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Digital Government Enterprise Strategies at the Regional Drinking Water Company (PDAM) Delta Tirta, Sidoarjo Regency, Indonesia

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Abstract

This study examines the *digital government enterprise strategies* at the Regional Drinking Water Company (PDAM) Delta Tirta, Sidoarjo Regency, Indonesia. PDAM Delta Tirta faces problems in achieving its water service coverage target, serving only a small proportion of the total population. In addition, the PDAM's implementation of e-government has not been optimal, reflected in the low rating of its digital services. This problem reflects a lack of effectiveness in implementing digital government strategies, which should improve the quality of public services and operational efficiency. This study used a descriptive qualitative research method with snowball sampling to select six key informants. Data were analysed using an interactive model that included data collection, condensation, data presentation, and drawing conclusions. The results showed that PDAM Delta Tirta's digitalisation strategy is supported by the Chief Information Officer (CIO) role and cross-field collaboration for infrastructure innovation. However, there are still constraints on budget allocation and human resource development. However, the commitment to quality service, reflected in the high Public Satisfaction Index (PSI) in 2023, confirms the importance of understanding public values and stakeholder needs in successful digitisation.

Keywords: the Regional Drinking Water Company (PDAM), digital government enterprise, Chief Information Officer (CIO)

INTRODUCTION

Water is a significant source of life for all living things and is a basic requirement in various aspects of life (Effendi et al., 2018; Teguh Imam Sationo, 2022; Vina Mareta, 2021). As the population increases, the need for water increases, while the availability of clean water is increasingly limited (Angellina et al., 2021). Therefore, everyone has the right to get access to clean water, with the guarantee of adequate availability of water resources. However, in the management of water resources, complex conflicts of interest often occur, such as competition between the need for water for irrigation and the needs of the growing industry (Weningtyas & Widuri, 2022; Astriani et al., 2020). In addition, development that occurs around water sources risks damaging natural ecosystems, which in turn threatens long-term water availability (Permatasari & Koestoer, 2022). Therefore, sustainable water resource management is needed to maintain ecosystem balance and ensure adequate water availability for the community (Sentanu & Mahadiansar, 2020).

Table 1. Distribution of Clean Water through Clean Water Companies

Year	Total Clean Water Distribution through Water Companies (thousand/m^3)
2019	4.130.273
2020	4.350.726
2021	4.375.697
Total	12.856.696

Source: bps.go.id, 2023

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Based on this data, it can be seen that the distribution of clean water on a national scale increases every year. It also directly shows that the need for clean water is always increasing. Clean water is a basic human need for various needs such as sanitation, agriculture, and for consumption. Therefore, the state, as the holder of power over water, is obliged to organize various efforts to ensure the availability of water for all citizens. The central and local governments have the responsibility to fulfil clean water needs as part of public services. Public services, which are the basic functions of government, must be run by applicable regulations (Azizah & Kriswibowo, 2021; Bazarah et al., 2021). For this reason, local governments are authorized to manage water resources by forming Regional-Owned Enterprises (BUMDs), such as the Regional Drinking Water Company PDAMs, to provide drinking water services for their citizens, as stipulated in the Minister of Home Affairs Regulation No. 2/2007.

PDAM Delta Tirta of Sidoarjo Regency is tasked with providing healthy drinking water to the population by Sidoarjo Regent Regulation No. 31/2014. Its functions include planning, implementing, coordinating, and controlling the production and distribution of drinking water, managing revenue from water accounts and other legal sources, administrative and secretarial activities, and other duties of the Regent. As a regional company responsible for providing drinking water as a public service, PDAM Delta Tirta must improve community welfare and ensure access to clean water for all citizens (Hasan et al., 2021). PDAM Delta Tirta must perform two main functions: first, as a profit-oriented company to support Regional Original Revenue (PAD), and second, as a public service provider that prioritizes benefits for the community.

Along with technological advances, digital adaptation has become very important in the public sector. E-government is one approach that is expected to improve efficiency, effectiveness, transparency, and accountability in public services (Azizah & Kriswibowo, 2021; Eprilianto et al., 2021; Laili & Kriswibowo, 2022). PDAM Delta Tirta has implemented e-government through various digital services, such as online complaints and social media. However, the results achieved are still far from expectations as evidenced by public complaints related to the quality of services provided by PDAM Delta Tirta. This can be seen in the Google reviews that show a low rating on the complaint application, with a rating of only 1.4 out of 624 reviews. It can be said that these public complaints show public dissatisfaction with the implementation of e-government.

