Analysis of smart governance in tax digitalization in Bandung city (a case study of e-Satria application)

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Abstract: *This study aims to analyze the implementation of the e-Satria application in achieving smart governance in the city of Bandung. The analysis includes community participation, transparency, and quality of service as evaluated through effectiveness, efficiency, time savings, and data security. This study employs a qualitative approach. The validation of research data utilizes data triangulation, where information is gathered from various informants, documents, and an analysis of the e-satria application. The informants for this study included representatives from the Regional Revenue Management Agency (BPPD), the Bandung City Inspectorate, and De.U Coffee, a restaurant in the Bandung area that uses the application. Data analysis consisted of data reduction, presentation, and conclusion drawing. The study's findings indicate the successful implementation of tax digitalization via the e-satria application. This application meets the criteria for smart governance, namely community participation, transparency, and improved service quality, which are reflected in effectiveness, efficiency, and service time. However, a clearer implementation policy is still necessary to maximize its effectiveness.*

Keywords: Smart governance, e-satria, participation, transparency, effective, efficient, time-saving, data security

Introduction

In recent decades, the swift advancement of technology and the increasing complexity of community activities have compelled governments to continuously enhance service efficiency and quality. Several local governments have adopted the smart city model, which leverages integrated ICT to deliver public services. This approach helps tackle governmental challenges effectively and efficiently, thereby accelerating regional development (Tirtariandi et al., 2019; Rahmadanita et al., 2019). This integrated use of ICT is called e-government, and it aims to enhance governance quality (Rahmandita et al., 2019).

Compared to other ASEAN nations like Singapore and Malaysia, Indonesia's e-government implementation lags (Media Indonesia, 2020). A key strategy to bridge this gap is transforming cities into smart cities, an initiative that has been underway since 2015. Smart cities are characterized by six key attributes: smart economy, smart people, smart governance, smart mobility, smart environment, and smart living (Meijer & Bolívar, 2016). The transformation into a smart city has led to significant initiatives in Bandung, such as the creation of the Bandung Command Center in 2013, which enhances city operations management through extensive CCTV monitoring for traffic, public safety, and environmental oversight.

Further innovations include the 2017 e-Satria application, which digitalizes regional tax payment processes, allowing online submission of the Regional Tax Notification Letter (SPTPD). This digital approach simplifies tax reporting, with the Bandung City Regional Revenue Management Agency (BPPD) processing these reports electronically, boosting efficiency and transparency. Recognizing these achievements, Bandung earned accolades like the TOP 99 public sector innovations in 2018 and the 2019 Innovative Government Award from the Ministry of Home Affairs.

Moreover, Bandung has developed additional smart applications to enhance public services, such as the Pemuda app for online legalization administration and Open Data for easy access to government data online. The Lapor application facilitates citizen complaints and redress. These applications support smart

governance by fostering transparency, accountability, and citizen participation. By expanding its smart city framework, Bandung aims to integrate advanced technologies to meet residents' evolving needs and promote sustainable urban development.

Bandung is a pilot project for smart cities in Indonesia (Tirtariandi et al., 2019) that applies the six smart city indicators. Initiated in 2013, efforts like the Bandung Command Center aim to improve city monitoring through widespread CCTV use. Despite these advancements, public awareness of Bandung's smart city implementation is limited, prompting governmental efforts to disseminate information better (Mursalim, 2017)

Smart governance, a foundational smart city pillar, enhances governance through transparency, accountability, efficiency, and effectiveness (Heryana et al., 2013; Pramuningrum et al., 2017). Implementing e-government, cities aim to fulfill three smart governance criteria: transparency (public access to government information), citizen participation (direct public involvement in decision-making), and high-quality online public services (Pratama, 2014).

To realize comprehensive smart city infrastructure, Bandung continually improves its smart city aspects annually. Applications developed include Pemuda for online legal administration, e-Satria for regional tax payments, Open Data for data access, and Lapor as a citizen complaint platform. Developed in 2017, e-satria enables online regional tax self-assessment, with the Bandung City Regional Revenue Management Agency (BPPD) overseeing and approving taxpayer submissions. E-satria's implementation won Bandung the TOP 99 public sector innovations in 2018 and the 2019 Innovative Government Award (Bandung, 2019).

