RESEARCH ARTICLE

CONFRONTING E-GOVERNMENT ADOPTION IN INDONESIAN LOCAL GOVERNMENT

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ABSTRACT

Indonesia passed an e-government law in 2018, ushering the country's society into the information age across a range of sectors, including social, economic, communication, transportation, literacy, and public services. This transformation has benefited enormously from the facilitation of information technology in terms of productivity, comfort, compassion, and time elapsed. Local governments in

Indonesia, on the other hand, are slowing the adoption of e-government, which has progressed to the second stage of implementation, which is the introduction or integration of cross-sectoral systems. This article claims that local governments face challenges in this second stage as a result of departmental egos that make it difficult to unite around shared objectives. The whole government approach is suggested in this paper as a concrete policy strategy for eradicating sectoral egos within local government departments. It places a premium on collaboration in order to accomplish the government's vision and objectives.

Keywords: e-Government, Road Map, Local Government, Public Services

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HOW TO CITE:

INTRODUCTION

INDONESIA IS ADAMANT about developing a transparent, accountable, and participatory governance system. Indonesia is attempting to use information technology to build a nation and improve its effectiveness and performance. Presidential Regulation No. 3 of 2003, which defined a National Policy and Strategy for the Development of E-Government, reflected this initiative. This Presidential Regulation is the government's response to the community's demand for more effective, productive, quick, affordable, and timely government services. Additionally, the introduction of e-government in Indonesia establishes a direct line of communication between the public and the government.

According to Yunita and Aprianto's study, e-government adoption is generally very slow in Indonesia. The slow pace of adoption of e-government by local governments at all levels, from planning to maturation, consolidation, and use, reflects these findings[1]. In this case, Loura's research confirms that e-government in Indonesia is still in the interaction stage and has not yet progressed to the transaction, let alone transformation, stage [2].

Djunaedi explained that the growth rate of e-government is influenced by several elements such as (i) data system infrastructure, (ii) legal infrastructure, (iii) institutional infrastructure, (iv) human

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[1] Novi Prisma Yunita & Rudi Dwi Aprianto, *Kondisi Terkini Perkembangan Pelaksanaan E-Government Di Indonesia : Analisis Website*, 2018 SEMIN. NAS. TEKNOL. INF. DAN KOMUN. 329–336 (2018).

[2] Loura Hardjaloka, *Studi penerapan E-Government di Indonesia dan negara lainnya sebagai solusi pemberantasan korupsi di sektor publik Implementation Study on E-Government in Indonesia and Other Countries As A Solution in Eradicating Corruption in Public Sector)*, 3 J. RECHTSVINDING 435–452 (2014).

resources infrastructure, (v) technology infrastructure, and (vi) leadership and strategic thinking [3].

According to Zaenal A. Hasibuan, the local government's commitment to e-government implementation is vital to the program's success. Due to the difficulty of reforming a bureaucratic culture that has long extended traditional service patterns to online-based services, despite the fact that this policy has been in place for 17 years, dating all the way back to 2003 [4].

National and local governments have pioneered the development of public services through communication and knowledge networks. At least in Java, some regional leaders are actively engaging with the community through social media. However, Ministry of Communication and Information observations indicate that the majority of government sites and autonomous local governments are at the first level (preparation), with only a small percentage achieving level two (maturation). Neither level three (stabilization) nor level four (utilization) have been reached in the interim. The Ministry of Communication and Information's in-depth observations suggest that the program has not steered e-government in the right direction. Several disadvantages stand out:

a. the services provided through the government website are not supported by an effective management system and work processes, as regulations, procedures, and limited human resources have severely limited computerized penetration into the management system and government work processes;

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[3] Achmad Djunaedi, *Beberapa pemikiran penerapan e-government dalam pemerintah daerah di Indonesia*, SEMIN. NAS. E-GOVERNMENT WORK. LINUX 30 Oktober 2002 (2002).

