

E-Gov on the Sicantik Application at the Investment and One-Door Integrated Services Service (DPM-PTSP) Gorontalo Regency

Sintia R. Harun¹, Muh. Firyal Akbar², Sri Lestari Gintulangi³, Nuzlan Botutihe⁴

Universitas Muhammadiyah Gorontalo

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Abstract

This study aims to analyze the implementation of e-government through the use of the SiCantik (Smart Integrated Licensing Service) application at the Gorontalo Regency Investment and One-Stop Integrated Service Office (DPM-PTSP), and to identify various technical and non-technical obstacles that hinder the effectiveness of licensing services. The research method used was a qualitative descriptive method with a case study approach. Data were obtained through field observations, interviews, and documentation of DPM-PTSP employees and service users. The results indicate that the implementation of the SiCantik application has not been optimally implemented. This is due to frequent system maintenance without an effective emergency mitigation mechanism, a high dependence on internet network stability, and limited technical competence of staff in handling system issues. These conditions have implications for the licensing service process and reduced the efficiency and effectiveness of organizational performance. However, the transition from a manual system to an application-based system has had a positive impact on improving the quality of public services. This is evidenced by an 80% increase in permit applications from the first to the fourth quarter. Furthermore, network infrastructure management by the Gorontalo Regency Communication and Informatics Agency (KOMINFO) is considered optimal, supporting the continuity of service operations. Based on the research findings, it is recommended that the SiCantik application center administrator provide a more effective emergency mitigation mechanism, improve coordination between the DPM-PTSP (Directorate General of Public Service) and KOMINFO in system maintenance, and strengthen the technical competence of civil servants through ongoing training. These steps are expected to improve system reliability, streamline service processes, and achieve a more optimal implementation of e-Government within the local government.

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Corresponding Author:

Sintia R. Harun

Universitas Muhammadiyah Gorontalo

Email: sintiaharun00@gmail.com

1. INTRODUCTION

Format Development E-Government is an effort to support electronic-based government performance to organize and improve the quality of services to the public effectively and efficiently. Through the development and implementation of *E-Government* management systems and work processes are being arranged within government agencies, particularly agencies with public service functions, with the implementation of *E-Government*. It is hoped that all government organizational activities can be carried out electronically, thus facilitating policy and service functions, in implementing the concept

of *E-Government* This is a shared responsibility, meaning that it is not only the government but also the community that plays a role (BJ Mulyono, 2020).

Quality service plays a crucial role in the sustainability of government organizations. Providing good service means meeting the needs and expectations of the public who use it. Long-term relationships between the government and service recipients are one way to foster quality public service (Firmansyah & Rosy, 2021).

The implementation of E-Government in public services is a crucial step in increasing the efficiency and effectiveness of public services. Utilizing information technology of *E-Government* can reduce bureaucratic red tape, shorten processing times, and reduce operational costs. This enables the government to provide faster, more transparent, and more accountable services. In the digital era, the public expects responsive, easily accessible services, so the implementation of E-Government is a highly relevant solution.

Besides that, *E-Government* also improves the accessibility of public services, especially for people in remote areas or those with physical limitations. *On the platform*, the public can access various government services from anywhere and at any time, without having to visit a government office in person. This not only saves time and effort but also expands the reach of government services, ensuring that all citizens receive their right to quality public services.

E-Government implementation in Indonesia began in government agencies, namely, following the enactment of Presidential Instruction No. 6 of 2001 concerning Telematics (Telecommunications, media, and informatics). In 2001, it was stated that "Government agencies are required to use telematics technology to support good *governance* and accelerate the existence of democracy". So, year by year, the implementation of *E-Government* in Indonesia has experienced significant development and improvement. Furthermore, the government has implemented Presidential Instruction No. 3 of 2003 concerning national policies and strategies for development. *E-governance as a gateway to development: E-Governance in Indonesia*. Development of E-Government. It is hoped that it will increase transparency, effectiveness, efficiency, and accountability in the public service process, thereby encouraging the government to provide quality public services (Aprianty, 2016).

