

EVALUATION OF E-GOVERNMENT SYSTEM POLICIES IN TIMOR-LESTE FROM 2017 TO 2023

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ABSTRACT

Information and communication technology is increasingly developing in the current era, the government is required to issue a policy to prepare and develop it in the government. In this case, the implementation of e-government system policies in Timor-Leste through the central agency of information and communication technology aims to digitize government activities and services towards a modern government and ensure a transparent, effective, and efficient government. In this study descriptive qualitative research methods. Data collection is carried out by interviews, observation, and documentation with the determination of informants determined by purposive techniques or methods. This study shows that the implementation of the e-government system policy in Timor-Leste is still not effective or optimal because there are still factors that become obstacles to its implementation. Furthermore, the central agency of Tic Timor. I.P. still lacks human resources in the field of IT or adequate technical personnel, lacks facilities, and slow or unstable internet networks. The conclusion in the research obtained from the results of this study is that the Timor-Leste government through the central agency Tic Timor. I.P. has tried to develop an e-government policy system but there are still many shortcomings such as human resources in the field of informatics and technology, and low internet networks. The input suggestion given by the researcher is that the government needs to increase the capacity of supervisors and human resources to develop and accelerate the implementation of e-government policies in various government agencies at the central and regional levels.

KEYWORDS Evaluation, Public Policy and E-Government.



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INTRODUCTION

Timor-Leste is one of the new developing countries, required to adapt to the development of information technology that is increasingly advanced and sophisticated. Thus the VIII constitutional government led by Prime Minister José Vasconcelos "Taur Matan Ruak" decided through government decree number 9 of

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2017, February 15 on the 2017 National Policy on Technology, Information and Communication (ICT), to implement the e-government system policy in Timor-Leste to improve the effectiveness of public services through various social media platforms.

The development of technology and information as one of the factors that bring great changes in social, economic and political life and others. Therefore, a new concept known as E-Government or Eletronic Government emerged. The essence of E-Government is a change in public administration that innovates internal and external relationships with electronic assistance to run government governance. *Electronic Government* or *e-government* or *e-govt* is the use of internet networks in disseminating government information and services to the public, "*The employment of the Internet and the world-wide-web for delivering government information and services to the citizens*" (United Nations, 2006). While the New Zealand Government in (Indrajit, 2007: 7) sees E-Government as a phenomenon as follows: e-Government is a way for governments to use new technologies to provide people with more convenient access to government information, to improve the quality of services and provide greater opportunities for participation in our democratic institutions and processes.

In this era of globalization, there is a clear need for countries to communicate with each other more intensely from day to day. The need to interact between one government and another every day does not only revolve around matters of diplomacy, but furthermore to facilitate cooperation between countries and cooperation between state entities (society, industry, companies, etc.) in doing things related to trade administration, political processes, social and cultural relations mechanisms, and so on (Indrayani, 2020: 72-73).

On the other hand, the faster-than-expected globalization era has made issues such as democratization, human rights, law, transparency, corruption, civil society, good corporate governance, free trade, open markets, and so forth the main things that every nation must pay attention to if it does not want to be alienated from the world community. In this format, the government must reposition its role in a country, from being internal and focused on domestic needs, to being more externally oriented and focused on how to position its people and country in a global association. If in the past in a country the power was more centered on the government side (supply side), then it is now shifting towards the community (demand side), so that the demands of the community on the performance of its government are getting higher (because to be able to get along easily and effectively with the people of other countries, people in a country must have a conducive environment - which is the responsibility of the government) (Indrajit, 2007: 9).

To face the challenges of globalization in the industrial era 4.0, an institution or organization must adopt Information and Communication Technology (ICT) to avoid being disrupted or left behind. Information and Communication Technology and the Internet have provided various facilities and conveniences in various contexts, namely trade, education, social, and others. Governments of various countries operate in a complex world and need to adapt to the new realities of the knowledge era and globalization. In this context, an information society is forming, in which information and communication technologies (ICTs) play an important

role in the way the State fulfills its core functions. These technologies are changing the approach to public management, configuring a reality in which citizens, companies and other organizations want faster and easier access to government, with the expectation that their needs will be focused on by government programs. In this sense, some of the possible ways to improve the general perception of public services would include new ways of providing services and new styles of governance.

In this process, Timor-Leste seeks to adapt the reform of the internal processes of the Government to the new realities of the Country and the World, following the best international practices that favor the reduction of bureaucracy, greater transparency, greater effectiveness and efficiency in the quality of services provided, improving accessibility and connectivity, and contributing to greater participation by citizens and civil society organizations, which seeks to gradually bring the government closer to users and socio-economic operators operating in Timor-Leste, with a view to facing the challenges posed by globalization.

