Digital Mastery in the Population and Civil Registration Office of Depok City: Toward Government Digital Transformation

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Digital transformation in public service delivery has driven the implementation of the Digital Population Identity (Identitas Kependudukan Digital/IKD) as part of the Electronic-Based Government System (Sistem Pemerintahan Berbasis Elektronik/SPBE) to enhance efficiency and integration of population administration based on the National Identification Number (NIK). However, the implementation of IKD at the Department of Population and Civil Registration of Depok City still faces several challenges, including low activation rates, limited public literacy and trust, the proliferation of fraud conducted under the guise of IKD, and the internal readiness of the bureaucracy to manage digital transformation. This study aims to analyze the level of readiness and digital mastery of the Department of Population and Civil Registration of Depok City and to identify strategic aspects that need to be strengthened to support the successful digital transformation of population administration services. The Digital Mastery theory proposed by Westerman, Bonnet, and McAfee (2014) is employed as the primary analytical framework to understand and assess the processes and levels of digital mastery within the research context. The theory emphasizes that successful digital transformation is determined by a balance between digital capabilities and leadership capabilities. The combination of these two dimensions results in four levels of digital mastery, namely Beginners, Fashionistas, Conservatives, and Digital Masters. This study adopts a qualitative descriptive method with an inductive approach. The findings indicate that the digital mastery of the Department of Population and Civil Registration of Depok City in supporting government digital transformation through the activation of Digital Population Identity (IKD) is positioned at the Conservative level within the Digital Mastery framework of Westerman et al. (2014). This level is characterized by the availability of stable, secure, and standardized digital systems and a focus on the use of technology to improve administrative efficiency. Although leadership commitment to digitalization is evident through support for IKD implementation, regulatory compliance, and personal data protection, the utilization of technology and digital leadership remains operational and risk-control oriented. As a result, it has not fully driven service innovation, strategic data utilization, or enhanced user experience. Therefore, advancing digital mastery toward the Digital Master level requires strengthening an integrated digital strategy between central and local governments, developing visionary digital leadership, enhancing the digital competencies and culture of public officials, improving public digital literacy and trust, and fostering sustained synergy with the Directorate General of Population and Civil Registration to promote citizen-oriented digital transformation in population administration services.

Keywords: Digital Mastery, Digital Population Identity, Digital Transformation.

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1. Introduction

Technological development has become one of the most defining characteristics of the 21st century. These advancements have not only affected personal and business aspects of life but have also fundamentally transformed the government sector. Governments increasingly adopt technology to enhance efficiency, transparency, and public service delivery. Consequently, ongoing technological trends are becoming more deeply integrated across various sectors, both public and private, creating opportunities for the

development of new applications and services. This transformation reflects a paradigm shift in how societies and organizations adapt to and leverage technological advancements to address modern social and economic challenges.

Along with the significant impact of digitalization, population identity management in Indonesia has also undergone a transition from manual to digital systems. Initially, population identity took the form of paper-based identity cards, later evolving into electronic identity cards (e-KTP), and has now transformed into Digital Population Identity. In this current form, identity cards can be accessed directly through personal devices such as smartphones or other digital gadgets. Historically, population administration began in 1995 with the first computerized system (SIMDUK), followed by the establishment of an integrated system known as the Population Administration Information System (SIAK). This development marked the transition from manual identity ownership to nationwide biometric registration, which became the foundation of the electronic identity card database. Subsequently, the e-KTP system achieved authentication status. In 2019, electronic signatures were adopted in population documents, facilitating easier document signing and validation processes across Indonesia. Ultimately, in 2022, the Directorate General of Population and Civil Registration officially launched the Digital Population Identity (Identitas Kependudukan Digital/IKD), signifying an acceleration of Indonesia's digitalization efforts toward comprehensive digital transformation.

As previously described, the transformation of population administration services represents a historical evolution in which population identity, once limited to paper-based and manually managed documents, progressed into electronic identity cards integrated within the SIAK system. This evolution continued with the adoption of electronic signatures (KTP-el) and has now reached a stage of digital innovation where population identity is stored and accessed through personal digital devices. This transformation extends beyond changes in physical form to include improvements in service convenience, information accessibility, and integration with various public services. As a result, citizens benefit from easier access to their personal data and improved connectivity with multiple public service platforms.