[4] Zainal a Hasibuan, *Langkah-Langkah Strategis dan Taktis Pengembangan E-Government Untuk Pemda*, 3 J. SIST. INF. MTI UI VOL 3 1–5 (2007).

b. no strategy has been developed yet, and an insufficient budget has been allocated for;

c. the development of a safe and dependable system for incorporating management systems and work processes within government agencies into integrated public services has received less attention;

d. individual approaches are inadequate to close the community's access gap to the internet network, thereby restricting the reach of existing public services.

According to the report, the aforementioned conditions indicate that Indonesia is falling behind the rest of the world in terms of e-government growth. This study recommends that additional research be performed to determine the factors underlying Indonesia's sluggish adoption of e-government[5].

The aim of this article is to discuss the challenges that Indonesian local governments face when implementing e-government. The first segment begins with an introduction outlining the current state of e-government in general and Indonesia's specific challenges. Following that, there will be a discussion of the concept of e-Government and its development, followed by a discussion of the e-government architecture. The following section discusses the roadmap for Indonesia's e-government architecture, accompanied by a review of the challenges associated with incorporating e-government in the practice of local governments in Indonesia, and concludes with recommendations.

The Authors gathered primary and secondary data for this investigation. The primary data collecting approach was an interview with Semarang City's head of information and technology, while

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[5] Yunita and Aprianto, *supra* note 1.

secondary data collecting methods included regulation, document, and journal articles.

SHORT-TAIL E-GOVERNMENT

NUMEROUS E-GOVERNMENT ideas have been suggested by experts. They all refer to the same thing, however: a government structure that provides services to the public and business worlds through the use of information technology, with the aim of increasing efficiency, efficacy, transparency, and interaction speed, as well as significantly reducing service costs[6]. Thus, this definition encompasses three major components: the use of information and communication technology (ICT) to enhance government efficiency, efficacy, transparency, and accountability, and, most importantly, government services to the public and private sectors [7]. According to Fang, there is a significant distinction between e-Government and e-Governance. The initial e-government concept seemed more static than others, with the government concentrating exclusively on uploading services to the website. Nonetheless, the second concept's meaning is more inclusive. E-governance requires more than just providing access to government websites and e-mail systems. It is not limited to discussing the delivery of government services through the internet. It is not restricted to having access to government-issued digital documents. The fundamental shift in the relationship between government and community, as well as between communities, is

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[6] Tamara Almarabeh & Amer AbuAli, *A general framework for E-government: Definition maturity challenges, opportunities, and success*, 39 EUR. J. SCI. RES. 29–42 (2010); Lemuria Carter & France Bélanger, *The utilization of e-government services: Citizen trust, innovation and acceptance factors*, 15 INF. SYST. J. 5–25 (2005); Djunaedi, *supra* note 3.

[7] Djunaedi, *supra* note 3; Yunita and Aprianto, *supra* note 1.

manifested in e-governance through the concept of needs and obligations [8].

The word "e-government" was coined for the first time by former US Vice President Al Gore. He wished that someday there would be a way to connect individuals to various government agencies and public services. According to Al Gore, this can be accomplished by the use of information technology by reducing the amount of time [9], the level of service, and the speed at which it is provided to the public [10]. Al Gore's definition was then captured by information technology experts in the concept of e-government, which is a government activity carried out through electronic communication for the purpose of providing digital services to the public, community, and business world [11]. By and large, e-government aims to provide people with government services that are reliable, timely, accurate, and cost-effective [12]. According to Zhiyuang, this will improve the city's government services' results [13]. Thus, Middleton asserts, the use of cutting-edge information technology is crucial to e-success governments or failure [14].

Tamara continued by emphasizing that e-government is a continuous and gradual process. Each government will approach e-government differently, beginning with electronic mail (e-mail) and

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[8] Zhiyuang Fang, *e-Goverment in digital era : concept, practice and development*, 10 INT. J. COMPUT. INTERNET MANAG. 1–22 (2002).

[9] Paul T. Jaeger & Kim M. Thompson, *E-government around the world: Lessons, challenges, and future directions*, 20 GOV. INF. Q. 389–394 (2003).

