depth interviews were conducted with the head of the agency as a policy-making official related to SPBE. The result shows that the regional government has provided public services in both SPBE and innovative regional services. The users have felt the benefits of the public services provided. However, there are constraints related to users' ability in digital literacy and the availability of networks. In the future, both will become a priority to overcome.

***Corresponding author**

Address: Faculty of Geography, Gadjah Mada University, Bulaksumur, Yogyakarta, Indonesia, 55281

Phone: +62 274-6492334 | *Email:* rinirachma@ugm.ac.id

©2022 Human Geographies; The authors



This work is licensed under a

Creative Commons Attribution 4.0 International License. DOI:10.5719/hgeo.2022.161.5

Key Words: *electronically-based governance system, public services, smart governance*

Article Info: Received: *December 24, 2021*; Revised: *March 7, 2022*; Accepted: *May 15, 2022*; Online: *May 31, 2022*.

Introduction

The development of Information and Communication Technology (ICT) has caused ease in social life order, including providing public services to society. As the main actor in providing public services, the government is expected to be able to give access to all layers of society (Rachmawati et al., 2018). Public services need to be provided in an integrated system so that the users can use them effectively, efficiently, and functionally (Rachmawati et al., 2018). The effort to integrate the uses of ICT in public services is one of the realizations in the electronically-based governance system.

The guideline for electronically running a government is developing the concept of Electronic Government (e-Government) (Presidential Directive No. 3, 2003). Technological advances and the implementation of e-Government have become a factor in the appearance of ICT-based service systems as an innovation (Rohmah & Rachmawati, 2019). E-government is a process of using ICT as a means of helping governance and public service system (Sosiawan, 2008). It has become one of the development indicators because of its role in giving essential services to society (UNDESA, 2016). In addition, it can also benefit institutions by optimising their role in providing public services easily and effectively (Almira et al., 2019). Meanwhile, the benefit from which society can get is information that can be accessed rapidly per what they are searching for (Almira et al., 2019).

As a form of the executive action for the Presidential Directive in running e-Government, in 2018, the central government developed SPBE (Sistem Pemerintahan Berbasis Elektronik/Electronically-Based Governance System). SPBE is a form of governing by using ICT to provide services to its users in an open, participative, innovative, effective, transparent, and accountable way so that public services with high quality and reliability can be materialised (Presidential Regulation, no. 95, 2018).

SPBE copes with public services the government provides for both the internal sides (i.e. ministries, institutions) and regional government to give services to the public. Nevertheless, it is necessary to identify the kinds of services, implementation model, success, and constraints of public services in SPBE.

This identification is undergone by the Ministerial Regulation, the Minister of State Apparatus Empowerment and Bureaucracy Reforms No. 59, 2020 on Monitoring and Evaluation of SPBE. It stated that electronically-based public service belongs to the fourth domain of SPBE services, and the eighth aspect consists of 6 (six) service indicators as stated in indicators 42-47 that will be addressed in this research.

The aims of this research are described as follows: Identifying the existing public services and implementation; Analysing the success and constraints of the implementation of public services; Providing recommendations for their future.

Materials and methods

This research applies a qualitative method. The variable used is the kinds of public services found in SPBE. The secondary data was collected by browsing websites belonging to the regional government, particularly the one of SPBE related to public services. This study uses secondary and primary data. Secondary data was collected by searching local government websites related to public services in SPBE. At the same time, primary data was conducted through questionnaires and in-depth interviews. The data obtained through the questionnaire covers the Special Region of Yogyakarta, and the district and city levels include one city, namely Yogyakarta City and 4 four districts, namely Sleman Regency, Bantul Regency, Gunungkidul Regency, and Kulon Progo Regency. Filling out the questionnaire was carried out by local government employees or staff in the area, especially from the Communication and Information Office, which handled the preparation of the SPBE from a technical point of view. Meanwhile, in-depth interviews were conducted with the Heads of the Communication and Information Office as the decision-making officials. The analysis results related to public services and their use at SPBE were obtained based on the results of the questionnaires and in-depth interviews. The data collection process, both questionnaires and in-depth interviews were conducted online from June to August 2021. The analysis technique used is descriptive qualitative.

Results

Electronically-Based Governance System (SPBE)

Currently, the government transformed to being oriented more toward the public interest (Indrajit, 2006). Information technology has been acknowledged as one of the potential means to alter the ways how the government operates, one of which is through electronic government (i.e. e-Government) (Luna-Reyes & Gil-Garcia, 2014). E-Government is an information system supporting online-based administrative services to implement effective and efficient service operations (Pieterse & Ebbers, 2008). E-Government is also defined as governance using information technology to provide services of high quality and transparency concerning public services (Shin, 2012 in Kim & Kim, 2021; Canedo et al., 2020). The most important application of e-Government is especially in the context of integration (Djunaedi et al., 2018).