The Ministry of Home Affairs, through the Directorate General of Population and Civil Registration, officially released the Digital Population Identity (IKD) application in stages beginning in 2022. This initiative is regulated under Regulation of the Minister of Home Affairs of the Republic of Indonesia No. 72 of 2022 concerning Standards and Specifications for Hardware, Software, and Blanks of the Electronic Identity Card (KTP-el), as well as the Implementation of Digital Population Identity. According to this regulation, Digital Population Identity (IKD) is defined as electronic information that represents population documents and associated data within a digital application accessed through a mobile device (smartphone), displaying personal data as proof of identity. Simply stated, Digital Population Identity (IKD) is the digital version of the Electronic Identity Card (KTP-el), which can be accessed through a smartphone application. IKD contains the same personal data as the physical KTP-el and can be utilized for various digital services, including banking, healthcare, education, transportation, and other government services.

The Digital Population Identity (IKD) application represents a concrete implementation of the digital identity policy and reflects the utilization of technology in population administration. This application functions as a platform to facilitate the use of digital identity by citizens. The administration of digital population identity is regulated under Article 13 Paragraph (2) of Minister of Home Affairs Regulation No. 72 of 2022, which states that the digital form of the KTP-el is contained within the Digital Population Identity application, representing registered residents and ensuring that the digital identity corresponds to the individual concerned. The activation of the IKD application was officially launched at the end of 2021 during the National Working Meeting of Population and Civil Registration Offices across Indonesia. The initial activation targets included employees of the Directorate General of Population and Civil Registration,

the Ministry of Home Affairs, and Population and Civil Registration Offices nationwide.

The national target for Digital Population Identity (IKD) activation in 2022 was set at 25% of the total population with recorded electronic identity cards. This target increased to 30% for the period 2023–2025. However, as shown in the data presented above, the percentage of IKD activation both nationally and in Depok City has not yet met the established national targets. The proliferation of fraud conducted under the guise of the Directorate General of Population and Civil Registration or regional Population and Civil Registration Offices has negatively affected institutional credibility and resulted in the misuse of citizens' personal data, as highlighted by the Director General of Population and Civil Registration.

Furthermore, the persistently low activation rate of Digital Population Identity in Depok City, as illustrated in the preceding paragraphs and figures, raises important questions regarding the factors contributing to limited public participation. As of the observed period, IKD activation in Depok City stands at only 6.46%, far below the national target of 30%. This situation prompts several critical considerations: whether widespread fraud has undermined public trust, whether insufficient public knowledge and digital literacy regarding IKD have hindered participation, or whether internal bureaucratic factors such as the readiness of human resources and supporting infrastructure have constrained effective implementation. These factors are crucial in determining whether Indonesia's broader objective of digital government transformation can be successfully achieved.

The selection of this research topic is particularly relevant given that Digital Population Identity constitutes a strategic component in supporting the digital transformation of public services, which is currently being intensively promoted by the government. Considering the urgency and challenges involved, this study is essential to assess the extent of digital mastery within the Department of Population and Civil Registration of Depok City in advancing government digital transformation, particularly in the activation of Digital Population Identity. Additionally, this research seeks to identify strategic aspects that require strengthening to support more effective and citizen-oriented digital population administration services.

2. Method

The research method employed in this study is a qualitative descriptive approach with an inductive reasoning framework. This design is intended to collect extensive field data that reflect actual conditions as they naturally occur. The data are then systematically described and analyzed by linking empirical findings with relevant theories or patterns aligned with the research topic, thereby enabling the formulation of conclusions.

In qualitative research, person data sources refer to individuals involved in digital transformation within population administration services at the Directorate General of Population and Civil Registration and at regional Population and Civil Registration Offices. Regarding place as a data source, this study is conducted at the Directorate General of Population and Civil Registration of the Ministry of Home Affairs and the Department of Population and Civil Registration of Depok City. Furthermore, paper data sources are categorized into two types: primary data and secondary data.