A process that aims to use the electronic products and tools provided by new information technologies and digital platforms, removing unnecessary barriers that prevent the leaps in development that are to be made in the short term, as advocated in national information and communication technology policies. All countries pass through five distinct stages in the long process of implementing e-Government, namely: a) emergent presence; b) enhanced presence; c) interactive presence; d) transactional presence; and) network presence. Timor-Leste has witnessed in recent years the emergence of internet sites (known as websites) associated with various ministries, public bodies and autonomous bodies, the most significant examples of which include regular access to the Government Portal and frequent use of *Jornal da Republica*. It has also witnessed an increase in available information, improving accessibility, files and services available to citizens and the rest of society.

With the establishment of the central body (TIC Timor), the intention is to move forward to the next phase of interactions, transactions and connections, placing citizens and community needs at the center of the administrative reform process. A progressive increase in services, products and tools available online, with a gradual increase in digital forms, receipts and payments, and with a corresponding reduction in the ecological footprint caused by the excessive use of paper documents. Greater convenience participation and engagement with users, removing barriers associated with schedules and face-to-face events, replacing them with the contribution and active participation of citizens and economic and social agents.

New connections using various digital platforms, can contribute to increased interactivity between the Government and the general public, guaranteeing real-time access to data, opinions, suggestions and recommendations from users, for the government to work and strive to provide better services, with better levels of satisfaction. This is the main objective in the mission (TIC Timor), which also includes the management of the Information Technology network of the Government and other public entities with a view to modernizing the State and improving the functioning of public administration services. It is anticipated that the implementation of this policy will result in creating new roles and

responsibilities at the government level, which must be implemented and coordinated. Although it is expected that in the short term, the main tasks and coordination functions are assigned to the coordinator (ICT) to operate in the prime minister's office, it is planned for the establishment of institutions such as the development agency (ICT) to manage the implementation of the new information policy in the long term.

Therefore, many state that the implementation of e-government is not optimal because in real terms some services carried out by the government still use manual methods. A citizen must face to face visit the relevant officer at the government office. This is very ineffective and inefficient because it costs more than the actual cost and is also felt to be very inconvenient because they have to go to the government office. (Indrayani, 2020: 139-140).

In the purpose of this study, researchers want to evaluate the implementation of e-government and find out what are the inhibiting factors and supporting factors in the implementation of e-government system policies in Timor-Leste.

RESEARCH METHOD

In this study, researchers used qualitative research methods. In qualitative research, the research instrument or tool is the researcher himself. Therefore, the researcher as an instrument must also be "validated" how far the qualitative researcher who conducts the research then goes into the field. Validation of researchers as instruments includes validation of understanding of qualitative research methods, mastery of insights into the field under study, the readiness of researchers to enter research objects, both academically and logistically (Sugyiono 2017: 101).

Furthermore, according to Steven Dukeshire & Jennifer Thurlow (2002) qualitative research methods are concerned with narrative data. Qualitative research methods are mainly used to obtain rich data, information about the issue or problem to be solved. Qualitative research methods use focus groups, in-depth interviews, and participant observation in collecting data (Sugyiono 2017: 101).

In this study, researchers conducted research at the central agency for technology and information (Tic Timor.I.P) Dili-Timor-Leste for 3 months starting from October to December 2023. In data collection techniques researchers get through in-depth interviews, observation and photos and documents needed.

RESULT AND DISCUSSION

Theoretical Framework

The analytical knife to analyze the extent of the successful implementation of the e-government system policy in Timor-Leste in 2017-2023, using William N Dunn's 1998 policy theory which has six (6) aspects as follows:

- 1) *Effectiveness*, which is concerned with whether an alternative achieves the expected results (consequences), or achieves the objectives of the action. Effectiveness is always measured by the quality of the results of a policy.
- 2) *Efficiency*, which is concerned with the amount of effort required to produce a certain level of effectiveness. Efficiency is the relationship between

effectiveness and effort, and is ultimately measured by the cost per unit of policy. The policy that achieves the highest effectiveness at the lowest cost is called efficient.