SiCantik cloud is provided to Government Agencies that need it (Free) by first submitting a Letter of Application from the Head of the DPM-PTSP Department/Regional Head/Regional Secretary to the Director of Government Informatics Application Services, with the contents of the letter for the application for the use of SiCantik cloud and technical guidance. The SiCantik cloud application can only be run online, which means that its technical implementation requires an adequate internet connection at DPM-PTSP.

Based on initial observations, researchers found several obstacles in implementing e-government at the One-Stop Integrated Investment Service (DPM PTSP) Office of Gorontalo Regency. The Public Service Administration Information System (SiCantik) is an application used by local government agencies to simplify the online licensing process. However, its implementation often encounters system errors that hinder public services.

The first application is highly dependent on a static internet connection, as it can only run online if the connection is not available during the Sicantik maintenance process. This prevents go.id from being accessed, slowing down the processing of health permits. Errors in printing permits or legal documents without clear information confuse users, reducing the effectiveness of public services. There are still some, and the community itself lacks awareness of the need to extend health permits before their validity period expires. The input or upload process of documents fails, so it repeats the process that has been carried out, and there is no synchronization between the input data and the results that come out (output), so it can increase the workload of employees because they have to repeat the

process, and can hinder the achievement of agency service targets. There are other obstacles besides the network. The SiCantik application is still often inaccessible to users. This is because the error in the SiCantik application may originate in the application system itself, such as an unresponsive server, insufficient system capacity during high traffic, or unresolved bugs. This condition really disrupts the smooth operation of public navigation, especially in the submission and processing of permits online.

This research aims to find out how the implementation of *E-Government* in using the SiCantik application and the success of processing health permits at the One-Stop Integrated Investment Service Office (DPMPTSP) of Gorontalo Regency.

2. RESEARCH METHODS

This study uses a descriptive qualitative approach. The researcher will systematically describe and explain the conditions at the DPMPTSP office in the Gorontalo Regency. The qualitative method aligns with the research title, which concerns the government's implementation of an application system that facilitates the public, particularly permit applicants, in processing health permits through the Sicantik application.

This research took place at the office of the Investment and One-Stop Integrated Services Agency, considering that the research location had problems related to the researcher's topic.

Data analysis carried out in this research was carried out before entering the field, during the field, and after being in the field.

Triangulation is used in testing data credibility. Triangulation involves three methods of checking data, collecting data from various sources or methods to inform research results. Data triangulation can be performed in several stages:

1. Source triangulation

Collecting data from various sources or informants. For example, to gather information about school regulations, researchers can interview the Head of the Licensing Division.

2. Time triangulation

Collecting data at different points in time, such as time of day, different days of the week, or different months of the year.

3. Triangulation of analysis

Using more than two methods of analyzing the same data set for validation purposes.

3. RESEARCH RESULTS AND DISCUSSION (12 Pt)

3.1. Research result

This research aims to examine the implementation of e-Gov in the SiCantik Application at the Gorontalo Regency One-Stop Integrated Investment Service Office. In this study, the researcher used a study of the Application of E-Government, namely: *Content Development, Competency Building, Connectivity, Citizen Interfaces*

The research results obtained through site observations, interviews with informants, and documentation can be described as follows:

1. Content Development

Content Development is the process of planning, creating, compiling, and maintaining digital content that is relevant, informative, and easy for public users to understand. In the context, E-Government content must support transparency, service efficiency, and community engagement.

The implementation of e-government has received strong support and positive responses from both the government and the public. This is evident in the application's active use by both the government and the public, and in the government's ongoing development and improvement of the system.

2. Competency Building

Competency Building is an effort to increase the capacity, skills, and knowledge of government employees so they can effectively manage and utilize e-gov technology. This includes training, mentoring, and strengthening digital culture.

Network issues are now the responsibility of the Communications and Information Technology Agency, not the PTSP. This is evident from the SPBE's mandate, which is the Online-Based Government System, which handles network infrastructure matters for the Communications and Information Technology Agency.