Meanwhile in 2020, the PDAM was only able to serve 46% of residents, far from the 100% target, with only 13% of the population connected to clean water services. This is also confirmed based on data from PDAM Delta Tirta Sidoarjo Regency, it is known that from January to May 2023 only 2,000 house connections were installed from the target of 20,000. So this data indicates that the target has not been achieved because there are still problems that occur in the service process provided by PDAM Delta Tirta. Furthermore, when viewed about the amount of water available in PDAM Delta Tirta Sidoarjo Regency, is sufficient to meet the water needs of 60 litres per individual per day for PDAM customers, but the amount of water availability in the PDAM is not sufficient for the needs of the entire population of Sidoarjo Regency as evidenced by the data in the following table:

Table 2. Comparison of Clean Water Distribution with Number of Customers and Population in Sidoarjo District

Year	Clean Water Distribution (million^{m3})	Number of Customers (people)	Total Population (population)
2018	32,3	137,094	2,216,804
2019	33,3	141,414	2,249,476
2020	35,7	151,493	2,082,801

Source: bps.go.id, 2023

It can be seen from the table that the number of clean water customers in PDAM Delta Tirta has always increased, balanced by an increase in water distribution. In addition, based on the PERPAMSI DPD East Java Korwil II Performance Value data, it can be seen that PDAM Delta Tirta Sidoarjo Regency, with a service area of 634.38 km², has experienced an increase in the number of customers by 10% from 2018 of 137,094 customers to 151,493 in 2020. However, the total performance of the company shows a performance that tends to fluctuate with a value of 3.55 in 2019, 3.24 in 2020, and 3.46 in 2021, and is not in line with customer growth even though the value is still in healthy category according to the assessment of PERPAMSI DPD East Java II korwil. It can be said that Sidoarjo has a fairly large number of customers and a fairly large area but is not matched by an increase in total performance value. This is in line with research conducted by Sahabuddin et al., (2022) which says that employee performance in providing services affects customer satisfaction and organizational reputation. When employees can carry out their duties well, quickly, and efficiently, this will create a positive experience for customers, which in turn can increase loyalty and trust in the services provided.

Some previous studies as conducted by Ruru et al., (2020) examined the implementation of a digital government smart city in Manado City using the research focus, namely the policy implementation model from Charles O. Jones. The results showed that the implementation of the smart city program in Manado was not optimal, with a lack of human resources, a low understanding of technology, and limited infrastructure as obstacles. Then, there is another previous research conducted by Febiyanti & Kriswibowo (2023) examining the Evaluation of Electronic Government in Improving Public Service Performance at PDAM Surya Sembada Surabaya City using the research focus of the Indonesian e-government ranking framework. The results showed that the application of e-government in customer complaint services was not optimal, requiring policy adjustments, infrastructure evaluation, and feature updates.

From these previous studies, the novelty element in this research is that there is still no research that discusses digital government, especially using the principles of digital government enterprise strategy in the book "Building Digital Government Strategies: Principles and Practices" by Sandoval-Almazan et al., (2017). In fact, along with technological advances, digital adaptation is very important in the public sector. Moreover, the use of technology is also needed to provide a digital-based governance system by Presidential Regulation Number 95 of 2018. Digital government is governance that refers to the use of digital technology to transform all aspects of government, including public services, internal operations, and interactions with the community. The goal of digital government is to create better public value, build efficient government, and improve public services.

Therefore, it is necessary to analyze the digital government enterprise strategy at PDAM Delta Tirta Sidoarjo Regency using the digital government enterprise strategy principles in the book "Building Digital Government Strategies: Principles and Practices" by Sandoval-Almazan et al., (2017), namely (1) The establishment of a field that focuses on coordinating the development of a digital government enterprise; (2) The existence of a Chief Information Officer (CIO) who is responsible for coordinating the digital government enterprise strategy; (3) The Chief Information Officer (CIO) and the committee play a role in building policies, procedures and standards for the development of digital government enterprises; (4) Budget allocation and resource efficiency for digital government enterprise innovation projects; (5) There is a balance in the system and budget allocation for innovation and exploration to support infrastructure development; (6) Public sector investment reports based on understanding public values and exploring the value needs of each relevant stakeholder; (7) Investment reports that include investments in infrastructure, systems that support digital government enterprise operations, policies and programs; (8) Collaboration between IT experts and program experts in assessing cases, overseeing project development and implementation.

With this principle, it can be a reference for creating technology-based governance, aiming to create better public value, build efficient government, and improve the quality of public services. This research has important benefits in providing a deeper understanding of the implementation of the digital government enterprise strategy at PDAM Delta Tirta Sidoarjo Regency. By analyzing this strategy, this research is expected to identify the challenges and successes experienced in efforts to create better public value, build efficient government, and improve public services. The findings of this study can also provide recommendations for PDAM Delta Tirta management to improve service performance and increase customer satisfaction. In addition, this research can contribute to the development of digital government theory and practice, and serve as a reference for other agencies seeking to implement technology-based governance.

