



# Digital Governance Strategy to Realize Adaptive, Agile, and Fluid Government in the Provincial Government of West Java

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**Abstract.** The Industrial Revolution 4.0 with technological advances has disrupted various strategic environments in human life. Likewise, governance must reposition itself so as not to be out of date in responding to public demands. This study aims to analyze the digital government strategy carried out by the Provincial Government of West Java to create an adaptive, agile, and fluid government. This research uses a qualitative method, with a descriptive approach to understanding in depth the problems in the embodiment of digital government. Data collection techniques were carried out through interviews, document reviews, and observation. The results of the research show that the West Java provincial government has endeavored to provide support for the realization of digital government through capacity building to create public values.

**Keywords:** Digital Governance · Government · Industrial Revolution 4.0

## 1 Introduction

The Industrial Revolution 4.0 has disrupted almost all aspects of life. This also requires the government to be responsive in dealing with rapid changes. The existence of the Industrial Revolution 4.0 has also greatly influenced the organizational relationships of human work as stated by Klaus Schwab, an expert on world economic policy [1]. Schwab's argument states that the 4.0 revolution has brought speed, breadth, and depth of systematic impact on countries, societies, industries, and companies. The Industrial Revolution 4.0 also introduced all-digital work system procedures that have been used in various parts of the world. Online work systems, economic sharing, data integration, and the use of technological application systems and the like have changed the behavior of government services.

Governance through the existing bureaucracy must reposition itself so that it does not become obsolete in responding to public demands. The digital governance strategy is expected to be able to encourage the government to be more adaptive, agile, and fluid, which is a necessity that cannot be negotiated [2].

This has increasingly had strategic value in dealing with the condition of Indonesia which is still struggling with the Covid-19 pandemic. Bureaucratic reform through

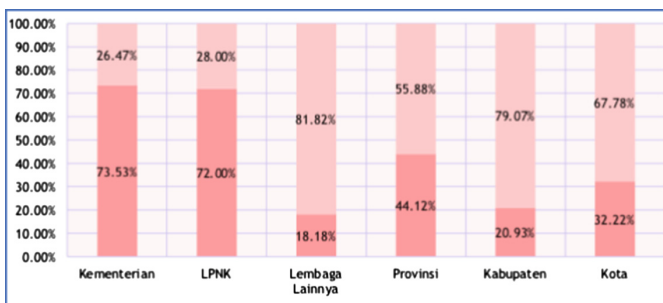
improving digital governance is the answer to achieving the goal of increasing the nation's competitiveness with a competitive culture by creating a more adaptive, agile, and fluid organizational ecosystem [3].

The transformation of governance becomes important because the bureaucracy is still not relevant to the 4.0 revolution, where the bureaucracy is still confined by rigid things due to the application of regulations, procedures, hierarchies, and controls as the basis for Weberian bureaucracy [4]. The Weberian bureaucratic model which is hierarchical and concentrated, with the power to make decisions lying with the top leadership also often makes the decision-making process slow. Experts say that this is often referred to as a time lag or decision-making delay.

The acceleration of digital governance transformation is strengthened by Presidential Decree No. 95 of 2018 concerning Electronic-Based Government Systems. The implementation of an electronic-based government system aims to realize clean, effective, transparent, and accountable governance, as well as realize the quality and reliable public services. To guarantee the implementation of an electronic-based government system, the Ministry of Administrative Reform and Bureaucratic Reform as the Coordinator of the Electronic-Based Government System Team conducts an assessment of the maturity level of government agencies by referring to four important elements, namely internal policies, governance, management, and services. From the results of the 2021 evaluation, nationally only 159 (30.75%) central/regional government agencies have met the Electronic-Based Governance System index target with "Good" results and above, but there are still 361 (69.25%) that have not met the target according to expectations of integrated implementation [5].

Figure 1 shows the National Electronic-Based Government System Index Value Distribution for 2021.

Based on the data in Fig. 1, it can be seen that currently, central/regional government agencies have different adaptation levels and capacities in implementing SPBE. This also illustrates the efforts of central/regional government agencies in Indonesia in realizing digital governance. Based on the percentage of provincial government index values, the largest proportion is still in the category below goods. Various challenges



**Fig. 1.** Distribution of index values for electronic-based government systems in 517 government agencies.

**Table 1.** Research informant.

No	Informant	Chair
1.	Office of Communication and Information of West Java Province	Head of E-Government
2.	Jabar Digital Service	Digital Village Product Manager

certainly arise considering that the Provincial level has a big task to carry out equal distribution of preparedness in various regions, both Regencies/Cities which have various characteristics.

