

## ARTICLE

# E-Readiness Analysis to Accelerate Transformation Towards E-Government in Regional Government in Indonesia

Case Study of the Government of Indragiri Hulu Regency of Riau Province

Evi Zubaidah <sup>1</sup>, Monalisa <sup>2</sup>, Sylvina Rusadi <sup>3</sup>, Tito Handoko <sup>4</sup>

<sup>1</sup> Public Administration Study Program, Universitas Islam Riau, Pekanbaru, Indonesia

<sup>2,3</sup> Government Science Study Program, Universitas Islam Riau, Pekanbaru, Indonesia

<sup>4</sup> Department of Government Science, Universitas Riau, Pekanbaru, Indonesia

✉ [evizubaidah@soc.uir.ac.id](mailto:evizubaidah@soc.uir.ac.id)

**Abstract:** This research aims to evaluate the readiness of the Indragiri Hulu Regency government, especially Satpol PP and KPBD, to implement the Si ATAN BEDA application, which has been implemented. E-Readiness analysis was carried out using the STOPE approach. The Si ATAN BEDA service application functions as a channel for public complaints, making it easier for the public to submit reports and complaints regarding disturbances of peace, public order, and regional disasters. Implementing the Si ATAN BEDA application service has not shown optimal results due to the government's lack of understanding regarding E-Readiness and making decisions without adequate consideration of the facts. The research method uses a qualitative approach with a descriptive research type. After the field data was collected, the data was processed using NVivo 12 to provide a visual depiction of the field findings and analyzed based on the theory that supports the findings. The results and discussion concluded that the STOPE framework model, which consists of strategy, technology, organization, people, and environment, is the most appropriate model for evaluating the E-Readiness of the Indragiri Hulu Regency government. In the strategy domain, there is a lack of leadership roles in providing direction and supervision, as well as weaknesses in application development planning. The technology domain shows that there are obstacles in application use and security that still need to be strengthened. The lack of cooperation between the government and the private sector in implementing applications is a challenge in the organizational domain. The human resources domain shows that officers' skill qualifications are not aligned with their educational background, and their understanding of applications still needs to be improved. Meanwhile, in the environmental domain of public knowledge, the lack of public knowledge about the application shows a lack of socialization by the government, so the community has not fully felt the benefits.

**Keywords:** E- Readiness; E-Government; Si ATAN BEDA.



## OPEN ACCESS

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## 1. Introduction

The development of information technology has spurred improvements in public services in various sectors. This is marked by various innovations utilizing information technology to bring services or products closer to consumers. This adaptation to information technology is carried out not only by the private sector but also by the public sector. In the public sector, the acceleration of innovation is largely determined by the managerial ability of a leader to create innovation, and this condition applies to almost every government structure (Rizki & Kurniawan, 2023). South Sumatra Province pioneered the birth of “e-sumsel” as a form of reform that brings public services closer to the community. This is certainly in line with the shift in the public service paradigm from new public management (NPM) to New Public Service (NPS) (Sari, 2021). Meanwhile, in other areas, public service innovations are also growing with almost the same aim, namely bringing the government closer to its people (Hutagalung & Hermawan, 2018; Napitupulu, 2016; Rofi et al., 2021; Wahyudi, 2016).

With the emergence of global public sector information communication initiatives, there is an increasing need for research into the factors influencing the adoption of e-government services (Tung & Rieck, 2005). Electronic Government or e-Gov is an important concept that continues to develop amidst the excitement of the industrial revolution 4.0 (Davison et al., 2005). Generally, e-Gov is interpreted as the use of communication and information technology carried out by the government to increase efficiency in managing government (Wijaya & Surendro, 2006). E-gov aims to make employees’ tasks easier in providing services to the public and is considered a crucial infrastructure in government administration (Yadav & Bagga, 2020). E-Government is defined as handling public administration processes with the help of information systems using information and communication technology. It is believed to lead to better delivery of government services, increased interaction with business and industry, community empowerment through access to information, or more efficient government management.

In the current technological era, implementing E-Government has become a necessity and an urgent request in delivering public services (Mohammed & Ibrahim, 2015). Various countries have adopted information technology-based services in the private sector into their various public services, including increasing public participation in improving services (Gil-Garcia et al., 2014). In Indonesia, efforts to translate e-gov into real life can be seen in various service applications created by the government at multiple levels. At the central level, for example, efforts to speed up public services have been made with the birth of multiple applications in almost all ministries and state institutions (Huda & Yunas, 2016). Meanwhile, at the regional level, from province to district/city, various e-Gov innovations are also no less rapid. According to data from the Ministry of Communication and Information of the Republic of Indonesia, there are 27,400 application-based services in all ministries, institutions, and regional governments. These have the potential to overlap and stand alone, including public information service applications (Rizki & Kurniawan, 2023).

