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# From E-Government to Digital Government: The Role of Quality Management Systems in Public Administrative Agencies – Evidence from Hanoi

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**ABSTRACT:** Vietnam's national digital transformation compels public administrative agencies to move beyond the mere adoption of technology, demanding innovative management practices and a renewed focus on service quality as they transition from e-Government to Digital Government. This study explores the pivotal role of quality management systems in facilitating Hanoi's public administrative agencies to adapt to and operate effectively within the Digital Government framework. Utilizing a combination of surveys and in-depth interviews conducted across various departments and agencies, the research examines how quality management systems streamline internal processes, enhance transparency, and improve satisfaction among citizens and businesses. The findings underscore that quality management systems are fundamental to establishing standardized data infrastructures, optimizing electronic workflows, and fostering a citizen-centric organizational culture. Nevertheless, persistent challenges such as entrenched traditional management mindsets and limited integration between quality management frameworks and emerging digital platforms continue to hinder progress. Drawing on these insights, the study proposes targeted solutions to enhance the implementation and integration of quality management systems within public agencies, thereby advancing the vision of a citizen-centric, efficient, transparent, and sustainable Digital Government.

**KEYWORDS**: Digital Government, E-Government, Digital Government Transformation, Public Administration Reform, Quality Management System

## I. INTRODUCTION TO THE RESEARCH PROBLEM

The deepening forces of globalization and rapid scientific technological progress have firmly entrenched a global trajectory towards Digital Government. Vietnam's commitment to this evolution is articulated in Resolution No. 57-NQ/TW, outlining strategic breakthroughs in science, technology, innovation, and national digital transformation, and operationalized through the Government's Action Program and the Digital Government Development Strategy (Decision No. 942/QĐ-TTg, June 15, 2021). A central 2025 objective is the robust establishment of a Digital Government as a catalyst for national governance reform, recognizing the transition from e-Government as a foundational pillar of this national agenda.

As Vietnam's populous and highly urbanized administrative political hub, Hanoi is at the forefront of Digital Government implementation. Consequently, its public administrative bodies must undergo comprehensive modernization of their quality management systems (QMS), deeply integrate with digital platforms, and adopt contemporary operational models to enhance service delivery for citizens and businesses.

This study explores the theoretical underpinnings, strategic directives, and developmental objectives shaping Vietnam's Digital Government. Furthermore, it examines Hanoi's practical implementation, offering recommendations for renewing and optimizing QMS within public administrative agencies to address the evolving demands of the digital transformation era.

## II. RESEARCH METHODS AND LITERATURE REVIEW

Employing a qualitative research approach, this study combines a comprehensive literature review with document analysis. The research comprises the following key steps:

(i) Literature Review: A thorough examination of global and national academic literature, legal frameworks, and policy documents concerning e-Government, Digital Government, and quality management systems.

(ii) Document Analysis: A detailed analysis of key Vietnamese legal and regulatory documents on e-Government and Digital Government, including: Resolution No. 36a/NQ-CP (2015); Decision No. 942/QĐ-TTg (2021); Law on Government

Organization No. 63/2025/QH15; Decision No. 19/2014/QĐTTg; Vietnamese Standard TCVN ISO 9001:2015; and other pertinent government documents.

By assessing these practices, policies, and regulations, this research aims to provide deeper insights into best practices and identify potential improvements to Vietnam's regulatory framework. This comparative lens facilitates the identification of successful strategies and mechanisms adaptable to enhance Vietnam's legal environment.

The urgent implementation and development of Digital Government have garnered significant research attention from domestic and international scholars and organizations, including:

- World Bank's "Digital Government Transformation in Vietnam: Global Lessons and Policy Insights" (analyzing strategy, data, infrastructure, coordination, and offering prioritized recommendations).
- ERIA's "Digitalising Public Services in Supporting Economic Development: The Case of Viet Nam" (focusing on public service digitalization and its economic impact on efficiency and transparency).
- "Digital Government and Solutions for Building a Digital Government in Vietnam Today" (Vuong & Su, analyzing core characteristics like data-driven decision-making and citizen participation).
- "Building E-Government Towards Digital Government in Vietnam Today: Current Situation and Solutions" (Quyen, assessing current status and proposing IT-driven solutions for e-Government to Digital Government transition).