This study analyzes smart governance in Bandung City's digital tax service implementation via the e-Satria application. Findings reveal that the e-Satria application meets smart governance criteria, evidenced by community involvement from planning to evaluation stages, transparency in tax services, and improved service quality. These results offer theoretical and practical insights into good governance and public service digitalization, particularly in regional tax digitalization.

Literature review

Electronic government (e-Government)

E-Government refers to the utilization of information and communication technologies by governmental bodies to deliver services that benefit citizens, business partners, and employees (Bank, 2015; Silcock, 2018). According to the UNDP, it involves transforming public services through online platforms. This transformation aims to minimize costs, foster economic growth, enhance transparency in service delivery and public management, and boost societal advancements in information technology (Bank, 2015). As highlighted by Indrajit (2004), e-Government services cover a range of interactions, including Government to Citizen (G2C), Government to Business (G2B), Government to Employee (G2E), and Government to Government (G2G). G2C services encompass disseminating public information, issuing permits, certificates, tax payments, and providing educational and health services. G2B involves policies and regulatory services between the government and businesses, including business information, applications, registrations, permits, and payments. G2E extends G2C services to government employees, focusing on human resource development and bureaucratic operations. G2G involves domestic communication within central and local governments and international efforts to enhance diplomatic relations.

Smart city

The concept of a "smart city" is rooted in its capability to attract and harness human capital via collaborations among various organizational and individual actors, employing information and communication technologies (Meijer & Bolívar, 2016). A smart city is characterized by its ability to respond to the needs of its inhabitants and adapt interfaces to suit individual preferences (Chourabi et al., 2012). Washburn (2009) defines a Smart City as using advanced computing technologies to enhance the intelligence, connectivity, and efficiency of vital city infrastructure and services, including administration, education, healthcare, public safety, real estate, transportation, and utilities.

Per Forrester Research, Smart Computing represents a new generation of integrated technologies that bestow IT systems with real-world awareness and advanced analytics, empowering people to make smarter decisions that optimize processes and financial results (Washburn & Sindhu, 2009).

Smart governance

Smart governance is an integral dimension of a smart city, focusing on governance. It aims to foster collaboration between government and community to achieve honest, fair, and democratic governance while providing quality public services (Pramuningrum & Ali, 2017). Smart governance implies employing information technology to efficiently manage complex city systems (Razaghi & Finger, 2018). It emphasizes the effectiveness of governance in public service delivery and the adaptability of governments to technological advancements (Pan et al., 2011; ITSNews, 2019). According to Pratama (2014), smart governance comprises three main components: community participation, transparency, and enhanced quality of public services. Community participation involves citizens engaging in decision-making processes facilitated by online platforms. This includes online voting for public policies and submitting suggestions to guide governmental decisions (Stratigea et al., 2015). Simonofski & Yves (2019) highlight that citizens can actively participate in decision-making, proposing innovative solutions to mitigate risks early on. In the implementation phase, community members can engage as ICT users, utilizing smart city infrastructure for active participation.