[10] Almarabeh and AbuAli, *supra* note 6.

[11] *Id.*

[12] Fengyi Lin, Seedy S. Fofanah & Deron Liang, *Assessing citizen adoption of e-Government initiatives in Gambia: A validation of the technology acceptance model in information systems success*, 28 GOV. INF. Q. 271–279 (2011).

[13] Fang, *supra* note 8.

[14] Michael Middleton, *Approaches to Evaluation of Websites for Public Sector Services*, PROCE 279–284 (2007).

advancing to the highest stages, which include digital democracy and joint government. Today, three developed countries – the United States, Canada, and Finland – lead the world in e-government [15].

E-governance will allow direct interaction between citizens and government, engagement in policymaking, and collaboration between communities in order to participate in the democratic process. Thus, e-governance covers a much broader range of activities than e-government. In this regard, the government's choice of an online-based government concept has an impact on the technology adoption model and e-government system it develops [16].

INDONESIA'S E-GOVERNMENT ARCHITECTURE

EDDY SATRIYA STRESSED the importance of revitalizing the new e-government [concept] by taking into account the government's and society's readiness, in compliance with fundamental principles, and gradually [17]. The rapid advancements in information technology, global problems, and societal conditions all contribute to the critical nature of e-government revitalization. According to this, there are three stages in the development of e-government services in Indonesia [18]:

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[15] Almarabeh and AbuAli, *supra* note 6.

[16] Fengyi Lin et al., *A general framework for E-government: Definition maturity challenges, opportunities, and success*, 28 GOV. INF. Q. 271–279 (2010).

[17] Eddy Satriya, *Pentingnya Revitalisasi E-Government di Indonesia*, *in* PROSIDING KONFERENSI NASIONAL TEKNOLOGI INFORMASI & KOMUNIKASI UNTUK INDONESIA 3-4 MEI 2006, AULA BARAT & TIMUR INSTITUT TEKNOLOGI BANDUNG 38 38–43 (2006).

[18] Djunaedi, *supra* note 3.

a. Phase I: Information dissemination for the benefit of individuals and companies (via the web/internet) often enables two-way communication.

b. Phase II: An intranet program allows data to be collected (online), processed, and disseminated in a more efficient manner (to increase efficiency); although certain service delivery processes remain offline, the public may monitor performance online.

c. Stage III: With the use of an extranet, people can complete application forms electronically (via the internet).

Zainal Arifin Hasibuan proposed that the e-government stages be implemented in three phases: in the short term, by compiling technical guidance and a general e-government structure, including the e-government competency standard book, and disseminating them; in the medium term, by implementing the e-government competency standard book; and in the long term, by implementing the e-government competency standard book. Additionally, the guidebook and technical guidelines outline a method for running e-government in the medium term [19]. Meanwhile, it will continue to operate the e-government services outlined in the manual in the long run. In line with this ideas, Parmita Saha et al. emphasized the importance of a solid theoretical foundation for evaluating cost-effectiveness, facilities, and government performance, as well as public satisfaction with government services provided through the e-government system [20].

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[19] Hasibuan, *supra* note 4.

[20] Parmita Saha, Atanu Nath & Esmail Salehi-Sangari, *Success of government e-service delivery: Does satisfaction matter?*, 6228 LNCS LECT. NOTES COMPUT. SCI. (INCLUDING SUBSER. LECT. NOTES ARTIF. INTELL. LECT. NOTES BIOINFORMATICS) 204–215 (2010).

Meanwhile, Weiling Ke dan Wei concluded from his research on the implementation of e-government in Singapore that three critical factors influence the progress of e-government, namely strong leadership with a clear vision and a well-defined mission. According to Ke and Wei, this factor is important for encouraging government stakeholders to collaborate in order to achieve the government's vision and change the mindset of government agencies toward e-government advancement. In addition, the second explanation for Singapore's e-government progress is that the government must close the technological infrastructure gap [between stakeholders and society]. As a result, the government provides specialized computer education to stakeholders and the general public in order to foster technological literacy and an understanding of e-government. The strong political will to provide services [online] to the populace through an orderly coordination mechanism is the final factor driving the Singapore government's progress toward e-government implementation [21].