These studies have collectively established a foundational framework for Digital Government development in Vietnam, recognizing information technology as a key enabler. However, a research gap persists: the specific development of quality management systems within public administrative agencies remains unexplored.

## III. RESEARCH RESULT

### *A. Transition from E-Government to Digital Government in the Process of Quality Management System Reform in Public Administrative Agencies in Vietnam*

***1) Overview of E-Government:*** The term "e-Government" emerged in the 1990s as developed nations such as the United States, the United Kingdom, Canada, and Australia began integrating information technology into public service delivery. The U.S. took an early step with the 1993 "National Performance Review" initiative[1]. By 2001, the concept was formalized in the U.S. through the E-Government Act of 2002, which defined "eGovernment" as "the use of information technology, particularly web-based services, to enhance the delivery of government information and services to citizens, businesses, and other government entities in a more efficient manner."[2] Similarly, the European Commission's eGovernment Action Plan 2016–2020 defined e-Government as "the application of information and communication technologies to improve the functioning of public administrations and to offer better public services to citizens and businesses," linking it to the vision of "transparent government – citizen-centric – cross-border administration."[3]

As a leader in both e-Government and digital transformation, Singapore's 2018 "Digital Government Blueprint" (DGB) describes it as "the digitization of all public services and processes to provide a complete, convenient, consistent, and personalized digital service experience for citizens," emphasizing a highly integrated system. In Vietnam, Resolution No. 36a/NQCP (2015) defines e-Government as "a government that leverages information and communication technology (ICT) to organize and operate, thereby improving the effectiveness and efficiency of the state apparatus and better serving citizens and businesses.

A global pioneer in e-Government and digital transformation, Singapore boasts a deeply integrated system spanning personal data and public services. Its 2018 Digital Government Blueprint (DGB) defines e-Government as "the digitization of all public processes and services to deliver a complete, convenient, consistent, and personalized digital service experience for citizens."[4]

Vietnam's definition of e-Government, outlined in Resolution No. 36a/NQ-CP (October 14, 2015), emphasizes "a government that utilizes information and communication technology (ICT) to organize and operate to enhance the effectiveness and efficiency of the state apparatus and to better serve citizens and businesses."

[1] Gro nlund, Å ., & Horan, T. (2005). Introducing e-Gov: History, definitions, and issues. Communications of the Åssociation for Information Systems, 15(Årticle 39). https://doi.org/10.17705/1CÅIS.01539

[2] United States Congress. (2002). E-Government Åct of 2002, Public Law 107–347.

[3] European Commission. (2016). eGovernment Åction Plan 2016–2020: Åccelerating the digital transformation of government.

[4] Government Technology Ågency of Singapore. (2018). Digital government blueprint: Å digital government for a smart nation

E-Government emerged as the application of information technology to enhance the efficiency of public administration[5], addressing stagnation, bureaucratic inefficiencies, and cumbersome administrative procedures in the public sector[6]. It aimed to modernize public sector governance by leveraging technology to keep pace with the widespread digitalization occurring in the private sector and society at large[7]. Additionally, e-Government sought to respond to the crisis of public service effectiveness and to better serve citizens through online public services, greater transparency of information, and reduced transaction costs. In *Digital Era Governance*, Patrick Dunleavy posits a three-phase evolution of government in the digital age: e-Government → Digital Government → Open Government.

Vietnam's Resolution No. 36a/NQ-CP (2015) affirmed eGovernment as a key driver for administrative reform, enhanced governance capacity, promoted transparency, and improved citizen and business satisfaction.

***2) Identifying Digital Government:*** *The Concept of Digital Government:* Digital Government marks the next evolutionary step from e-Government, gaining prominence in the 2010s with the widespread digital transformation. The OECD (2020) distinguishes them by stating that while e-Government digitizes existing administrative processes, Digital Government fundamentally restructures state operations through data, digital technologies, and real-time citizen engagement.

Leading advanced economies like the UK, Estonia, South Korea, and Singapore have spearheaded Digital Government development via clear strategies emphasizing data integration, artificial intelligence (AI), proactive digital services, and open governance. As early as 2012, the United States introduced its first Digital Government Strategy, aiming for "anytime, anywhere, on any device" service delivery and defining it as "the use of digital technologies to transform how government serves citizens and businesses," thus underscoring a shift towards citizen-centric, digitally-enabled governance.