Data collection techniques may be carried out through several methods, including observation, interviews, questionnaires, documentation, or a combination of these approaches. In this study, the researcher applies triangulation across the selected data collection techniques, namely overt or covert observation, unstructured interviews, and documentation. The use of triangulation is expected to enhance data credibility compared to relying on a single method. This study employs triangulation to test the validity of data obtained from interviews by conducting validation with the immediate supervisors of the initial informants.

Within the qualitative approach, data analysis is conducted using the framework proposed by Miles and Huberman. According to Miles and Huberman (2014), as cited in Mariyadi (2019), qualitative data analysis consists of three concurrent flows of activity: data reduction, data display, and conclusion drawing/verification.

3. Research Findings and Discussion

Digital Mastery of the Population and Civil Registration Office of Depok City

This subsection presents the research findings on the digital mastery of the Department of Population and Civil Registration of Depok City in its efforts toward digital transformation, using the implementation of Digital Population Identity (Identitas Kependudukan Digital/IKD) activation as a case study. Referring to the Digital Mastery theory proposed by Westerman, Bonnet, and McAfee, digital mastery is understood as an organization's ability to develop and integrate two core capabilities: digital capabilities and leadership capabilities. Digital capabilities relate to the utilization of technology to enhance services, operational processes, and population administration service models, while leadership capabilities reflect leaders' capacity to formulate a clear vision, steer organizational change, and drive sustainable digital transformation. Accordingly, the findings in this subsection are organized around these two capabilities to provide a comprehensive overview of the level of digital mastery of the Department of Population and Civil Registration of Depok City in the implementation of Digital Population Identity.

Digital Capabilities

The Department of Population and Civil Registration of Depok City supports the implementation of Digital Population Identity (Identitas Kependudukan Digital/IKD) activation as part of its digital transformation efforts. Referring to the Digital Mastery theory proposed by Westerman, Bonnet, and McAfee, digital capability refers to an organization's ability to leverage digital technologies to improve service quality for citizens, optimize operational processes, and strengthen the effectiveness of population administration. In the context of this study, digital capability is analyzed through several aspects, including the readiness of technological infrastructure, the competencies of human resources, the utilization of digital technologies, and the integration of supporting systems within the Department of Population and Civil Registration of Depok City.

Digital capability comprises three sub-dimensions, which are discussed sequentially based on the findings from interviews and researcher observations: Customer Experience, Operational Processes, and Business Models.

a. Customer Experience

Prior to the implementation of digitalization, particularly in the period before 2019, population administration services in Depok City were predominantly managed through manual queueing systems. This condition resulted in long queues, extended waiting times, and significant inconvenience for citizens. Such circumstances not only affected service effectiveness but also diminished the overall quality of citizens' experiences in accessing population administration services.

Figure 4.3 The Initial Version of the Silondo Website

Source: Processed by the author, based on SILONDO BERMULA – DUKCAPIL Depok.

It was also revealed to the researcher that the implementation of the Silondo Bermula application has created a positive service experience, to the extent that citizens have expressed appreciation for the performance of the Head of the Department of Population and Civil Registration of Depok City, as services can now be accessed without the need to visit the office in person. In addition, the Department of Population and Civil Registration of Depok City actively accommodates public feedback and strives to integrate services with the community in the most accessible and user-friendly manner. This is supported by the implementation of a Citizen Satisfaction Survey conducted twice a year, as well as feedback collected through various social media channels, which are also displayed within the Silondo Bermula application.

Social media functions as an accessible and direct channel for public complaints, allowing issues to be quickly understood and promptly addressed. Many citizens directly submit comments on these platforms when they have complaints, questions, or expressions of satisfaction. This indicates that the Department of Population and Civil Registration of Depok City has effectively leveraged digitalization to enhance public service delivery. Furthermore, the department conducts a Citizen Satisfaction Survey on a quarterly basis, the results of which are consistently published on social media and used as a foundation for quarterly evaluations, as illustrated in the following figure.