INDONESIA'S ROADMAP TO E-GOVERNMENT

IN 2001, INDONESIA started implementing e-government with the publication of Presidential Instruction No. 6 of 2001 on the Creation and Use of Telematics in Indonesia. The government is investing heavily in telecommunications, media, and information technology (telematics). Why is the government concentrating its efforts on these three points?. The government anticipates that these three measures would have an impact on society's attitude and perspective when it

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[21] Weiling Ke & Kwok Kee Wei, *Successful e-government in Singapore*, 47 COMMUN. ACM 95–99 (2004).

comes to various activities based on the ease and speed at which information can be shared. According to the government, this situation represents an opportunity to use this capital to unite the country and inspire the populace in order to achieve long-term national growth success.

The legislation strategy of President Abdurrahman Wahid for the advancement of telematics laid the foundation for e-government. The strategy emphasized two critical points: information technology would eventually alter society's culture by facilitating faster and easier social interactions. Additionally, the presence of information technology must be used for two purposes: to strengthen national unity and integrity, and to inspire the broader society.

After President Abdurrahman Wahid resigned and was succeeded by Megawati Soekarno Putri two years later, the telematics policy was continued. President Megawati demonstrated her commitment to the advancement of telematics in Indonesia by forming the Indonesian Telematics Coordination Team through Presidential Decree No. 9 of 2003. This Presidential Decree (Keppres) issued in January 2003 established a more precise purpose for its use, namely to promote various government, industry, and social activities, as well as to boost the nation's competitiveness. To accomplish these goals, it is critical to create a common perception and direction for the development of telematics in Indonesia. Additionally, the government, industry, and society must work collaboratively to develop and incorporate telematics. Without a question, the President was named as the team's chief sponsor, alongside the Chief Executive of the State Minister for Communication and Information and six ministers and state secretaries.

The Indonesian Telematics Coordination Team's primary tasks are as follows:

1. provide direction and insight into the development of national telecommunications policies;
2. advancing human resource growth, manufacturing, and the use of telematics in Indonesia;
3. stimulating economic growth by the and promoting public participation in the development and deployment of telematics technology;
4. strengthen collaboration among all Central and Regional Government agencies, State and Regional Government-Owned Enterprises, and the private sector. Professional associations and the telematics sector, as well as the broader community interested in telematics use and advancement

To smooth out the main agenda for telematics development, the Coordination Team enlisted community participation through the Working Group charged with developing Indonesian Telematics technical specifications. The Chair of the Working Group is empowered to hire members from a range of related backgrounds, including experts [telematics], analysts [telematics], the business community, educational organizations, universities, the telematics culture, and society [elements].

The Indonesian Telematics Coordination Team's concrete actions became evident five months after Presidential Decree No. 9 of 2003, which established the National Policy and Strategy for E-Government Development as outlined in Presidential Instruction No. 3 of 2003, which was enacted in June 2003. This Presidential Instruction demonstrates how information technology can be used to increase government efficiency, effectiveness, transparency, and accountability.

Advances in information technology prompted the establishment of e-government in 2003. At the time, the government separated these changes into two categories: public services and

distribution of goods and services to improve people's lives by making them more convenient, cheaper, faster, more secure, transparent, and accountable. The following provides a more detailed explanation of the two demands for group reform made against the government through information technology:

a. the public expects public services to be responsive to the needs of a wider community in all rural areas, to be dependable and trustworthy, and to be interactively available.

b. since the public requires that their expectations be fulfilled, the government must foster public participation and discussion in the formulation of state policies.