The shift from e-Government to Digital Government has accelerated globally since 2020, becoming a post-COVID-19 imperative. The UK's Government Digital Service (GDS) defines Digital Government as delivering simpler, clearer, and faster public services through digital-first design, reflecting the UK's citizen-centric, comprehensive digitalization approach[8]. The United Nations also recognized Digital Government as a crucial evolution in the UN E-Government Survey 2020, highlighting its necessity for governments to adapt to emerging technologies and rapidly changing societal needs.

The United Nations defines Digital Government as leveraging digital technologies to deliver public services, promote citizen engagement, and enhance governmental operational efficiency. This aligns with Vietnam's Digital Government Development Strategy. Officially introduced in Vietnam by Decision No. 942/QĐ-TTg (2021), marking a key point in its national digital transformation, Digital Government is defined as a data and digital technology-driven government capable of providing highquality, personalized public services to citizens and businesses anytime, anywhere, and on any device.

Digital Government distinguishes itself from e-Government through several key characteristics:

(i) Reimagined Public Service Delivery**:** Digital Government innovates public service objectives and methods, shifting governance thinking from primarily supporting state management to offering public services as a foundational societal platform;

(ii) Comprehensive Digital Operations**:** It migrates all government operations to the digital environment, aiming to transform processes by innovating governance models rather than merely reforming administrative procedures;

(iii) Data-Centricity: Digital Government operates on data, leverages data for decision-making, and treats data as a core resource. This represents a shift from paper-based reporting to data-driven analytics synthesized from diverse sources, enabling more efficient governance and driving national digital transformation;

(iv) Enhanced Citizen and Business Participation: It empowers greater citizen input in service improvement and enables businesses to move beyond infrastructure provision to actively deliver value-added services based on open government data;

(v) Transformed Civil Servant Skills: Digital Government necessitates a shift in civil servant skills, supplementing traditional competencies with data analysis, processing, and effective digital communication to adapt to this evolution;

(vi) Proactive Adoption of Emerging Technologies: It prioritizes the proactive adoption of emerging technologies, moving government agencies beyond simply meeting operational needs to strategically leveraging technology to serve and keep pace with the rapid advancements of the digital economy, information explosion, and digital society."

[5] United States Congress. (2002). E-Government Åct of 2002, Public Law 107– 347.

[6] Organisation for Economic Co-operation and Development. (2020). Digital government policy framework: Six dimensions of a digital government. OECD Publishing.

[7] United Nations Department of Economic and Social Åffairs. (2010). UN EGovernment survey 2010: Leveraging e-government at a time of financial and economic crisis. United Nations.

[8] UK Government Digital Service (GDS). (2020). Government digital service: Ånnual report and accounts 2019 to 2020.

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*The Necessity of Transitioning from E-Government to Digital Government:* While e-Government in Vietnam has focused on digitizing existing administrative processes, the imperative now is to embrace Digital Government, which aims to restructure entire workflows, innovate governance models, and deliver proactive, intelligent services. E-Government streamlines tasks but often lacks the dynamism for true innovation, primarily accelerating existing processes and risking stagnation. In contrast, Digital Government seeks to perform new tasks more effectively through smarter approaches, aligning with the city's digital transformation goals.

The OECD (2020) views e-Government as the initial phase of administrative modernization, whereas Digital Government signifies a fundamental transformation in mindset, institutional frameworks, and data governance across the entire state system. Similarly, the United Nations (UN E-Government Survey, 2022) underscores this shift as an evolutionary process that expands the scope and approach to provide more comprehensive services to society. [9]

In Vietnam, Decision No. 942/QĐ-TTg (2021) concretizes this transition, mandating a shift from mere "IT application" to "comprehensive digital transformation." This involves a fundamental reorientation from serving internal administrative functions to prioritizing citizens and businesses, with data at its core.

*The aim of building a Digital Government in Vietnam:* Vietnam's vision for a Digital Government is a modern, effective, and transparent governance model centered on citizen and business needs. The 2021 Digital Government Development Strategy (Decision No. 942/QĐ-TTg) outlines the aim to deliver highquality, personalized public services via a digital data platform and modern technologies. This development enhances governmental management and operational efficiency. Operating on data-driven decision-making and leveraging Industry 4.0 technologies like cloud computing, IoT, AI, and data processing centers, the Digital Government enables faster, timelier, and more efficient administrative actions.