Figure 4.10 Results of the Public Satisfaction Survey at the Population and Civil Registration Office of Depok City

Source: Population and Civil Registration Office of Depok City

Figure 4.11 Comparison of Public Satisfaction Survey Results at the Population and Civil Registration Office of Depok City

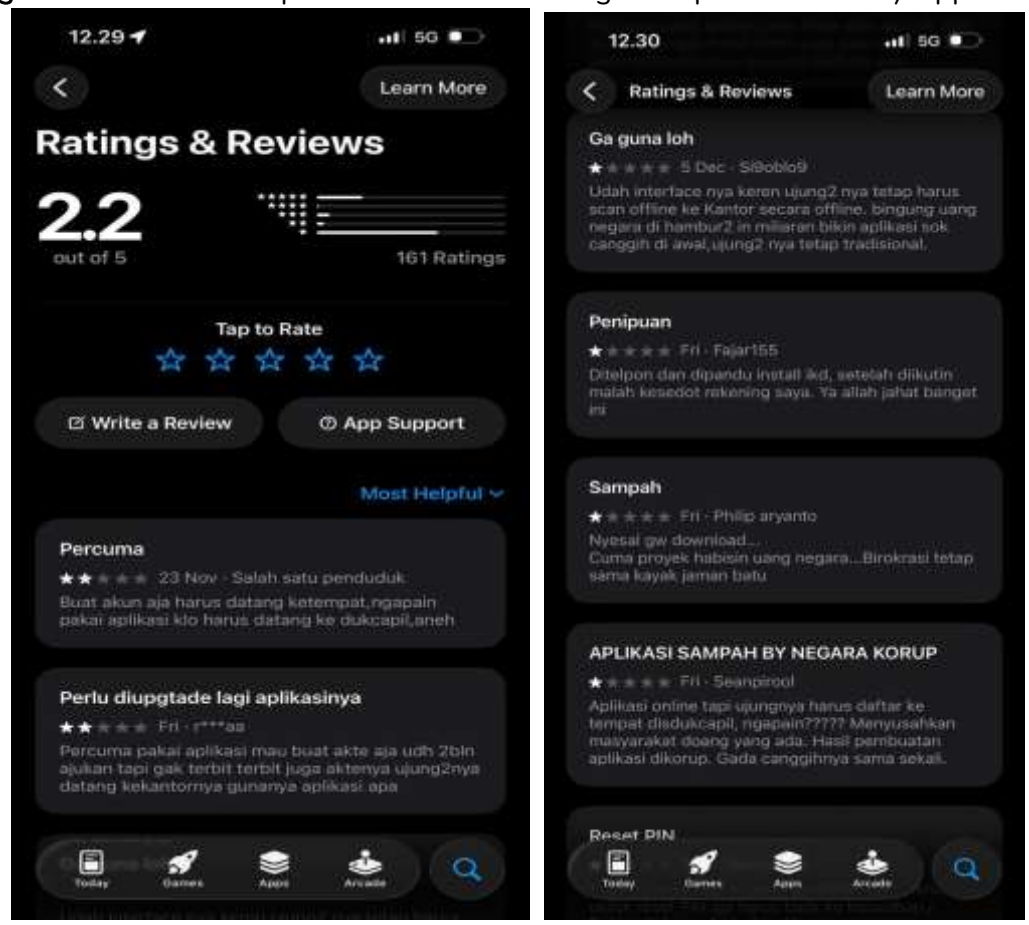
Source: Department of Population and Civil Registration of Depok City.

Based on the results of the Citizen Satisfaction Survey accessible to the public through the Silondo Bermula portal, it is evident that citizens have become increasingly responsive in providing quarterly evaluations of the Department of Population and Civil Registration of Depok City. This responsiveness has been facilitated by the convenience of conducting the survey digitally, which has encouraged greater public participation.

Nevertheless, a considerable number of citizens have not yet fully developed trust in, or experienced the expected benefits of, the Digital Population Identity (Identitas Kependudukan Digital/IKD) application. Based on the researcher's field observations, many users expressed dissatisfaction with the IKD application due to the requirement to activate the application in person at the Population and Civil Registration Office, village or sub-district offices, or district offices for barcode scanning. This requirement is closely related to personal data security considerations; however, many citizens do not yet fully understand the rationale behind this procedure.