E-Government can make the communication between regional governments and society easy, improve service effectiveness, and reduce administrative costs

(International City/County Management Association (2011) in Nam (2014)). The majority or around 86% of the studies' findings dealt with impact of e-Government on capabilities and interactions related to improving access and quality of data, interaction between government and society and private sectors (Kim & Kim, 2020). In addition, the implementation of e-Government also results in the ability to help the government reduce cost, improve quality, save time, and increase effectiveness and efficiency in public services (Ariana et al., 2020). Improvements in the implementation of e-Government are carried out through an Electronically-Based Governance System (*Sistem Pemerintahan Berbasis Elektronik/SPBE*) (Pratiwi et al., 2020). SPBE is one of the forms of achieving clean, effective, transparent and accountable governance (Al-Khouri, 2011). SPBE is implemented under several principles per the Presidential Regulation No. 95, 2018. They should represent effectivity, integration, sustainability, efficiency, accountability, interoperability, and security. In addition, SPBE should provide services that are citizen-centric or services oriented to fulfil what society needs. There are proofs that society is satisfied since the partition in the organizations of bureaucracy has been eliminated (Aikins & Krane, 2010). Several countries have developed such a practice (Aikins & Krane, 2010). SPBE is one of the forms of innovation in using ICT as an effort for the government to improve public services. This leads to a transformation in communication between government and society, which was previously a one-way process. With the help of ICT, now it turns to be two-way communication, i.e. the one between government - society and society-government (Sulehat & Taib, 2016).

The Evaluation Guideline of SPBE is regulated in the Ministerial Regulation, the Ministry of State Apparatus Empowerment and Bureaucracy Reforms No. 5, 2018. Through evaluation, it is expected that the level of SPBE readiness, which is related to public services, will be improved. Therefore, this research is focused on the SPBE applications related to public services, from which the varieties will be presented through examples in the Special Region of Yogyakarta.

Electronically-Based Governance System (SPBE) for public services

Public service is an activity provided by an organisation to the community (Gedeona, 2015). The implementation of public services must be accompanied by service standards that will be a reference in service delivery (Sukesi & Yunus, 2018). Different kinds of procedures such as time, cost, product, facilities, and quality of human resource become points that need to be taken into consideration in the implementation of public services (Ridwan & Sudrajat, 2009).

Public service is the combination of interaction among different aspects of services, such as human resources in charge of giving services, strategies, and users (Alberth & Zemke, 1990 in Dwiyanto, 2006). The quality of public services can be evaluated based on 7 dimensions (i.e. simplicity, clarity and certainty, security and convenience, openness, efficiency and economic aspect, justice and punctuality of service) (Tjiptono & Gregorius, 2011).

The government has the responsibility for public services to improve the welfare of people (McKevitt, 1998). The concept of public administration that has

become a paradigm in new public services stresses that the organisation of public sectors, in this case, the government, has the main duty to provide good service to its subjects (Rahmadana et al., 2020). In this concept, all parties play an important role in achieving a prosperous society. They are the government, private agents, and the community who support the implementation of good governance (Rusli, 2015). Using a new ICT system can improve the operation and integration inside and among the parties in the government (Diirr et al., 2011). Previously it was better known as a one-stop service. One-stop service is a service pattern in one place that includes various types of services without an integrated process and will be served through several technical task units (Silaban, 2003). At this time, the service is more developed as an electronic service that uses ICT applied online.

SPBE in public services provides benefits such as simplifying the service process and creating efficiency and effectiveness in time, energy, and cost. All the benefits given fulfil what becomes the primary purpose of public services, i.e. being responsive to satisfy people with what they get (Arfan et al., 2021). In practice, the responsiveness of electronically-based public service is influenced by decentralisation and regional autonomy as an institutional order that is the most effective and efficient, particularly in a region with a heterogeneous population (Filippetti, 2021).