This study also discusses the effectiveness of application-based services created as a complaint service regarding regional disasters and public order. This application-based service was developed by the Indragiri Hulu Regency Government in 2019 and was named “SIATAN BEDA”. This application allows the public to submit reports and complaints regarding disturbances of peace, public order, and regional disasters. With two features offered to the public who will provide services to the Satpol PP and KPBD of Indragiri Hulu Regency, this application was chosen because the creation process is more economical and easier and can be accessed via a wide internet network

without time limits. Through the implementation of SI ATAN BEDA, it is hoped that the performance and functions of Satpol PP and KPBD can be optimized in managing and handling complaints related to peace, public order, and regional disasters in a more professional and accountable manner.

E-Readiness is a study that evaluates the readiness of individuals in an organization to adopt communication and information technology, which has a key role as a necessary initial step so that the implementation of E-Government products runs smoothly (Riani et al., 2021). In an effort to achieve good governance, E-Readiness research on the implementation of E-Government is a very important element because it can produce different services according to different levels of readiness (Pramono, 2022). Even though the main goal of E-Government is to provide information to citizens, improve services, and empower society through ICT access and participation in public policy decision-making, all of this still depends on the government's readiness to provide online services. The success of E-Government services depends on cooperation between system developers and leaders in planning and implementing changes in various government activities (Syahputri et al., 2021). Obstacles often arise in developing and implementing application systems due to a lack of attention to technological readiness and existing resources. Challenges in implementing the SI ATAN BEDA application include the application system and the readiness of human resources as technology users, which are influenced by the government's level of readiness (E-Readiness) in launching the SI ATAN BEDA application, which is not yet optimal.

E-Readiness is also an evaluation of the readiness of E-Government services, aimed at establishing service standards by understanding the root causes of information technology implementation that will be carried out (Pramono, 2022). Meanwhile, the World Economic Forum states that e-readiness reflects the extent to which a country is ready to adopt Communication and Information Technology (ICT), especially in policy, infrastructure and basic initiatives (Dilip Potnis & Pardo, 2011). E-Readiness also includes evaluating an individual's or group's ability to adopt and utilize communication and information technology to achieve positive results (Bowles, 2011). Countries with a high level of e-readiness have the potential to improve services, create new opportunities, and gain competitive advantages compared to countries with low readiness (Mutula & van Brakel, 2006). One of the obstacles in implementing e-government is the uneven development of information technology (Nugroho & Purbokusumo, 2020). In implementing electronic government (E-Government), assessing the government's electronic readiness (E-Readiness) has a very important role because the government is a key element in overall E-Government readiness and is a major determinant. E-Readiness assessment provides concrete evidence to identify existing issues or problems, formulating appropriate policy alternatives based on adequate evidence. The E-Readiness concept functions as an effective method for evaluating E-Government implementation and becomes the basis for policies based on organizational capabilities and community needs (Pramono, 2022). The results of the E-Readiness evaluation not only reflect the organization's readiness but can also identify the root of the problem, analyze the impact of changes in Communication and Information Technology (ICT), and plan ICT development in the long term (Al-Osaimi et al., 2006). Several studies have developed E-Readiness evaluation models and tools with wide variations depending on the objectives and methodology used. One example is the E-Readiness evaluation model, which adopts the STOPE concept. The STOPE framework consists of five domains, as seen in Figure 1.

The STOPE framework, which includes Strategy, Technology, Organization, People and Environment, is an abbreviation to assess electronic readiness (E-Readiness)

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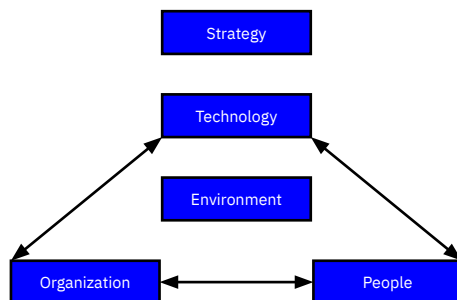