METHODS

In this research, the method used is a descriptive research method with a qualitative approach. This qualitative method was chosen because the author aims to explore and understand in detail the readiness of PDAM Delta Tirta Sidoarjo Regency to implement digital government through the eight principles proposed by Almazan et al., (2017). The qualitative approach allows researchers to explore the perspectives and experiences of informants, thus providing a more comprehensive picture of the challenges and potential in improving public services (Abdussamad, 2021).

Informants in this study were selected purposively using the snowball sampling method, which is an effective way to identify and select informants in a network of relationships (Abdussamad, 2021). Interviews were conducted with a total of six key informants who have key roles in the development of information technology at PDAM Delta Tirta Sidoarjo Regency. These informants include: one Head of Research Development and Information Technology, who has in-depth knowledge of information technology in the PDAM; one Sub-Division of Technology and Information, who is in charge of planning and implementing the development of information technology systems; two Technology and Information Assistants, who also plan and develop

integrated information technology systems; one Cooperation and Investment Assistant, who understands cooperation with stakeholders; one Public Relations Officer, who understands the PDAM's public services; and one Management Assistant, who focuses on infrastructure management.

This research was conducted at PDAM Delta Tirta Sidoarjo Regency from October 4 to December 4, 2023. This location was chosen because PDAM Delta Tirta has the main responsibility of providing clean water to the community. However, the problem faced is the lack of effectiveness in implementing e-government as part of the digital government enterprise strategy. Some of the barriers faced include weak coordination, limited resources, and challenges in maintaining service quality. To validate the research findings, researchers used the interactive data analysis model from (Miles et al., 2018). This model allows researchers to analyze data effectively and efficiently through four stages: data collection to answer research questions, data condensation needed to find important points of relevant data, presentation of condensed data so that the description of the data obtained becomes simpler and easier to understand, and drawing conclusions from data that has been obtained and validated through data condensation. Thus, the results of this research are objective, valid, and accurate, reflecting the reality in the field regarding the implementation of digital government in PDAM Delta Tirta Sidoarjo Regency.

RESULT AND DISCUSSION

1. Establishment of a field that focuses on coordinating the development of digital government enterprises

The existence of a field that focuses on the development of a digital government enterprise is needed to build unity in the application of IT and make the system integration operate according to its function (Almazan et al., 2017). In this case, the strategy analysis shows that the establishment of an area focused on the development of digital government enterprise is an important first step to creating unity in IT implementation. The IT sub-section at PDAM Delta Tirta, with nine applications that have been developed, namely SMART, SPEKTRA, SIMPEG, SIPAM, SIA, Delta Tirta, ABM, employee Telegram and SCADA Monitoring. This proves the company's commitment to creating an efficient and effective system based on technology, in line with the findings of Roziqin et al., (2021) which states that a unified and integrated system can improve services and create operational efficiency.

In addition, coordination between the IT Subdivision and other interested parties is essential in planning the digital government enterprise strategy. Through this coordination, PDAM Delta Tirta can ensure that the needs and inputs of various parties are met. The process involving the creation of SOPs and evaluation of system effectiveness shows that the company is not only focused on technology development but also achievable results, as emphasized by Nuralam (2017) research on the importance of coordination and communication in achieving common goals, which is reflected in the practice at PDAM Delta Tirta.

Digital government enterprise strategy emphasizes the importance of establishing a dedicated area to coordinate all IT development activities within an organization. This includes the establishment of an IT Subdivision that ensures there is a unit focused on integrated IT planning and management as well as coordination and collaboration aimed at building effective communication between the IT Subdivision and interested parties, so that system development can run according to expectations and goals. According to Almazan et al., (2017) which explains that the field that focuses on the development of digital government enterprises represents the interests and needs of other fields to facilitate coordination related to the development of digital government.

The digital government enterprise strategy emphasizes that an integrated system can reduce the redundancy of tasks and increase transparency, which are key factors in successful implementation. Good coordination between the IT Sub-Division and interested parties also strengthens the argument that decisions based on actual needs in the field can be decisive in the success of digital government enterprise projects. Thus, PDAM Delta Tirta not only meets the expectations of the community but can also serve as an example for other local companies in implementing digital government, strengthening the role of IT in supporting better public services. As research by Hermawan et al., (2024) explains the role of Information Technology (IT) in supporting public services is important in improving the efficiency, transparency, and accessibility of services to the community. It enables the automation of administrative processes, facilitates data collection and analysis, and accelerates responses to citizen needs.