3. Citizen Interfaces

Citizen Interfaces refers to the interface or point of interaction between citizens and the system. The *e-government* goal is to ensure that people can interact easily, comfortably, and effectively when accessing digital services.

In developing access channels for the public and stakeholders, they are constantly forced to wait or report directly to the Ministry of Communication and Information Technology. PTSP cannot do anything because the server is at the Ministry of Communication and Information Technology.

3.2. Discussion

In this research, the aim is to find out how to implement *e-gov* on the SiCantik application at the One-Stop Integrated Investment Service Office (DPMPTSP) of Gorontalo Regency using the Theoretical Study of the Implementation of *e-Government* in applying the concept of e-Government public sector, four elements of success must be considered, namely, *Content Development*, *Competency Building*, *Connectivity*, *Citizen Interfaces*.

User convenience is one of the indicators used to determine the quality of electronic services or government services. This is in line with the definition of *use*. According to Wakhida and Sanaji (2020), users experience ease when operating the application system without effort. The ease and speed of access to the SiCantik application cloud. It is effortless to obtain an innovative application for integrated licensing services for the public (SiCantik *Cloud*).

This aligns with the opinion of Phung and Trang (2018): the quality of information in digital services, including e-Government systems, is primarily determined by content adequacy, encompassing aspects of trustworthiness, appropriateness, and completeness. They emphasize that the information presented must be relevant to user needs, complete, and trustworthy to provide usefulness to the public. This perspective emphasizes the substance of the content presented in the system as a key determinant of the effectiveness of digital services.

This opinion supports Indrajit's (2006) theory within the development framework. *E-Government*, *Content Development* is one of the four main components of implementing a digital government system. In his theory, Indrajit emphasized that content is not only about the available data and information, but also about how it is curated, updated, and tailored to user needs. He also highlighted the importance of simple language, high readability, and local context to ensure information is accessible to all groups, including those with low literacy levels.

The opinion of Kharisma and Fanida (2021) emphasized the importance of supporting users of public service applications, particularly through adequate support facilities. They explained that in implementing application systems, service providers must provide support that allows users to obtain assistance when they encounter problems. This support can take the form of a help page. *Online, live features, chat*, or direct contact, such as email or telephone. This approach places the user experience at the forefront (*user experience*) as the primary focus in the success of digital public services.

Meanwhile, according to Indrajit (2006), *Content Development, in his book Electronic Government: Strategy for the Development and Expansion of a Digital Technology-Based Public Service System, Citizen Interfaces is one of the four main pillars of Government*. Indrajit emphasized that the interface between the system and the user community must be easy to understand, accessible, and participatory. This interface encompasses not only the application's appearance but also how the system interacts with the community: whether it provides space for feedback, whether the community feels involved in the service process, and whether it is inclusive of all segments of society.

Thus, Kharisma and Fanida's opinions strengthen Indrajit's theory, especially in the technical aspects of *Citizen Interfaces*, namely, about the importance of providing responsive and responsive assistance facilities. Meanwhile, Indrajit saw *Citizen Interfaces* more broadly, encompassing participatory, inclusive, and communicative interactions between systems and societies.

Digital social media connectivity, by utilizing public free time for collaboration and participation through digital platforms (social media, wikis, blogs, etc.), leverages cognitive surplus (excess cognitive capacity) to create social, creative, and participatory value (Clay Shirky, 2008). Thus, connectivity between information systems in an organization, enabled by information technology networks, supports data integration and process efficiency, enabling quick and accurate information exchange between organizational parts. Information technology infrastructure, such as LANs, the internet, databases, servers, and system applications.

Competency development (*competency building*) is an element crucial in improving individual and organizational performance in the era of digital transformation. Two figures who highlight the importance of competency development from different but mutually reinforcing perspectives are Ulrich, Brockbank, et al. (1995–2000) through the HR Competency Model, and Indrajit (2006) through an approach to information systems and technology management.