From the policy perspective, the Directorate General of Population and Civil Registration, as the authority responsible for policy formulation and application development, is currently working on system enhancements aimed at simplifying the activation process. These planned improvements are intended to eliminate the need for offline barcode scanning by introducing more advanced features, while continuing to prioritize the protection of citizens' personal data. The following are several screenshots illustrating public complaints regarding the Digital Population Identity application.

Figure 4.12 Public Complaints Related to the Digital Population Identity Application



Source: Processed by the author, based on reviews of the IKD application on the App Store.

Based on the results of interviews and field observations, the Department of Population and Civil Registration of Depok City has leveraged digital technology to deliver public services in a more digitalized manner, thereby providing an improved service experience, faster service delivery, and enhanced interaction with citizens through various social media channels that enable more personalized engagement. However, with regard to the Digital Population Identity (Identitas Kependudukan Digital/IKD), public trust and enthusiasm for activating the application remain limited. This reluctance is influenced by several factors, including concerns over personal data security, the lack of compatible supporting devices, and public dissatisfaction with the activation process, which still requires in-person visits to the Population and Civil Registration Office, village offices, or sub-district offices to scan the activation barcode.

b. Operational Processes

From a digital mastery perspective, particularly in the dimension of operational processes, the use of digital technology is directed toward increasing automation, efficiency, and transparency in internal organizational processes. The digitalization of operational processes enables organizations to simplify workflows that were previously complex and manual, reduce reliance on physical resources, and accelerate service delivery. Moreover, digitally based operational processes provide organizations with greater flexibility in responding to changes in the external environment, including emergency situations such as pandemics. In the context of the Department of Population and Civil Registration of Depok City, the transformation of operational processes did not occur instantaneously but evolved gradually in line with organizational needs and growing public service demands.

Prior to the implementation of the Digital Population Identity application, the Department of Population and Civil Registration of Depok City had already initiated the digitalization of population administration services. Initially, services were delivered manually through face-to-face interactions. However, the outbreak of the COVID-19 pandemic necessitated rapid changes in service delivery models. As an initial adaptive response, the department utilized basic digital tools such as Google Forms and WhatsApp services to ensure continuity of public service delivery. These early measures subsequently laid the foundation for the development of a more structured digital service system through the Silondo Bermula web portal.

Applications for the activation of the Digital Population Identity can be submitted through the Silondo Bermula web portal, where the Digital Population Identity application is available as one of the features for IKD activation requests. In addition, for citizens who newly apply for biometric recording and issuance of the electronic identity card (KTP-el), the Digital Population Identity is automatically activated as part of the process. The simplified procedures for activating the Digital Population Identity application are illustrated in the following figure.

Figure 4.13 Procedures for Activating the Digital Population Identity

Source: Directorate General of Population and Civil Registration, Ministry of Home Affairs, 2025.

The procedures for activating the Digital Population Identity are relatively straightforward while continuing to prioritize the security of personal data associated with each National Identification Number (NIK). The activation process consists of the following steps:

1. Download the official *Digital Population Identity* application developed by the Directorate General of Population and Civil Registration from the Play Store or App Store;
2. Register by entering the NIK, full name, gender, place and date of birth, email address, and an active mobile phone number;
3. Complete facial verification by taking a selfie;
4. Scan the QR code provided by authorized officers at the nearest Population and Civil Registration Office or other official service points;

Activate the application using the activation code and link sent to the registered email address. The activation process is free of charge and can be carried out at Population and Civil Registration Offices or other authorized service locations. Once successfully activated, users are able to access all of their

population administration documents directly through the Digital Population Identity application. This reflects the increased effectiveness and efficiency experienced by citizens through the use of the IKD application.

