



Developing Electronic Government Towards Digital Government to Enhance the Efficiency of State Governance in Vietnam

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Abstract

The development of an electronic government, aiming for a digital government to effectively manage the state and contribute to the convenience of citizens and businesses, is both a crucial aspect of the comprehensive administrative reform program for the period 2021-2030 and an essential global trend for all countries, including Vietnam. This article discusses various topics: general issues related to electronic government and digital government, the current situation of electronic government development in Vietnam, challenges faced in the process of developing electronic government towards a digital government in Vietnam, and some solutions to enhance the effectiveness of electronic government development towards a digital government in Vietnam.

Keywords: *electronic government, digital government, online public services*

1. Some common issues regarding electronic government and digital government

1.1. The concept of electronic government and digital government

Currently, there are many different conceptions of electronic government and digital government, however, from the perspective of the Organization for Economic Co-operation and Development (OECD), electronic government and digital government are defined as follows:

Electronic government is the Government's use of information and communication technologies (ICT- Information and Communications Technology), especially the Internet, as a tool to achieve better efficiency [7].

Digital government is defined as "the use of digital technologies, as an integrated part of governments' modernisation strategies, to create public value" [17]. Public values are benefits for society, which can change depending on viewpoints or actors, including: (1) goods and services to satisfy the needs of customers and citizens; (2) production options to meet people's expectations of justice, equity, efficiency, effectiveness; (3) high-performing, well-organized public institutions that represent citizens' priorities and aspirations; (4) fair and efficient distribution; (5) use of valid resources to fulfill public purposes; and (6) innovate and adapt to ever-changing priorities and needs. This process is based on a Digital Government ecosystem consisting of actors related to Government, NGOs, businesses, civil society and citizens, promoting the creation and access of data materials, services and content through interaction with Government.

Thus, between electronic government and digital government, there are both similarities and differences, specifically:

The similarity between electronic government and digital government is that these models aim to help government agencies innovate, work effectively and efficiently; ensuring transparency, high accountability and convenience in all relations between government and citizens; create favorable

conditions for people to exercise their democratic rights and participate in State management. In Vietnam today, the construction and development of electronic government towards digital government in order to improve the efficiency of state governance, build a government by the people, of the people, for the people and for the prosperity of the land. countries in the environment of deep international integration.

Difference: Electronic government is the application of information and communication technology in the public system to improve the efficiency and user experience of public services by replacing paper-based administrative procedures. by digital platform. Electronic government is different from Digital Government. While electronic government focuses on online public services, Digital Government moves all government activities to a digital environment, operates on data and provides new services. Electronic government mainly uses information technology, while digital government uses digital technology, especially the technology of Industry 4.0.

1.2. The role of electronic government and digital government

Firstly, the development of electronic government towards a digital government will accelerate the digitalization of administrative procedures, provide public services, promote administrative reform, and create a digital environment between the government and businesses. The practical experience of countries around the world shows that enhancing the application of technology, information, communication, and automation in government operations to serve citizens and businesses will ensure transparency, save time and costs for the people and businesses, control corruption in the public sector, and strengthen the accountability of government officials and civil servants.

Secondly, the development of electronic government towards a smart government also contributes to enhancing the participation of citizens in state management activities. Specifically, with the automation of government connectivity and trans-

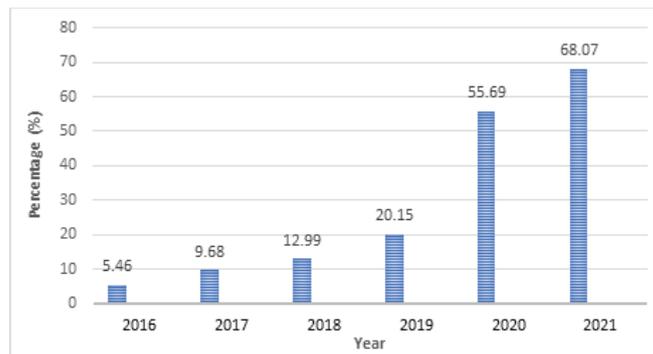


Fig. 1. Ratio of Level 3 and Level 4 online public services to the total number of public services (Source: Compiled by the authors from the Report on the Readiness Index for Development and Application of Information Technology and Communication in Vietnam, Publishing House for Information and Communication, years 2018-2021) [1]

