



## Analysis of e-Government-Based Public Service Innovation in Enhancing Transparency and Accountability of Local Government in East Kalimantan

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### Abstract

*This study aims to analyze the implementation of e-government-based public service innovation in enhancing transparency and accountability within local government administration in East Kalimantan. The research focuses on examining how digital public service systems contribute to improving governmental openness, administrative responsibility, and service effectiveness. This study employs a qualitative descriptive research method to obtain comprehensive insights into the implementation of e-government in local government institutions. Data were collected through interviews, observations, and documentation involving government officials, public service employees, digital system administrators, and members of society utilizing e-government services. The collected data were analyzed using the interactive model of Miles and Huberman, consisting of data reduction, data display, and conclusion drawing. The findings indicate that the implementation of e-government has significantly improved transparency by increasing public access to governmental information, service procedures, and online complaint systems. Digital platforms enable citizens to monitor governmental activities and participate more actively in evaluating public services. Furthermore, accountability has improved through electronic documentation, digital monitoring systems, and performance evaluation mechanisms that encourage greater responsibility among public officials. However, the study also identifies several challenges affecting the effectiveness of e-government implementation, including limited technological infrastructure, unequal internet access, low digital literacy, insufficient human resource capacity, organizational resistance to technological change, and incomplete system integration among government institutions. The study concludes that e-government-based public service innovation has positively contributed to strengthening good governance practices in East Kalimantan. Nevertheless, continuous improvements in infrastructure, digital literacy, institutional coordination, and organizational readiness remain essential to ensure sustainable and inclusive digital governance.*

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## Introduction

The rapid development of information and communication technology has significantly transformed various aspects of human life, including the governmental system (Khizbullin et al., 2017). Digitalization has become one of the primary strategies used by governments to improve effectiveness, efficiency, and the quality of public services. In the context of modern public administration, governments are required to provide services that are fast, transparent, accountable, and easily accessible to society. Therefore, the implementation of e-government has become an essential solution in supporting the realization of good governance (Abasilim et al., 2015).

The concept of e-government refers to the use of information and communication technology by government institutions to improve public service quality, strengthen transparency, increase public participation, and create a more effective and efficient governmental system (Waddington et al., 2019). E-government is a transformation of relationships between the government, society, businesses, and other stakeholders through the utilization of digital technology to enhance public service quality. The implementation of e-government does not merely function as an administrative digitalization tool but also serves as a strategic instrument for bureaucratic reform (Cordella et al., 2015).

In Indonesia, the development of e-government has become a national agenda continuously promoted by both central and local governments (Huda et al., 2016). The Indonesian government, through Presidential Instruction Number 3 of 2003 concerning National Policies and Strategies for e-Government Development, emphasized the importance of utilizing information technology in governmental administration. Furthermore, the implementation of the Electronic-Based Government System (SPBE) was strengthened through Presidential Regulation Number 95 of 2018 (Arey et al., 2020). These policies aim to establish a clean, effective, transparent, and accountable government through the utilization of digital technology.

The implementation of e-government in the public service sector is highly important because public service is one of the government's primary functions directly experienced by society (Aritonang, 2017). Good public service can increase public trust in government institutions. Conversely, slow, non-transparent, and complicated services can lead to public dissatisfaction and reduce the legitimacy of local governments (Mourad et al., 2016). Therefore, e-government-based public service innovation has become a strategic step in improving the quality of public services.

E-government-based public service innovation can be implemented through various forms of digital services, such as online administrative services, public information systems, public complaint applications, electronic licensing services, and regional budget transparency platforms (Ronchi, 2019). These innovations enable society to access services more quickly, easily, and efficiently without directly visiting government offices. Effective implementation of e-government can improve bureaucratic efficiency while simultaneously strengthening governmental transparency and accountability (Manenji et al., 2016).

Transparency is one of the main principles of good governance. Transparency refers to government openness in providing information to the public regarding policies, programs, budget utilization, and public service processes. Public information openness allows society to understand, supervise, and evaluate governmental performance. Transparency in the public sector is highly important to prevent corruption, collusion, and nepotism while increasing public trust in government institutions (Tsetsura et al., 2020).

In addition to transparency, accountability is also an essential element in the administration of local government. Accountability refers to the government's responsibility for policies and services provided to society. Governments are required to account for every use of public resources effectively and efficiently. Explains that public accountability is the obligation of government institutions to account for both the success

and failure of program implementation to society as the highest holder of sovereignty (Munzhedzi, 2016).