One of the provinces that has a good index is West Java Province. West Java Province has succeeded in obtaining a Good index level in 2020 because it has fulfilled various indicators. Various digital-based flagship programs have been created and implemented on an ongoing basis. This success indicates that what the government is doing in digital governance and digital services to the community has been well received by the community. This achievement certainly has the support of various parties. As explained in a study conducted by the Harvard JFK School of Government on the elements of successful e-government implementation. To apply digitalization concepts to the public sector, three elements of success must be owned and taken seriously. Each of these success elements is support, capacity, and value [6]. So this research seeks to describe the progress of the transformation of digital governance in the Province of West Java in terms of the successful elements of e-government implementation, namely support, capacity and value.

## 2 Research Method

This type of research is descriptive research using qualitative methods. Qualitative methods were used in this study to identify and describe the concrete conditions of the research object and then produce a description of the research object so that it can assist researchers in identifying efforts to realize digital governance in West Java Province.

Data collection techniques were carried out in 3 ways, namely interviews, document review, and observation. Meanwhile, the data analysis technique in this study used the Milles and Huberman model, which consisted of 4 steps, namely data collection, data reduction, data presentation, and conclusion. The informants in this study are shown in Table 1.

## 3 Research Findings and Discussions

To answer the purpose of the research, namely to find out the strategy carried out by the West Java Provincial Government regarding digital governance, will use a framework according to Indrayani [6] namely support, capacity and value. This will be described below:

### 3.1 Support

To support the realization of the West Java Provincial government in implementing digital governance, there are supporting factors, one of which is the leading factor of the regional head. The Governor of West Java has a desire that West Java can become a digital province. This is in line with the big challenges that come along with advances in information technology. Efforts to utilize technology in government are included in the superior program of West Java Champion 2018–2023 to create a good governance system so that it can encourage the regional economy.

The West Java provincial government's commitment is then poured into West Java Governor Regulation Number 161 of 2022 concerning the Implementation of Electronic-Based Government Systems within the Regional Government of West Java Province which replaces West Java Governor Regulation Number 86 of 2018 concerning Governance of Electronic-Based Government Systems. At the implementation level, in July 2019 a Regional Technical Implementation Unit for Geospatial Digital, Data and Information Services or better known as the Jabar Digital Service (JDS) was formed and became a unit under the Office of Communication and Informatics, West Java Province.

The existence of the Jabar Digital Service (JDS) is another proof that shows the commitment of the West Java Provincial Government to support West Java as a digital province. Jabar Digital Service (JDS) encourages the provision of data and technology to support services and public policy making. This was done with the main focus on three things, namely: 1) government digital transformation; 2) data for decision support systems; 3) Improving citizens' digital experience [7].

Transforming to digital is not only about how to present services online but has a broader scope including how to increase government capacity in utilizing digital technology to improve performance. In supporting digital governance, in 2021 an institution for the Acceleration and Expansion of Regional Digitalization has been established. This institution socializes the importance of digitalization in the administration of regional government. In addition, based on information submitted by the Head of the E-Government Division of the Communication and Informatics Service, West Java Province, what West Java Province is doing to support the digital government is to build Penta-helix collaborations, including with academia, business, community, and media. Meanwhile, to ensure the progress of digital governance while at the same time evaluating its implementation, the Governor of West Java also formed a Team for Compiling a Study Evaluation of the Implementation and Optimization Strategy for Electronic-Based Government System Policies as outlined in the Decree of the Governor of West Java Number 048.05/Kep.593-BP2D /2022.

Another focus related to digital governance is on providing data to support policy-making. Until 2018, the exchange of information and coordination between the provincial and district/city governments had not been integrated so it became a challenge in the decision-making process. This encourages the emergence of the West Java Data Ecosystem as a form of responsibility in data-based policy making. Data is "ammunition" in policy making so that accurate data can produce the right policies. Through the West Java Data Ecosystem, now a lot of data in West Java can be more easily accessed by anyone through an integrated data portal.

Then, other things are also pursued to support increased public access to digital services. In 2019, the Jabar Command Center (JCC) began to be built to increase community access. The Jabar Command Center functions as a command room equipped with various dashboards and connected systems, such as the Sapawarga Dashboard, the Open Data Dashboard, and the Pikobar Dashboard, as well as internal applications for communications and information services in districts/cities that are incorporated in one Interactive System Control application.