2. There is a Chief Information Officer (CIO) responsible for coordinating the digital government enterprise strategy.

The CIO is tasked with being responsible for the development and management of the digital government enterprise strategy as well as the effective management of IT infrastructure in the government (Almazan et al., 2017).

In this case, the strategy analysis shows that the presence of the CIO at PDAM Delta Tirta has proven to be effective in the development of the digital government enterprise strategy plan as evidenced by the presence of the Assistant Head of the IT Subdivision in coordination with the Head of the R&D and IT Unit to select staff involved in system development, allowing the CIO to provide clear direction to the IT team, including advice and input needed during the system development process. Research by Sahnan (2017) supports the importance of careful planning in achieving organizational goals, where the CIO plays a central role in formulating strategic steps.

In addition, effective IT infrastructure management is the foundation for successful system development. PDAM Delta Tirta has prepared various supporting infrastructures, such as laptops, servers, and network devices, where the CIO plays an important role in coordinating and reporting on infrastructure needs. The systematic process of applying for and managing infrastructure, as outlined in Bunga & Bunganingtyas (2023) research, shows that good infrastructure is essential for smooth operations. By conducting regular checks and timely repairs, PDAMs can ensure that the infrastructure optimally supports system development.

Digital government enterprise strategy emphasizes the important role of the CIO in the digital government enterprise strategy. This framework includes *first*, strategy development by the CIO, where the CIO is responsible for planning and developing a clear digital strategy and coordinating with various parties in the organization. *Second*, is IT infrastructure management, where the CIO must ensure that the available IT infrastructure is adequate and well-managed to support the implementation of the formulated strategy. According to Almazan et al., (2017) who explained that the CIO has a role in leading, coordinating, and inspiring technical and program staff in terms of appreciating the strategic value of information and technology in the public sector.

The digital government enterprise strategy at PDAM Delta Tirta has emphasized the role of the CIO in the development of digital government, showing that this strategy has been implemented effectively. Through close oversight of infrastructure planning and management, the CIO cannot only improve the effectiveness of the systems developed but also ensure that the needs of stakeholders are met. This finding underscores the importance of integration between strategic planning and infrastructure management, where collaboration between the CIO, IT staff, and other management makes system development more responsive to actual challenges and needs.

Thus, the evidence that good coordination across organizational levels is essential to achieve common goals in digital government supports the argument that the presence of a CIO can be a decisive factor in improving public services, which is central to the success of the digital government enterprise at PDAM Delta Tirta. As according to Fitrianingrum et al., (2022) who explains that good coordination is important to ensure smooth communication, clear division of tasks, and synergy between departments so that common goals can be achieved effectively and efficiently.

3. The Chief Information Officer (CIO) and the committee play a role in developing policies, procedures, and standards for the development of the digital government enterprise.

The CIO together with the committee has the authority to develop policies, and procedures and set standards for developing a digital government enterprise to ensure the integration, collaboration, and development of IT systems (Almazan et al., 2017). In this case, the strategy analysis shows that the development of a clear digital government enterprise policy is an important foundation for the implementation of IT in PDAM Delta Tirta, where this policy, contained in the Board of Directors Regulation, is formulated and set by the CIO and the committee to provide clear direction for employees and create unity of vision throughout the organization.

In addition, the availability of systematic procedures, from assignment, coordination, and system creation, to maintenance, is crucial in the development of a digital government enterprise. By following established procedures, teams can work more efficiently and effectively, as supported by Neyfa & Tamara (2016) research which shows that structured procedures make it easier to carry out tasks. The application of clear standards is also important for evaluating the performance of IT systems, where PDAM Delta Tirta emphasizes the integration and efficiency of the developed system, aiming to ensure the system functions properly and speeds up work. Suprapti & Ashriady (2016) explain that standards serve as benchmarks for assessing actual versus expected performance, with the CIO and committee playing a role in setting and implementing these standards to ensure evaluations are conducted consistently.

The digital government enterprise strategy emphasizes the important role of the CIO and the committee in establishing policies, procedures, and standards for the development of the digital government enterprise. This framework includes *first*, clear policies that provide direction and foundation for the development of a digital government enterprise. *Second*, systematic procedures facilitate efficient and effective execution of IT development. *Third*, the application of standards enables

the evaluation of the performance of the developed system, ensuring that the system functions properly and by the needs of the organization. According to Almazan et al., (2017) which explains that with a clear and coordinated framework, companies can optimally utilize information technology to improve efficiency, transparency, and services to the community.