In Indonesia, SPBE in improving public service is divided into several services. They are public service for complaints, electronically-based open data service, electronically-based network service for Legal Documentation and Information (Jaringan Dokumentasi dan Informasi Hukum/JDIH), and public service of three sectors (Minister of State Apparatus Empowerment and Bureaucracy Reforms No. 59, 2020). Three public sector services are the priority in each agency or institution. Furthermore, the research results will be discussed in the form of an analysis of the availability and implementation of SPBE in public services at the research location. Comparison of the SPBE for public services at the provincial level, city and regency at the provincial level, namely the Special Region of Yogyakarta and at the city and district levels, namely the City of Yogyakarta, Bantul Regency, Gunungkidul Regency, Sleman Regency, and Kulon Progo Regency can be seen in Table 1.

The implementation of SPBE in improving public services in the Special Regency of Yogyakarta can be seen in Table 2. SPBE has provided considerable benefits in improving public services, per the statement of the informant in the in-depth interview:

“Each Regional Apparatus Organization (OPD) has conducted a public service satisfaction survey. The survey results show that information technology increases public satisfaction with services because there is transparency, efficiency, and accountability. The public can directly see how the service is provided to them” (member of Special Regency of Yogyakarta’s Communications and Information Office).

Table 1. SPBE for public services: comparison at the provincial level, city and regency

	Special Province of Yogyakarta	City of Yogyakarta	Regency of Gunungkidul	Regency of Bantul	Regency of Sleman	Regency of Kulon Progo
Condition and Potential	Ranked second at the national level of SPBE in 2018. Awarded by the Ministry of State Apparatus Empowerment and Bureaucracy Reforms	Public services can be accessed on the platform JSS (161 applications).	Since 2017 has tried to integrate digital-based public service infrastructure into all agencies.	In the early stages, played a role in the preparation of roadmaps and regulations and socialisation with all Regional Empowerment Organisations (<i>Organisasi Perangkat Daerah/OPD</i>).	The implementation of SPBE has been regulated in Head of Regency Regulation No. 22, 2021.	Since 2018, many innovations have been made in the implementation of SPBE.
Benefits	Increasing level of satisfaction. Data is carried out by a satisfaction survey of services that the provincial government runs annually.	Smartphone access makes it easy for society to convey information.	Faster, more effective and efficient service	Efficient access, both in terms of energy and time, does not require a fee.	Encourages open, participatory, innovative and accountable administration.	Effective and efficient services, with better data accuracy
Challenges and Obstacles	Quantity and quality of human resources Limited fund Availability of network in several areas Low awareness of stakeholders on the importance of developing public services electronically Available ICT infrastructure Availability of resources Security of the information system	Society's readiness to optimising services that the city government provided The central government's changing policies will make it difficult for the regional government to adapt or change the implementation of working methods in the area of Regional Government	Limited fund Human resources quantity and quality need to increase. Indictments and complaints also need to be solved. Consistence in updating data by regional forces Lack of follow-up steps based on the result of evaluation adapted to technological development and the need for making regulations in harmony among agencies	Infrastructure facilities are not optimal Government level human resources Future implementation of public complaint service must be in line with public information openness Data consolidation applied in the regions and its connectivity with other information systems Training for the application organisers at the Kelurahan (village) level.	Accessibility to internet Changes in central regulations Systems at the centre are not integrated yet The latest android-based technology, limited resources Level of information system security	Stable network and connection in all areas of Kulon Progo, particularly the ones categorised as a blank spot Capacity and capability of both human resources and facilities

Source: Results of in-depth interviews

Table 2. SPBE for public services in the Special Province of Yogyakarta (DIY)

	Public service for complaint	Open data service	Legal documentation & information service	Service of prioritised sector
Service type	e-Lapor Jogja	PPID Jogja	JDIH	I: "Jogja Istimewa"
Response to suggestions and feedback	In 24 hours	It can be accessed online or directly through PPID	It can be accessed online	II: "SiBakul Jogja" Service
Integration	Still in the process of integration with "SP4N Lapor"	Integrated to "Dataku Jogja" belonging to Bappeda (Regional Planning Board) of DIY	Integrated to JDIH at the National Level	III: "E-Posti" Service

Source: Results of in-depth interviews and questionnaires

The Aspiration Service and people’s online complaints in the Special Region of Yogyakarta are more commonly called “e-Lapor Jogja”. PPID Jogja (Portal Pejabat Pengelola Informasi dan Dokumentasi/Gate for Officials in charge of Organizing Information and Documentation) is included in the open data service. JDIH (Jaringan Dokumentasi dan Informasi Hukum/Network for Documentation and Legal Information) service integrated with the national level (JDIHN). “Jogja Istimewa” is a mobile application encompassing almost all information found in the Special Region of Yogyakarta, like tourism, culinary, hotel, shopping centres, public services, event schedules, etc. “SiBakul” Jogja is a digitalisation platform for taking data of Small and Middle Enterprises (SMEs), clustering SMEs, establishing CSMEs, and innovating facilities for strengthening CSMEs. "E-Posti" is a service for the payment of motor vehicle tax in collaboration with BPD (Bank Pembangunan Daerah/Regional Development Bank) of the Special Region of Yogyakarta.