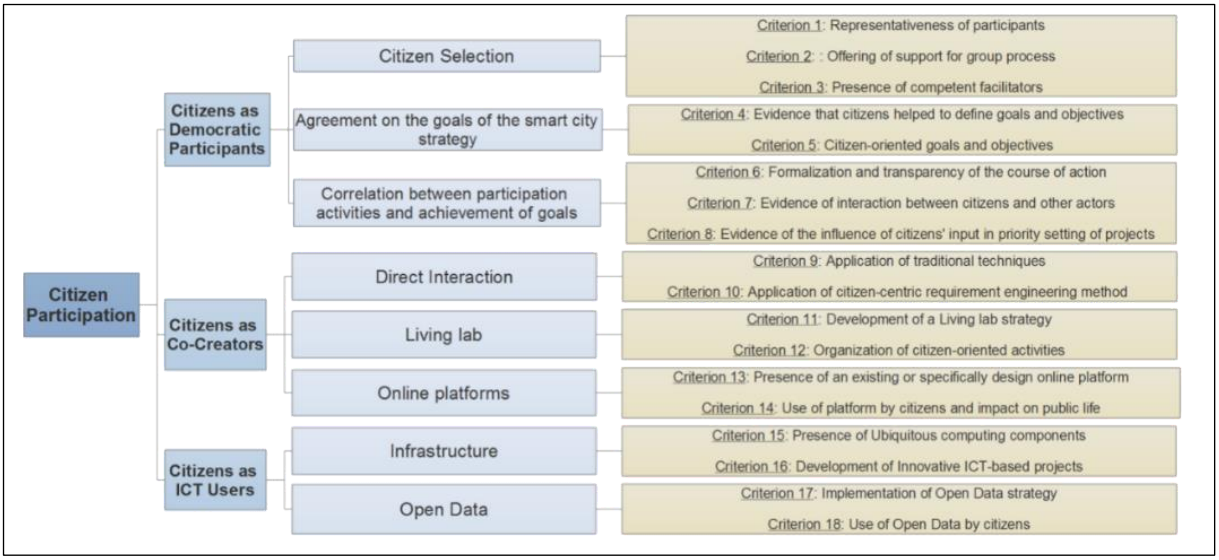

Figure 1. Smart governance framework

The second pillar of smart governance is transparency, which aims to boost citizen awareness and competence. This involves creating portals for public access to government information via web or mobile applications, sharing policy-related information, and providing platforms for public input through ideas, suggestions, or criticisms (Johannessen & Lasse, 2018). Transparency comes into the document, meeting, process, decision-making, and disclosure transparency.

The last component of smart governance is improving the quality of public services. Information technology is utilized to provide public services more efficiently and effectively and save time. Implementing this can involve providing a web—and mobile-based public service information system, such as online tax payments. Creating a structured, secure, and organized database for storing data and information is also a form of improving public services.

The governance of information technology (IT) implementation in an institution or government also needs to be assessed for its maturity. Symons (2005) explains that information technology (IT) governance includes the decision-making process about IT investments, who makes the

decisions, who is responsible, and how the results of the decisions are measured and monitored. The four levels of IT governance maturity in the model developed by Forrester are as follows in Table 1.

Table 1. IT governance maturity

Level	Predicate	Description
IV	Best Practices	IT governance has been around for a while and has evolved to represent best practices. Companies that use best practices in IT governance tend to have an optimized IT portfolio.
III	Consistent	There is a formal IT governance process in place that is followed consistently throughout the organization.
II	Fragmented	Although there has been some effort to formalize IT governance practices, they are dispersed throughout the enterprise.
I	Ad hoc	Ad hoc governance practices are exactly that: ad hoc. There are no formal processes or mechanisms in place; it is essentially "everyone for themselves.". There is no Performance

Methods

The research paradigm adopted for this study is qualitatively structured to gain an in-depth understanding of the subject matter. The study was conducted over six months within the Bandung City Government in West Java Province, Indonesia. This extensive research involved meticulously collecting both primary and secondary data. The primary data was gathered through interviews with a select group of participants, while secondary data was derived from documentation and online tracing.

The interviews were strategically conducted with key stakeholders directly involved in digitalizing regional tax processes through the e-satria application. This group included essential officials from the Bandung City BPPD (Regional Revenue Agency), Regency Municipal Inspector team members, and De representatives. U Coffee is a notable restaurant in Bandung City. The interviews provided critical insights into the application's operational and strategic facets.

Complementing the interviews, online tracing was employed to scrutinize the e-satria interface and comprehend its regulatory frameworks. This method allowed the research team to evaluate the technical and regulatory environment in which the application operates.

For data analysis, the researchers utilized the Miles and Huberman model, a well-regarded analytical framework in qualitative research. This model involves several stages: data collection, data reduction, data presentation, and conclusion drawing. Each stage is crucial in systematically distilling information to reach meaningful conclusions.

Data triangulation methods were applied to ensure the rigor and validity of the research findings. This involved cross-verifying information from four distinct groups: planners in the conceptualization phase, implementers responsible for execution, supervisors overseeing the process, and end-users interacting with the application. By gathering and comparing insights from these diverse parties, the study was able to bolster its findings and draw robust conclusions.