Figure 1. STOPE Framework

Source: Al-Oasimi et al. (2006)

in implementing electronic government (E-Government). Various E-Readiness assessment models exist, depending on the objectives and methodology applied. The selection of the E-Readiness assessment model using the STOPE framework was carried out because this framework covers comprehensive aspects and integrates various relevant factors in measuring E-Readiness. This approach allows evaluation of the success of E-Government implementation not only focusing on technological readiness but also considering complex factors such as socio-political, organizational, economic, cultural and institutional aspects of the environment (Dukić et al., 2017). E-readiness refers to the level of readiness of individuals, organizations and countries to adopt and apply communication and information technology to achieve optimal and beneficial results (Mohammed & Ibrahim, 2015). This research aims to investigate, in general, the implementation of the SI ATAN BEDA application, with a special focus on readiness (E-Readiness) in the provision of E-Government services using the STOPE concept. E-readiness analysis is acknowledged to have been carried out by many previous scholars with various analytical backgrounds; one of the studies used as a reference was written by Boztaş et al. (2023), he highlighted information society indicators with aspects of digital inclusion (digital inc), individual E-Government activities through websites (int act), level of household internet access (int acc), individual mobile internet access (mob acc) and internet use for interact with public authorities (public services). A study from Boztaş et al. (2023) was carried out in developed countries with a good level of education, and of course, it will be different from the educational situation of people in medium and low-income countries like Indonesia, especially if it is related to traditional community life such as the locus of this research.

Another somewhat relevant study conducted by Koh et al. (2006) reviews how information technology, strategic planning processes, and society interact in the emerging e-government environment. The study focuses on only one stakeholder group, namely employees. Therefore, the presence of a study conducted by the author can fill the gap in studies (Koh et al., 2006) by focusing the analysis on local governments and public responses related to the SI ATAN – BEDA application. Armed with existing studies regarding the public’s readiness to accept developments in information technology in the government sector. A study conducted by Napitupulu et al. (2018) explains this in-depth regarding this matter. He explained that many government institutions are currently competing to improve the quality of their public services. Unfortunately, they put more emphasis on the technology side than the citizen side. So far, it has been felt that e-Government initiatives do not involve users because the designed system does not align with user expectations, resulting in a low adoption rate. T-Government or e-Gov 2.0, as a new generation of e-Government or Citizen-Centric Government, has the key element of citizen or user involvement in policy formulation. T-Government aims to encourage a more open and transparent government where the public has a greater role in e-Government initiatives. Unfortunately, the application of

the T-Government in Indonesia is still very limited. Research results by [Napitupulu et al. \(2018\)](#) show two main parts of the level of use of e-government services by the public and public perceptions of e-government. The main demographic findings are consistent with previous research involving e-Government users, which generally does not come from categories such as elderly, low educated, low income, and female. Based on the level of technological readiness, residents can be said to be quite ready because most respondents (90%) have Internet access from home. Citizens can also be considered experienced users, as more than 60% of respondents have used the Internet for over ten years. This is in line with the high interest of residents in this matter. So, is the SIATAN-BEDA application already known to the public in the research area? This will also be a new finding as a comparison of studies ([Napitupulu et al., 2018](#)) above.

## 2. Methods

This research applies descriptive qualitative methods. Descriptive research is a type of research that aims to describe a phenomenon, situation, or condition without manipulating or directly influencing the variables studied. This research aims to provide a clear and detailed picture of a topic, whether it is population characteristics, behavior, or relationships between variables. The methods used in descriptive research were observation, interviews, or questionnaires. The data analysis used descriptive, such as calculating the average, median, mode, percentage, and so on ([Andriadi et al., 2019](#)). The data collected involves statements or objects that help researchers understand the research problem. The three data collection techniques applied involve interviews, observation, and documentation. The documents used in this research include regional apparatus organization strategic plan documents related to the SI ATAN-BEDA application, policy documents that are the legal basis for making the application, and application manuals prepared by the relevant agencies. Interviews were conducted with six operator officers responsible for implementing the Si ATAN Beda application and three people as service recipients. Direct observations were also carried out in the field to observe the implementation of application use and obstacles in the field. After the field data was collected, the analysis process was carried out using NVivo 12 to present visualizations of field findings and analyze them based on theories that support the research results. The research results and discussions are prepared systematically by following aspects of strategy, technology, organization, environment, human resources.

## 3. Results and Discussion

E-Readiness refers to the readiness of a country or organization to adopt and utilize information and communication technology (ICT) for economic, social and political purposes. This includes ICT infrastructure, digital literacy levels, internet access, regulations, policies, and other factors influencing an entity's ability to use the technology effectively. In turn, e-readiness will transform electronic-based government systems or e-government. The t-government concept (government transformation or e-government) is a concept where the government uses information and communication technology to provide services to citizens, improve administrative efficiency, and increase transparency and public participation. This includes using the Internet, mobile applications, and various other digital platforms to deliver government services and interact with citizens. These two concepts are interrelated because high information and communication technology readiness (e-readiness) is a prerequisite for successful t-government implementation. A country or organization that has a high

level of e-readiness is more likely to be able to implement t-government initiatives successfully.