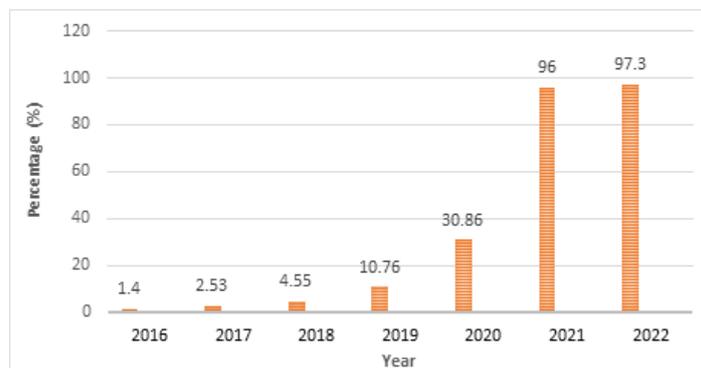


Fig. 2. Ratio of Level 4 online public services to the total number of public services (Source: Compiled by the authors from the Report on the Readiness Index for Development and Application of Information Technology and Communication in Vietnam, Publishing House for Information and Communication, years 2018-2022) [1]; [2]

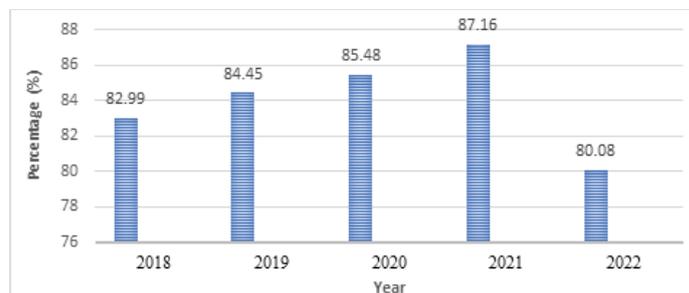


Fig. 3. Satisfaction Index with Administrative Services provided by Administrative Agencies for Citizens and Organizations. Source: Compiled by the authors from SIPAS data from 2018-2022 [16]

parent work processes, widely deployed electronic services... citizens and businesses not only enjoy useful public services but also participate in contributing opinions to the state management activities. Therefore, the smart government model is an important solution to facilitate the most effective interaction and information exchange between the government and the people.

Thirdly, the development of electronic government towards a digital government in urban areas will create a transparent legal environment for the process of digital economic development. In recent years, thanks to the application of information technology in building electronic government, documents and policies on socio-economic development in general and digital economic development in particular have been updated and timely issued, contributing to the effectiveness of organization and implementation in practice. This is a positive and effective transformation compared to the traditional methods of drafting, issuing, and disseminating laws and policies.

The coordination between technology enterprises, ministries, departments, and localities has effectively implemented the national document connectivity system. The national document connectivity system is the core platform that ensures the successful construction of electronic government towards a digital government, a digital society, and a digital economy; aiming to better serve the people and businesses and promote the socio-economic development of the country. Currently, 95 out of 95 central and local agencies (including the Central Party Office, ministries, government agencies, and 63 provinces and centrally-governed cities) have completed the connection of document management systems and operations on the national document connectivity system. Document management software of ministries, departments, and localities has been connected, enabling smooth and systematic vertical and horizontal communication, and electronic documents are sent and received quickly and safely between state agencies.

2. The current situation of developing electronic government towards a digital government in Vietnam

2.1. In terms of institutions and policies

In recent years, the issue of applying information technology and developing electronic government has always been of great concern to the Party and State in Vietnam, aiming to enhance the effectiveness and efficiency of state agencies, improve the quality of services for citizens and businesses, and enhance the nation's competitive capacity. In this regard, the Government and the Prime Minister have issued various documents defining the objectives and contents of electronic government development, including Resolution No. 17/NQ-CP dated March 7, 2019, on some tasks and key solutions for electronic government development in the 2019-2020 period, with a vision towards 2025; Decision No. 749/QĐ-TTg dated June 3, 2020, approving the National Digital Transformation Program until 2025, with a vision towards 2030; Decision No. 942/QĐ-TTg dated June 15, 2021, approving and issuing the Strategy for Digital Government Development in the 2021-2025 period, with a vision towards 2030; and Resolution No. 76/NQ-CP dated July 15, 2021, issuing the Comprehensive Program for Administrative Reform in the 2021-2030 period.

These legal foundations have helped Vietnam determine its determination to achieve the goal of developing electronic government towards a digital government in Vietnam in the current period.