- 3) *Adequacy*, which is concerned with how far a level of effectiveness satisfies the needs, values, or opportunities that foster problems or in other words whether the level of achievement of the results is right to solve the problem in question.
- 4) *Equity*, which is closely related to legal and social rationality and refers to the distribution of consequences and effort between different groups in society. Policies designed to redistribute income, welfare, educational opportunities, or public services are sometimes recommended on the basis of this criterion.
- 5) *Responsiveness*, which is concerned with how far a policy can satisfy the needs, preferences, or values of the community. The importance of this criterion is because analysts who can satisfy all other criteria still fail if they have not responded to the actual needs of the groups that should benefit from a policy.
- 6) *Appropriateness*, which is related to substantive rationality, because the question does not concern individual criteria but two or more criteria together. This criterion refers to the value or price of the program objectives and to the strength of the assumptions underlying these objectives or in other words, whether the desired results are really feasible or valuable. (Sadhana, 2011: 309-310).

In view of the theory described above, it can explain and serve as a benchmark to measure the success of the *e-government* system policy implementation in Timor-Leste. The theory of public policy from Willian N Dunn 1998, the author considers suitable and relevant to this research.

Discussion

The Tic Timor.I.P central agency was established based on government decree number 29 of 2017 which aims to carry out the main tasks and functions as stipulated in government resolution number 8 of 2017. The Tic Timor.I.P central agency is a public institution under the minister of transportation and communication on the basis of government decree number 46 of 2023 with direct supervision from the minister of transportation and communication. The purpose of the establishment of the central body of Tic Timor.I.P is to implement government programs in the field of technology and information, as well as prepare and approve Tic Timor.I.P's strategy regarding the government's interest in technological development in Timor Leste. Tic Timor.I.P is responsible for the application and infrastructure of the E-Government network as well as fiber optic cable (Cabo fibroptico) as a national priority.

The Central Agency of Tic Timor.I.P is one of the public institutions that has a role in managing, regulating and implementing E-Government system policies in Timor-Leste with a total number of employees (128), 79 men and 49 women to carry out their duties and functions in accordance with their respective responsibilities.

In this discussion the author will present the results of research that has been obtained at the central agency of Tic Timor.I.P regarding the implementation of the E-Government system policy in Timor-Leste, associated with William N Dunn's 1998 policy evaluation theory which has six factors, namely: 1) Effectiveness or effectiveness, 2) Efficiency or efficiency, 3) Adequacy or sufficiency, 4) Equity, 5) Responsiveness, 6) Appropriateness.

Effectiveness

In the concept of policy evaluation, the implementation of a government policy that expects effectiveness and achievement of desired goals or the quality of the results of a particular policy. In an interview conducted by researchers with the executive director of Tic Timor.I.P Venancio Pinto, S.I.Kom, said that:

"We have developed and provided official websites and addresses to ministries, as well as maintenance and technical support in the field of information and communication technology. Furthermore, the system is offered without the need for the internet, thanks to the local network which reduces costs and time and increases productivity, effectiveness and efficiency of work, in addition to developing also the main portal in 12 cities including a single portal called the government dashboard and also the human resources portal and the government services portal."

This is one indication that the implementation or administration of the E-Government system policy in Timor-Leste has been effective although there are still some ministries that have not implemented the policy as a whole.

Furthermore: "There are several government agencies that do not yet have a direct connection to Tic Timor.I.P to implement the E-Government system, this is one of the challenges for the central body of Tic Timor.I.P, but we will still try our best to solve it in the near future. Then the challenges faced by the central body of Tic Timor.I.P at the moment are the absence of a law or government regulation related to the use of electronics in Timor-Leste or (Law on Information, Electronic Transactions) to regulate and control the users of electronic systems and the absence of adequate human resources and experts in the IT field to meet the needs of Tic Timor.I.P in implementing the E-Government system policy. The management and human resources are not yet sufficient to develop the E-Government system in the government."

State institutions that have connected to Tic Timor are as follows: State cooperative secretariat, State secretariat for equality and inclusion, Guido Valadares national hospital, National electricity authority, Institute for business development support, Betano polytechnic institute, Ombudsman for human rights and justice, Timor-Leste civil aviation authority, Timor-Leste economic and sanitary inspection and fiscalization authority, National institute for workforce development, National body for academic assessment and accreditation, State secretariat for social communications, Independent service for medicines and medical devices, Timor-Leste radio and television, Timor-Leste extractive industries transparency initiative, Timor-Leste ministry of higher education, science and culture, Anti-graft commission, Civil service commission, Bamboo research and development institute, Public institutions business registration and verification service,

Investment and export promotion agency, Timor-Leste national commission for UNESCO, Dili convention center, Timor-Leste press council, Timor-Leste national archives, Ministry of justice, Ministry of foreign affairs and cooperation, Prime minister's office, Timor-Leste information and communication technology, Tatoli.I.P, National security institute, Ministry of finance, Ministry of petroleum and minerals.