Studies on e-readiness like the one the author conducted seem relevant to the findings (Dada, 2006) which show that achieving a high level of e-readiness is increasingly heralded as one of the top priorities for developing countries. Additionally, more and more time, money, and effort are being invested in calculating a country's e-readiness level. This paper undertakes a critical review of e-readiness, focusing on developing countries. When used alone, the results show that these measures do not help development because they tend to focus on the wider environment and ignore the organizational level. In light of this, a new model is proposed that emphasizes e-readiness (environment) and technology acceptance (organization) to better understand the situation. Studies by Ramayah et al. (2005) on Electronic Readiness of SMEs in Malaysia: Implications for Planning and Implementation explain different aspects. Encouragement from the government to SMEs impacts their readiness to develop their businesses. Research findings by Ramayah et al. (2005) show that SMEs in North Malaysia are ready to move forward with e-business, e-commerce, and the Internet. The findings also show that, in general, top management commitment and infrastructure and technology have a significant impact on SMEs' e-readiness. However, human capital, resistance to change.

### 3.1. Strategy: Leadership and Development Planning

The strategy explains the strategic problems and activities of the Indragiri Hulu Regency Government. The successful implementation and acceptance of a program by the community not only depends on a good strategy but also requires an appropriate approach so that the program can effectively achieve the targets and objectives set (Widodo & Permatasari, 2020). This strategy is important as a basis for planning the future development of the SI ATAN BEDA application. The following are findings regarding the readiness of the upstream Indragiri government in the strategy for the SI ATAN BEDA Application.

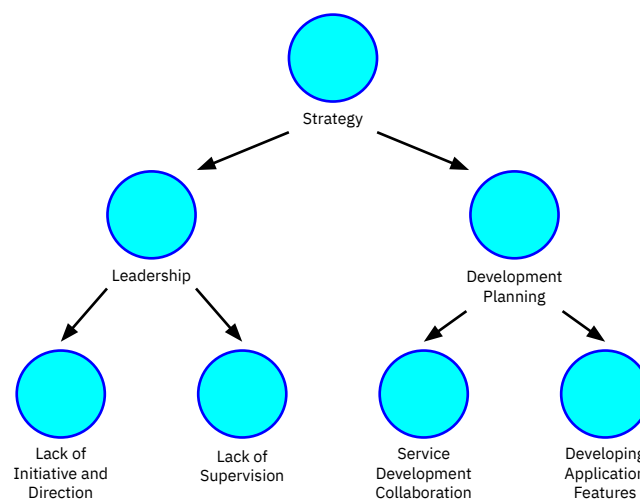


Figure 2. NVivo 12 Processed Data Regarding the Strategy Domain

Source: NVivo 12

#### 3.1.1. Leadership

The leadership of an organization has a very important role in forming a positive image of a region (Lubis, 2012). This leadership sub-indicator found two themes: problems

in preparing the SI ATAN BEDA application development strategy, namely lack of initiative and direction, and lack of supervision. The following is an explanation of each theme:

a. Lack of Initiative and Direction

The informant said the leadership had not provided direction or initiative to use the SI ATAN BEDA application optimally. As the organization that owns the application, Indragiri Hulu District Government leaders should be pioneers in using this application to set an example for their community. A good leader can provide good motivation and direction to his group members (Ahmadu et al., 2012). These strategic directions must also be conveyed so that application development can be more focused.

b. Lack of Supervision

Field findings regarding the Indragiri Hulu government's readiness for the Si Atan Beda application show no regular supervision from the competent government. The monitoring stage has an important role in reviewing ongoing processes and evaluating plans that have been prepared. Supervision is one of the leaders' responsibilities in ensuring that the program runs according to what has been designed. Supervision itself is an active action, where its function includes seeking corrective action if things happen that go outside the initial plan that has been previously determined (Rai, 2008). Excess supervision is important because lack of supervision can have an impact on reducing employee performance due to minimal involvement of leadership in carrying out work.

### 3.1.2. Development Planning

Technological developments have progressed quickly, triggering various innovations to simplify product development. One of the objectives of planning the development of Information Systems and Technology is to provide a more focused direction for developing E-Government (Yudhistyra & Nugroho, 2014). In this development planning, there are two themes related to the achievements that the Indragiri Hulu Regency Government has made in developing the SI ATAN BEDA application, namely the theme of collaborative service development and application feature development.

a. Service Development Collaboration

In principle, an application is a tool that can help streamline business processes in an organization. Apart from understanding employee competence, cooperation is a useful factor in preparing an application (Adhitama, 2021). The application itself can integrate various business processes from various organizations, providing an opportunity for the Indragiri Hulu Regency Government to collaborate with various Regional Apparatus Organizations (OPD) to be involved in the SI ATAN BEDA application. In this context, SI ATAN BEDA has collaborated with OPDs such as Satpol PP, KPBD, and the Transportation Service. Cooperation or collaboration between government agencies is considered a channel for overcoming problems that arise (Reynolds, 2003).

b. Developing Application Features

Through collaboration with different agencies under the Indragiri Hulu Regency Government, the Si ATAN BEDA application has additional features. By collaborating with the transportation department, the application has additional features regarding accident information. This is an integration between OPDs so that the complaints submitted can be more diverse. System integration is needed in every



application because it functions as a medium for connecting and developing applications (Vinoth et al., 2022).