The implementation of an SPBE in the City of Yogyakarta can be seen in Table 3. Improving public services in the City of Yogyakarta is materialised in Jogja Smart Service (JSS). JSS is a “one-door” platform or single window launched by the City Government of Yogyakarta. Public services in the City of Yogyakarta are a form of implementation of SPBE, which is based on identifying shared needs to optimise public services to make it easier for the community to obtain services. This is following the statements of respondents to in-depth interviews:

"Electronically–Based Governance System (Sistem Pemerintahan Berbasis Elektronik/SPBE) in Yogyakarta City aims to provide simpler, more accessible, cheaper services by considering public readiness in optimizing digital potentials. Not just computerizing public services. All community services no longer have to require a face-to-face process between service providers and those who require services. (member of Department of Communication, Information and Encryption, Yogyakarta City).

Table 3. SPBE for public services in the City of Yogyakarta

	Public service for complaint	Open data service	Legal documentation & information service	Service of prioritised sector
Service type	UPIK	Open Data	JDIH	Sector I:
Response to suggestions and feedback	Will be responded in 2 hours at the longest	It can be accessed online	It can be accessed online	Application “Nglarisi”
Integration	Not yet integrated with “SP4N Lapor”	Open Data is accessed through JSS	JDIH is connected to and accessed through JSS	Sector II: “Surat Warga” Sector III: Application “Kuliah Lagi”

Source: Results of in-depth interviews and questionnaires

UPIK (Unit Pelayanan Informasi dan Keluhan/Service Unit for Information and Complaint) is not yet integrated with “SP4N Lapor” (Sistem Pengelolaan Pengaduan Pelayanan Publik Nasional/National Public Service Complaint Management System). However, UPIK, Open Data Service and JDIH (Jaringan Dokumentasi dan Informasi Hukum/Network for Documentation and Legal Information) are connected and can be accessed through JSS. Up until June 2021, there had been 161 application services found in JSS. In addition, the complaint service in Yogyakarta City has been significantly advanced, as stated by the following informant:

"Complaint services can be submitted through text illustrations and image or video illustrations accompanied by specifying the coordinates of the required object. This is to minimize reports and complaints that are not real." (member of Department of Communication, Information and Encryption, Yogyakarta City).

The application “Nglarisi” (i.e. stimulating the sale) is the one used to make a reservation for meeting refreshment from society as an implementation of the program Gandeng-Gendong (i.e. walking hand-in-hand and carrying for something) run by the City Government of Yogyakarta. Unlike the application “Nglarisi” intended for the trade sector, the application service “Surat Warga” became one of the gates for public services used to provide services and information related to the coronavirus screening, reports from society, letter of introduction, any services from sub-district and city village offices, and information from society.

Last but not least, another public sector that is of priority in the city of Yogyakarta is the application “Kuliah Lagi”. It was used for taking students’ attendance during the COVID-19 pandemic as one of the ways to prevent COVID-19 from spreading in the city of Yogyakarta. The implementation of an SPBE in the Gunungkidul Regency can be seen in Table 4.

Table 4. SPBE for Public Services in the Regency of Gunungkidul

	Public service for complaint	Open data service	Legal documentation & information service	Service of prioritised sector
Service type	Lapor	Open Data	JDIH	Sector I: "e-Pusda"
Response to suggestions and feedback	Based on system records, in 2021, the average follow-up speed is 1.3 working days with a completion of 5 working days	It can be accessed online	It can be accessed online	Sector II: "SPTPD" Sector III: "SIMPLE"
Integration	Integrated to "SP4N Lapor"	-	Integrated to JDIHN and BSrE	

Source: Results of in-depth interviews and questionnaires

The benefits of Open Data from the Gunungkidul Regency Government are transparency of data and democratic control, increased public participation, efficiency and effectiveness of government services and can be used by the community and stakeholders to provide social and economic benefits. However, the challenge of implementing open data services is that there are demands from the public regarding Open Data, which requires consistency in updating data by regional officials. Other sectors of public service that have become the priority in SPBE in Gunung Kidul Regency are "E-PUSDA", "E-SPTPD", and "SIMPLE". "E-PUSDA" is intended to push reading habits and encourage the learning process in society, "E-SPTPD" has given transaction services to its users such as data basis transaction, data validation, agreement mechanism, and data analysis. "SIMPLE", as a sectoral public service that is electronically based, is seen to have given transaction service to its users related to the sectoral public of the government's activities such as data basis transaction, data validation, agreement mechanism, and data analysis:

"Optimization of Electronic-Based Public Services must be carried out by providing monitoring and technical guidance for the SPBE process, improving infrastructure, applications, information security and data management. Of course, all these efforts must be supported by the relevant OPD and also the community as users." (member of Communication and Information Office of Gunungkidul Regency).