The requirements for service enhancement emphasize two critical points: basic and digital facilities. The other possibility is that there is a social demand for a room where public desires can be channeled directly to the government, bypassing traditional bureaucracy. The Ministry of Communication and Telecommunications reaffirmed its commitment to e-government implementation in compliance with Presidential Instruction No. 3 of 2003. As the face of government, they are compiling a Blueprint for E-Government Application Systems for Regional Government Agencies, Indonesia's leading area of e-government. The Blueprint is focused on adaptability and standardization principles. These two principles decouple the Blueprint from the local government's internal framework, making it more resistant to policy changes while still encouraging local councils to adapt and translate it. In other words, this Blueprint enables local governments to develop their own e-government systems as long as they adhere to the guidelines established by the central government.[22]

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[22] Departemen Komunikasi dan Informatika RI, Cetak Biru (Blueptint) Sistem Aplikasi E-Government bagi Lembaga Pemerintah Daerah (2016).

The Blueprint specifies six interconnected phases for the e-Government architectural framework, namely:

a. Internet use

b. Use of Telematics Infrastructure

c. Use of Application Systems

d. Metadata Standardization

e. Electronic Data Transactions and Exchange, and

f. Electronic documentation system

According to the e-government Blueprint, at least four government functions must be automated, including the following:

a. Society service

b. Staffing

c. Regional Finance, and

d. Asset Management.

The concept-based categorization of government functions framework. Government functions framework. It is a framework that specifies how government functions are organized around common functional blocks. Six general basic function blocks comprise this structure: service, administration and management, legislation, manufacturing, finance, and employment. Population, taxation and punishment, registration and licensing, business and investment, public complaints, and dissemination of public and governance information are the basic service function blocks. Additionally, the primary administrative and management task blocks include electronic mail, electronic document systems, decision support systems, collaboration and cooperation, and management of government reporting [23]. According to the Blueprint, e-Government has the potential to transform government functions in five ways[24]:

a. Change in work culture

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[23] Yunita and Aprianto, *supra* note 1.

[24] DEPARTEMEN KOMUNIKASI DAN INFORMATIKA RI, *supra* note 22.

b. Change in business process
c. Standard Operational Procedure (SOP) and Political Policy
d. Rules and Regulations
e. Leadership

According to Presidential Instruction No. 3 of 2003, there are four phases in the implementation of e-Government: the first (preparation), the second (maturation), the third (consolidation), and the fourth (expansion or utilization). According to the Blueprint, each stage's implementation should provide concrete and achievable targets that both stakeholders will recognize and obey. The higher a Local Government's level of e-Government, the more complex management system support, work processes, and information transfers between agencies are required. As a result, according to the Blueprint, [every] attempt to lift the level without sufficient support is doomed to fail [25].

The Blueprint reorganized e-Government application solutions within the previous government function block, in the context of e-technical Government's implementation. The matrix approach to grouping service functions according to their orientation and the nature of the application system's meaning. Using this definition as a starting point, the Blueprint divides the application process into three (three) categories:

1. the application framework community whose primary objective is to offer direct services to its customers (front office applications).
2. the application framework community whose primary objective is to administer government and perform official and administrative functions (back-office applications).

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[25] *Id.*

3. for a primary and broad category of application systems, a more specific application system is needed. The bulk of essential application services are classified as back-office.

Each of these structures is further classified into three subgroups according to the user orientation it represents:

1. the category of e-Government application frameworks whose functionality focus is oriented towards the needs and desires of the society (G2C: Government to Citizen)
2. a collection of e-Government application frameworks designed to meet the business community's needs and desires (G2B: Government to Business)
3. a collection of electronic government application systems that serve the internal requirements of government agencies or the requirements of other local governments (G2G: Government to Government)

LOCAL GOVERNMENT E-GOVERNMENT CHALLENGES

THE 2018 LAW ON E-GOVERNMENT allows local governments to move from traditional to electronic government. This is meant to streamline the service delivery process while also increasing public participation. Additionally, it is hoped that e-government would eliminate corruption within the government bureaucracy. However, implementation of e-government by local governments has been slow so far. For instance, using Semarang City as the capital of Central Java Province as a case study reveals the city's latent e-government adoption problems.