### 3.2. Technology: Performance, Infrastructure and Security Level

The level of success of an e-government system can be assessed by looking at the application of technology (Koh et al., 2006). At the E-Readiness assessment level, technology is an assessment of an application based on the perspective of the technology it uses (Jamil et al., 2016). In this case, the sub-indicators that will be explored are e-government service infrastructure, e-government device performance and the level of e-government security in the SI ATAN BEDA application. This exploration is important because E-gov itself is a technology-based government service, so the government must be prepared for the technological aspect.

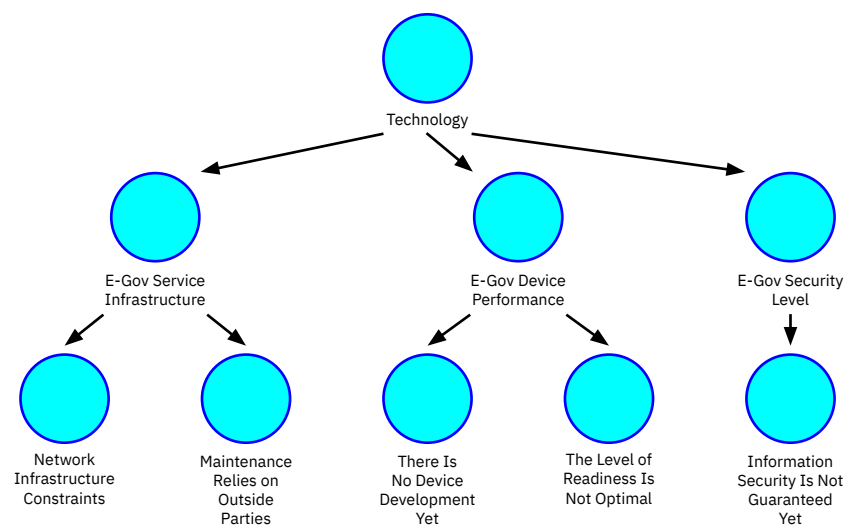


Figure 3. NVivo 12 Processed Data Regarding the Technology Domain

Source: NVivo 12

#### 3.2.1. E-Gov Device Performance

In the performance of the E-Gov Toolkit, two themes were successfully explored from the results of the interview transcript, namely that there had been no development of the tool and that the level of readiness was not yet optimal. These two themes are findings of problems faced by the Indragiri Hulu Regency Government regarding readiness to use e-government, which states that they are not fully ready in terms of performance. Harvard University’s School of Government states that the availability of appropriate information technology infrastructure is 50% of the key to successful implementation of the E-Government concept.

##### a. There Is No Device Development Yet

Computing power is one of the important things to consider when developing an application. Application development is the key to increasing the readiness of the technology itself; developing technological devices can create changes in the application itself (Habimana et al., 2020). The increasing features in the SI ATAN BEDA application require higher computing power to support data processing. The informant explained that there had been no device development to support the application, which affected the application’s performance.



b. The Level of Readiness Is Not Optimal

In general, informants explained that the level of readiness of the SI ATAN BEDA application was not optimal, so the use of this application was not optimal. In this case, the Indragiri Hulu Regency Government needs to be committed to taking programs aimed at increasing the credibility of the application so that it is more ready for use because the success of implementing E-Government concerns several aspects, including technological readiness (Nugroho, 2020).

### 3.2.2. E-Gov Service Infrastructure

Accurate technological readiness and infrastructure facilities play a very important role in efforts to develop and implement E-Government (Sharifi & Manian, 2010). In the application service infrastructure, two themes are problems with the Si ATAN BEDA application infrastructure, namely Network Infrastructure Constraints and Maintenance Relying on Outside Parties.

a. Network Infrastructure Constraints

Internet network infrastructure is the main aspect that supports the performance of an Internet-based application. Findings in the field show that the experienced internet network influences the level of readiness regarding service infrastructure, so the services provided will not arrive on time because the network does not support it. Internet network readiness can support the speed of information delivery and the application's credibility when used by users. So, with these obstacles, the government's level of readiness is still lacking; mature readiness is needed in this regard to provide effective and efficient services.

b. Maintenance Relies on Outside Parties

One of the problems faced is maintenance activities that still rely on vendors or external parties. In the application development program itself, the application owner should understand the aspects of the technology used so that problems can be resolved quickly and ultimately support the speed of public services.

c. E-Gov Security Level

The level of e-Gov security in the Si Atan Beda application is a problem for the Indragiri Hulu Regency Government in ensuring the level of security in using e-Gov. This is influenced by the lack of guaranteed security of information provided by the community when the public provides all the information provided.