Beyond mere digitization, a Digital Government represents a comprehensive transformation towards open, flexible, connected, and real-time governance. Key goals by 2025 include 100% online provision of eligible public services at level 4, integrated on the National Public Service Portal, alongside the development of national data systems for policy planning. Furthermore, the Digital Government pioneers national digital transformation, driving a digital economy, society, and citizenry to create new momentum for rapid, sustainable socio-economic development. By granting citizens access to data through open government and local administrative agency systems, it fosters greater transparency, empowering them to exercise democratic rights, contribute to policy development and implementation, and participate in oversight and accountability mechanisms. This will reduce inconveniences, harassment, and negative actions by officials, particularly corruption and wastefulness, fostering a more honest, effective, and efficient public administration.

*The Legal Basis for Building a Digital Government in Vietnam:* Vietnam's Digital Government is built upon a robust legal foundation evolved from its e-Government development and strengthened by the ongoing national digital transformation. Key foundational documents include Resolution No. 17/NQ-CP (March 7, 2019), which aimed to link e-Government with administrative reforms for citizen and business service. This was significantly advanced by Decision No. 942/QĐ-TTg (June 15, 2021), issuing the Digital Government Development Strategy for 2021–2025 (vision to 2030), marking a decisive shift from "IT application" to data-centric "comprehensive digital transformation." Further bolstering this framework are the amended 2023 Electronic Transactions Law, the Cybersecurity Law, the Personal Data Protection Law, and Decree 47/2020/NDCP on digital data management, connectivity, and sharing within government. Moreover, pivotal political and legal groundwork was laid by Decisions like No. 749/QĐ-TTg (2020) on the national digital transformation program and Politburo Resolution No. 52-NQ/TW (2019). This comprehensive regulatory system provides clear guidance for establishing a modern, secure, and transparent digital governance model centered on serving the people.

***3) Overview of the Quality Management System in State Administrative Agencies****: Conceptualization and Strategic Role of QMS in State Administrative Agencies:* Despite the proliferation of definitions, a universally ratified conceptualization of a "quality management system" remains elusive. The International Organization for Standardization (ISO) defines a QMS as a structured set of clearly articulated processes and assigned responsibilities that enable an organization to operate effectively in pursuit of its defined objectives. State administrative agencies, like other organizations, typically design customized QMS frameworks, comprising a codified set of policies, processes, and procedures, with the overarching aim of enhancing stakeholder satisfaction and trust[10].

[9] Ås noted in the UN E-Government Survey (2022), "…E-government has evolved from a siloed, technocratic approach to governance in a handful of high-income countries to a whole-of-government and whole-of-society approach undertaken in a broad range of countries" (p. 166).

[10] ISO. (n.d.). *Quality management systems: An introduction*. International Organization for Standardization. Retrieved Åpril 27, 2025, from https://www.iso.org/quality-management/what-is-qms#toc1

Renowned quality expert P. Crosby characterizes a quality management system as a comprehensive organizational methodology designed to ensure the consistent fulfillment of customer and stakeholder requirements. He emphasizes the QMS's critical function as a preventive mechanism against errors, rather than merely a corrective tool[11].

In the Vietnamese context, the Northern Center for Environmental Monitoring under the Vietnam Environmental Administration conceptualizes a QMS as a formalized system of processes, procedures, and responsibilities structured to achieve quality policies and objectives. A QMS coordinates and steers organizational activities to meet stakeholder expectations and regulatory requirements while promoting ongoing improvements in operational effectiveness and productivity. Among global standards, ISO 9001:2015 stands as the most widely recognized framework, prescribing the essential components of a quality management system and serving as the predominant model for QMS implementation worldwide[12]

While the application of quality management systems (QMS) within state administrative agencies has become widespread both globally and in Vietnam, a definitive, universally recognized conceptualization tailored to this specific context remains absent.

Drawing upon practical experience, a QMS in state administrative agencies may be construed as a comprehensive framework encompassing policies, procedures, and tools designed to ensure regulatory compliance, operational efficiency, transparency, and the achievement of measurable outcomes in administrative functions.