The conclusions were derived by examining the convergence of responses from these various stakeholders, carefully aligning interview responses with document analyses, and observational insights gleaned from the e-satria application. This comprehensive approach ensured that the research problem was addressed with high reliability and validity, leading to well-founded insights into the digitalization of regional tax processes in Bandung City.

Results

E-satria profile

E-satria, introduced in late 2016, is a sophisticated electronic self-assessment tool designed to streamline regional tax reporting in Bandung City. Developed by Bandung City Regulation Number 20, Article 81, Paragraph (2) of 2011, this application is a crucial component in the city's strategy to modernize and improve tax-related procedures. It mandates the adoption of online methods for

managing specific taxes, including those applicable to hotels, restaurants, entertainment venues, and parking facilities.

The primary goal of e-satria is to simplify and enhance the efficiency of tax services, making them more transparent and accessible to taxpayers. The application enables users to easily create a Taxpayer Identification Number (NPWP) and facilitates tax reporting and payment. Thus, it streamlines the tax filing process and significantly reduces the bureaucratic hurdles typically associated with tax compliance.

Moreover, e-satria minimizes the necessity for in-person interactions between taxpayers and tax officials. This reduction in physical interaction is a deliberate measure to curb opportunities for collusion and corruption, fostering a more honest and accountable tax environment. The application's implementation reflects Bandung City's commitment to leveraging technology in governance. The city aims to provide its residents a seamless, reliable, and user-friendly experience. Through this digital initiative, the city sets a benchmark for other regions in pursuing transparency and efficiency in public administration.

Background of e-satria

E-satria, a groundbreaking initiative, was introduced as a strategic solution to mitigate the persistent problem of long queues during tax reporting deadlines. These queues caused significant inconvenience for taxpayers and posed logistical challenges for tax officers who had to manage the influx efficiently. For taxpayers, the issue went beyond mere inconvenience; traveling to these reporting centers incurred substantial costs, adding a financial burden on top of their tax obligations.

To address these challenges, E-satria was developed under the visionary leadership of Mayor Ridwan Kamil, who was committed to transforming Bandung into a Smart City. His vision was to leverage Information and Communication Technology (ICT) as a pivotal tool in streamlining public services, thereby enhancing the overall efficiency and accessibility of municipal services.

E-satria was crafted as a digital tool and as part of a broader mission to incorporate technology into public service delivery. This application enabled taxpayers to complete their tax reporting online, significantly reducing the need for physical presence and, thus, the queues at conventional reporting centers. By integrating E-satria into the city's administrative framework, Bandung improved its service delivery and took a significant step towards embracing the smart city model.

E-satria is a testament to how technology can reshape public service landscapes, providing more efficient, cost-effective, and user-friendly experiences for all stakeholders involved. It highlights the potential of digital solutions in addressing urban challenges, fostering a more connected and efficient city environment that aligns with modern-day expectations of public service delivery.

Regulation

The implementation of e-satria is guided by the Mayor of Bandung's Regulation Number 615 of 2013, which provides a comprehensive framework for establishing and managing online taxpayer business transaction data systems. This regulation aims to enhance the efficiency and accuracy of regional tax payment supervision by leveraging digital technologies. The regulation is intricately connected to the broader legislative framework established by Law Number 06 of 1983, which concerns General Provisions and Tax Procedures. This foundational law advocates for self-assessment methods, allowing taxpayers to calculate their taxes due, thereby promoting transparency and accountability. By integrating the principles of self-assessment with modern digital solutions, the e-satria system seeks to streamline tax-related processes, reduce errors, and improve compliance rates among taxpayers in the region.

Development of E-Satria

The Bandung City Regional Revenue Agency (BPPD Bandung) undertook a comprehensive approach to overhauling its tax reporting system. Initially, BPPD Bandung City officers embarked on a mission to collect valuable taxpayer feedback regarding the existing tax reporting processes. This feedback played a crucial role in shaping the design and functionality of a new application, which was developed entirely by the internal IT team

within BPPD, with no involvement from external consultants.

Once the design phase was completed, the application entered a pivotal trial phase. This phase focused intensely on ensuring robust data security measures and enhancing the platform's user-friendliness. The trials provided a wealth of information and insights, which were instrumental in further refining and improving the application. The extent of the trial phase's impact was significant, as it ensured data security compliance and significantly improved the overall user experience by streamlining the interface and optimizing performance. Detailed feedback from trial participants highlighted key areas for enhancement, allowing developers to address potential issues proactively, ultimately leading to a more polished and efficient final product.