### 3.3. Organization: Policy, Cooperation, and Management

Applications help an organization's performance and business processes, so they cannot be separated from an organizational perspective. The organization is a readiness factor that greatly influences the success of implementing E-Government (Keramati et al., 2018). In this case, there are three components related to organizational readiness in terms of providing applications, namely policies or regulations issued to become the foundation for different SI Atan applications, cooperation carried out by local district governments regarding application expansion, and organizational management in preparation for the use of these applications. The following is the explanation.

#### 3.3.1. E-Government Regulations/Policies

The purpose of regulation is to regulate the behavior of individuals involved in a community, limiting their actions within a certain framework. The process of making these regulations involves an agreement from the government to submit to and

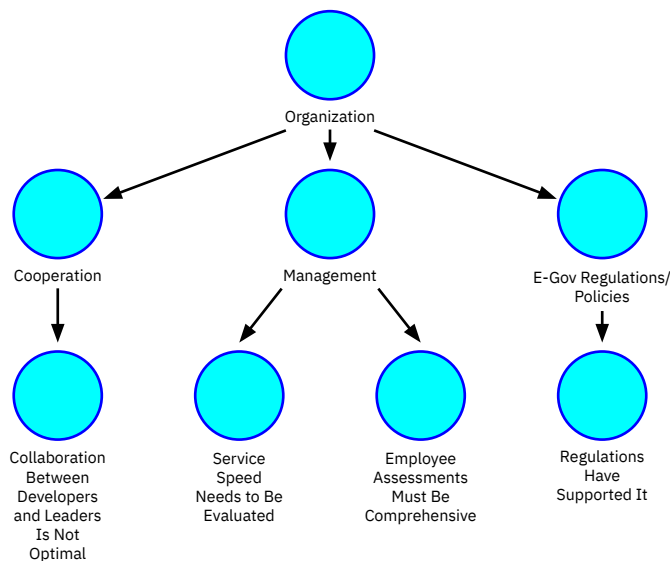


Figure 4. NVivo 12 Processed Data Regarding Organizational Domains

Source: NVivo 12

comply with the rules that have been made to achieve joint results. In the Indragiri Hulu Regency Government context, regulatory or policy support for the Si ATAN BEDA application is reflected in the Indragiri Hulu Regent Regulation Number 34 of 2021. Therefore, the government’s readiness for the Si ATAN BEDA application policy has been realized because clear regulations have been implemented.

a. Regulations Have Supported It

Within the scope of government, regulations are the basis for every program carried out. The regulations provide restrictions and directions with legal force and must be implemented by every civil servant under the Indragiri Hulu Regency Government. The development of the Si ATAN BEDA application has a regulatory basis so that it has a good bargaining position as a program from the Indragiri Hulu Regency Government.

3.3.2. Collaboration

The collaboration explains the managerial activities of the Indragiri Hulu Regency Government in embracing various parties to develop the SI ATAN BEDA application. Collaboration is the most helpful for preparing an application (Adhitama, 2021). The following is one theme that emerged from the results of the analysis of the interview transcripts.

a. Collaboration Between Developers and Leaders Is Not Optimal

It is known that as time goes by and the successful implementation of regional autonomy, regional-level governments have a great opportunity to collaborate with other parties in developing a government product (Leroux & Carr, 2007). In this case, the readiness of the Indragiri upstream district government has prepared cooperation between application makers and the government. However, this only extends to making applications without sustainability for future development. Research informants explained that there has not been maximum cooperation between application developers and leaders within the Indragiri Hulu Regency Government. This makes planning for application development and its utilization less than optimal.

### 3.3.3. Management

Management in an organization has very important needs involving the management of all processes. Management is defined as a series of special functions carried out by individuals in the context of work to increase productivity and achieve organizational goals (Walker & Andrews, 2015). Indragiri Hulu Regency explains managerial issues such as service and performance assessment in this case. There are two problems in organizational management: speed of service and incomplete employee assessment. The following is a more in-depth explanation of this.

#### a. Service Speed Needs to Be Evaluated

Complaint notifications entered through the application can only be accessed via computers in the office, so complaints cannot be monitored for 1 x 24 hours. The government's delayed response has prompted the need to develop features to integrate complaint notifications with employee devices. In the implementation of public services, the central and regional governments continue to make improvements to create optimal and high-quality public services (Rahayu, 2020).