The digital government enterprise strategy emphasizes the important role of the CIO and the committee in the development of policies, procedures, and standards for the development of the digital government enterprise, confirming that the implementation of this strategy has been done well. Clear policies serve as guidelines to improve employee performance, while systematic procedures facilitate efficient execution of IT development. The implementation of appropriate standards allows for more accurate evaluation and measurement of system performance, which is an important aspect in assessing the success or failure of digital government implementation in the enterprise. As according to Yadnya et al., (2022) who explains that clear policies and procedures and the application of appropriate standards are important to improve employee performance and assess the achievement of organizational goals by its vision and mission.

With good alignment between policies, procedures, and standards, and effective collaboration between the CIO and committees, PDAM Delta Tirta can create a framework that supports innovation and continuous improvement in public services. This shows that the successful development of a digital government enterprise depends on the implementation of strong policies and systematic procedures, by Almazan et al., (2017) who stated that good policies, procedures, and standards are key to achieving operational efficiency and effectiveness in digital government.

4. Budget allocation and resource efficiency for digital government enterprise innovation projects

Resource allocation and budget management are crucial in IT management. CIOs must be able to allocate budgets for innovation projects that meet the objectives of digital government enterprise development. In addition, the CIO must be able to allocate resources conservatively (Almazan et al., 2017). In this case, the strategy analysis shows that having the right budget allocation is an important foundation for the implementation of digital government enterprise at PDAM Delta Tirta, which has established a planned base budget for infrastructure expenditures such as computers, laptops, and other hardware. According to Kusniawati & Lahaya (2017), a systematically prepared budget helps organizations manage finances and achieve set goals, while Saraswati (2018) emphasized the importance of allocating funds for infrastructure in the capital expenditure group.

Although PDAM Delta Tirta has a budget for infrastructure procurement, more attention needs to be paid to the budget allocation for system maintenance so that innovation can continue sustainably. Good resource management is also key in driving innovation, where the infrastructure at PDAM Delta Tirta is sufficient to support system maintenance, including content updates and feature changes. However, the absence of a dedicated budget for maintenance is a challenge, as revealed by Abdullah & Abdul Halim (2006) in the research cited by Saraswati (2018), which states that the capital expenditure budget should include the cost of maintaining fixed assets.

On the other hand, although human resources are sufficient, the number still does not meet the needs to drive innovation, indicating a gap between innovation needs and available resources. To achieve efficiency in resource management, CIOs need to make conservative allocations by considering the priority of innovation projects and current operational needs. As according to Almazan et al., (2017) emphasize the importance of efficient and effective resource management, including budget, infrastructure, and manpower, to achieve optimal results.

Digital government enterprise strategy emphasizes the importance of budget allocation strategy and resource efficiency in digital government enterprise innovation projects. The framework includes *first*, budget allocations supporting innovation projects must be well planned to ensure infrastructure and maintenance needs can be met. *Second*, efficient resource management is required to manage human resources and infrastructure, so that system maintenance and continuous innovation can be maintained. *Third*, resource efficiency must be considered through conservative management, so that resource allocation can be optimized and innovation goals can be achieved. According to Almazan et al., (2017) who explained that the CIO must be able to allocate resources efficiently and effectively for innovation projects that support the development goals of the digital government enterprise, including conservative management of infrastructure, budget, and labor.

While the digital government enterprise strategy emphasizes that the PDAM has a basic budget to support the implementation of the digital government enterprise, the constraints faced, such as the absence of a dedicated budget for system maintenance and imperfections in human resources, indicate that the implementation of this strategy has not been fully optimized. Thus, proper budget allocation and resource efficiency are essential to encourage innovation at PDAM Delta Tirta. According to

Wesmi et al., (2023) which explains that proper budget allocation and resource efficiency are important to encourage innovation, where integrated cost management can include resource allocation that makes a positive contribution to the efficiency of resource management and the improvement of the results achieved. With the CIO's attention to budget allocation for human resource capacity maintenance and development, organizations can better adapt to technological developments and meet public service needs. This research confirms that budget allocation strategy and resource efficiency are key factors in the success of the digital government enterprise innovation project at PDAM Delta Tirta.

5. There is a balance in the system and budget allocation for innovation and exploration to support infrastructure development.

The diversity of systems used is often a challenge for CIOs because it makes maintenance costs more expensive. Therefore, there is a need for standardization & the same process to balance the running of the system and budget allocation including maintenance costs (Almazan et al., 2017). In this case, the strategy analysis shows that in budget allocation, PDAM Delta Tirta faces the challenge of not having a specific allocation for system maintenance, although there is a budget for development such as infrastructure purchases. This shortcoming indicates that the budget does not fully reflect long-term needs, whereas Abdullah & Abdul Halim (2006) in the research cited by Saraswati (2018) emphasized the importance of including financial allocations for fixed asset maintenance in the capital expenditure budget.