Ulrich and his colleagues developed a framework of strategic competencies that human resources professionals must possess to function as strategic partners, change agents, administrative experts, and advocates for employee interests. In this context, competencies extend beyond technical skills to include the ability to think strategically, understand the business, build credibility, and contribute directly to an organization's competitive advantage.

Meanwhile, Indrajit (2006) focused his theory on competency development in the context of information technology. He stated that the success of an information system within an institution is highly dependent on the competency of its human resources and the institutional framework that supports it. This competency encompasses not only technological mastery but also management, communication, and the ability to adapt to digital change.

These two approaches share a firm common ground: the view that competency is not a fixed attribute, but rather something that can and should be systematically

developed. Both within the general HR context (Ulrich) and in the IT context (Indrajit), competency is positioned as a strategic asset that determines an organization's success in facing global challenges and technological change.

1. Content Development

Content development refers to the process of effectively creating, managing, and delivering digital information to support technology-based public services. Its primary goal is to increase transparency, efficiency, and public participation by providing relevant, user-friendly, easily accessible content. Content development within the framework of e-Government plays an important role in improving the quality of digital public services. According to Presidential Instruction No. 3 of 2003, researchers observed that, in the Investment and One-Stop Integrated Services Office (DPMPTSP) of Gorontalo Regency, in the implementation of E-Government, they have developed a concept *called Employees (G2E)*. The Investment and One-Stop Integrated Services Office of Gorontalo Regency saw this. It started using the SiCantik Application in 2010, when it was first released with version 1.0. Then, in the development of the SiCantik 2.0 version in 2012, SiCantik 3.0 in 2013, and SiCantik 4.0 in 2014.

Furthermore, SiCantik Cloud version 5.0 was launched in 2017 and continues to be developed to this day, a breakthrough made by the PTSP Office as part of the implementation of *E-Government* to improve the quality of public services. One aspect of human resource management is capacity development. This capacity development can be achieved by improving competency to achieve optimal work results.

The implementation of digitalization of public services through the SiCantik application at the DPMPTSP of Gorontalo Regency is a government effort to improve the quality of public services effectively, efficiently, transparently, and accountably. This is in line with national policy directives on the development of a digital-based government system. However, the success of digitalization implementation is not only determined by the availability of infrastructure such as computers and internet networks (WiFi). It also depends on the commitment of regional leaders (political will). Because government bureaucracy tends to be top-down, this support must be realized through consistent policies, infrastructure, and a ready supply of human resources (HR) capable of running digital systems.

In addition, community participation is also an important element. The fact that many people still do not know about or have never used the SiCantik application shows that digital literacy and socialization around application use need improvement. Not many people admit they have never heard of the application or the office itself. Because the application often has problems, especially network-related issues, many people who ask still come directly to the office. Thus, the digitalization of public services through the SiCantik application in Limboto District still faces several challenges, both technical and human resource-related.

Based on the results of initial observations, researchers found that the government, in this case, the DPMPTSP of Gorontalo Regency, especially in the Licensing Sector, has not carried out even socialization to the community regarding the SiCantik application. This finding is reinforced by interview results indicating that the community lacks understanding of the application or the information; so far, it has been limited to the heads of RT and RW, without directly reaching all levels of society. As well as network obstacles that often occur,

although various solutions have been formulated to overcome existing problems, the implementation has not been running optimally.

In *Good Governance – UNDP (United Nations Development Program, 1997)*, Key concepts: Transparency, Efficiency, Participation, Accountability, and Responsiveness. Transparency means information must be available and accessible to the public. Public resources must be used efficiently and effectively. Citizens must have the right and opportunity to participate in decision-making. Referring to the UNDP principles regarding good *governance*, the SiCantik application is a digitalization effort that supports transparency and service efficiency. However, limited technical control at the regional level indicates that an inclusive and interoperable digital system, as recommended in the digital framework, has not yet been established. *Public Infrastructure* UNDP. The application network has not enabled active participation by permit applicants and regional officials, which is an obstacle to creating a sustainable digital ecosystem.