Thus, efforts have been made to support the realization of digital government in West Java. This also cannot be separated from the momentum of the Covid-19 pandemic which has become an effective driver of innovation. The Provincial Government of West Java is trying to respond to challenges in a new way, even though the process requires continuous improvement and the role of many parties. Therefore, the challenge going forward is how the support provided can effectively encourage the realization of digital governance, while at the same time having relevance to the needs of society.

### 3.2 Capacity

Capacity is the ability or empowerment of the local government in realizing the goals of realizing digital governance. Three things must be owned by the government, namely:

- a. Availability of budget to implement various digital governance initiatives. Regional Revenue is the right of the Regional Government which is recognized as an addition to the value of regional net worth. Table 2 is a table of regional income for West Java Province and its realization.

The West Java Provincial Government is committed to realizing West Java as a digital province so it needs budget support. The challenge is how to make this issue a priority when there are many other important issues.

- b. The availability of adequate infrastructure is 50% of the key to realizing digital governance. As previously stated, West Java Province has the Jabar Digital Service (JDS) as an effort to accelerate the realization of West Java as a digital province. Jabar Digital Service (JDS) is also making improvements related to the provision of public services through the launch of the Sapawarga application as Jabar Super-Apps and the Jabarprov.go.id portal which provides new and better experiences in accessing information and public services for citizens. Society began to feel the benefits of the presence of technology. A total of 2,248 villages have joined the Digital Village program and 2,741 young people in West Java have become beneficiaries of coding scholarships from the Candradimuka West Java Coding Camp Program. In addition, through the West Java Data Ecosystem, the public can explore as many as 13,985 data sets collected in West Java Open Data to help the government produce more measurable policies.
- c. Availability of human resources who have competence and expertise so that the implementation of digital governance can be following the principle of expected benefits. From 2019 to 2022, the West Java Provincial Government has DigiTeam, which is growing rapidly. Every year, the enthusiasm of young people to join Jabar Digital Services (JDS) has increased significantly. Currently, there are 163 DigiTeam who have joined as technical staff in collaboration with the State Civil Apparatus. This is

**Table 2.** Regional income and realization.

No.	Regional Income	Budget	Realization	
			Rp	%
1.	Locally-generated revenue	19.553.536.343.937,00	20.333.679.966.126,39	103,99
2.	Balancing Fund	16.528.606.182.182,00	16.606.086.315.554,00	100,47
3.	Others Legitimate income	40.889.133.929,00	52.106.943.251,00	127,43
Amount		36.123.031.659.994,00	36.991.873.224.931,39	102,41

Source: Local Government Financial Reports of Jawa Barat Province, 2021

understandable because building a digital province requires not only technical skills but also a digital mindset. This mindset is mostly found in the younger generation, how to look for opportunities to utilize data and technology to achieve a better quality of life.

### 3.3 Value

The implementation of digital governance is one of them determined by Value. The value of the successful element of implementing digital government is a manifestation of the benefits of various digital services, applications, and systems provided by the government. The utilization of government technology aims to improve the quality of public services and facilitate the delivery of information to the public. To achieve the benefits of digital-based services evenly in the community, of course, there are various challenges. The government hopes that all people, both in urban and rural areas and even remote areas, can enjoy the various sophistication and conveniences offered by the government to achieve good public services. However, today's conditions show that not all people are aware of the benefits they receive when using digital-based services offered by the government. Therefore the West Java Provincial government has implemented several digital-based programs aimed at the community such as strengthening digital literacy for the community, optimizing the use of one-stop digital service applications for greetings, and increasing community capacity through the Jabar Coding Camp.

First, organizing digital literacy. West Java digital literacy is a program organized to strengthen people's abilities and awareness of using digital services. This digital literacy is one of the stages of digital village acceleration after strengthening infrastructure. This digital literacy looks at the extent of public awareness of to use of technology in services provided by the government. To make this happen, not only the ability to access the internet is needed, but also how people can adapt and take advantage of this sophistication effectively. The Provincial Government of West Java, in this case, has carried out various activities related to digital literacy in the form of assistance, such as socializing the safe use of social media in the context of fighting hoaxes in 2021. This activity was carried out together with the Development Planning Agency and the Office for Community and Village Empowerment.