In Vietnam, the adoption of the QMS model based on the national standard TCVN ISO 9001 has been extensively institutionalized across the public sector, pursuant to Decision No. 19/2014/QĐTTg and its accompanying regulatory guidance. Article 1 of this Decision stipulates that the Quality Management System, aligned with the National Standard TCVN ISO 9001:2008, is herein referred to as the "Quality Management System."

The QMS serves as an indispensable mechanism for advancing administrative reform, strengthening the effectiveness and efficiency of public service delivery, and enhancing the quality of services provided to citizens and organizations. Predicated upon the TCVN ISO 9001 framework, the QMS facilitates the standardization of administrative processes, delineates clear lines of responsibility, and fosters institutional transparency across all organizational units.

The implementation of a QMS engenders a range of tangible benefits, including the mitigation of procedural errors, the acceleration of document processing timelines, and the augmentation of citizen satisfaction. Within the often complex and transparency-driven environment of public administration, the QMS provides a critical foundation for cultivating a professional, accountable, and efficient administrative culture. Moreover, it instills a disciplined operational ethos among public officials and civil servants, ensures strict compliance with established procedures, and promotes a culture of continuous improvement.

The application of a QMS transcends technical formalities, representing a strategic necessity within the broader trajectory toward e-government and digital government. Through the structured framework of a QMS, administrative agencies are empowered to undertake scientific self-assessment, rigorous monitoring, and systematic refinement of their operations. Significantly, the QMS establishes a resilient platform for elevating the quality of public services, ensuring fairness and operational excellence in service delivery, and has emerged as a pivotal benchmark for assessing the performance and institutional credibility of contemporary state administrative agencies.

*Implementation of Quality Management Systems in State Administrative Agencies:* The implementation of quality management systems (QMS) within state administrative agencies constitutes a pivotal mechanism for advancing management effectiveness and enhancing the delivery of public services. The overarching goal of QMS deployment is to elevate the quality, transparency, and efficiency of administrative processes, ensuring strict adherence to regulatory frameworks.

Achieving this objective requires administrative agencies to adopt relevant national and international quality standards, underpinned by the meticulous design and codification of robust operational procedures. Effective implementation demands unwavering commitment from institutional leadership, coupled with the active participation and collaboration of all public officials and civil servants. Equally critical is the establishment of systematic evaluation and quality assurance mechanisms to enable the timely identification and resolution of deficiencies, thereby fostering a culture of continuous improvement.

Integral to the successful adoption of QMS are capacity-building initiatives aimed at strengthening the professional competencies of the administrative workforce. Moreover, the strategic application of information technology in management and oversight processes plays an indispensable role, facilitating workflow optimization, promoting greater transparency, and minimizing bureaucratic inefficiencies.

[11] Crosby, P. B. (1979). *Quality is free: The art of making quality certain*. McGraw-Hill.

[12] Northern Environmental Monitoring Center. (n.d.). What is a quality management system (QMS)? - ISO 9001 & other quality management systems. Department of Environment. https://cem.gov.vn/danh-gia-hethong/he-thong-quan-ly-chat-luong-qms-la-gi-iso-9001-nhung-he-thongquan-ly-chat-luong-khac

However, the deployment of QMS is not without challenges. Barriers such as limited awareness, resource constraints, and the need for broad-based consensus across the administrative system can significantly impede progress. Addressing these challenges requires a holistic, coordinated approach to foster a resilient, high-performing administrative environment aligned with the broader objectives of public sector modernization and digital transformation.

*Synergistic Interrelationship Between Digital Government and Quality Management Systems:* Digital Government and Quality Management Systems (QMS) exhibit a mutually reinforcing synergy. Digital infrastructure (ICT) provided by Digital Government enhances organizational operations, creating propitious conditions for more efficacious QMS implementation (e.g., expedited data distribution and improved interdepartmental integration). Conversely, QMS ensures the high quality, stability, and responsiveness of Digital Government services to citizen needs, thereby cultivating public trust and encouraging broader adoption. For instance:

- ISO 9001 establishes and standardizes administrative processes, while Digital Government furnishes the digital platforms for their automation and operationalization.
- QMS underpins the development of transparent workflows—an indispensable requisite for citizen-centric Digital Government models.
- The integration of ISO standards within digital systems facilitates the creation of intelligent data governance frameworks, thereby enhancing decision-making efficacy in public administration.