The implementation of SPBE in the Bantul Regency can be seen in Table 5. SP4N service as a forum that accommodates complaints, aspirations, and requests for information. Report SP4N can be directly downloaded on Play Store or Apps Store. The challenge of implementing this public service complaint service in the future must be in line with the era of public information disclosure in which the traffic of public complaints will increase and require fast handling. An electronic-based public service in the form of open data services in Bantul Regency that has been developed is the Satu Data Portal. The development of open data services is needed, among others, to integrate open data services with other service information systems. The challenges of implementing this open data service in

the future are data consolidation that will be applied to regions and connectivity with other information systems.

Table 5. SPBE for public services in Regency of Bantul

	Public service for complaint	Open data service	Legal documentation & information service	Service of prioritised sector
Service type	Lapor	Satu Data Bantul (One Data)	JDIH	Sector I: "Dukcapil Smart"
Response to suggestions and feedback	Based on system records, in 2021, the average follow-up speed is 1.3 working days with a completion of 5 working days	It can be accessed online	It can be accessed online	Sector II: "DGS Health Service"
Integration	Not yet integrated to "SP4N Lapor"	-	-	Sector III: "Lantip"

Source: Results of in-depth interviews and questionnaires

The implementation of an SPBE in the Sleman Regency can be seen in Table 6. The Electronic-Based Public Service System provides convenience for the community in accessing the necessary service needs, especially people who are in suburban areas can be served, of course also minimizing transport costs. In addition, the Sleman District Complaint Service can provide positive benefits as a channel for aspirations and information from the community to the government. The following information corroborates this:

"It is easier for the community, especially people whose houses are far away, to be more efficient. On the other hand, the Sleman complaint service is quite successful. With this service, it is rare for demonstrations to occur in districts." (member of Sleman Regency Communication and Information Office).

"Dukcapil Online" is a service consisting of actions for Identity Cards (KTP), Family Cards (KK), Child Identity Cards (KIA), and migration. "Online Licensing" provides convenience for the public to obtain various types of permit documents through the Sleman Simpadu channel. Meanwhile, Public Service Smart Health RSUD is promoted by the Regional General Hospital (RSUD) Sleman with the application "SI JEMPOL" or Online Emergency Network Information System to Prevent Panic. The implementation of SPBE in the Kulon Progo Regency can be seen in Table 6.

"TaniKu" consists of 14 features providing information for users and the public. "BumilKu" is equipped with GIS to develop data on pregnant women. "SiCantik Cloud" is an intelligent application of integrated licensing services for the public based on an integrated Permit Service cloud system/smart application. The Kulon Progo Regency Government asked all regional and sub-district officials to have Quick Win.

Table 6. SPBE for public services in Regency of Sleman

	Public service for complaint	Open data service	Legal documentation & information service	Service of prioritised sector
Service type	Lapor Sleman	Sleman Satu Data (One Data)	JDIH	Sector I: "Dukcapil Online",
Response to suggestions and feedback	Will be responded to in 4 days at the longest	It can be accessed online	It can be accessed online	Sector II: "Online Permits",
Integration	Not yet integrated to "SP4N Lapor"	Integrating SDI and Sleman geoportal is the basis for collaboration and integration with other service systems.	-	Sector III: "Smart Health RSUD"

Source: Results of in-depth interviews and questionnaires

Table 7. SPBE for public services in the Regency of Kulon Progo

	Public service for complaint	Open data service	Legal documentation & information service	Service of prioritised sector
Service type	Lapor	Portal Satu Data (Gate of One Data)	JDIH	Sector I: "TaniKu",
Response to suggestions and feedback	Will be responded to in 7 days at the longest	It can be accessed online	It can be accessed online	Sector II: "BumilKu",
Integration	Integrated to "SP4N Lapor"	-	Integrated to JDIHN	Sector III: "SiCantik"

Source: Results of in-depth interviews and questionnaires

This is a quick and urgent program to be carried out, as stated in the results of in-depth interviews as follows:

"We asked all regional devices to create applied application models such as Quick Win. There are 42 Quick Wins including 12 sub-districts and 30 OPD". (member of Kulon Progo Regency Communication and Information Office).