Furthermore, the state institutions that are not yet connected to Tic Timor are as follows:

Presidential palace, Ministry of tourism trade and industry, National health laboratory, Ministry of health, National electoral committee, Technical secretariat for the organization of elections, RAEOA and ZEESM, Ministry of the interior, Ministry of defense of Timor-Leste, Ministry of National Liberation Fighters Affairs, Ministry of Public Administration, Ministry of Public Works, Ministry of Agriculture, Livestock, Agriculture, Livestock, Fisheries and Forestry, Ministry of Youth, Sports, Arts and Culture, Ministry of Strategic Planning and Investment, State Secretariat for Electricity, Water and Sanitation, State Secretariat for Arts and Culture, State Secretariat for Regional Development, State Secretariat for Toponymy and Urban Organization, State Secretariat for Veterans, State Secretariat for Civil Protection.

On the "Tic Timor.I.P side is facing the problem of lack of technical staff which has not reached 100%. It is common knowledge that in Tic Timor.I.P's annual Training of Trainer (ToT) plan, it is even necessary to reach out to a certain number of trainers in response to existing technical needs. Next, some ministries still do not have a direct connection to Tic Timor.I.P and also have not centralized government data to Tic Timor, even though Tic Timor's central body is a state agency that has the role of centralizing government data in one specific place; but still, some state agencies rely on human resources from abroad."

Furthermore, this document shows that the lack of IT technical personnel in the central body of Tic Timor.I.P is considered as one of the inhibiting factors in the implementation of the E-Government system, because the number of technical personnel in Tic Timor.I.P in the IT field is only 37 people, compared to the Ministry of Justice which has 45 IT technical personnel.

Resultadupesquisa hatudu, kotal númeru totali funsióndu II ho entidade áia (9) hamutuk 135 hanesan hatudu iha tabela 2. sigrifika 27% hosi númeru totali funsióndu. Númeru media funsióndu II ho organizasun hira ne'e mak 15. Ministériu Justia iha númeru funsióndu II baotaku (hain 45) hamba Ministériu ne'e iha departamentu TI iha TIC TIMOR iha funsióndu tékniku nain 37 no ho kualifikasun II. Ministériu ne'e béé ho númeru funsióndu II káiku mak Ministériu Interioir maekria iha totali númeru funsióndu neebé baot tebes.

Entidade	Totali Númeru Funsióndu II	Totali Númeru Funsióndu	Funsióndu II (%)
Ministériu Interioir	2	2688	0.07
Komissáun Funsaun Públika	5	193	2.59
Ministériu Solidariedade Sosial no Inkakazun	5	497	1.01
STAE	8	381	2.10
TIC TIMOR I.P.	37	78	47.44
Ministériu Saúde	6	5296	0.11
Presidénsia Komseku Ministru	4	116	3.45
Ministériu Finansas	23	833	2.75
Ministériu Justia	45	583	7.72
Totali	135	10627	1.27
Media	15.0	1181	7.5

Tabela 2. Totali Númeru Funsióndu II

Númeru funsióndu II feto menus iku funsióndu mane hanesan hatudu iha Tabela 3. Totali funsióndu II feto hamutuk 27.45 delhos númeru totali. STAE hanesan entidade uniku neebé ho representasun feto 50% iha II.

Source Tic Timor Report 2021

Númeru funsióndu II feto menus iku funsióndu mane hanesan hatudu iha Tabela 3. Totali funsióndu II feto hamutuk 27.45 delhos númeru totali. STAE hanesan entidade uniku neebé ho representasun feto 50% iha II.

Entidade	Mane	Feto	Totali	Funsióndu feto (%)	Mane (%)
Ministériu Interioir	2	0	2	0.0	100.00
Komissáun Funsaun Públika	5	0	5	0.0	100.00
Ministériu Solidariedade Sosial no Inkakazun	4	1	5	20.0	80.00
STAE	4	4	8	50.0	50.00
TIC TIMOR I.P.	25	12	37	32.4	67.57
Ministériu Saúde	5	1	6	16.7	83.33
Presidénsia Komseku Ministru	3	1	4	25.0	75.00

Tabela 3. Percentajen Funsióndu II mane á feto

Source Tic Timor Report 2021

Efficiency

In implementing the E-Government system policy, it has not been efficient because "E-Government policy requires a large investment in human resources and facilities to support training in improving technical knowledge in the field of Information Technology. For example, every year the government allocates sufficient funds to the central body of Tic Timor.I.P to carry out the planned main tasks and political decisions that impose standards and systems and digitization of IT resources at the central body of Tic Timor.I.P, so that Tic Timor.I.P can meet the objectives in accordance with the plan and programs can be carried out appropriately.