While QMS emphasizes the human dimension through continuous training, engagement, evaluation, and improvement, Digital Government primarily focuses on technological solutions. Their integration ensures technology augments human decisionmaking, while human oversight maintains technological alignment with quality objectives.

The concurrent advancement of Digital Government and Quality Management Systems significantly elevates the quality of public services. Organizations leveraging this integrated approach demonstrate enhanced responsiveness, greater transparency, and heightened adaptability to evolving citizen demands.

Consequently, Digital Government and QMS are not discrete endeavors but constitute a synergistic dyad that mutually strengthens administrative reform and public service quality enhancement. The integration of Digital Government transformation with QMS implementation represents a critical strategy for modern governments striving to serve citizens more efficiently, transparently, and flexibly.

***B) Status of Quality Management System Implementation in Vietnam's State Administrative Agencies***

According to the Ministry of Science and Technology, a comprehensive framework for establishing, implementing, maintaining, and continually improving Quality Management Systems (QMS) has been established across Vietnam's state administrative apparatus.

**Central Level:** Notably, 91% of ministries and ministerial-level agencies (20 out of 22) have developed and implemented QMS in adherence to regulations. All mandatory agencies and organizations under these ministries have established and officially communicated QMS compliant with the TCVN ISO 9001 standard for their entire spectrum of administrative procedures. Furthermore, proactive efforts by ministries and agencies have resulted in a 75.5% adoption rate (74 out of 98 entities) of QMS among agencies and organizations encouraged, but not mandated, to implement the system[13].

**Local Level:** Impressively, 98.4% of localities (62 out of 63) have implemented QMS in accordance with regulatory requirements. Within these localities, all compulsory agencies and organizations have developed and officially communicated QMS compliant with TCVN ISO 9001 for all administrative procedures. Local authorities have also actively promoted QMS deployment among encouraged agencies and organizations. Significantly, 98.4% of localities (62 out of 63) have extended QMS implementation to commune-level People's Committees, with 62.5% (5,564 out of 8,910) successfully establishing, implementing, and communicating QMS compliant with TCVN ISO 9001 standards[14].

**Supporting Infrastructure:** Substantial progress has been made in developing and finalizing the legal framework, technical guidelines, and financial management regulations underpinning QMS implementation. Ministries and agencies have comprehensively published standardized QMS frameworks, based on TCVN ISO 9001, for subordinate agencies operating within sectoral systems at the local level. The Ministry of Science and Technology has also issued a standardized QMS framework applicable to state administrative organizations at the local level. Moreover, a robust network of training institutions has been established to provide administrative management expertise for consulting experts, auditing experts, and specialized consultancy, certification, and auditing organizations. This network adequately addresses the consultancy and auditing demands for QMS implementation across the state administrative apparatus.[15]

## From E-Government to Digital Government: The Role of Quality Management Systems in Public Administrative Agencies – Evidence from Hanoi

### 1. Advancement of E-Government Implementation and the Transition to Digital Government in Hanoi

As the capital and the administrative-political, economic, and cultural nucleus of Vietnam, Hanoi has consistently demonstrated leadership in the implementation of e-Government initiatives and is now vigorously pursuing a strategic transition towards Digital Government. In accordance with Plan No. 239/KH-UBND on digital transformation and the development of a smart Hanoi by 2025, with a strategic orientation towards 2030, promulgated on September 27, 2023, the city has articulated three fundamental pillars: digital government, digital economy, and digital society.

As of 2023, Hanoi has achieved significant progress across several key areas:

- **Digital Signatures:** A total of 12,188 digital signatures have been issued to officials and civil servants city-wide[16]. Since April 3, 2023, Hanoi, in collaboration with four enterprises, has streamlined the issuance of digital signatures at the unified one-stop-shop units of departments, sectors, and the People's Committees of districts, towns, and communes.
- **Online Public Services:** By March 1, 2022, Hanoi had made available 254 administrative procedures as online public services at levels 3 and 4 through the National Public Service Portal[17]. This initiative forms a crucial component of the city's broader strategy to advance digital transformation and elevate service quality for its citizenry.
- **Smart City Application:** The "Hanoi SmartCity" application has been deployed as a multifaceted tool to support pandemic prevention efforts and provide essential urban management utilities.
- **Database Development:** Significant efforts are underway in the development and integration of core databases encompassing population, businesses, healthcare, and education.