Discussion and the development of public services in the future

Several cities that have been declared smart cities in Indonesia have made a breakthrough by using information and communication technology (ICT)-based applications (Rachmawati et al., 2021). Breakthroughs in the implementation of SPBE in Regional Government cannot be separated from several weaknesses on which evaluation can be based to establish better public services in the future.

Meanwhile, several weaknesses concerning the implementation of SPBE in the area of administration in DIY are, among others: 1) Policies from the central government forces the regional government to adapt the existing established services; 2) Several services are not integrated into the system belonging to the central government; 3) Human resource in the region is still limited; 4) Socialisation to OPDs and society about the information about the existing public services in the respective region is still limited.

In the future, the development of public services needs to integrate all indictment canals (application, email, website, and social media) into one dashboard. This includes providing facilities to integrate service data between the regional and central governments, developing a database or variation of data on an open data service, and modules on law consultation integrated into other relevant applications. In addition, it is necessary to provide facilities for adequate data services, develop and optimise services in line with what each region needs, such as the need for the development of data service for UMKM, integration of notification system, electronic autograph, etc. Collaboration, cooperation, and integration of different kinds of public services became the key to success for the regional government in providing services easily and improving the service quality for society in particular and the administrative organisations in general.

Since there is no balanced perception of implementing SPBE in each region, this becomes a problem of its own. Therefore, each regional government must have the same perception that SPBE is not only a matter of applying ICT. More importantly, it is about how to organise administration by using ICT as a tool to improve the quality of service to society. Thus, the responsibility for implementing SPBE in a region is not merely taken by the agency in charge of ICT. Instead, this becomes the responsibility of all OPDs that provide administrative services to society using ICT as a supporting tool. Therefore, it is necessary to undergo socialisation and technical guidance for all stakeholders and society. Socialisation can be about the stipulation for Service Standard applied to all kinds of services adapted to the basis and component of public service standards applied. Besides, socialization can also be about the system of offering compensation if a service is found not following the standard for the recipient in all kinds of services. The other kind of socialisation can also be about information related to public services accessible online using social media and is connected to the national public service information system.

The regional government has provided public services in the form of both the ones in SPBE and the ones of regional innovation. In the future, various integrated service applications with an online basis and network access will be needed (Rachmawati et al., 2021). This study shows that indictment or complaint service, open data service, and service of the prioritised sector in each region have different names. Nevertheless, their function and scheme in each region have the same purpose. This is intended to facilitate society members to deliver an indictment of their problems. Each plight will be followed up for solution by the respective OPD in the Regional Government in minutes or days.

Meanwhile, the Open Data Service in the Provincial Government of DIY is called PPID, different from the one in the City Government of Yogyakarta and Regional Government of Gunungkidul Regency, which is called Open Data. In the Regional Government of the Regencies of Bantul, Sleman, and Kulon Progo, it is called One Data. Like open data service, the service of the prioritised sector in each region is also different. The service of the prioritised sector that becomes a regional innovation as an effort to solve problems in each region is certainly different from one another. In each region, it indicates the one of excellence in the respective region, like the Province of DIY with “Jogja Istimewa”, the City of Yogyakarta with “Nglarisi”, Regency of Gunungkidul with “e-Pusda”, Regency of Bantul with “Dukcapil Smart”, Regency of Sleman with “Dukcapil Online”, and Regency of Kulon Progo with “TaniKu”.

Unlike the other three services, the service of Network for Law Documentation and Information is called the same, i.e. JDIH. JDIH service, especially in the Province of DIY and Regency of Kulon Progo, has been integrated into JDIHN.

Conclusions

This research shows that the regional government has provided public services in the form of both the ones in SPBE and the ones of regional innovation. These public services give benefits to users. People feel more open to the information and get practical and efficient, transparent and accountable services from the government. However, there are obstacles to using public services, namely network constraints and limited human resources for electronic-based service providers. This should be a priority for future solutions. In addition, strong, collaborative, and innovative leadership will determine the success of SPBE in each local government agency, so that it is expected to be able to encourage the creation of a work environment and culture that can support the progress of public services in SPBE.

Funding

The research was funded by the Faculty of Geography, Universitas Gadjah Mada, through Penelitian Mandiri Dosen Scheme in 2021.

Acknowledgements

The author wishes to thank the Faculty of Geography, Universitas Gadjah Mada, for the Research Grant in 2021 and the blind reviewers for the comments to improve the manuscript.