Furthermore, the investment spent by the government on the central agency of information and communication technology in 2017-2023 with a total of US\$ 9,256,650, as outlined in the final report for the 2017-2023 period by the executive director of the Tic Timor I.P agency, in the performance of Tic Timor I.P, which was carried out in the last five years period was not effective enough because only a few programs or activities were implemented such as creating unique IDs, hosting, implementing E-Government in some ministries. The results are not good enough and not effective because there are still many government institutions that have not implemented E-Government policies and the results are not as expected to respond to current government needs.

On the one hand "To protect institutional memory, and secure sensitive information, protect citizens' data and privacy and consolidate citizens' trust in using online platforms. With respect to E-Government investment, there is a need for greater investment, especially with regard to human resource issues and facilities that support capacity building and technical knowledge enhancement. In this way, Tic Timor.I.P can have the human resources and infrastructure to provide a centralized and guaranteed 100% online service platform."

Furthermore, the following document shows that the facilities at Tic Timor.I.P's central office are insufficient because there are only 38 computers while the staff at Tic Timor.I.P are more than that. This makes it difficult to run the programs that have been planned.

The screenshot shows a PDF document with a table titled 'Tabela 5. Númeru Komputadór kado Funsionáriu'. The table compares the number of computers and staff across different government entities. TIC TIMOR I.P has 38 computers and 87 staff, which is significantly lower than other entities like the Ministry of Health (5256 staff) and the Ministry of Finance (6149 staff).

Entidade	Totál Númeru Komputadór	Totál Númeru Funsionáriu	Porcentajen (%) Funsionáriu ho Komputadór
Komisaun Funsiaun Públika	236	193	122.3 %
Ministériu Solidariedade Sosial no Inkluzun	252	497	50.7 %
TIC TIMOR I.P	38	87	43.7 %
Ministériu Saúde	484	5256	9.2 %
Prezidénsia Konsellu Ministru	116	116	100.0 %
Total	1126	6149	21.6 %
Média	225	1230	65 %

Source Tic Timor Report 2021

In this case, the implementation of the *E-Government* system policy in Timor-Leste has not been efficient because the facilities to support certain programs do not meet the needs in *Timor-Leste*.

Furthermore, "Currently the central body of *Tic Timor.I.P* is focused on four components namely; 1. Management 2. Technology 3. Process and 4. Strategy. As well as human resources, *E-government* programs, *E-Government* implementation between the central body of *Tic Timor.I.P* and other government institutions, architecture, central body of *Tic Timor.I.P*, *E-Government* infrastructure, negotiation processes and information systems and access for internet users depending on pre-requisites."

Adequacy

"The service achieved by *Tic Timor.I.P* has completed the connection of local networks to 12 municipalities. Local networks respectively, the Government becomes the owner and base of important infrastructure in the future, as the submarine cable project completes the distribution of internet connectivity throughout the territory, which can be extended to these local network facilities. Currently, the local networks have facilitated access to information between one municipality and another, both in terms of access to the "*Free Balance*" system.

Furthermore, There are some government agencies that do not yet have a direct connection to *Tic Timor* to implement the *E-Government* system, this is one of the challenges for the central body of *Tic Timor.I.P*, but we will still try our best to solve it in the near future . This is an inhibiting factor for the central body of *Tic Timor.I.P* so that it has not achieved the previously expected goals. As well as the lack of facilities to meet the needs of the *Tic Timor.I.P central body* itself, this is considered an obstacle for us the *Tic Timor.I.P central body* to carry out our activities, but *Tic Timor.I.P* does not stop here even though there are still many challenges and shortcomings but we always try to realize the vision and mission of *Tic Timor.I.P* ."

The following government agencies do not yet have a direct connection to *Tic Timor.I.P*, to implement the *E-Government* system: Presidential palace, Ministry of Interior, *Ministry of Public Works*, *Ministry of Youth, Sports, Arts and Culture*, *Ministry of Tourism Trade and Industry*, Ministry of Defense of Timor-Leste, *Ministry of Agriculture, Livestock, Fisheries and Forestry*, *Ministry of Administrative Affairs*, Ministry of National Liberation Fighter Affairs, Ministry of Strategic Planning and Investment, National Electoral Committee, National health laboratory, Ministry of health, RAEOA and ZEESM, State Secretariat for Electricity, Water and Sanitation, *State Secretariat for Regional Development*, *State Secretariat for Civil Protection*, *State Secretariat for Arts and Culture*, *State Secretariat for Toponymy and Urban Organization*, *State Secretariat for Veterans*, Technical Secretariat for the Election .