In practice, the implementation of e-government is believed to strengthen transparency and accountability within local governments. Digital-based service systems enable administrative processes to become more open, documented, and easily monitored by the public. For example, online complaint services allow citizens to submit complaints directly and monitor government follow-up actions transparently (Kusumasari, 2018). Moreover, electronic information systems can minimize maladministration and abuse of authority because all service processes are digitally recorded.

East Kalimantan Province is one of the regions continuously encouraging digital transformation in public services (Sulistya et al., 2019). As one of Indonesia's strategic regions, especially with the development of the National Capital City (IKN), East Kalimantan faces increasing demands to improve governance quality and public service performance (Febrianto et al., 2020). Local governments in East Kalimantan have begun developing various digital-based service innovations to support bureaucratic effectiveness and increase public satisfaction.

However, the implementation of e-government in regional areas still faces numerous challenges. Several common obstacles include limited technological infrastructure, low-quality human resources, lack of digital literacy among society, and the suboptimal integration of systems among government agencies (Ksatrya et al., 2019). The failure of e-government implementation in developing countries is often caused by the gap between digital system designs and the actual conditions of bureaucracy and society. In addition, resistance to organizational change also becomes an obstacle in implementing technology-based public service innovation (Parris et al., 2016).

In East Kalimantan itself, although various digital innovations have been developed, several problems in public services remain, such as unequal service access, limited internet networks in several areas, and the suboptimal use of service applications by society. These conditions indicate that the success of e-government is not only determined by the existence of technology but is also influenced by organizational readiness, human resource quality, and public participation (Keramati et al., 2018).

Based on the explanation above, research regarding e-government-based public service innovation is important to conduct, particularly in the context of improving transparency and accountability within local governments in East Kalimantan (Sijabat, 2020). This research is expected to provide an overview of e-government implementation in public services, analyze its contribution to governmental transparency and accountability, and identify various obstacles faced in its implementation (Weerakkody et al., 2015).

Besides contributing academically to the development of public administration studies, this research is also expected to serve as evaluation material and recommendations for local governments in improving digital-based public service quality. Thus, the implementation of e-government should not merely become a symbol of bureaucratic modernization but should genuinely create a transparent, accountable, effective, and community-oriented government (Dutu et al., 2017).

## **Method**

### **Research Design**

This study employs a qualitative descriptive research design to analyze e-government-based public service innovation in enhancing transparency and accountability of local government in East Kalimantan. A qualitative approach is considered appropriate because the study aims to explore and understand social phenomena related to the implementation of digital public services within government institutions. According to Creswell (2014), qualitative research is used to explore and understand the meaning individuals or groups ascribe to social or human problems. Through this approach, the researcher can gain comprehensive insights into the implementation process, effectiveness, and challenges of e-government systems in local governance.

The descriptive method is utilized to provide a systematic and factual explanation regarding the implementation of e-government in public services. This method enables the researcher to describe existing conditions objectively without manipulating variables. Therefore, the study focuses on understanding how digital-based public service innovations contribute to improving transparency and accountability within local government administration.

### **Research Location**

This research is conducted in East Kalimantan Province, Indonesia, particularly within local government institutions that implement e-government systems in public service delivery. East Kalimantan was selected as the research location because the province has become one of the strategic regions in Indonesia, especially with the development of the National Capital City (IKN). This development requires local governments to improve governance quality and public service performance through digital transformation.

The study focuses on several regional government agencies involved in digital public services, such as the Communication and Informatics Office, integrated public service offices, and other related institutions that implement e-government-based innovations.

### **Research Focus**

The focus of this research is to analyze the implementation of e-government-based public service innovation in improving transparency and accountability within local government in East Kalimantan. The study specifically examines several aspects, including the implementation of digital public services, accessibility of public information, transparency in governmental processes, accountability mechanisms in service delivery, and challenges faced during the implementation of e-government systems.

By focusing on these aspects, the research aims to provide a comprehensive understanding of the role of e-government in supporting good governance practices at the local government level.

### **Data Sources**

This research uses two types of data sources, namely primary data and secondary data. Primary data are obtained directly from informants through interviews and field observations. The primary informants consist of local government officials, public service employees, administrators of digital service systems, and members of society who utilize e-government services.

Secondary data are collected from supporting documents such as government regulations, institutional reports, policy documents, official websites, journals, books, and

previous studies related to e-government, transparency, accountability, and public service innovation. These secondary sources are used to strengthen and support the analysis of the research findings.

### **Data Collection Techniques**

Data collection in this research is conducted through interviews, observations, and documentation. Interviews are carried out using semi-structured interview guidelines to obtain detailed information from informants regarding their experiences and perspectives related to e-government implementation. This method allows flexibility during the interview process while maintaining the focus of the study.