References

- Aikins, S.K. and Krane, D. (2010), "Are Public Official Obstacles to Citizen Centered E- Government? An Examination of Munipal Administrators Motivation and Actions", *State and Local Government Review*, vol. 42, no. 2, p. 87-103.
- Al-Khouri, A.M. (2011), "An Innovative Approach for e-Government Transformation", *International Journal of Managing Value and Supply Chains (IJMVSC)*, vol. 2, no. 1.
- Almira, P., Lipu, B., Pradipta and Rachmawati, R., (2019), "Utilization of Human Resources Management Information System (SIMPEG) Application to Support e-Government in the BKPP at Palangka Raya Municipality", *Proceedings of the 15th International Asian Urbanization Conference*, Vietnam, Springer.
- Arfan, S., Maryani and Nasution, M.S. (2021), "Responsitivity of Public Services in Indonesia during the COVID-19 Pandemic", *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, vol. 4, no. 1, p. 552-562.
- Ariana, S., Azim, C. and Antoni, D. (2020), "Clustering of ICT Human Resources Capacity in the Implementation of e-Government in Expansion Area: A Case Study from Pali Regency", *Cogent Business & Management*, vol. 7, no. 1.
- Departemen Komunikasi dan Informatika, (2004), Dokumen Cetak Biru (Blueprint) Sistem Aplikasi e-Government bagi Lembaga Pemerintah Daerah, viewed 11 March 2021, shorturl.at/jqXR9.
- Dias Canedo, E., Morais do Vale, A.P., Patrão, R.L., Camargo de Souza, L., Machado Gravina, R., Eloy dos Reis, V., Lúcio Lopes Mendonça, F. and de Sousa, R.T.Jr. (2020), "Information and Communication Technology (ICT) Governance Processes: A Case Study", *Information*, vol. 11, no. 10, p. 462.
- Diirr, B., Araujo, R. and Cappelli, C. (2011), "Talking about Public Service Processes", *Lecture Note in Computer Science*, vol. 6847.
- Djunaedi, A., Permadi, D., Nugroho, L., Widyawan., Rachmawati, R., Hidayat, A., Achmad., K. and Egaravanda, S. (2018), *Membangun Kota dan Kabupaten Cerdas: Sebuah Panduan bagi Pemerintah Daerah*, Yogyakarta, Gadjah Mada University Press.
- Dwiyanto, A. (2006), *Mewujudkan Good Governance melalui Pelayanan Publik*, Yogyakarta, UGM Press.
- Filippetti, A. (2021), "Does Regional Autonomy Improve Local Public Services in More Diverse Regions?" in E.M. Belser, T. Bächler, S. Egli and L. Zünd (eds), *The Principle of Equality in Diverse States: Reconciling Autonomy with Equal Rights and Opportunities*, p. 130-157.
- Gedeona, H.T. (2015), "Analisis Model Alternatif Instrumen Pengukuran Kinerja Unit Pelayanan di Lingkungan Pemerintah Provinsi Jawa Barat", *Jurnal Ilmu Administrasi*, vol. 12, p. 469-490.
- Indrajit, R.E. (2006), *Electronic Government: Development Strategy and Development of Public Service System Based Digital Technology*, Yogyakarta, Andi.
- Kim, C. and Kim, K.A. (2021), The Institutional Change from e-Government Toward Smarter City; Comparative Analysis Between Royal Borough of