Despite significant efforts to promote and socialize the new online platform among taxpayers, the transition was not immediate for all users. Many were hesitant or slow to adapt to the digital solution. However, the onset of the COVID-19 pandemic dramatically altered the landscape. With restrictions limiting the feasibility of offline transactions, there was a notable and rapid increase in adopting the e-satria platform as taxpayers sought convenient and safe alternatives to fulfill their obligations.

Implementation of e-satria

The e-Satria application is a comprehensive digital platform specifically designed to streamline the processes associated with tax management for various sectors within Bandung City's jurisdiction, such as hotels, restaurants, entertainment venues, and parking services. This user-friendly application is accessible through both a dedicated website (http://esatria.bppd.bandung.go.id/) and an Android app, making it convenient for taxpayers to use according to their preference.

One of the key functionalities of the e-Satria application is the ability for users to create their NPWP (Taxpayer Registration Number) and efficiently manage their tax reporting obligations. The application provides a seamless experience where taxpayers can register themselves, report their business transactions, and calculate the tax liabilities they owe to the government. Automating tax processes significantly reduces the need for manual calculations and paperwork, reducing the potential for errors and saving time.

Furthermore, the Bandung City Government has partnered with Bank BJB to facilitate tax payments. This collaboration ensures a streamlined and efficient tax payment process, wherein the system automatically updates the taxpayer's status upon payment completion. This integration speeds up the process and reduces administrative burdens for taxpayers and tax administrators by ensuring that payments are recorded accurately and promptly.

Despite the efficiencies and conveniences offered by e-Satria, there remains a challenge regarding awareness and adoption among all taxpayers. Not every taxpayer is reached through digital or socialization efforts, meaning some still rely on traditional methods for tax payments. In such cases, tax officers are tasked with manually collecting taxes. This process can be time-consuming and less efficient compared to the digital approach offered by the application. This indicates a need for increased outreach and education to ensure more widespread awareness and use of the e-Satria platform to leverage its benefits for all parties involved fully.

Resources and cost of e-satria development

The Bandung City Budget allocated funds to develop e-satria, an innovative initiative to modernize and streamline city services through digital means. This project cleverly utilized existing infrastructure from the BPPD (Badan Pengelola Pendapatan Daerah or Regional Revenue Management Agency), which helped minimize the initial setup and operational costs. Despite incurring additional expenses, such as updates to the existing systems, training for staff, or integrating new technologies, these costs were justified by the substantial benefits of e-satria.

The benefits of e-satria included improved efficiency in municipal services, enhanced accessibility for residents accessing city services, and better management of city resources. For example, it could facilitate quicker processing of permits, more transparent handling of local taxes, and more effective communication channels between the city administration and its residents. In the long run, e-satria also promised to reduce operational costs by decreasing the

dependency on paper-based processes and manual labor, leading to overall savings for the city budget.

Furthermore, the digital platform enabled faster responses to citizen requests and promoted more responsive and accountable city governance. The favorable outcomes from this strategic investment demonstrated that the benefits, such as increased efficiency, transparency, and citizen satisfaction, significantly outweighed the initial costs associated with developing and implementing the e-satria system.

Output of e-Satria

The introduction of the e-satria application in Bandung City has significantly advanced tax service delivery. This digital platform has streamlined the process for taxpayers, making it more efficient and effective. By simplifying tax obligations, e-satria has reduced the time and effort required for taxpayers to fulfill their responsibilities. The application provides a user-friendly interface that ensures taxpayers can easily navigate their tax duties, enhancing overall service speed.

However, e-satria's impact on direct tax revenue growth, particularly from sectors such as hotels, restaurants, entertainment, and parking, has been less significant than anticipated. While the app has improved the ease of tax compliance, it hasn't translated into increased tax revenues from these industries. This suggests that while e-satria is a valuable tool for efficiency, it is not a standalone solution for boosting tax income.