In this case, the government, through *Tic Timor.I.P*, should provide guidance to institutions that have not yet implemented *E-government* policies. On the other hand, the central body of *Tic Timor.I.P* still has shortcomings and the problem faced today is the lack of technical personnel and skills in the IT field. So that it slows down and hinders the implementation of *E-Government* policies in all government institutions.

Equity or similarity

"The *Tic Timor.I.P* central body works according to what has been planned and based on the role as regulated in government decree number 29 of 2017 which aims to carry out the main tasks and functions as regulated in government resolution number 8 of 2017. Although we have not achieved all the goals, we will continue to move until all the plans are realized." Furthermore, "as we transition into a new era, I would like to assure everyone that *Tic Timor.I.P* will continue its hard work wholeheartedly and is ready, committed and prepared to spearhead the

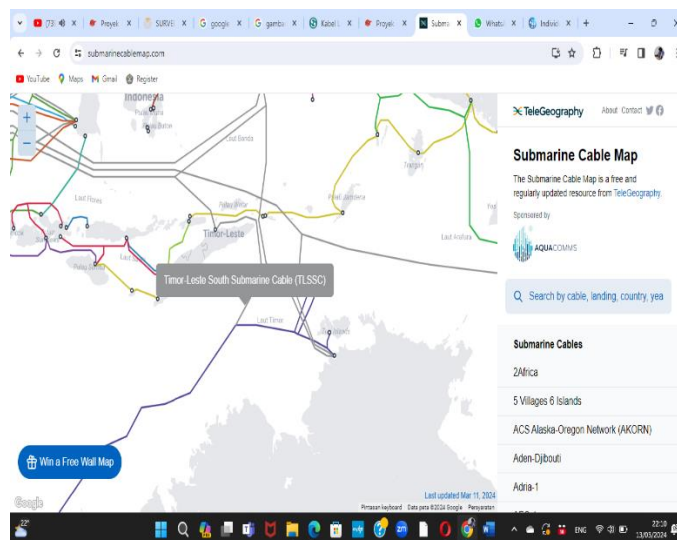
implementation of *E-government*, as mandated by the Council of Ministers. As the leading implementation agency for initiatives in Digital Timor, we fully understand the magnitude of our responsibility. And to do so, we are committed to strengthening partnerships and promoting collaboration across all levels of government, civil society, the private sector, development partners and all stakeholders."

On the other hand, "The central body of *Tic Timor.I.P* has distributed local connections to 12 regions and the government has a major role in the base and infrastructure because of the submarine cable project and the equalization of internet connectivity throughout the territory of Timor-Leste, currently the local network has facilitated access to information between cities in order to access the "*Free Balance*" system between regions. In terms of data access in the future, the central body of *Tic Timor.I.P* will focus on *E-Government* data centers in government offices including video conferencing applications in the government that have adopted the *Open System "Open Source"* platform to increase productivity, efficiency and effectiveness will be managed directly by the central body of *Tic Timor.I.P*."

Furthermore, the *submarine* cable project is under implementation or is being worked on to distribute the network to Timor-Leste through the *Timor-Leste South submarine Cable (TL-SSC)* fiber optic project between Dili - Darwin, and *Port Hedland* Australia carried out by *Alcatel Submarine Network (ASN)*, soon to be realized.

Based on the contract agreed by the previous government with the company, the value is US\$38.6 million to realize the installation of the Australia-Timor Leste submarine optical cable digitization. The entire budget for the fiber optic strategy project is 100% financed by the Timor Leste government.

The following picture shows that the undersea fiber cable project has been connected through Australia to Timor-Leste and the government is still trying to distribute it to all areas in Timor-Leste for equal internet connectivity.



<https://www.submarinecablemap.com/>

Submarine Cable Map (TeleGeography) accessed on 23/03/2024 at: 09:25 WIB



<https://www.submarinenetworks.com/en/systems/asia-australia/png-national/tlssc>

Accessed on 23/03/2024 at: 09:25 WIB.