2.2. Regarding the online public service index

In order to develop a digital government, Vietnam has made efforts to provide online public services to citizens, businesses, and organizations, thereby meeting high standards in terms of both quantity and quality of online public services. The results of the report on the online public service index from 2016 to 2022 show the following:

The ratio of level 3 and level 4 online public services has been steadily increasing from 2016 to 2021. In 2021, out of the total number of public services nationwide, the ratio of level 3 and level 4 online public services reached 68% (approximately 81,446 services). This ratio was nearly 55.7% in 2020 and 20.15% in 2019.

These figures demonstrate Vietnam's commitment to enhancing the provision of online public services, as well as the continuous improvement in the accessibility and quality of these services. The efforts made in expanding the range of online public services have contributed to the development of a digital government and the transformation towards a more efficient and citizen-centric administration system.

Specifically, the ratio of Level 4 online public services, as reported by the Ministry of Information and Communications, shows the following results: In 2016, it was 1.4%; in 2017, it was 2.53%; in 2018, it was 4.55%; in 2019, it was 10.76%; and in 2021, it reached 96%. In 2022, the government issued Decree No. 42/2022/ND-CP, which regulates the provision of information and online public services by state agencies on the internet. According to Report No. 91/BC-BTTTT dated June 30, 2022, as of June 28, 2022, the ratio of online public services meeting the requirements to be classified as Level 4 reached 97.3% (accounting for 53.56% of the total number of administrative procedures).

With the goal of promoting the application of information technology in serving meetings and handling government affairs, the e-Cabinet system has been put into operation connecting up to 22 ministries and ministerial-level agencies, helping to manage Synchronously and fully managing the Government's meetings, organizing the collection of opinions of the Government members in a simple, fast and effective way on the network environment and contributing to shortening time and saving printing costs. Press, copy paper documents. From the opening day (June 24, 2019) to March 8, 2021, the e-Cabinet system has served 28 government conferences and meetings (delegate use electronic documents) and implemented currently processing 685 opinion polls of Government members, replacing the issuance of more than 253,000 dossiers. paper documents. The use of the System saves more than 169 billion VND/year [8].

According to a report by the Government Office, from the moment the Prime Minister pressed the button to open the National Public Service portal (December 9, 2019) with 8 initial public services, to March 8, 2021, more than 2,800 public services have been integrated, providing a total of nearly 6,800 administrative procedures at 4 levels of government, with more than 116 million visits, more than 468,000 registered accounts; more than 42.5 million state sync records; over 940,000 records made online and more than 67,000 electronic payment transactions (total amount of more than 26.7 billion dong) on the portal; received and supported over 53,000 calls, more than 10,000 reflections and recommendations. As of March 8, 2021, there have been more than 4.5 million electronic documents sent and received through the National Document Communication Axis, the number of electronic documents sent and received in 2020 is 2.5 times higher than that of the National Document Axis. year 2019 [14].

2.3. The development index of digital government towards a digital government in Vietnam

The Strategy for Development of Electronic government towards a Digital Government in the 2021-2025 period, with a vision towards 2030 (the Strategy) emphasizes the viewpoint of developing a digital government comprehensively and holistically, building upon the achievements attained so far. It aims to concentrate resources and mobilize the participation of the entire political system, employing innovative and distinctive solutions to fundamentally fulfill the development targets of electronic government by 2021 and establish a digital government by 2025.

To achieve these objectives, Vietnam has been making efforts in digital transformation, developing technological infrastructure, providing high-quality online public services, and investing in human resources development. The country has been focusing on enhancing digital skills, promoting digital literacy, and fostering a digital culture among government officials and the general public.

In the ranking of the electronic government development index, it shows that Vietnam has maintained a continuous increase in rank in the period 2014 - 2020 from position 99 to position 86. Ranking position on component indexes of Vietnam The year 2020 has a relatively large change. The Telecommunications Infrastructure Index (TII) increased sharply, up 31 places (in 2020, ranked 69th; 2018 ranked 100th); The Hu-