Local authorities in Bandung City must consider implementing additional strategies to address this issue. Innovative tax policies that incentivize compliance and broaden the tax base could be explored. Furthermore, awareness campaigns are crucial to educate businesses and citizens about their tax obligations and the importance of compliance to community development.

Despite the revenue decline since 2017, e-satria's stabilizing presence indicates its role in maintaining revenue levels that might otherwise have fallen further. The application has created a foundation for potential growth, pending the implementation of complementary strategies focusing on increasing the tax base and ensuring compliance across all sectors.

Benefits of e-Satria

E-satria is a digital platform designed to revolutionize how tax services are managed and accessed. It offers several notable benefits, starting with significantly reducing paper usage. By digitizing tax documents, e-satria minimizes the need for physical paperwork, promoting environmental sustainability. This shift not only helps conserve resources but also simplifies the storage and retrieval of documents, making the entire process more efficient. Moreover, e-satria saves time for both taxpayers and tax authorities. By accessing tax records and completing transactions online, users can handle their tax-related tasks far more quickly than traditional methods. This ease of access means no longer needing to travel to tax offices or stand in long queues, as everything can be managed from a computer or smartphone.

Another critical advantage is the quick access to tax history. Users can quickly review past submissions, payments, and correspondence, which is invaluable for maintaining accurate records and ensuring compliance. This level of transparency and convenience is particularly beneficial during tax seasons or audits. E-satria also enables tax payments to be made anywhere and anytime. This flexibility improved over the previous system, where payments were confined to business hours at specific locations. Now, taxpayers can meet their obligations without disrupting their daily schedules. Furthermore, the application minimizes human contact during transactions, significantly reducing the risk of fraud and errors. By automating many processes, e-satria ensures that data handling is more secure and reliable.

Before e-satria was introduced, the tax service landscape was quite different. Paper usage was extensive, contributing to substantial administrative burdens. Payments were restricted to physical tax offices, often resulting in long wait times as people queued to complete their transactions. By streamlining these processes, e-satria has dramatically enhanced the efficiency and effectiveness of tax services, benefiting users and the tax administration alike. This digital transformation has set a new benchmark for how government services can be delivered in the digital age, offering a model that could also be applied to other sectors.

Discussion

Public participation in e-Satria

Public involvement in delivering public services is a crucial element of democratic governance. Table 2 provides a detailed overview of the various forms of public participation. These forms are categorized according to specific criteria for democratic engagement, particularly in the context of the Bandung City Government's implementation of online-based tax services. The table highlights the mechanisms through which citizens can engage directly and indirectly, showcasing how these participation forms are structured to enhance transparency, accountability, and citizen empowerment in governmental processes.

Table 2. Summary of findings

Aspects	Description
1. Agreement on the goals of the smart city strategy	
1.1 Evidence the citizens helped to define goals & objectives	The e-satria application was developed from the problems faced by the community in paying taxes. Therefore, the Bandung City government invited the community to express their opinions, through interviews, regarding online-based tax services. Together with the community, the government formulated the direction and objectives of developing the e-satria application for tax services.
1.2 Citizen oriented goals & objectives	Based on input from the public, the Bandung City Regional Management Agency (BPPD) began planning and formulating the objectives of the e-satria application, namely the provision of efficient, effective, transparent and accountable tax services.
2. Correlation between participation activities & achievement of goal	
2.1 Evidence of interaction between citizens and another actor	Based on information provided by the Bandung City BPPD, and online search results, currently most taxpayers have used the e-satria application. Many taxpayers download the e-satria application from the Google Play Store. Other taxpayers utilize the government website.
2.2 Evidence of the influence of citizen input in priority setting of projects	The e-satria application was developed based on input from the public who did not want to continue queuing to pay taxes. The Bandung City BPPD then prioritized the development of this online-based tax service so that one of the obstacles faced by taxpayers could be overcome.
3. ICT Use	
3. Online Platforms	
3.1 Presence of an existing/specifically design online platform	E-satria is an online tax reporting and payment application in the Bandung City Government that has been launched since 2016. The main purpose of developing this application is to make it easier for taxpayers to report and create new NPWP without having to come to the tax office. Bandung residents can directly access the e-Satria website and application.
3.2 Use of platform by citizens and impact on public life	Before the presence of e-satria, long queues occurred during the tax payment deadline. This caused problems for taxpayers and tax officers, taxpayers would spend a lot of time queuing, and tax officers were overwhelmed because they could not serve the public optimally. The presence of the e-satria application makes tax services more efficient because taxpayers do not need to queue, tax officers also need to spend a lot of time and energy to serve the mandatory queue.