**Table 3.** West java digital literacy activities.

No.	Literacy Activities	Participant
1.	Digital Technology Adaptation Literacy	177 Villages
2.	ToT Digital Literacy	77 Villages
3.	“Desa Cakap Bermedia”	16 Villages
4.	Digital Village Capacity Building	45 Villages

Source: Annual Report JDS, 2022

From the Table 3 of digital literacy activities, it can be seen that the Provincial Government of West Java has attempted to organize various digital literacy programs in village stages. For adaptation literacy activities where the main goal is to increase awareness, it is the activity with the most participation, namely 177 villages. The success of this digital literacy program is in line with the capital already owned by West Java Province where most of the people are people who actively use the internet. Based on data from the Association of Indonesian internet service providers for 2020, out of 196.7 million internet users in Indonesia, West Java Province is in the highest position with a total of 35.1 million users. (Source: Association of Indonesian Internet Service Providers, 2020). This supports the achievement targets of developing and increasing the capacity of a culture of safe use of technology.

Second, optimizing the use of the Sapawarga application. Digital-based services have the aim of providing convenience to the community. The government is required to carry out various innovations in developing applications where people can use integrated applications. In 2019 the West Java provincial government released the Sapawarga application, which is an android-based application that includes several features such as motor vehicle tax information, job vacancy information, health information, information about activities, and so on. This application provides a participation feature for the Head of the “Rukun Warga” in submitting provincial assistance programs. The head of “Rukun Warga” was chosen as the initial user because he has the responsibility to provide information and to act as a liaison between the government and the surrounding community. The head of the “Rukun Warga” can share updated moments of activity on this application. Table 4 shows the Sapawarga usage activity data.

Based on data on the use of the sapawarga application, it can be seen that sapawarga users, in this case, the Head of the “Rukun Warga”, have been able to adapt to the sapawarga application, this can be seen from participating in registering for the sapawarga

**Table 4.** Sapawarga usage activity.

No	Literacy Activities	Information
1.	Activities Posts 2020–2022	325.282 Posts
2.	Sapawarga “Rukun Warga” users	39.534 Account
3.	Active use of the application 2022	10.792 Account

application. However, only 10,792 active account users are active in 2022. This means that the sustainability of this application has only reached 27.29%. The achievement of user expansion is a new challenge for the West Java provincial government so that the continued use of *sapawarga* can be carried out evenly throughout all regions in West Java.

Third, community capacity building through the West Java Coding Camp. Jabar Coding Camp is a program designed to produce competent programmers who are ready to work in international-scale industries. Many people from districts/cities in the West Java region participated in this program, such as Bandung City, Bandung Regency, West Bandung Regency, Bogor Regency, and Garut Regency. This program has been running since 2021 and consists of 3 batches. The batch I produced 361 graduates, Batch II produced 386 graduates and Batch III produced 705 graduates [7].

These three programs are part of the implementation of the West Java Digital Village. In terms of the benefits of this digital village, it has contributed to beneficiaries, namely to 1904 beneficiary villages, and 31 beneficiary partners. In 2021 the effort to expand thematic villages has succeeded in adding 2 themes, namely animal husbandry and waste management. Villagers in West Java are slowly starting to feel the benefits of the presence of technology. Out of a total of 5,312 villages in West Java, 2248 villages have joined the digital village program. This program certainly helps ease the work of villagers. The increase in the participation of Digital Village shows that the various difficulties faced by the community in the process of changing habits from manual to digital are not big obstacles if they already understand and feel the benefits that can be obtained from the changes. This adaptation process is of course not only motivated by the emergence of the technology, but because of the increasing public trust in the government. As explained by Warkentin [8] that, the factor of trust (trust) is one of the factors that encourage the adoption of e-Government.

## 4 Conclusion

Digital transformation has its challenges for both central and regional governments. West Java Province can respond to existing challenges by making various efforts to improve digital governance. Referring to the successful elements of implementing e-government, West Java Province has achieved improvements in terms of digital government governance and acceptance in society. In terms of support, the commitment of leaders is the key to the success of e-government in the regions. Leaders who are committed to the development of e-government can certainly be reflected in the various regulatory reinforcements that have been produced. In terms of capacity, budgetary support, infrastructure, and digitally competent human resources also provide support for the success of e-government.

Meanwhile, values are clear evidence that everything the government does in transformation has benefits, both for the government itself, as well as for society and the business world. As realized in the digital village program, the benefits received are not only for village communities but also for private partners. The successes achieved, such as good indexes, various appreciations, and high acceptance in society are proof that the trust factor is one of the supporting factors. In the future, these achievements can



be further enhanced by taking into account the compatibility of the various programs offered with the needs of the community equally.

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