Responsiveness or responsiveness

"Although the implementation of the E-Government system policy has not satisfied all parties, when referring to the results of research conducted by the United Nation E-Government Development Index in 2022 Timor-Leste is categorized as a country with the lowest level of E-Government development with a score or ranking of 147. However, "The 8th constitutional government focuses on developing information and communication technology to ensure transparent governance in public services and policies issued by the government, currently the government is investing in the development of information and communication technology to achieve its vision and mission.

Furthermore, E-Government in Timor-Leste has been implemented in several government agencies although it has not covered all agencies but the government through the central agency Tic Timor.I.P is trying to provide services to the community using information and communication technology, ensuring good and efficient governance, transparency and more importantly the involvement of citizens to control and supervise public policies".

Appropriateness

Currently, "The implementation of the E-Government system policy is in accordance with the needs of the government on the grounds that the development of information and communication technology is increasingly massive the government is required to adapt and adopt according to the needs of the times. Furthermore, the need to modernize government administration and develop the benefits of E-Government as well as the establishment of connectivity platforms and providing internet access to government agencies and state institutions to facilitate bureaucratic processes and ensure transparency of services in government.

Furthermore, the usability and operation of E-Government has not been effective and there are still many shortcomings that must be corrected, for example, the internet network is slow so that there are obstacles in the implementation of E-Government system policies. This is considered a failure of the government through Tic Timor.I.P in implementing the E-Government system in Timor-Leste. On the other hand, Tic Timor.I.P has established a system to ensure data security within 24 hours for 7 days, State institutions that have used Tic Timor.I.P facilities consist of more than 40 institutions and the number continues to grow."

On the other hand, this document shows that internet service providers are still managed and controlled by private companies, namely; Telkomcel, Timor Telecom, because the provision of services through fiber optic cables (Intranet) has not functioned properly to meet the needs of various ministries and other state institutions.

Entidade	Fornecedor servisu	Total velocidade /bandwidth (ha Mbps)	Total Numeru Komputador	Intern et band width kada PC (ha Mbps)
Ministériu Interior	DNIC/Timor Telecom	19	N/A	N/A
Prezidénsia Konsellu Ministru	TIC/Timor Telecom	19	116	0.16
Ministériu Saúde	DNIC/Telkomcel	22	484	0.05
Ministériu Justisa	Timor Telecom	25	N/A	N/A
TIC TIMOR I.P.	Timor Telecom	33	38	0.87
Ministériu Finansas	Timor Telecom & Telkomcel	35	N/A	N/A
Ministériu Solidariedade Sosial no Inklausan	DNIC/Telkomcel	53	252	0.21
Total		206	890	1.29
Média		29.43	222.50	0.32

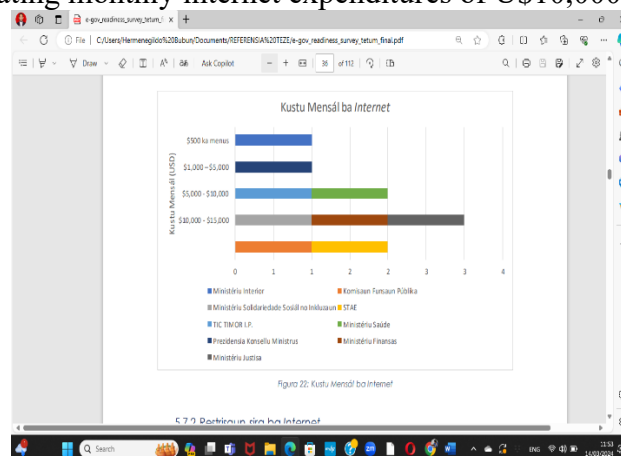
Tabela 7. Bandwidth ba Internet

Média hosi internet bandwidth kada PC mak 0.32 Mbps kuandu hotu-hotu uzaa servisu

Source Tic Timor 2021 report

Furthermore, internet speeds in some ministries are quite high (19 MBPS) to (53 MBPS) but overall internet speeds are 0.20 GB (*Gigabits*) or the equivalent of (200 MBPS) *Megabits Per Second*. Timor-Leste only has (0.20GB) *Gigabits*, but as time goes by users continue to increase resulting in a slow internet network.

Furthermore, the document shows that internet costs are high, with some ministries estimating monthly internet expenditures of US\$10,000 to US\$15,000.