According to Arif Budiman, Head of Semarang City E-Government Services, the implementation of e-government in Local

Government, especially in Semarang City Government, is classified according to a stage known as the e-government maturity model. The Semarang City Government initially developed a leading website as a means of maintaining an online presence that provides valuable information to the public and stakeholders in need. The following stage is interaction, during which the Semarang City Government's website and associated applications solicit feedback from other stakeholders and facilitate data and information sharing. Transparency of information, as required by the Public Information Disclosure Law, and involvement or collaboration of stakeholders in brainstorming services and development in Semarang City through applications on the newly created website. The following stage is a transaction, during which the exchange of data, financial transactions, and taxes is facilitated by essential public interoperability technologies such as web services, and data sharing that enable integration with multiple applications. Simultaneously, for instance, through the integration of online attendance programs with employee health systems and other applications. The subsequent stage is a hybrid of the first and final stages, enabling collaboration across all lines and stakeholders, and emphasizing the importance of open data and shared data in delivering a more optimal service to the community.

The Semarang City Government has thus far only reached the collaboration stage, which encompasses all lines ranging from online presence or informative stage to transactional stage. The slow pace of e-government development in Semarang City can be attributed to two factors: each Regional Apparatus Organization's (OPD) sectoral ego and the discontinuity of commitment to e-government advancement due to leadership changes. According to David Gichoya, these difficulties are present in a large number of E-Government projects, including those in Kenya. David discussed some of the obstacles to

implementing e-Government in greater detail, including infrastructure, funding, inadequate data systems and lack of accessibility, technical staff, leadership styles, culture, bureaucracy, and attitude [26].

The acute challenge facing Semarang City's Regional Government in advancing e-Government is sectoral ego, which some experts say is a "latent" disease in Regional Government [27]. The sectoral ego is marked by a strong sense of autonomy in the execution of development programs and a reluctance to collaborate with other departments [28]. This sectoral ego is impeding development by refusing to conform or be collectively supervised [29]. It will foster an unhealthy competitive spirit amongst sectors inside a government bureaucratic system rife with sectoral egos. In comparison to other industries, one sector seems insignificant. As a result, the government has incurred considerable waste in financing the Regional Government's information technology system, which, while achieving 65 percent utilization through SPBE, is not integrated [30]. Additionally, as a result of this situation, major disconnects in vision and mission existed between agencies. As a result, Hadinagoro

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[26] David Gichoya, *Successful implementation of ICT projects in government*, 3 PROC. EUR. CONF. E-GOVERNMENT, ECEG 171–182 (2005).

[27] Erwin Rasyid et al., *Jaringan komunikasi dalam pengelolaan perencanaan program penanggulangan kemiskinan di Provinsi Sulawesi Barat*, 7 J. KAJI. KOMUN. 133 (2019).

[28] Yohanes Museng Ola Buluamang & Leope Pinnega Handika, *Komunikasi Pemerintahan Antar Perangkat Daerah di Provinsi Nusa Tenggara Timur (NTT)*, 21 J. PENELIT. KOMUN. 57–72 (2018).

[29] Richardus Eko Indrajit, *Evolusi Strategis Integrasi Sistem Informasi Ragam Institusi: Kiat Memecahkan Permasalahan Politis dalam Kerangka Manajemen Perubahan*, in PROSIDING KONFERENSI NASIONAL TEKNOLOGI INFORMASI & KOMUNIKASI UNTUK INDONESIA 98–101 (2006).

[30] Wisber Wiryanto & Muhammad Ma'ruf Afif, *Akuntabilitas layanan publik mel alui penerapan sistem pemerintahan berbasis elektronik* 63–77 (2003).

proposed a new method of managing the government known as whole-of-government management[31]:

> "A policy that unifies the actions of a government's departments and agencies in pursuit of a shared goal. Another term for it is the interagency method. The phrases "unity of effort" and "unity of goal" are often used interchangeably to refer to collaboration between all participants, both government and non-government."