From the results of observations, interviews and analysis carried out, it can be concluded that the indicators *Content Development* In the digitalization of public services through the SiCantik application at the Gorontalo Regency Investment and One-Stop Integrated Services Agency (DPMPTSP), it was discovered that technical issues frequently encountered with the SiCantik application at the Gorontalo Regency Investment and One-Stop Integrated Services Agency (DPMPTSP), such as system slowness or inaccessibility, could not be directly addressed by local officials. This was due to the centralized nature of the SiCantik application, where system management was entirely at the ministerial or central level, not at the district/city level.

2. Competency Building

Competency Building, Concerning the procurement of human resources, training, and development of competencies and skills of all levels of human resources in various lines. In the context of e-gov, it refers to systematic efforts to increase the capacity of human resources (both civil servants and support staff) to effectively and efficiently deliver digital-based public services in the context of the Gorontalo Regency Investment and Public Service Agency (DPMPTSP), *Competency Building* within the framework is a strategic effort to increase the capacity of State Civil Apparatus (ASN) in providing digital-based public services.

Analysis using the ANT Concept *Actor -Network Theory (Latour, 2005)*. This demonstrates that the application interface is too complex for some senior citizens. From an ANT perspective, the interface is not just a tool, but a non-human actor that plays a crucial role in connecting citizens with digital systems. When the interface fails to meet user expectations, enrollment fails, impacting the entire application network.

In the ANT approach, the SiCantik application is not viewed merely as an administrative tool, but as a non-human actor in a public service network that interacts with human actors such as permit applicants, officers, and system developers. The fact that users prefer to come in person indicates that the process is failing. *Interestingly*, the failure of the SiCantik application to attract human actors to join the digital network. Furthermore, system disruptions during peak hours demonstrate that the technical infrastructure (such as servers or internet networks), as non-human actors, is not yet capable of performing its functions optimally, thereby weakening the enrollment process and hindering citizens' ability to fulfill their roles as active users.

Based on initial observations, the Gorontalo Regency PTSP Office still faces obstacles in implementing the application, namely a lack of human resources for procurement and competency development, as it relies on only one or two people who fully understand the application. The ability of human resources (HR) to operate the SiCantik application is a key factor in the success of the implementation. At the Gorontalo Regency DPMPTSP, employee training has been conducted, but it does not cover all technical and service aspects. Some employees still experience difficulties in handling technical problems and providing assistance to the community.

Based on observations, interviews, and analysis at the Gorontalo Regency DPMPTSP, the supporting infrastructure for the SiCantik application is sufficient to support digital services. However, application proficiency is limited to admins and front office staff. Other staff lack a thorough understanding of SiCantik's optimal use. This is due to the discontinuation of the Technical Guidance (BIMTEK) related to the SiCantik application and the transition to the OSS RBA system. As a result, only a small number of officers receive direct training, leading to suboptimal use of the SiCantik application across all work units.

3. Connectivity

Connectivity, concerning the availability of infrastructure and information technology at the location where *E-Government* is applied. In the context of E-Government, *connectivity* is a crucial foundation that enables all components of a digital-based government system to be efficiently connected. Without strong connectivity, digital services will not run optimally, particularly in terms of data integration, inter-agency communication, and public access to public services. In the context of the Gorontalo Regency PTSP Service, connectivity is a crucial element in implementing e-Government to ensure efficient, integrated, and easily accessible public services for the public and business actors.

This is in line with the *strength of Weak Ties*. Mark Granovetter (1997) explains that in social structures, weak relationships, namely those that are not intense or rarely interact, actually have an important role in disseminating new information, expanding network access, and connecting different social groups. In the context of digital bureaucracy, such as the implementation of the SiCantik Cloud application in the DMPTSP of Gorontalo Regency, the relationship between actors such as local employees, the central technical team (Kominfo), application developers, and user communities is often weak because they do not interact regularly. However, these weak relationships enable the transfer of technical information, the reporting of problems, and the adoption and development of digital public service systems. Thus, the strength of the connectivity network in the licensing service application system actually rests on the existence and effectiveness of weak social relationships, as well as on the strategies of the actors involved.