#### b. Employee Assessments Must Be Comprehensive

Employee assessment must be carried out on all employees, both management and staff, so that a more comprehensive evaluation can be carried out. This is not considered to have been done well by the Indragiri Hulu Regency Government. Steps to change and improve public services, emphasizing public satisfaction, involve several efforts, including improving service facilities. When services are provided electronically, improvements are not only needed in the facilities but also require increased capacity of the community and public officials to create optimal service quality (Rukayat, 2017).

### 3.4. Human Resources: Understanding, Training and Skills Qualification

Even though the application is a technology-based service, it cannot be separated from its users, namely humans (manpower). As is generally known, human resources are considered the most vital asset. They are the main driver of the performance of other resources, including the optimization of information technology in public service (Irawati & Munajat, 2018). According to Simamora, human resources play an important

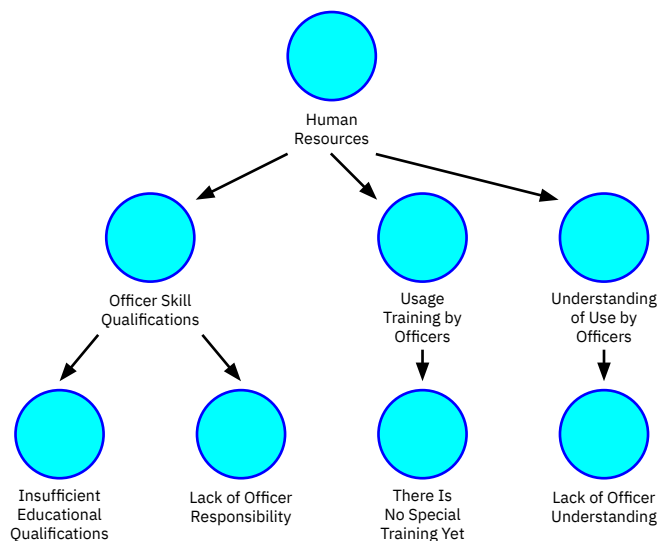


Figure 5. NVivo 12 Processed Data Regarding Human Resources Domain

Source: NVivo 12

role because it impacts an organization's efficiency and effectiveness and is also the main cost that the organization must incur in carrying out its operational activities. This section discusses three sub-indicators, namely understanding of use by officers, training in use by officers, and skill qualifications of officers.

#### 3.4.1. Understanding of Use by Officers

Officers from the SI ATAN BEDA application must, of course, understand the application they are using. The following is an explanation of the officer's understanding of the application.

##### a. Lack of Officer Understanding

The informant explained that officers' understanding of the SI ATAN BEDA application was still lacking. This is, of course, a problem that the Indragiri Hulu Regency Government must immediately address because, basically the officers are the center for the community to ask questions, so they must have a deep understanding.

#### 3.4.2. Usage Training by Officers

A training program to support officers' competency in understanding the SI ATAN BEDA application is necessary for those who can implement the application. The following is one of the themes that is a problem for the Indragiri Hulu Regency Government.

##### a. There Is No Special Training Yet

Research informants explained that officers had not attended any special training in applying for SI ATAN BEDA. The knowledge possessed only comes from consultant instructions, which is not considered sufficient in understanding the application of SI ATAN BEDA.

#### 3.4.3. Officer Skill Qualifications

Fundamental abilities or skills are key to human resources, as they are the basic knowledge needed to use applications effectively and correctly (Abdulkareem et al., 2022). The educational process aims to improve the ability to carry out tasks or work. Therefore, if an employee does not have sufficient educational skills to carry out his duties, he will lack skills, which can hinder the smooth running of his work. Two skill problems were found among SI ATAN BEDA application officers, namely:

##### a. Insufficient Educational Qualifications

One of the problems faced by the Indragiri Hulu Regency Government is the lack of suitability of the educational background of officers in terms of their duties. There are no human resources who have a background in IT, so this is an obstacle in developing and operating the SI ATAN BEDA application.

##### b. Lack of Officer Responsibility

The responsibilities of the SI ATAN BEDA application operations officer were considered insufficient. The success of public sector organizations must also be measured by their performance (Primadona, 2013). This is a threat to achieving the goals of using the SI ATAN BEDA application.

### 3.5. Environment: Community Knowledge, Benefits and Impact on Society

Evaluation of application readiness not only focuses on the internal aspects of the organization but also considers the external environment. The environment here refers to how the use of the SI ATAN BEDA application by external factors influences Indragiri Hulu Regency. The environment is considered a critical element in the assessment of e-readiness (Bakry, 2004). National culture and community participation have a very significant role in the progress of E-Government, ensuring that the application of technology can run successfully (Sharifi & Manian, 2010).