Aspects	Description
4. Co-Creation	
4. Infrastructures	
4.1 Presence of wide computing components	E-satria services can be accessed via online networks and mobile applications or websites at anytime, anywhere, and at any time as long as they are connected to the internet network. As a result, the e-satria application simplifies tax reporting and payment for taxpayers.

Transparency in E-Satria

Transparency is a fundamental principle for the success and efficacy of public services. It creates an environment where community members are empowered with the knowledge necessary to engage actively in civic matters. The e-Satria system illustrates this principle through its innovative design, which incorporates various features designed to enhance transparency.

One of the primary transparent features of the e-Satria system is the accessibility of documents. Users can effortlessly access documents relevant to various governmental processes, demystifying the bureaucracy often associated with public administration. By providing clarity on processes and decision-making pathways, the system allows citizens to gain insight into governmental operations, thus promoting a more informed public. This level of clarity ensures that community members understand the procedures they must follow and the rationale behind certain government actions, reducing the potential for misunderstandings or misinformation.

Additionally, the e-Satria system ensures that decision-making processes are conducted transparently. For instance, the system offers features such as the installation of monitoring devices or the option for direct supervision, which enhance visibility and accountability. These options allow citizens to witness firsthand the mechanisms by which decisions are made and the resources and efforts allocated to their implementation. By doing so, the e-Satria system fosters a sense of shared responsibility and cooperation between the government and the community.

These transparent features are instrumental in building and maintaining mutual trust between the government and its citizens. Transparency reduces the opacity of tax processes and other public services, encouraging civic engagement and strengthening the social contract. Citizens feel more confident in their government's intentions and capabilities, which can lead to higher participation in community initiatives and compliance with public policies. In essence, the e-Satria system exemplifies how transparency enhances the operational efficiency of public services and contributes to a vibrant and engaged community.

Quality of public service in e-Satria

The e-Satria application exemplifies technological advancements in public service delivery through its substantial efficiency. Its design and functionality streamline the user experience, minimizing energy consumption, time investment, and costs typically associated with traditional methods. One key feature contributing to its efficiency is the absence of application fees, coupled with the elimination of the need for physical queuing. This saves time and reduces users' stress and hassle, making the application significantly more user-friendly.

However, to sustain and enhance the quality of service, the e-Satria application must undergo continuous system updates. These updates are crucial as they ensure the application remains at the forefront of technological and service-oriented advancements and addresses any emerging issues promptly and efficiently.

In terms of effectiveness, the application has transformed the tax reporting process by making it much simpler and faster for users. This convenience enhances the overall user experience, as individuals can complete their tasks with greater ease and speed. Despite this, some users have reported encountering difficulties related to the system. These issues are typically associated with technical glitches or operational inefficiencies, which ongoing improvements are targeting. By

resolving these challenges, the application bolsters its effectiveness and ensures a smoother, more reliable service for all users.

Furthermore, the e-Satria application stands out as a significant time-saver. It removes the necessity for travel to physical offices and the associated long queues, allowing users to handle their affairs from the comfort of their homes or offices. This is particularly beneficial in reducing the carbon footprint associated with travel and contributes to a more sustainable approach to public service.

Nonetheless, there are areas where further refinements are necessary, particularly concerning time-consuming procedures like validation. These aspects indicate that while the application has made considerable strides in improving efficiency, there is still room for improvement. By focusing on these areas, the application can enhance its efficiency even further, ensuring a seamless and swift experience for all its users.

IT governance

The e-Satria system is presently in a critical phase of refinement, partly prompted by a significant surge in usage due to the COVID-19 pandemic. This digital platform, designed to streamline city services and engage the public, has become increasingly essential during the pandemic as more citizens turn to online solutions for their civic needs. To effectively steer the development of e-Satria, public feedback is actively solicited and considered indispensable. Feedback channels allow users to report issues, suggest improvements, and share their experiences, which directly inform the ongoing enhancement and user-friendliness of the application.