Observation techniques are used to directly observe the implementation of digital public services within government institutions. Through observation, the researcher can understand the actual conditions of service delivery, including the use of technology, interaction between officers and service users, and operational procedures.

Documentation techniques are employed to collect written materials relevant to the research topic, including policy documents, government regulations, reports, service statistics, photographs, archives, and other official records. Documentation serves as supporting evidence to validate the research findings.

### **Research Informants**

The informants in this study are selected using purposive sampling techniques. Purposive sampling refers to the selection of participants based on specific considerations related to the objectives of the research. The selected informants are individuals who possess knowledge, experience, and involvement in the implementation of e-government systems within local government institutions.

The informants include government officials, employees responsible for digital public services, information technology administrators, and members of society who actively use digital public service platforms. The selection of these informants is intended to obtain accurate, relevant, and comprehensive information related to the research topic.

### **Data Analysis Technique**

The data collected in this study are analyzed using the interactive model proposed by Miles and Huberman (2014), which consists of data reduction, data display, and conclusion drawing or verification.

Data reduction refers to the process of selecting, simplifying, and organizing the raw data obtained from interviews, observations, and documentation. In this stage, the researcher identifies important information related to the implementation of e-government, transparency, and accountability.

Data display involves presenting the organized data in the form of descriptive narratives, tables, or charts to facilitate interpretation and understanding. This process helps the researcher identify patterns, relationships, and significant findings.

The final stage is conclusion drawing and verification. In this stage, the researcher interprets the analyzed data and formulates conclusions related to the objectives of the study. Verification is continuously conducted throughout the research process to ensure the consistency and validity of the findings.

## Validity of Data

To ensure the validity and trustworthiness of the research findings, this study employs triangulation techniques. Triangulation is conducted by comparing data obtained from different sources, methods, and informants. Source triangulation is used by comparing information from government officials, employees, and public service users.

Technique triangulation is carried out through the combination of interviews, observations, and documentation. In addition, member checking is also applied by confirming the research findings with informants to ensure that the interpretations accurately represent their perspectives and experiences.

These validation techniques are important to strengthen the credibility, reliability, and accuracy of the research findings.

## Results

### Implementation of e-Government-Based Public Service Innovation

The implementation of e-government-based public service innovation in East Kalimantan has shown significant progress in improving the effectiveness and efficiency of government services. Several local government institutions have adopted digital systems to facilitate administrative processes and public access to government services. These innovations include online licensing services, digital complaint systems, electronic document processing, and integrated public information platforms. The implementation of these systems reflects the government's effort to modernize bureaucracy and provide faster and more accessible services for the community.

Based on the findings from interviews, government officials stated that the use of digital systems has significantly reduced bureaucratic complexity and service processing time. One informant from the Communication and Informatics Office explained:

*"The implementation of e-government has helped government institutions provide services more efficiently. Citizens no longer need to visit government offices repeatedly because many administrative processes can now be completed online."*

The implementation of digital public services also enables better coordination among government agencies. Several service applications are integrated into centralized systems that facilitate data sharing and communication between departments. This integration contributes to improving administrative efficiency and minimizing delays in service delivery.

In addition, members of the public acknowledged that digital public services provide greater convenience and flexibility. Citizens can access services at any time without geographical limitations. A public service user stated:

*"Online services are very helpful, especially for people living far from government offices. We can submit applications and monitor the process directly through the application."*

However, despite these improvements, several challenges remain in the implementation process. Some remote areas in East Kalimantan still experience limited internet access and inadequate technological infrastructure. These conditions affect the effectiveness of digital service delivery and limit equal access for all citizens.

## Transparency in Local Government Administration

The implementation of e-government has contributed positively to enhancing transparency within local government administration in East Kalimantan. Through digital platforms, the government has become more open in providing information related to public services, regulations, development programs, and budget utilization. Citizens can now access important governmental information through official websites and online information systems.

The findings indicate that transparency has improved because digital systems allow information to be published and monitored more easily. One government employee explained:

*"Previously, many public documents were difficult to access. Now, most information is available online, so people can monitor government activities more transparently."*

The existence of online complaint systems also strengthens transparency because citizens are able to submit complaints and monitor the government's responses directly. This mechanism encourages government institutions to become more responsive and accountable in handling public issues.