Information from the Ministry of Information and Communications reveals that Hanoi has launched a pilot program to evaluate digital transformation maturity at the district level. Acting under the directives of the Hanoi People's Committee and the guidance of the Department of Information and Communications, districts have proactively undertaken digital transformation initiatives within their administrative areas. Nonetheless, the implementation process has exposed significant challenges, including insufficient budget allocations, a shortage of qualified information technology personnel, and uncertainties regarding effective implementation strategies. In response, districts have formally requested additional guidance and the provision of necessary resources from both the Ministry of Information and Communications and the municipal authorities to ensure the successful and timely fulfillment of their assigned digital transformation objectives.

*Current Status and Limitations of Quality Management Systems in Hanoi's Administrative Agencies within the Digital Government Context:* Hanoi's administrative agencies initially implemented Quality Management Systems (QMS) based on the TCVN ISO 9001:2008 standard, as mandated by Prime Minister's Decision No. 19/2014/QĐ-TTg (dated March 5, 2014). Subsequently, a transition to the TCVN ISO 9001:2015 standard was undertaken to enhance the quality and efficiency of state management and public service delivery, aligning with administrative reform objectives. However, when viewed through the lens of digital government development, the existing ISO framework exhibits several key limitations:

- **Siloed Operation:** The ISO system is often maintained as a discrete procedural framework, predominantly relying on paper-based documentation or operating in isolation from extant electronic systems.
- **Lack of Digital Integration:** A significant deficiency exists in the integration between ISO processes and digital platforms. Critically, citizen feedback data is not yet systematically incorporated into the quality improvement cycle as envisioned by the PDCA (Plan–Do–Check–Act) model.
- **Superficial Improvement Processes:** Internal audits and process improvement initiatives tend towards superficiality, frequently conducted primarily to satisfy performance indicators rather than to instigate substantive enhancements in operational efficiency and service quality.
- **Interoperability Deficiencies:** Poor interoperability between district-level and department-level QMS frameworks results in discontinuities in information flow and hinders standardized practices.

[13] [14] [15] Center for Science and Technology Communication Research and Development. (2021). Åpplication of the quality management system according to ISO 9001 standard: Ån effective tool for building a modern public administration.

[16] Hanoi has issued over 46,500 free digital signatures to citizens. Retrieved from http://caicachhanhchinh.gov.vn/tin-tuc/ha-noi-da-cap-tren-46500chu-ky-so-mien-phi-cho-cong-dan

[17] The application was developed by the Information Technology Center under the Office of the City People's Committee and deployed by Hanoi during the Covid-19 epidemic prevention period; to manage and update information related to the epidemic prevention and control situation in the city and many other activities of Hanoi.

Despite notable achievements in administrative modernization, Hanoi's digital transformation process continues to be impeded by significant challenges related to the integration of QMS:

- **Synchronization Deficit:** A primary impediment is the lack of synchronization between ISO 9001:2015compliant quality management processes and the digital systems currently being deployed across administrative agencies. While document management software and online public services have been introduced, the ISO system often operates independently, sometimes remaining paper-based, leading to process duplication and inefficiency.
- **Inadequate Technology Infrastructure and Data Interoperability**: Data, a fundamental pillar of effective digital government, remains fragmented. Many administrative agencies in Hanoi are still in the nascent stages of constructing or updating sectoral databases. The prevailing lack of data interoperability across administrative levels and sectors impedes the automation of ISO processes and the enhancement of service quality. Core databases pertaining to population, land, education, and healthcare, among others, remain largely siloed.
- **Insufficient Human Resources:** The cadre responsible for ISO implementation and digital transformation at the grassroots level often lacks formal training in critical areas such as digital governance, open data management, and the integration of quality management principles with information technology. This deficiency presents significant obstacles to the development of standardized digital procedures and the effective integration of ISO frameworks with digital platforms. Consequently, ISO systems frequently exist as archival documentation rather than dynamic operational management tools.
- **Delayed Policy Concretization:** Despite strategic direction provided by central-level policy documents such as Decision 942/QĐ-TTg and Resolution 17/NQ-CP, detailed guidance for the integration of QMS into digital transformation at the provincial and municipal levels remains conspicuously absent. Hanoi has yet to promulgate unified regulations concerning the standardization of electronic ISO processes, foundational input databases for administrative procedures, or mechanisms for the online quality control and supervision of public services.
- **Absence of Real-time Quality Assessment:** Existing citizen feedback mechanisms, such as SIPAS and the 1022 Hotline, have not yet been integrated into internal ISO evaluation frameworks. Consequently, improvements in administrative service quality rely predominantly on periodic reports, which often fail to capture the dynamic and real-time needs and expectations of citizens.