All organizations embrace the following values in this strategy: collaboration, togetherness, unity, common goals, and the participation of all participants at all levels of government. Technically, the key to successful e-Government implementation is a single policy for everyone based on these principles. As a development of the New Public Management (NPM) strategy of establishing sectoral egos, whole of Government (WoG) emphasizes the importance of unifying all facets of government [32].

This situation is empirically observed on a national scale, as shown by the results of the Ministry of Administrative Reform and Bureaucratic Reform's (KEMENPAN) 2019 evaluation of the implementation of the Electronic Based Government System (SPBE, here and after):

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[31] Suharyono S. Hadinagoro, *Reduksi Ego Sektoral dan Perkuat Sinergi Demi Produktivitas Nasional*, PERPUSTAKAAN NASIONAL REPUBLIK INDONESIA (2020).

[32] A. Evangelidis et al., *Risk assessment & success factors for e-government in a uk establishment*, 2456 LECT. NOTES COMPUT. SCI. (INCLUDING SUBSER. LECT. NOTES ARTIF. INTELL. LECT. NOTES BIOINFORMATICS) 395–402 (2002); Jörg Becker et al., *e-Government Success Factors* 503–504 (2004); Ke and Wei, *supra* note 21; Gichoya, *supra* note 26.

TABLE 1. KEMENPAN Evaluation of E-Government 2019

Province	Scale			
	Very Good	Good	Good Enough	Not so Good
Province of Central Java	■			
Riau Province	■			
North Sumatra Province		■		
West Sumatra Province		■		
West Java Province		■		
DIY Province		■		
East Java Province		■		
East Kalimantan Province		■		
South Kalimantan Province		■		
South Sulawesi Province		■		
Bengkulu Province			■	
Lampung Province			■	
Banten Province			■	
West Kalimantan Province			■	
East Nusa Tenggara Province			■	
Maluku Province			■	
Jambi Province				■
North Kalimantan Province				■
West Sulawesi Province				■

Source: KEMENPAN, 2019

Along with the few provinces that had their respective scores, the provinces that were not reported "expressed reluctance" to announce their SPBE achievement ratings. It is a cause for concern that some regions of the province are opposed to releasing the SPBE evaluation results. Transparency is the primary condition for electronic governance. On the other hand, this fact raises questions about the central government's stance, which is unable to "coerce" regions into transparently publishing their SPBE data. According to Arief Budiman, e-government implementation in local government is

self-sustaining. The central government's strategic initiative phases, on the other hand, show that the government is not self-sufficient—regions in establishing their e-government systems.

Local Government SPBE architecture development starts in 2020-2021, immediately following the completion of the Central Government SPBE architecture in 2018-2020. The Regional Government SPBE coordination unit, on the other hand, started in 2018-2019 and will continue to improve and review policies annually until 2025. Meanwhile, SPBE Human Resources is strengthening public servants' capacity to handle the SPBE. Among the policy advantages introduced was the application of human resource professional competency standards to SPBE requirements. Following the functional status of SPBE, an appropriate remuneration plan is introduced, as is advanced planning for SPBE human resources.

According to Ndou, the human resource component of e-Government is a hot topic in developing countries. Human resources for e-government are required to combine commercial and management processes with technology systems.[33] Additionally, technical capability is necessary for installing, managing, designing, and implementing information, communication, and technology infrastructure. As a result, human resources in this field must constantly update their knowledge through seminars, conferences, and training. The government's strategic initiatives in the SPBE human resources sector align with the solutions suggested in Table 2.[34] The imbalance between decision-makers and E-Government is being addressed at the monthly meeting in order to level the playing

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[33] Valentina (Dardha) Ndou, *E-Government for Developing Countries: Opportunities and Challenges*, 18 EJISDC 1–24 (2004).