Furthermore, digital transparency helps reduce opportunities for corruption, maladministration, and abuse of authority because service procedures and administrative processes are recorded electronically. A local government official stated:

*"Digital systems make administrative processes more transparent because every transaction and procedure is automatically recorded. This reduces opportunities for illegal practices."*

Although transparency has improved, some citizens still face difficulties in accessing information due to limited digital literacy. Certain members of society are not fully familiar with using online platforms and digital applications, particularly elderly citizens and people living in rural areas.

## Accountability in Public Service Delivery

The research findings show that e-government implementation has improved accountability in public service delivery within local government institutions in East Kalimantan. Digital systems enable government agencies to document service processes more systematically and transparently. As a result, public officers become more responsible for their duties because service performance can be monitored electronically.

The implementation of online monitoring systems allows supervisors and citizens to evaluate the quality and timeliness of public services. According to one informant:

*"Every service activity is recorded in the system, so it is easier for supervisors to monitor employee performance and evaluate service quality."*

The existence of digital complaint and feedback systems also encourages government institutions to improve service quality continuously. Citizens can provide evaluations, suggestions, and complaints directly through online platforms, which increases institutional responsibility toward public satisfaction.

Moreover, accountability is strengthened through the availability of digital records and service documentation. Electronic systems minimize the possibility of data manipulation because all administrative activities are automatically stored within the system. A government administrator stated:

*"The use of electronic systems increases accountability because all service data are stored digitally and can be traced whenever needed."*

Despite these positive developments, some obstacles still affect accountability improvement. Limited human resource capacity and insufficient technical skills among government employees remain challenges in operating digital systems effectively. In some cases, technical errors and system maintenance issues also disrupt service performance.

### **Challenges in Implementing e-Government**

Although e-government implementation in East Kalimantan has contributed positively to public service improvement, several challenges continue to hinder its effectiveness. One of the major obstacles identified in this study is the limited technological infrastructure in certain regions, particularly in rural and remote areas. Weak internet connectivity affects citizens' ability to access digital public services consistently.

A government official explained:

*"Internet infrastructure remains one of the biggest challenges, especially in remote areas where network access is still unstable."*

Another challenge relates to human resource readiness. Some government employees still lack sufficient digital competencies and technical skills required to operate e-government systems effectively. Continuous training and capacity-building programs are therefore necessary to improve employee performance in digital service delivery.

Public digital literacy also becomes an important issue. Not all members of society are familiar with the use of digital applications and online service platforms. Elderly citizens and people with limited educational backgrounds often experience difficulties in accessing electronic services. One community member stated:

*"Some people still prefer manual services because they do not fully understand how to use online applications."*

In addition, system integration among government agencies has not been fully optimized. Several institutions still operate independent applications that are not interconnected, causing inefficiency and duplication of administrative processes. The lack of coordination among agencies affects the effectiveness of digital governance implementation.

Overall, the findings indicate that e-government-based public service innovation has significantly contributed to improving transparency and accountability within local government in East Kalimantan. Nevertheless, continuous improvement in infrastructure, human resources, digital literacy, and system integration remains necessary to ensure the sustainability and effectiveness of digital governance implementation.

### **Transparency of Local Government**

Transparency is one of the fundamental principles in the implementation of good governance. In the context of local government administration in East Kalimantan, the implementation of e-government-based public service innovation has contributed significantly to improving governmental transparency. Through digital systems and online public service platforms, local governments have become more open in delivering information regarding policies, administrative procedures, development programs, budgeting processes, and public service mechanisms to society.

The findings of this study indicate that the use of digital technology has facilitated public access to governmental information. Citizens are now able to obtain information through official government websites, online service portals, and digital complaint systems without having to visit government offices directly. This condition has created a more transparent administrative environment because information can be accessed more quickly, efficiently, and openly by the public.

Based on observations conducted during the research, several government institutions in East Kalimantan have developed integrated digital platforms that provide information related to public services, licensing procedures, service requirements, and service completion times. The availability of this information allows citizens to monitor administrative processes and reduces uncertainty in obtaining public services. In addition, online information systems help minimize opportunities for illegal fees, bureaucratic manipulation, and abuse of authority because administrative procedures are publicly displayed and electronically documented.

One government employee explained:

*"The implementation of e-government has improved transparency because citizens can directly access service information, requirements, and procedures through the online system. This reduces misinformation and makes the service process more open."*

The implementation of digital complaint systems also strengthens transparency within local government administration. Citizens can submit complaints, suggestions, and reports regarding public services directly through online platforms. Furthermore, they can monitor the progress of complaint handling transparently. This mechanism encourages government institutions to respond more quickly and responsibly to public concerns.