- Greenwich, UK, and Seongdong-gu, South Korea, *Journal of Open Innovation: Technology, Market, and Complexity*, vol. 7, no. 1, p. 1–33.
- Kim, S. and Kim, D. (2020), "ICT Implementation and Its Effect on Public Organizations: The Case of Digital Customs and Risk Management in Korea", *Sustainability*, vol. 12, no. 8, p. 3421.
- Luna-Reyes, L. and Gil-Garcia, J. (2014), "Digital Government Transformation and Internet Portals: The Co-Evolution of Technology, Organizations, and Institutions", *Government Information Quarterly*, vol. 31, no. 4, p. 545–555.
- McKevitt, D. (1998), *Managing Core Public Services*, Blackwell Publishers, Oxford.
- Ministry of State Apparatus Empowerment and Bureaucracy Reforms (Peraturan Menteri Pendayagunaan Aparatur Negara dan Reformasi) (2018) *Ministerial Regulation no. 5 about The Evaluation Guideline of Electronically-Based Governance System (Birokrasi No. 5 tentang Pedoman Evaluasi Sistem Pemerintahan Berbasis Elektronik)*.
- Ministry of State Apparatus Empowerment and Bureaucracy Reforms (Peraturan Menteri Pendayagunaan Aparatur Negara dan Reformasi) (2020) *Ministerial Regulation no. 59 on Monitoring and Evaluation of Electronically-Based Governance System (Birokrasi No. 59 tentang Pemantauan dan Evaluasi Sistem Pemerintahan Berbasis Elektronik)*.
- Nam, T. (2014), "Determining the Type of e-Government Use", *Government Information Quarterly*, vol. 31, no. 2, p. 211–220.
- Pieterse, W. and Ebbers, W. (2008), "The Use of Service Channels by Citizens in The Netherlands: Implications for Multi-Channel Management", *International Review of Administrative Science*, vol. 74, no. 1, p. 95-110.
- Pratiwi, H., Putra, W. and Herlambang, A. (2020), "Evaluasi Penerapan e-Government Di Pemerintah Kabupaten Sumbawa Besar Menggunakan Kerangka Kerja Sistem Pemerintahan Berbasis Elektronik (SPBE)", *Jurnal Pengembangan Teknologi Informasi dan Ilmu Komputer*, vol. 4, no. 11, p. 4117.
- President of the Republic of Indonesia (2018), *Presidential Regulation no. 95 concerning Electronically-Based Governance System (Peraturan Presiden no. 95 tentang Sistem Pemerintahan Berbasis Elektronik)*.
- Rachmawati, R., Choirunnisa, U., Pambagyo, Z.A., Syarafina, Y.A. and Ghiffari, R.A. (2021), "Work from Home and the Use of ICT during the COVID-19 Pandemic in Indonesia and Its Impact on Cities in the Future", *Sustainability*, vol. 13, no. 12, p. 6760.
- Rachmawati, R., Ramadhan, E. and Rohmah, A. (2018), "Aplikasi Smart Province “Jogja Istimewa”: Penyediaan Informasi Terintegrasi dan Pemanfaatannya", *Majalah Geografi Indonesia*, vol. 32, no. 1.
- Rachmawati, R., Sari, A.D., Sukawan, H.A.R., Widhyastana, I.M.A. and Ghiffari, R.A. (2021), "The Use of ICT-Based Applications to Support the Implementation of Smart Cities during the COVID-19 Pandemic in Indonesia", *Infrastructures*, vol. 6, no. 9, p. 119.
- Rahmadana, M.F., Mawati, A.T., Siagian, N., Perangin-angin, M.A., Refelino, J., Tojiri, M.Y., Siagian, V., Nugraha, N.A., Manullang, S.O., Silalahi, M.,

- Yendrianof, D., Sari, A.P., Supriadi, M.N., Sari, M.H.N. and Bahri, S. (2020), *Pelayanan Publik*, Yayasan Kita Menulis, Medan Cetakan 1.
- Ridwan, J. and Sudrajat, A.S. (2009), *Hukum Administrasi Negara dan Kebijakan Pelayanan Publik*, Nuansa, Bandung.
- Rohmah, A. and Rachmawati, R. (2019), "Utilization and quality of information system for administration services based on ICT in Patehan, Kraton, Yogyakarta", *Indonesian Journal of Science and Technology*, vol. 4, no. 1, p. 55–63.
- Rusli, B. (2015), *Kebijakan Publik*, Adoya Mitra Sejahtera, Bandung.
- Silaban, H. (2003), *Pelayanan Publik di Era Reformasi*, Universitas Prof. Dr. Moestopo, Jakarta.
- Sosiawan, E. (2008), "Communication and Administration Management Model of Back Office e-Government as a Public Media Service", *Journal of Communication Sciences*, vol. 10, p. 3-10.
- Sukesi, S. and Yunus, E. (2018), "Service Quality in Public Transport Services of the Provincial Intercity Transportation (AKDP) in East Java Indonesia", *Budapest International Research and Critics Institute Journal (BIRCI-Journal)*, vol. 1, no. 4, p. 161-169.
- Sulehat, N.M. and Taib, C.A. (2016), "e-Government Information Systems Interoperability in Developing Countries: The Case of Jordan", *Journal of Business and Social Review in Emerging Economies*, p. 39-49.
- Tjiptono, F. and Gregorius, C. (2011), *Service Quality & Satisfaction* (3rd ed.), Andi Offset, Yogyakarta.
- UNDESA (2016), *United Nations e-Government Survey 2016 e-Government in Support of Sustainable Development*, United Nations, New York.