In addition, the PDAM implemented a standardized process in the development of the digital government enterprise, including module updates and data input error correction, which is important to ensure system maintenance is carried out efficiently and consistently, as stated by Pandi et al., (2014). Finally, planning that supports system maintenance, innovation, and infrastructure exploration has also been undertaken, with the PDAM categorizing system faults to determine the appropriate course of action, reflecting an awareness of the importance of maintenance in maintaining smooth operations and preventing further damage, as emphasized by Pandi et al., (2014) on the important role of system maintenance.

Digital government enterprise strategy emphasizes the importance of a balanced strategy in the system and budget allocation for innovation and exploration in the development of digital government enterprise infrastructure. This framework includes *first*, a budget allocation that ensures a balance between system development and maintenance. *Second*, process standardization establishes consistent procedures for system maintenance to improve efficiency and reduce costs. *Third*, planning that supports innovation, aims to develop systematic planning for infrastructure maintenance and innovation. According to Almazan et al., (2017) which explains that there must be standardization & the same process to balance the running of the system and budget allocation including maintenance costs.

The digital government enterprise strategy emphasizes that although the PDAM has implemented a standardization process in the development of the digital government enterprise, the challenge of creating a balance between the system and budget allocation is still an obstacle. The absence of a dedicated budget for system maintenance indicates that the digital government enterprise strategy has not been fully implemented effectively, and this has the potential to affect the success of digital government implementation in the company. According to Irmayani & Susyatih (2017) which explains that system maintenance is important to avoid damage or loss of data due to unwanted conditions, but without adequate financial support, efforts to maintain and protect data can be hampered. Thus, this research emphasizes that a balanced strategy in system and budget allocation is key to supporting continuous innovation and exploration in the development of digital government enterprise infrastructure. This balance, if achieved, will contribute to improved digital government implementation, which is the core objective of this research.

6. A public sector investment report that is based on an understanding of public values and an exploration of the values and needs of each relevant stakeholder.

This public sector investment report includes public value, which is interpreted as the benefits of implementing information technology as a result of a dialog between various stakeholders about what is considered valuable to the government's constitution (Almazan et al., 2017). In this case, the strategy analysis shows that PDAM Delta Tirta has implemented public values, which can be seen from its vision, namely the availability of better and healthier drinking water managed in a trustworthy and professional manner. It can be said that the vision describes how the company contributes to the community such as the existence of integrated and integrated services, so that services can be more efficient and effective. Such as the existence of complaints and service services that can be done online, so that residents do not need to come to the office.

On the other hand, PDAM also has a Community

Satisfaction Index (IKM) of 96.71 in 2023, this value is included in the very good category. The IKM scale ranges from 0 to 100, where values above 80 are generally considered satisfactory. The value of 96.71 indicates that the community is very satisfied with the services provided, reflecting high performance in meeting their expectations and needs. Research by Safitri (2019) revealed that the public value generated relies heavily on delivering services that meet the requirements and expectations of citizens, which in turn increases legitimacy and public trust in the institution.

In addition, the PDAM also identifies and values the interests of stakeholders, including cooperation with external parties to ensure the availability of necessary goods and services, as well as providing incentives for stakeholders. By involving them in decision-making, the PDAM can better understand and meet their needs, as well as focus on higher returns on investment for investors. In terms of infrastructure procurement, the PDAM demonstrates a commitment to improving services through the construction of water treatment plants and distribution networks, reflecting an understanding of stakeholder needs and the public value to be achieved, in line with the thinking of Bolívar et al., (2019) who emphasize that public policy should consider the benefits felt by the community at large.

The digital government enterprise strategy emphasizes the importance of a public sector investment report strategy with an emphasis on understanding public value and exploring stakeholder needs. This framework includes first, public value, which ensures that policies and programs implemented result in tangible benefits for society; second, stakeholder engagement, which involves identifying and exploring the interest values of each stakeholder to enhance their cooperation and participation; and third, infrastructure development, which designs strategies focused on building infrastructure that can meet the needs of society and stakeholders. According to Almazan et al., (2017) which explains that the public sector investment report includes public value defined as the benefits of implementing information technology, which is the result of dialog between various stakeholders regarding what is considered valuable for the government's constitution.