A public service user stated:

*"Previously, it was difficult to know whether our complaints were processed or not. Now, through the online complaint system, we can monitor the status of our reports directly."*

Transparency has also increased in relation to governmental budgeting and development programs. Several local government institutions publish financial reports, procurement information, and development plans through official websites. This openness enables society to monitor the utilization of public funds and evaluate government performance more effectively.

According to one local government official:

*"Publishing financial information and development programs online is important because it allows the public to participate in monitoring government performance and budget utilization."*

The implementation of e-government additionally contributes to reducing corruption and maladministration. Since administrative activities are digitally recorded, government officials become more careful and accountable in performing their duties. Electronic systems create digital traces that can be monitored and evaluated by supervisors and oversight institutions.

However, despite these positive developments, several challenges still affect the optimization of transparency in local government administration. One of the main obstacles identified in this research is limited digital literacy among certain groups of society. Some citizens, particularly elderly people and residents in remote areas, still experience difficulties in accessing and understanding online information systems.

One community member explained:

*"Some people still do not understand how to access information through online platforms, especially older citizens who are not familiar with digital technology."*

In addition, unequal internet infrastructure in several regions of East Kalimantan also affects public access to digital information. Weak internet connectivity limits the effectiveness of online transparency initiatives, particularly in rural and isolated areas.

Another issue relates to the consistency of information updates on government platforms. In some cases, information available on official websites is not updated regularly, which can reduce public trust in digital transparency systems. Therefore, continuous monitoring and system maintenance are necessary to ensure the reliability and accuracy of online public information.

Overall, the findings demonstrate that e-government-based public service innovation has positively contributed to improving transparency within local government administration in East Kalimantan. The use of digital systems has facilitated public access to information, strengthened openness in governmental processes, and encouraged greater public participation in monitoring government performance. Nevertheless, improvements in digital literacy, infrastructure development, and information management remain necessary to optimize transparency and support the realization of good governance.

### **Accountability of Public Service**

Accountability is one of the essential principles of good governance that reflects the responsibility of government institutions in delivering public services effectively, transparently, and responsibly. In the context of local government administration in East Kalimantan, the implementation of e-government-based public service innovation has significantly contributed to strengthening accountability in public service delivery. The use of digital systems allows administrative activities, service procedures, and governmental performance to be monitored, documented, and evaluated more systematically.

The findings of this study reveal that e-government implementation has improved the accountability of public services by creating clearer administrative mechanisms and measurable service standards. Through digital platforms, government institutions can

monitor the performance of employees, track service completion processes, and evaluate service effectiveness more efficiently. Electronic systems also enable supervisors to identify delays, errors, and irregularities in service delivery more easily.

According to one government official:

*"Digital systems help us monitor employee performance and service completion more effectively because all service activities are recorded electronically."*

The implementation of online public service systems also encourages government employees to become more disciplined and responsible in carrying out their duties. Since service activities are digitally documented, every administrative process can be traced and evaluated when necessary. This condition minimizes opportunities for negligence, maladministration, and abuse of authority within public institutions.

One administrative staff member explained:

*"With the electronic service system, every process is automatically recorded. Employees become more careful because their performance can be monitored directly through the system."*

Furthermore, accountability has increased through the use of online complaint and feedback systems. Citizens are able to submit complaints, evaluations, and suggestions related to public services through digital platforms. This mechanism allows government institutions to identify public concerns and respond to them more quickly and transparently. Public feedback also functions as an evaluation tool for improving service quality and institutional performance.

A citizen who frequently uses digital public services stated:

*"The online complaint system makes it easier for people to report service problems, and the government can respond more quickly than before."*

The implementation of e-government additionally improves accountability in financial and administrative management. Digital systems reduce the possibility of data manipulation and financial irregularities because transactions and service activities are automatically stored within electronic databases. This digital documentation strengthens institutional responsibility and facilitates auditing and supervision processes.

One local government administrator stated:

*"Electronic systems improve accountability because financial transactions and service records can be traced at any time during audits or evaluations."*

Moreover, the use of e-government supports transparency in decision-making processes and public policy implementation. Government institutions are encouraged to provide clear information regarding service procedures, service standards, and administrative requirements. This openness allows the public to understand their rights and obligations in accessing government services, thereby increasing trust in governmental institutions.

However, despite these improvements, several challenges continue to affect the optimization of accountability in public service delivery. One major issue identified in this research is the limited technical capacity of some government employees in operating

digital systems effectively. Certain employees still require additional training and technical support to adapt to technological changes within public administration.