Interviews with Gorontalo Regency DPMPTSP employees revealed that the network connectivity of the SiCantik Cloud application is highly dependent on the internet vendor used by the office. Choosing an unstable vendor or one with limited bandwidth often results in application access disruptions, especially when the number of applicants increases significantly at the same time. This condition causes the application to become slow, unresponsive, and even fail to process applications in real time. Furthermore, high network traffic when many applicants access the application simultaneously directly impacts system performance. This indicates that connectivity quality is determined not only by the application's

technical aspects or the central server, but also by local decisions, such as the choice of network vendor and the infrastructure capacity available at the DPMPTSP office.

Thus, to maintain the smooth operation of digital services through the SiCantik application, it is necessary to ensure that network providers are selected carefully and that bandwidth capacity is adjusted to the volume of active applicants, so that bottlenecks or disruptions in online public services do not occur.

4. Citizen Interfaces

Citizen Interfaces, Concerning the procurement of human resources and the development of various access channels (*Multi-access channels*) which can be used by the community and its stakeholders, government, anywhere and anytime. In the context of *e-government*, *Citizen Interfaces* refers to all digital interfaces or tools used by citizens to interact with government services. The aim is to make access to public services easy, inclusive, fast, and user-friendly.

Based on TCP/IP theory (Cerf & Khan), the stability of the communication protocol during data transmission greatly determines the quality of connectivity in the Sicantik application. Obstacles experienced, such as slow response and access disruptions, can be attributed to problems with network management and suboptimal data transfer. This indicates that although the infrastructure at the DPMPTSP level is adequate, constraints in the TCP/IP communication protocol and network connectivity remain significant obstacles to ensuring the application runs smoothly and can be accessed effectively in real time by users.

Based on initial observations at the PTSP Office of Gorontalo Regency, the infrastructure is adequate. However, in information technology, especially in improving the network system, problems often occur, so that within a week, the team...*IT* and *Indihome* may need to visit the office multiple times. A stable, fast internet connection is a key prerequisite for operationalizing the SiCantik application in some areas of Gorontalo Regency, especially remote areas, where network issues persist, hindering the online licensing process.

Based on observations, interviews, and analysis with officers at the Gorontalo Regency DPMPTSP, it was found that access to the SiCantik application has improved significantly. The application can now be accessed from anywhere using a private internet network (cellular data), without having to connect directly to the office network. This change indicates increased connectivity and flexibility in application use, in line with the needs of dynamic digital services. However, field findings also indicate that this improvement is relatively new and has only been implemented effectively within the last four months. Previously, application access was still minimal and dependent on the office's internal network. This reflects that although network and technical infrastructure are starting to be directed towards a more open and transparent, mobile-friendly service system, its implementation is still in its early stages and requires ongoing evaluation to ensure stability, ease of access, and future technical support.

4. CONCLUSION

This application is not running optimally. This is caused by frequent maintenance. (*Maintenance*) The system is centrally managed, but lacks an effective emergency mitigation mechanism. This situation can hamper the overall licensing service process, resulting in delays in permit processing for the public and businesses. Furthermore, because the application system is centralized and lacks local backups or alternative operational procedures in the event of disruptions, the entire service process becomes highly dependent

on the central system's availability. This dependency indicates weak service resilience to technical disruptions.

The transition from a manual system to an application system has brought significant changes. While the permit process was previously slow and manual, the application system has now made it faster, more efficient, and more organized. This is evidenced by the significant increase in the Permit Recapitulation from the first to the fourth quarters, up to 80 percent.

Meanwhile, in terms of network performance, it is optimal. Network infrastructure management is entirely the responsibility of the Communications and Informatics Agency (KOMINFO). The central server and service network are centrally managed by Kominfo, ensuring relatively stable network operations and preventing service disruptions.

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