The digital government enterprise strategy emphasizes the application of public sector investment reporting principles that focus on understanding public value and exploring stakeholder needs, indicating that the PDAM has adopted a relevant and responsive digital government enterprise strategy. The company's vision to provide good and healthy drinking water, supported by complaints and online services, reflects the PDAM's commitment to improving accessibility for the community. The importance of establishing a mutually beneficial relationship between public and private interests through cooperation with investors for infrastructure development shows that the PDAM strives to maintain a balance in creating public value. This suggests that public sector investment reports not only focus on achieving internal objectives but also contribute positively to the satisfaction of the community with the services provided and stakeholders.

This is to by research by Widianingsih et al., (2019) which explains that maintaining balance in creating public value shows that public sector organizations do not only focus on internal goals but also community satisfaction because the public value is achieved when services are met the needs of the community and the higher the community satisfaction, the greater the public value created. This research also confirms that creating public value through strategic and sustainable cooperation is a crucial aspect in supporting the development of future policies and strategies, which will ultimately strengthen the success of the digital government enterprise in improving the implementation of digital government at PDAM Delta Tirta.

7. Investment reports include investments in infrastructure, systems that support operations, and digital government enterprise policies and programs.

In terms of investment reports in this principle are related to basic infrastructure such as hardware, software, and network systems. Then there is a Government Resource Planning (GRP) system to support the operating system and also the existence of applications that support the improvement of digital government enterprise policies and programs that can process and analyze information that is beneficial to society (Almazan et al., 2017). In this case, the strategy analysis in this study shows that PDAM Delta Tirta has several important steps in infrastructure and resource management.

First, the availability of infrastructure asset reports is a key element that enables long-term planning, risk management, and cost savings; the budget for infrastructure procurement in 2023 includes devices such as laptops, computers, and servers, which is in line with Saraswati (2018) opinion on the importance of allocating funds in the capital expenditure group.

Second, the implementation of the GRP shows management integration that supports efficiency; technology-based systems, such as the existence of 9 systems namely SMART, SPEKTRA, SIMPEG, SIPAM, SIA, Delta Tirta, ABM, employee telegrams, and SCADA

Monitoring that can accelerate employee performance, by the research of Balafif et al., (2022) regarding the impact of digitalization on productivity.

Third, the support system for operations, policies, and public programs is implemented through the public complaint system, which allows the PDAM to respond to problems quickly. The use of the Delta Tirta application for complaints also improves the efficiency of problem-solving. This is evidenced by a recap of the number of complaints and the resolution of PDAM Delta Tirta's complaints, as follows:

Table 3. Number of Complaints and Complaint Settlement of PDAM Delta Tirta Sidoarjo Regency

Year	Number of Customer Complaints	Number of Complaint Settlements	Percentage (%)
2020	2.968	2.665	99
2021	6.232	6.195	99
2022	10.354	10.264	99
2023 (as of October)	9.967	9.615	99

Source: PDAM Delta Tirta, 2023

From the table above, the number of complaints and the settlement of PDAM Delta Tirta complaints in 2020-2023 almost reached 100% settlement. This shows the performance of PDAM Delta Tirta in responding to and resolving community complaints, reflecting the company's commitment to customer service and community satisfaction. Complaints at PDAM Delta Tirta can be made through the *call center*, social media (Twitter, Instagram, Facebook, Telegram, and email), as well as at PDAM branch offices so that the community can easily make complaints regarding their complaints. This is also by research conducted by Syafiq & Saputro (2023) which shows that PDAM Tirta Bening Kota Pati has a complaint application that can speed up the problem-handling process because it can be directly forwarded to the right party and there is no delay in handling the problem. Likewise, accordance to research conducted by Febiyanti & Kriswibowo (2023) which shows that the variety of options for providing access to information and submitting customer complaints can increase the response to the accuracy of complaint resolution by the company.

The digital government enterprise strategy emphasizes the importance of the strategic investment report. This framework includes first, infrastructure investment aims to provide the necessary foundation to support the digital government enterprise through proper allocation of funds. Second, the resource management system integrates the GRP to manage resources efficiently and effectively, which in turn supports employee performance. Third, the community complaint system serves as an efficient communication channel, allowing PDAM Delta Tirta to quickly identify and respond to community needs. According to Almazan et al., (2017) which explains that the investment report includes basic infrastructure and GRP systems that support government operations as well as digital programs for the analysis of useful information for the community.

The digital government enterprise strategy emphasizes the implementation of investment reporting principles that include aspects that demonstrate that the PDAM has taken significant steps in implementing this strategy. The availability of infrastructure asset reports reflects the company's commitment to transparent and accountable management, which is crucial in the context of public services. In addition, the implementation of GRP strengthens the management system and enables employees to work more efficiently, which contributes to improved organizational performance. This shows that the digital government enterprise strategy implemented has a positive impact on operational efficiency.