Despite these ongoing improvements, the city government has not yet established definitive performance metrics. Instead, it relies on monthly evaluations to assess the system's progress and impact. These evaluations analyze user engagement data, public feedback, and technical performance reports to identify areas for improvement and ensure that the application meets user expectations and operational goals.

A crucial component of the e-Satria system’s development is the assurance of stringent data security measures. Given the sensitive nature of taxpayer information handled by the application, the government has implemented robust authorization processes. These processes safeguard against unauthorized access and potential data breaches, maintaining public trust and protecting individual privacy. By prioritizing data security, the e-Satria system aims to provide a secure platform that users can confidently rely on for their digital interactions with city services.

Government efforts

The Bandung City Government is taking significant steps to promote and upgrade the e-Satria application, an integral part of its digital governance strategy. By focusing on transparency, the government intends to open the application process, allowing citizens to easily track and understand the flow of information, tax collection, and other civic processes. The emphasis on security ensures that user data is protected against unauthorized access and breaches, building a safer digital environment for all users.

Moreover, the government is working hard to make the application more user-friendly. By improving the interface and functionality, they aim to make it accessible to a broader audience, including those who may not be tech-savvy. This inclusivity is crucial for increasing the public's engagement with the platform. These efforts are part of a broader plan to streamline tax processes, reducing the bureaucratic burden on individuals and businesses. By simplifying these processes, the government hopes to increase compliance and facilitate smoother interactions between the citizens and the government.

Ultimately, the Bandung City Government's initiatives aim to build public trust and encourage greater participation in digital governance. By fostering a more collaborative relationship with the community, the government seeks to enhance efficiency and effectiveness in its services, thereby improving the overall quality of governance and public satisfaction.

Conclusion

The e-Satria application represents a significant step forward in smart governance, emerging as a model for integrating

technology into public administration. This digital platform is designed to enhance government operations by promoting community involvement, ensuring transparency, and elevating the quality of services provided to citizens. One of the standout features of the e-Satria application is its focus on efficiency and effectiveness, streamlining processes to save time and resources. Additionally, it strongly emphasizes data security to protect sensitive information, which is crucial in maintaining public trust.

The application invites community participation by allowing citizens to directly engage with governmental processes, fostering a sense of ownership and accountability. Transparency is another pillar of the e-Satria application, with clear communication and accessible information to the public, thereby reducing the potential for corruption.

However, despite these advancements, the IT governance structure associated with the e-Satria application is still in a developmental phase, often characterized as ad hoc. This is mainly attributable to the lack of established performance indicators, which are essential for measuring the success and areas for improvement of the application. Without these metrics, it becomes challenging to evaluate the effectiveness of the application comprehensively. The absence of clearly defined goals and benchmarks means that improvements in IT governance might be reactive rather than proactive, potentially hindering the application's long-term success and sustainability.

Recommendations

To further enhance the e-Satria platform, the Bandung City Government should prioritize its regional tax reporting and payment promotion efforts. Effective promotion can significantly improve citizens' awareness and usage, encouraging more people to comply with tax regulations. Strengthening supervisory measures is crucial to ensuring the integrity and efficiency of the system. This can include installing tap boxes to monitor transactions and ensure transparency and accountability.

Beyond these measures, integrating user feedback into the platform's development process is essential for continuous improvement. By actively listening to user experiences and suggestions, the government can identify areas for refinement and implement changes that enhance user satisfaction and functionality. This feedback loop could be complemented by the introduction of features such as live chat support to assist users in real time and error notifications to help users quickly identify and resolve issues.

A user-friendly interface is paramount to ensuring that residents can easily navigate and utilize the platform. This will increase engagement and reduce the need for extensive user support. Customer satisfaction surveys should be employed to measure the success of these enhancements. They will provide valuable insights into the effectiveness of the changes and identify further opportunities for improvement.

Additionally, future research should focus on conducting direct observations and collecting empirical data to more accurately evaluate the implementation of smart cities. This approach will provide a deeper understanding of the platform's impact and areas for advancement, ultimately contributing to a more efficient and user-centric urban management system in Bandung.

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