[34] Almarabeh and AbuAli, *supra* note 6.

field. Additionally, this strategic plan includes remuneration or special benefits. [35]

The problem with SPBE's implementation in Indonesia is a matter of regulatory impediments. According to Arief Budiman, Semarang City believes it retains control in developing SPBE. The primary impediment is the conflict between sectoral egos and policy discontinuity. The problem map proposed by Almarabeh and Abu Ali is deserving of consideration. Due to the high probability that the usage of technology, networking, and telecommunications in SPBE would conflict with the existing legal system, this conflict could be the most important impediment to e-government implementation. As a result, Almarabeh and Abu Ali suggested a comprehensive analysis of current laws, as well as the creation of new ones that are simpler and encourage e-government activity, such as granting legal status to the publication of government information. The government has invited Law 14 of 2018 on Freedom of Information in this regard. This law establishes a democratic right to access information, empowering the public to influence government administration [36].

TABLE 2 e-Government Problems and Solutions

	Problems	Solutions
Human Resources	Human resources must be structured and managed with E-government goals in mind. A well-trained and motivated workforce is critical to E-government success.	• Articulate a timeline for implementation in a step-by-step manner so the reforms will not seem overwhelming to the bureaucracy. • Hold regular meetings between E-government policy leaders and the affected workforce, so

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[35] Lin, Fofanah, and Liang, *supra* note 12.

[36] Almarabeh and AbuAli, *supra* note 6.

		• employees are active participants. • Create incentives by rewarding individuals and agencies that apply the reforms rapidly
Law and Policy	The application of Information Technology and Communication (ICT) to government may encounter legal or policy barriers. Legislatures must ensure that laws are updated to recognize electronic documents and transactions. Policymakers implementing E-government must consider the impact of law and public policy.	• Consult with stakeholders to assess how existing laws may impede the desired results. • Give legal status to the online publication of government information. • Clarify laws and regulations to allow electronic filings with government agencies. • Reform processes by simplifying regulations and procedures.

According to the report by the Ministry of State Apparatus Empowerment and Administrative Reform, it also highlights the issue of SPBE resource disparities between regions in Indonesia during the 2019 period. The word "*capital gap*" applies to all aspects of implementing e-Government, including human resources, the internet, regulation, and finance. These four factors work in concert to advance e-Government. The aim of these four tools' estuary is to provide the city with satisfactory services. Four factors will affect public satisfaction with e-Government services: quality (time and cost), anonymity, responsiveness, and website services [37].

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[37] Saha, Nath, and Salehi-Sangari, *supra* note 20.

CONCLUSION

THE SECOND STAGE of the roadmap for the establishment of e-government in Indonesia has been completed, namely the integration of the government system as a database in the e-government implementation. Data sharing is critical for the advancement of e-government because it enables true speed and ease of operation for the public. The Local government's primary impediment at the moment is the traditional bureaucratic mentality, which is still deeply embedded in its sectoral ego. Each agency competes to demonstrate its effectiveness by disparaging the performance of competitors. Individualism and a lack of coordination have hindered the pace of local government adoption of e-government. Another impediment is the e-government leadership's inconsistency. When positions are rotated, what was expected by previous officials is still overlooked by new officials with fresh perspectives. This is undoubtedly a distinct obstacle for regional technologists implementing e-government architecture.

Meanwhile, the impact of e-government on Local Government performance appears to be generally positive, especially in four areas: Human Resources, Time, Budget, and Costs. From the viewpoint of local government, these four industries are clear in terms of efficiency and efficacy, both in terms of employment, infrastructure, and assurance. Meanwhile, residents are generally satisfied with the pace and ease with which local governments respond to community needs. This situation becomes a distinct credit for the government in order to re-establish public confidence in government services that were previously regarded negatively due to slow response times, lengthy processes, and high costs.

A regulatory framework that explicitly supports the requirements of e-Government technology is required—efforts to reform the current bureaucratic order around a single vision, namely one of shared development. Additionally, it is critical to continually enhance human resource capacity through relevant training items in order to support e-government. Meanwhile, comprehensive and ongoing socialization is needed to increase government-population interaction.

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