The public complaint system used by PDAM Delta Tirta serves as an important tool in decision-making, enabling quick and effective responses to public complaints. This contributes to increased customer satisfaction and creates policies that are more responsive to community needs. According to Akbar et al., (2024) related to the benefits of customer satisfaction surveys for the community to support the business sustainability of Perumdam Tirta Kencana Samarinda City, showing that a responsive and effective complaint system improves water distribution services, accelerates responses to complaints, and contributes to customer satisfaction and policies that are more responsive to community needs.

Thus, investment reports covering infrastructure, systems that support operations, and digital government enterprise policies and programs not only reflect the PDAM's commitment to providing the best service but also strengthen the legitimacy and trust of the community in the institution. This finding supports the research question regarding the extent to which the digital government enterprise strategy has been implemented and its influence on the success or failure of digital government implementation in the enterprise. Overall, this study shows that PDAM Delta Tirta has been successful in improving digital government implementation through a comprehensive strategy that is responsive to stakeholder needs.

8. Collaboration between IT experts and program experts in assessing cases, overseeing project development and implementation

The importance of the collaboration of IT experts, and program experts to design digital government enterprise programs. This includes analyzing business cases related to understanding problems and solutions and finding effective methods to improve collaboration and build cross-field networks (Almazan et al., 2017). In this case, the strategy analysis in the development of digital government enterprise at PDAM Delta Tirta highlights the importance of a shared vision between IT experts and program/business experts, which guides the planning and development of a more effective and efficient system. This vision ensures all parties have clear objectives, and provides the right direction to produce the desired output.

In addition, collaboration in case assessment and project supervision is essential, where IT experts and program experts conduct initial coordination to classify case categories. If a case is classified as a severe case, then the program expert is responsible for reporting the issue to the director before involving the IT expert. This is in line with Anisa & Rahmatullah (2020) which states that this effective communication process reflects the need for coordination so that case assessments can be completed efficiently, System supervision is carried out regularly to ensure that obstacles can be identified and overcome quickly, demonstrating the team's responsibility in maintaining system integrity and facilitating continuous improvement.

Digital government enterprise strategy emphasizes the importance of collaboration strategy between IT experts and program experts in assessing cases and overseeing the development and implementation of digital government enterprise projects. This framework includes *firstly* creating a shared vision to provide clear direction and goals in system development; *secondly*, coordinating case assessment by classifying problems based on the level of difficulty and establishing the next steps; *and thirdly*, carrying out continuous supervision through regular monitoring and evaluation to address emerging obstacles and ensure system improvement. According to Almazan et al., (2017) who explained that collaboration between IT experts and program experts is important in designing digital government enterprise programs, including business case analysis to understand problems and improve inter-field networks.

Digital government enterprise strategy emphasizes collaboration between IT experts and program experts which effectively demonstrates the successful implementation of digital government enterprise strategy. The shared vision of the team has encouraged good cooperation and efficient coordination in handling technical issues. This reflects the PDAM's ability to respond to challenges and improve the quality of service to the community. Good coordination in case assessment ensures that issues can be addressed promptly, which contributes to operational effectiveness. According to Akbar et al., (2024) which explains that human resources support the efficiency and effectiveness of company operations, where good coordination ensures problems are addressed promptly.

Regular monitoring by the team also demonstrates a commitment to continuous improvement, which is an important aspect of a digital government enterprise. By focusing on a shared vision and conducting proper coordination, PDAM Delta Tirta can achieve the goal of developing a better system that is more responsive to the needs of the community. Thus, effective collaboration and good oversight were key factors in achieving the successful implementation of digital government at PDAM Delta Tirta and confirmed the importance of a collaborative approach in the development of the government's digital strategy.

CONCLUSION

Based on the research results and explanations above, it can be concluded that the implementation of the Digital Government Enterprise Strategy at PDAM Delta Tirta Sidoarjo Regency shows optimal results in the development of information systems and more efficient governance. The strategy, which involves the important role of the CIO and collaboration between IT and program experts, has created a strong foundation for innovation and management of digital infrastructure within the company. However, there are some shortcomings, such as suboptimal budget allocation for system maintenance and human resource development, and a lack of balance between innovation and exploration in infrastructure development. On the other hand, the PDAM's commitment to providing quality drinking water, accompanied by integrated online services, reflects the company's dedication to customer satisfaction, as reflected in its excellent Community Satisfaction Index (SMI) in 2023. This research confirms that successful digitization depends not only on good investments and policies but also on a deep understanding of public values and stakeholder needs. Therefore, strengthening strategies in budget management, and maintenance planning, as well as increasing collaboration between related parties is necessary to ensure the long-term success of digital government implementation, especially in PDAM Delta Tirta.

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