Tab. 1. Vietnam's electronic government Development Index. Source: United Nations electronic government survey (2010; 2012; 2014; 2016; 2018; 2020, 2022) [9]; [10]

year	E- Government Development Index (EGDI)	Type of index			ranking
		Online Services Index (OSI)	Telecommunication Infrastructure Index (TII)	Human Capital Index	
2010	0.4454	0.1036	0.0746	0.2672	90
2012	0.5217	0.4248	0.3969	0.7434	83
2014	0.4705	0.4173	0.3792	0.6148	99
2016	0.5143	0.5725	0.3715	0.5989	89
2018	0.5931	0.7361	0.3890	0.6543	88
2020	0.6667	0.6529	0.6694	0.6779	86
2022	0.6787	0.6484	0.6673	0.6903	86

man Resources Component Index (HCI) increased three places (in 2020, ranked 117th; in 2018, ranked 120th); The Online Services Index (OSI) dropped 22 places (in 2020, ranked 81st; in 2018, ranked 59th [13]). According to the four-level assessment by the United Nations for the Electronic government Development Index (EGDI), which includes very high (above 0.75), high (0.5 - 0.75), medium (0.25 - 0.5), and low (below 0.25), Vietnam's EGDI in 2022 reached a high level of 0.6787 points [10]. The country maintained its ranking at 86, with no change compared to the previous ranking in 2020 [10].

2.4. Satisfaction index of public administrative services

The construction and development of electronic government towards a digital government have brought about effective state administration and increased satisfaction indices among citizens and organizations towards the government.

In 20218, the overall SIPAS index nationwide was 82.99%. In 2019, the SIPAS index increased to 84.45%, a rise of nearly 1.5% compared to 2018. Among the factors, the satisfaction rate of citizens and organizations regarding service accessibility was 86.48%, administrative procedures were 86.54%, public officials were 85.62%, service outcomes were 88.56%, and and processing feedback and suggestions from citizens and organizations were 73.66%. The satisfaction rates with different aspects of the process of providing and delivering public services varied, with the highest increase seen in service accessibility and the most significant decrease observed in receiving and processing feedback and suggestions over the course of three years.

In 2020, the nationwide SIPAS index reached 85.48%. The satisfaction of citizens and organizations with administrative services varied among the 63 provinces, ranging from 73.91% to 95.25%, with half of the provinces nationwide falling within the range of 85.16% to 95.25%. In 2021, the overall SIPAS index nationwide was 87.16%. The SIPAS index for the 63 provinces and centrally-governed cities in 2020 ranged from 75.68% to 95.76%, with a median value of 85.17%. In 2022, the SIPAS index was 80.08%, with a satisfaction rate of 79.72% for policy development and organization implementation and 80.43% for the provision of administrative services. The SIPAS index of Vietnam was affected by the post-Covid-19 context; however, this context also presented an opportunity to accelerate the digital transformation process for the development of electronic government towards a digital government.

3. Challenges that arise in the process of developing electronic government towards a digital government in Vietnam

Firstly, challenges arise from institutional and policy factors

Although in the past time, the National Assembly, the Government and competent state administrative agencies have developed and issued a number of legal documents, creating an important legal basis for building and developing. However, in practice, electronic government still encounters difficulties and obstacles. Typically, there are still gaps in regulations on management, connection, data sharing, identification and electronic authentication; regulations on the protection of personal data; regulations on electronic documents; archive electronic documents of state agencies; legal value of electronic documents in administrative and payment transactions; on the implementation of administrative procedures in the electronic environment; information security in the electronic environment; culture of behavior, communication in the electronic environment.

Secondly, challenges stem from technology, information, and communication factors

To ensure information safety and security, develop digital infrastructure (telecommunications infrastructure, internet of things infrastructure, data infrastructure), digital platforms (including platforms such as integration and sharing data, internet of things, artificial intelligence, connecting digital services, "blockchain", electronic identity), digital transformation... [12], the legal corridor, roadmap, and mechanism requires a contingent of cadres and civil servants with appropriate information technology qualifications; must have sufficient financial resources to be able to develop electronic government and digital government. However, the current infrastructure resources still have limitations.

According to Ookla statistics, broadband internet in Vietnam reached 47.66 Mbps in April 2020. Although lower than the world average (74.74 Mbps), it has also increased 5 places and ranked 59th worldwide[11]. With the current covered 4G network, from 2021, Vietnam will deploy 5G network on a large scale[4] and be classified as one of the leading countries in 5G network development. However, technology infrastructure is not enough, we also need to have a database - the core and integral element of digital transformation. In addition, the complexity and rapid change in technology makes technology projects in the public sector inherently slow, prone to conflicts of interest" and "moral hazard".

According to a report of the Ministry of Information and Communications, currently the level of investment for digital transformation in Vietnam is still low, accounting for only 0.3 - 0.5% of GDP. While the average investment in the world must be at least three times that.

Challenges and difficulties remain to achieve the goal of comprehensive reform of three groups of online public ser-

vice indexes (OSI), telecommunications infrastructure and human resources (HCI). In the roadmap for implementing electronic government in Vietnam, it is still necessary to continue to perfect the architectural framework for electronic government, build a national public translation portal, connect information across sectors, establish a national database, provide level 3 and 4 construction services parallel with the enhancement of security assurance [12].