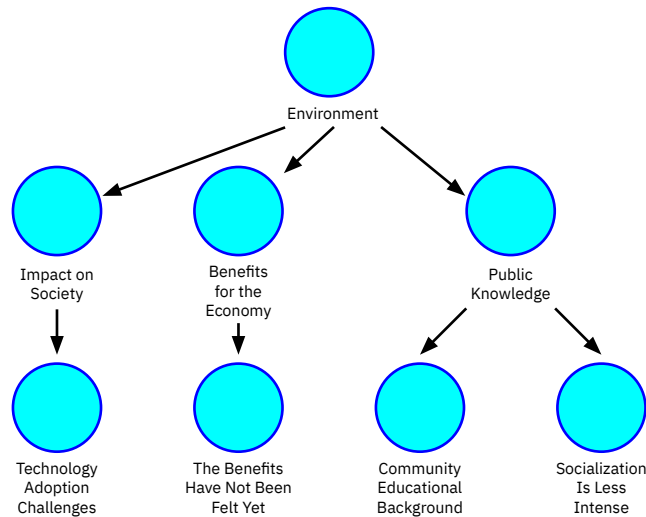


Figure 6. NVivo 12 Processed Data Regarding the Environmental Domain

Source: NVivo 12

#### 3.5.1. Public Knowledge

This sub-indicator explains two themes still part of the readiness problem to use the SI ATAN BEDA application. This theme is related to the educational background of the community and the socialization of the organization. The following is a more in-depth explanation of the sub-indicators of community knowledge.

##### a. Community Educational Background

An application is a technology that a user must know how to use. According to [Mardikanto & Soebiato \(2013\)](#) the development and growth of people's knowledge depend on their skills, which are influenced by their level of education. The informant explained that there are differences in the educational background of the people in Indragiri Hulu Regency, which is an obstacle in utilizing the SI ATAN BEDA application.

##### b. Socialization Is Less Intense

Socialization is inseparable from conveying the latest application usage policies to the wider community. In this case, the informant realized that the Indragiri Hulu Regency Government had not yet carried out intensive outreach to the community. The notification itself is only delivered via social media and is not delivered routinely, so many people are still aware of the application.

### 3.5.2. Benefits for the Economy

An innovation must, of course, have benefits for the environment, especially the economy. This sub-indicator explains one theme regarding the impact of the SI ATAN BEDA application.

#### a. The Benefits Have Not Been Felt Yet

The informant stated that the SI ATAN BEDA application was considered not to have had a complete impact on the economy. The low level of application utilization in society can cause this. This finding is in accordance with the results of research by [Angba & Itari \(2012\)](#), which shows that one of the factors' inhibiting participation is distrust of the benefits obtained, especially in the context of economic reasons.

### 3.5.3. Impact on Society

Apart from the impact on the economy, innovation must have an impact on social aspects or, in this case, on society. The following is an explanation of the challenges of the impact on society.

#### a. Technology Adoption Challenges

The informant explained that currently, there is no visible impact of the SI ATAN BEDA application on society. This is because many people have not yet switched to using this technology, or in other words, the complaint process is still carried out conventionally offline, so the benefits of this technology have not been felt significantly.

## 4. Conclusion

The successful implementation of E-Government depends not only on technological aspects but also on complex factors such as socio-political, organizational, economic, cultural, institutional, and environmental dimensions. Therefore, the STOPE framework is more appropriate than other frameworks because it presents the most comprehensive approach and integrates findings from previous E-Readiness research. E-Readiness research on implementing the regional disaster peace and public order complaint information system (SI ATAN BEDA) in Indragiri Hulu Regency uses the STOP concept to face various challenges and obstacles. Especially in the strategy domain, there are deficiencies in the leadership role in providing direction and supervision and in application development planning. In the technology domain, there are still obstacles to using applications, and the level of security is still weak. The organizational domain is the lack of cooperation between the government and the private sector in implementing these applications. In the human resources domain, the skill qualifications of officers do not match their educational background, and there is a lack of understanding of officers regarding the application. In the environmental domain of public knowledge, the existence of this application is still lacking; of course, the government lacks socialization, so the benefits for society have not been felt. This research reflects the behavior of local governments in middle-income countries with the characteristics of a society that is still technologically deficient, applications built by the government solely to meet innovative government indicators encouraged by the central government through the Ministry of Empowerment of State apparatus and bureaucratic reform. By applying the STOPE concept as an analytical tool, this study is able to present the dilemmatic situation of local governments in other developing countries.

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