***C) Strategic Solutions for Advancing Digital Government through Qua lity Management System Innovation in Hanoi's Administrative Agencies:*** *Development of an Integrated Digitalized Quality Management Framework:* Hanoi must prioritize the establishment of an integrated Quality Management System (QMS) framework that fully embeds digital platforms into its operational structure. This transformation requires reimagining ISO 9001:2015 not merely as a static set of procedures but as a dynamic, fully digitalized, and real-time operational tool. Each administrative procedure should be standardized within digital environments and seamlessly interconnected with electronic document management systems, online public service platforms, and open data portals. Digital ISO templates must be developed and integrated into automated workflows, eliminating the current parallel and fragmented systems.

*Strategic Enhancement of Human Capital for Digital Quality Management:* Personnel charged with ISO implementation and administrative reform at district, commune, and ward levels must undergo intensive, specialized training in digital governance technologies, data-driven management, and digitalized quality improvement methodologies. Hanoi should establish a comprehensive "Digital Competency Framework" aligned with specific administrative levels, supported by regular evaluations and certification programs to ensure sustained capability in managing integrated digital quality systems.

*Acceleration of Interoperable Data Infrastructure for Quality Governance:* The city must urgently develop a unified and interoperable data infrastructure to support administrative modernization and public service quality management. Critical databases—covering population, enterprises, land, and public administration—should be interconnected with electronic onestop portals and ISO workflows to create a robust "data ecosystem." This ecosystem would enable evidence-based decision-making, automate procedural improvements, and promptly detect and resolve bottlenecks within administrative processes.

*Systematic Integration of Citizen Feedback into the ISO Continuous Improvement Loop:* Citizen satisfaction measurement tools—such as SIPAS surveys, the 1022 hotline, and interactive platforms like Zalo or the Hanoi SmartCity app— should be systematically integrated into the ISO quality cycle. Real-time citizen feedback must dynamically inform the continuous improvement of administrative processes. Additionally, survey results should be publicly disseminated in real-time via digital dashboards and official government websites to enhance transparency and foster public engagement.

*Pilot Deployment and Scalable Expansion of the "Digital Quality Governance" Model*: Hanoi should strategically select several districts with favorable conditions to pilot a comprehensive "Digital Quality Governance" model. Under this model, all governance,

oversight, and performance evaluation activities would operate entirely on digital platforms, featuring real-time tracking of task execution through Key Performance Indicators (KPIs), automated ISO process integration, and predictive alerts for potential delays. Successful pilots should then serve as scalable models for citywide expansion.

## IV. CONCLUSION

The transition from e-Government to Digital Government represents a pivotal step in Vietnam's journey toward modernizing public administration and building a proactive, citizen-centered state. Achieving this transformation requires not only investment in digital infrastructure, data systems, and emerging technologies, but also comprehensive reforms in institutional frameworks, workforce competencies, and, crucially, the innovation of Quality Management Systems within state agencies.

The QMS based on the TCVN ISO 9001:2015 standard must be fully integrated with digital platforms to deliver transparent, efficient, and citizen-responsive administrative services. Enhancing public sector quality management will strengthen both local and central governments' service capacities, foster greater societal trust, and drive sustainable digital transformation.

Ultimately, the modernization of QMS is not merely a technical necessity but constitutes the essential governance architecture for enabling Digital Government to realize its full potential. This undertaking demands steadfast commitment, strategic coordination, and multi-level collaboration across the entire administrative apparatus.

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