Thirdly, challenges arise from the human resources within government agencies

The process of building and developing electronic government in Vietnam today has shown that the lack of high-quality human resources to exploit the full potential of Technology is also a significant obstacle for managers. Currently, a part of cadres, civil servants and public employees has limited ability to use information technology in solving work, still keeping the habit of using traditional paper documents; fear of change in changing the way of working in the digital environment...

According to the United Nations' assessment in 2020, Vietnam's Human Resources Index, although higher than previous years, is still lower than the world average (Vietnam only reached 0.6779 points, while the average score was 0.6779 points). of the world reached 0.688 points). Compared with 2014 is 0.6025 points, this index has not increased significantly; This index of Vietnam is much lower than that of Singapore - the country with the highest human resource index in the ASEAN region (0.8904 points) [12]. The report on the evaluation of the implementation results of the Master Program on State Administrative Reform for the 2011-2020 period shows that: "There are still limitations in the contingent of cadres and civil servants performing official duties" [6]

Fourthly, challenges emerge from the perspective of citizens and businesses

In order to build and develop electronic government towards digital government, besides preparing for infrastructure and human resource issues, the support of people's participation in this process is very important. However, at present, people's awareness and willingness to actually participate in implementing electronic government towards digital government through online public administrative transactions is still quite confusing; People are still apprehensive in using technological elements. The number of Vietnamese people using the Internet in 2020 is 68.17 million people, accounting for over 70% of the population and classified as countries with good spectrum, compared with the requirement of over 80% of high coverage) [14].

4. Solutions to enhance the effectiveness of developing electronic government towards a digital government in Vietnam

First, enhance institutional and policy frameworks for electronic government and digital government. This includes researching and amending the Law on Electronic Transactions and the Law on Archives to facilitate the development of a digital government. Issuing government decrees on digital government, developing specialized data networks connecting central and local government agencies, establishing a government cloud computing platform, and developing integrated platforms for national data sharing and electronic identification and authentication are also essential.

Second, shift from individual, decentralized application development to a platform-based approach with prioritization and a focus on comprehensive solutions. This involves combining centralized and decentralized models while adhering to the National Architecture Framework and the architecture of ministries, sectors, and localities. Researching and developing digital technologies, standardizing and restructuring business processes, establishing automated monitoring and evaluation tools, and assessing the effectiveness of investment projects are important steps.

Third, provide training and develop digital government and digital skills for officials and civil servants. Designing appropriate training and development programs for electronic government and digital government, such as training in working in a digital environment, data collection and processing in a digital environment, and decision-making skills in a digital environment, is crucial.

Fourth, encourage citizen participation in the development of electronic government and digital government. Developing electronic government and digital government is ultimately about serving citizens better and increasing efficiency and effectiveness. Therefore, the government needs to strengthen communication and raise awareness among citizens to actively apply digital technologies in their daily lives and activities related to public administration. Organizing training programs and providing guidance to citizens on electronic government and digital government, as well as training them in software applications, are essential.

By implementing these solutions, Vietnam can further enhance the effectiveness of electronic government development, foster digital transformation, and improve public service delivery for citizens and businesses.

5. Conclusion

The development of electronic government towards digital government in Vietnam has achieved certain results. The indices related to electronic government development towards digital government have consistently shown an increasing trend from 2016 to 2022. Indices such as online public services, SIPAS, telecommunications infrastructure, and human resources demonstrate the level of responsiveness to the requirements of electronic government and digital government, thereby contributing to improving the effectiveness of public administration in Vietnam. However, the development process still faces certain barriers, including institutional and policy barriers, technological barriers, barriers from citizens, and the capacity of the public sector workforce.

The results achieved indicate the feasibility of developing electronic government towards digital government in Vietnam. Furthermore, the development of electronic government towards digital government will enhance the effectiveness of public administration in Vietnam by simplifying online administrative procedures to level 4, promoting transparency, controlling corruption and abuse of power, and engaging citizens and businesses in state management activities.

To improve the indices of electronic government development towards digital government, Vietnam needs to continue refining the institutional framework with solutions for institutional, technological, and human resource aspects, as well as fostering citizen engagement.

By addressing these challenges and implementing the necessary measures, Vietnam can further enhance the development of electronic government towards digital government,

leading to more efficient public administration and greater citizen participation.

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