Timor.I.P Tic Report 2021

Tic Timor.I.P's efforts have culminated in the development of a comprehensive national strategy for digital development. A strategy that effectively

addresses all aspects required for holistic digital growth, covering areas such as government and national infrastructure, government systems, Unique ID, digital skills and literacy, civic participation, private sector investment, gender equality, inclusion, E-Commerce, digital health, education, agriculture, and enabling legislative frameworks. Furthermore, Tic Timor.I.P, will continue to be a catalyst for the development of needed technologies, provide support to government ministries and agencies on the digital transformation journey, and drive digital value creation across all sectors.

Analysis of E-Government Implementation

The government through the central body of Tic Timor.I.P has implemented law number 29 of 2017 with the main objective of implementing the Information and Communication Technology (ICT) policy in this context is the implementation of the E-Government system. From the results of research conducted at the central agency of Tic Timor.I.P, experiencing limited human resources (HR) in the sense of lack of experts in the IT field.

On the one hand, Tic Timor.I.P has provided official emails and websites to 40 government institutions but they have not been utilized properly, due to the lack of technical personnel in the IT field, although official websites have been provided by Tic Timor.I.P but sometimes the links or websites lack information and the services prepared cannot be accessed. Furthermore, based on the results of this study, there are shortcomings in the central body of Tic Timor.I.P, namely the lack of facilities in the development of information and communication technology, such as slow internet networks, and (intranet) which have not been utilized properly through fiber optic cables or (Cabo-fibra optico), laptops and so on.

Based on the results of this research, the government through the central agency Tic Timor.I.P focuses on developing E-Government system policies in all government institutions but there are still some ministries and institutions that have not implemented E-Government policies, in this context Tic Timor.I.P should coordinate to immediately implement certain policies.

Based on the results of this study, it shows that rules or regulations have not been well prepared by the government regarding the Privacy and Data Protection Act to guarantee more security and privacy of citizens' data collected by the government, the government through Tic Timor.I.P should immediately produce draft laws regarding E-Commerce issues, intellectual property or copyright, review national ICT policies and design cyber strategies.

Furthermore, based on the results of this research is the lack of human resources who have skills and knowledge in the IT field. In the development of E-Government system policies in government institutions, this is considered an inhibiting factor in the implementation of these policies. Human resources are a factor that determines the success of a policy in its implementation.

Human resources are the most important asset that an organization must have and must be considered in management, because they are the ones who work to create goals, innovate and achieve organizational goals. It is these resources that can make other resources work. On the other hand, according to Fathoni, human resources are the most important capital and wealth of every human activity.

Humans as the absolute most important element, analyzed and developed in this way, their time, energy and abilities can really be optimally utilized for the benefit of the organization as well as for individual interests (Rumawas, 2018: 5).

CONCLUSION

Information and communication technology plays an important role in Timor-Leste's social, political and economic development. Since independence the country has made important progress in extending mobile phone and mobile broadband coverage to its population across the region. However, the challenges that remain have significant implications for Timor-Leste's future development. The existing gap between Timor-Leste and other countries in the region could widen further as the fourth industrial revolution ushers in emerging technologies. Based on the discussion and analysis presented by the researcher above regarding the implementation of the E-Government system policy in Timor-Leste, it can be concluded that the implementation of the E-Government system policy has not been achieved effectively. For this reason, in the future it is necessary to improve and develop human resources and information network infrastructure so that the implementation of the E-Government system policy can be achieved as a whole and on target.

Advances in communication and information technology through the internet have opened up wider opportunities for the relationship between politics, democracy and society. E-Government is one way to make the political process more participatory. The public can be directly involved in the process of planning, implementing and monitoring or controlling public policies. The Government of Timor-Leste through the Ministry of Transport and Communications and Tic Timor.I.P should think about preparing human resources (HR) first as an important investment to develop the application or implementation of E-Government system policies, as a step for the Government of Timor-Leste towards open and modern government, so as to achieve clean, open, transparent, accountable government. The Government of Timor-Leste has taken the initiative to Implement E-Government but the government needs to realize and think about the following things;

(1). The government should budget funds for the development of Information and Communication Technology infrastructure. This infrastructure development aims to accelerate the implementation of E-Government, starting from the central level to the regional level. (2). The government should prepare a new policy related to rules, legal basis, data freedom, and data protection. On the other hand, human resources (HR), the government needs to prepare HR who have the capacity of knowledge in terms of managerial and mastery of Information and Communication Technology so that E-Government runs as expected. (3). The official websites created by Tic Timor.I.P are still not functioning effectively and even some official websites of government agencies cannot be accessed. On the other hand, the government must prepare a draft law as soon as possible to prevent cyber crimes committed by irresponsible people and the telecommunications infrastructure is inadequate and expensive and is still not evenly distributed.

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