One informant explained:

*“Some employees are still adapting to the new digital systems, especially those who previously relied on manual administrative procedures.”*

Another challenge involves technical disruptions and system maintenance issues. In some situations, server errors, network disruptions, and application failures delay service delivery and reduce service effectiveness. These technical problems may negatively affect public trust in digital public services if not addressed properly.

In addition, unequal internet access in remote areas remains a significant obstacle in ensuring equal accountability across all regions. Citizens living in areas with limited internet connectivity often experience difficulties in accessing online services and submitting complaints or feedback through digital platforms.

A community member stated:

*“People in rural areas sometimes face difficulties accessing online services because internet connections are unstable.”*

The findings also indicate that institutional coordination among government agencies still needs improvement. Some digital service platforms are not fully integrated, resulting in overlapping administrative procedures and inefficiencies in service management. Better inter-agency coordination is necessary to strengthen accountability and improve service quality comprehensively.

Overall, the research findings demonstrate that e-government-based public service innovation has positively contributed to improving accountability within local government institutions in East Kalimantan. Digital systems have strengthened administrative responsibility, improved service monitoring, facilitated public participation, and increased institutional transparency. Nevertheless, continuous improvements in technological infrastructure, employee competency, system integration, and digital literacy are still required to ensure the sustainability and effectiveness of accountable public service delivery.

### **Challenges in the Implementation of e-Government**

Although the implementation of e-government-based public service innovation in East Kalimantan has contributed positively to improving transparency and accountability, the research findings indicate that several challenges still hinder the effectiveness of its implementation. These obstacles involve technological infrastructure, human resource capacity, digital literacy, institutional coordination, and system maintenance. Such challenges influence the overall performance and sustainability of digital public service delivery within local government institutions.

One of the main obstacles identified in this research is the limited technological infrastructure, particularly in remote and rural areas of East Kalimantan. Stable internet access remains unevenly distributed across the region, causing difficulties for citizens in accessing online public services. Weak internet connectivity affects the speed and reliability of digital service systems, especially in areas located far from urban centers.

A government official explained:

*"Internet infrastructure is still one of the biggest obstacles in implementing e-government, especially in rural areas where network access is unstable and limited."*

The lack of adequate technological facilities within some government institutions also affects service performance. Several offices still experience shortages of supporting equipment such as computers, servers, and digital network systems. These limitations reduce the efficiency of administrative processes and slow down the implementation of integrated digital services.

Another significant challenge concerns the quality and readiness of human resources. Some government employees still have limited digital competencies and insufficient technical skills in operating e-government systems effectively. Employees who are accustomed to manual administrative procedures often require additional time and training to adapt to digital service systems.

One administrative employee stated:

*"Some staff members are still adapting to the use of digital applications because they were previously more familiar with manual service procedures."*

The findings also reveal that resistance to organizational change becomes another obstacle in the implementation process. Certain employees are reluctant to adopt new technological systems because they perceive digital transformation as complicated and time-consuming. This resistance affects the speed of institutional adaptation toward digital governance.

A local government administrator explained:

*"Not all employees immediately accept technological changes. Some still prefer conventional systems because they feel more comfortable with manual procedures."*

In addition to internal institutional challenges, public digital literacy also remains a significant issue. Many citizens, particularly elderly individuals and people living in rural communities, still experience difficulties in understanding and using online public service applications. Limited knowledge regarding digital technology reduces public participation in utilizing e-government services.

One community member stated:

*"Some people still do not know how to use online service applications, so they continue to rely on direct manual services at government offices."*

This condition demonstrates that successful e-government implementation depends not only on technological availability but also on the readiness and capability of society to utilize digital systems effectively. Therefore, public education and digital literacy programs are essential to support broader community participation in digital public services.

Another challenge identified in this research relates to system integration among government agencies. Several regional institutions still operate separate and unconnected applications, causing inefficiency and duplication of administrative processes. The lack of integration between systems complicates data sharing and coordination among government departments.

According to one informant:

*"Some government applications are still not integrated with each other, which sometimes causes delays and repeated administrative processes."*

Technical problems and system maintenance issues also frequently disrupt the implementation of e-government services. Server errors, application failures, and network disruptions occasionally prevent citizens from accessing online services properly. Such technical issues reduce public trust in digital public service systems and create dissatisfaction among service users.

One citizen explained:

*"There are times when the application cannot be accessed or the system suddenly crashes, especially during busy service periods."*

Furthermore, budget limitations also influence the sustainability of e-government development. The implementation and maintenance of digital systems require substantial financial support for infrastructure development, software updates, employee training, and cybersecurity protection. Some local government institutions still face difficulties in allocating sufficient budgets for digital transformation programs.

A government official stated:

*"Digital transformation requires large financial support, especially for infrastructure maintenance and employee training programs."*

Cybersecurity and data protection also emerge as important concerns in e-government implementation. As public services increasingly rely on digital systems, government institutions face risks related to data breaches, cyberattacks, and unauthorized access to confidential information. Therefore, stronger cybersecurity systems and data protection mechanisms are necessary to ensure the safety and reliability of electronic public services.

Despite these challenges, the local government of East Kalimantan continues to make efforts to improve the implementation of e-government through infrastructure development, employee training programs, digital literacy campaigns, and system integration initiatives. The findings of this research indicate that overcoming these obstacles requires collaboration among government institutions, society, and other stakeholders to ensure the successful and sustainable implementation of digital governance.

The study demonstrates that while e-government-based public service innovation has significantly improved public service quality, transparency, and accountability, several implementation challenges still need to be addressed. Continuous improvements in infrastructure, human resources, digital literacy, institutional coordination, and technological support are essential to optimize the effectiveness of e-government implementation in East Kalimantan.

## **Discussion**

The primary objective of this study was to analyze how e-government-based public service innovation enhances transparency and accountability within local government administration in East Kalimantan. The findings demonstrate that the implementation of digital governance has significantly transformed public service delivery by improving administrative efficiency, increasing public access to information, and strengthening

institutional accountability mechanisms (Salker et al., 2018). However, the study also reveals that the effectiveness of e-government implementation is not solely determined by technological adoption, but rather by the interaction between institutional readiness, organizational culture, human resource capacity, and public participation. Therefore, this discussion critically examines the implications of the findings from theoretical, administrative, technological, and governance perspectives.

The findings confirm that e-government functions not merely as a technological instrument but as a transformative governance mechanism that reshapes the relationship between government institutions and citizens. In line with the theory of digital governance proposed the implementation of e-government in East Kalimantan illustrates how digital systems can restructure bureaucratic processes and reduce administrative opacity (Utomo, 2020). The transition from conventional administrative procedures toward electronic systems has increased procedural transparency because information regarding service requirements, administrative processes, and service outcomes is publicly accessible through digital platforms. This finding supports previous studies arguing that digitalization enhances openness by minimizing information asymmetry between government institutions and society.

From a governance perspective, transparency in e-government implementation should not be interpreted narrowly as the mere publication of information. Rather, transparency involves the creation of institutional environments in which citizens are able to access, monitor, evaluate, and respond to governmental activities in real time. The existence of online complaint systems and digital public information platforms in East Kalimantan reflects a shift from passive transparency toward interactive transparency. Citizens are no longer positioned solely as recipients of governmental information but increasingly function as active participants in governance processes. This finding aligns with the concept of participatory governance, which emphasizes citizen engagement as an essential component of democratic administration (Fung, 2015).

Furthermore, the findings indicate that digital systems strengthen accountability by creating traceable administrative records and measurable performance indicators. Public officials become more accountable because their activities are electronically documented and can be monitored by supervisors, oversight institutions, and citizens (Lindquist et al., 2017). This supports Bovens' concept of public accountability, which defines accountability as a relationship in which actors are obliged to explain and justify their conduct before a forum capable of evaluating and sanctioning their actions. In the context of East Kalimantan, e-government platforms create digital accountability structures where administrative processes become more visible, auditable, and evaluable.

Nevertheless, this study argues that technological transparency does not automatically guarantee substantive accountability. While electronic systems increase procedural openness, accountability remains dependent on institutional commitment, ethical leadership, and organizational responsiveness. Some findings indicate that although digital complaint mechanisms exist, not all complaints are addressed effectively or promptly. This suggests that accountability cannot be reduced to technical system availability alone. Instead, accountability requires a bureaucratic culture that prioritizes responsiveness, integrity, and public service ethics (Vosselman, 2016). Therefore, digital governance should be understood as a socio-technical process rather than purely a technological innovation.

One of the most significant implications of this study concerns the persistent digital divide affecting the implementation of e-government in East Kalimantan. The findings reveal that unequal internet infrastructure and varying levels of digital literacy create disparities in public access to digital services. Citizens in rural and remote areas continue to experience difficulties accessing online platforms due to unstable internet connectivity and limited technological knowledge. This finding is particularly important because it demonstrates that digital transformation may unintentionally reproduce social inequality if infrastructural and educational disparities are not adequately addressed (Robinson et al., 2015).

From a critical governance perspective, this phenomenon reflects what Norris (2001) describes as the “digital divide,” where unequal access to technology reinforces existing socioeconomic inequalities. Consequently, while e-government has the potential to democratize public service access, it may simultaneously marginalize vulnerable populations lacking digital resources and competencies. This implies that successful e-government implementation requires not only technological investment but also inclusive digital policies that prioritize equitable access, public digital literacy, and infrastructural development in underserved regions (Othman et al., 2020).

Another important implication of this study relates to organizational adaptation within government institutions. The findings reveal that resistance to technological change remains a significant obstacle among some government employees. This resistance reflects deeper structural and cultural challenges within bureaucratic organizations. Traditional bureaucratic systems are often characterized by hierarchical decision-making, procedural rigidity, and dependence on manual administrative routines. The transition toward digital governance therefore requires not only technical adjustments but also organizational transformation (Kompella, 2020).

This finding supports institutional change theories suggesting that technological innovation often encounters resistance when it disrupts established power structures, work routines, and organizational norms. In East Kalimantan, some employees perceived digital systems as increasing workload complexity and reducing procedural flexibility. Consequently, the implementation of e-government should be accompanied by organizational capacity-building programs, continuous training, and leadership strategies that encourage institutional adaptation and innovation acceptance (Maulana et al., 2019).

Moreover, this study demonstrates that e-government implementation contributes to reducing opportunities for corruption and maladministration through digital documentation and procedural standardization. Electronic systems minimize direct interactions between citizens and public officials, thereby reducing opportunities for informal payments and administrative manipulation. This finding supports anti-corruption theories emphasizing the role of transparency and automation in limiting discretionary abuse within public administration (Addo, 2018).

However, the findings also indicate that digital systems themselves are not entirely immune to governance risks. Issues related to cybersecurity, data protection, and system reliability emerge as important concerns in digital governance implementation. As governmental processes become increasingly dependent on digital infrastructure, the risks of cyberattacks, data breaches, and technological failures become more significant. This suggests that e-government development must be accompanied by robust

cybersecurity frameworks, institutional data governance policies, and technological risk management strategies (Abisoye et al., 2020).

Theoretically, this study contributes to the broader discourse on e-government and public administration by emphasizing the multidimensional nature of digital governance. The findings suggest that the effectiveness of e-government cannot be measured solely through technological efficiency indicators but must also consider democratic values such as transparency, accountability, inclusiveness, and citizen participation (Sigwejo et al., 2016). In this sense, e-government should be conceptualized not merely as a modernization project but as a governance transformation process aimed at strengthening democratic institutions and improving state-society relations.

Practically, the study provides important implications for policymakers and local governments in Indonesia, particularly in regions undergoing rapid digital transformation. First, the government should prioritize infrastructure development in rural and remote areas to ensure equal access to digital public services. Second, continuous digital literacy programs are necessary to improve citizens' ability to utilize e-government platforms effectively. Third, government institutions must strengthen employee capacity through technical training and organizational reform initiatives. Finally, stronger institutional coordination and system integration are required to improve administrative efficiency and eliminate service fragmentation among government agencies (Cejudo et al., 2017).

This study demonstrates that e-government-based public service innovation in East Kalimantan has positively contributed to improving transparency and accountability within local government administration (Budiaty, 2019). Nevertheless, the findings also reveal that digital governance remains a complex and multidimensional process shaped by technological, institutional, social, and cultural factors. The success of e-government implementation therefore depends not only on technological advancement but also on the government's ability to create inclusive, responsive, and citizen-oriented governance systems.

## **Conclusion**

This study concludes that the implementation of e-government-based public service innovation in East Kalimantan has significantly contributed to improving transparency and accountability within local government administration. The adoption of digital public service systems has enhanced administrative efficiency, increased public access to governmental information, strengthened monitoring mechanisms, and encouraged greater institutional responsibility in service delivery. Through online platforms, citizens can access services more easily, monitor administrative processes, and participate more actively in evaluating government performance. The findings also indicate that e-government supports transparency by promoting openness in public information, budgeting, and service procedures, while accountability is strengthened through digital documentation, performance monitoring, and electronic complaint systems. However, the study reveals that several challenges continue to affect the effectiveness of implementation, including limited technological infrastructure, unequal internet access, insufficient digital literacy, limited human resource capacity, organizational resistance to technological change, and incomplete system integration among government agencies. Therefore, although e-government has demonstrated substantial potential in supporting good governance practices, its sustainability and effectiveness require continuous

improvements in infrastructure development, institutional coordination, employee competency, cybersecurity, and inclusive digital governance policies to ensure that digital transformation benefits all members of society equally.

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