The readiness of infrastructure and supporting components within the Department of Population and Civil Registration of Depok City in relation to the implementation of the Digital Population Identity application has not resulted in significant additional operational costs. However, it has substantially improved operational effectiveness and efficiency. For example, in the past, shortages of physical KTP-el blanks often delayed service delivery. With the availability of the Digital Population Identity, such delays can now be avoided, as citizens are directed to download and activate the IKD application, through which all population administration documents can be accessed digitally. Similarly, other population documents no longer require lengthy waiting times for physical issuance, as they are readily available within the application. This level of infrastructure readiness is consistent with statements provided by the Database Administrator (ADB) of the Department of Population and Civil Registration of Depok City.

c. Business Models

The business model dimension emphasizes an organization's ability to create new digital-based service models. Initially, services were predominantly delivered through manual procedures; however, with the advancement of digitalization, technology has been increasingly adopted to develop more modern and efficient service models. The Department of Population and Civil Registration of Depok City previously relied on manual service delivery, where citizens were required to endure long queues merely to obtain queue numbers, process changes to population documents, or repeatedly visit village offices and the department's office to complete administrative requirements. At present, the Department of Population and Civil Registration of Depok City has implemented online service delivery, allowing citizens to submit applications for population administration documents remotely without the need for physical visits.

In essence, the Department of Population and Civil Registration of Depok City began adopting digital technology in population administration services during the COVID-19 pandemic. The initial stage involved service applications submitted via Google Forms and WhatsApp. These early initiatives have since evolved into a more structured digital service system through the Silondo Bermula web portal. The portal was launched in 2020 and has undergone continuous improvements and development. By the end of 2025, Silondo Bermula Web Portal Version 2 is scheduled for launch, offering further enhancements and greater ease of access for citizens.

Based on the researcher's observations, the Digital Population Identity application developed by the Directorate General of Population and Civil Registration of the Ministry of Home Affairs has also evolved from Version 1 to Version 2. The updated version incorporates several improvements, including biometric-based login features, screenshot functionality, and the provision of 11 types of online services.

Figure 4.14 Differences Between Digital Population Identity Version 1 and Version 2

Source: Directorate General of Population and Civil Registration, Ministry of Home Affairs, 2025.

The Digital Population Identity application Version 2 has been developed to allow citizens to directly submit applications for population administration documents through the platform. An illustration of the available services within the Digital Population Identity application is presented in the following figure.

Based on the researcher's observations, the Directorate General of Population and Civil Registration continues to enhance and develop the Digital Population Identity application. Rapid technological advancements have encouraged the Directorate to continuously adopt emerging technologies. These developments include strengthening the overall design of the IKD application, introducing secure remote onboarding through liveness detection technology, implementing a digital folder feature, integrating the "One Data" policy, strengthening IKD branding, adopting international standards to ensure interoperability, and providing accessibility features for persons with disabilities and other vulnerable groups.

Leadership Capability

Although digital capability constitutes an essential foundation for the implementation of Digital Population Identity (Identitas Kependudukan Digital/IKD), the success of digital transformation is not determined solely by technological aspects. Westerman, Bonnet, and McAfee emphasize that leadership capability plays a strategic role in directing, coordinating, and ensuring that digital technologies are utilized optimally and sustainably. Therefore, the following discussion focuses on leadership capability within the Department of Population and Civil Registration of Depok City, encompassing leadership vision and commitment, change strategy, and the role of leadership in driving adoption and strengthening the implementation of Digital Population Identity (IKD) as part of the organization's digital transformation.

a. Vision

The vision aspect emphasizes the importance of leaders having a clear strategic outlook regarding the direction of digital transformation. Without a well-defined vision, digitalization efforts risk becoming short-term technology projects lacking strategic value. Westerman et al., in *Leading Digital: Turning Technology into Business Transformation*, explain that digital vision typically takes one of three perspectives: reimagining customer experience, reimagining operational processes, or combining both approaches to reimagine business models. The chosen approach should reflect organizational capabilities, citizen needs, and the competitive or external environment in which the organization operates.

Beyond its regulatory role, the Directorate General of Population and Civil Registration actively participates

in the development and continuous enhancement of the Digital Population Identity application as the primary instrument of digitalization in population administration. Application updates are conducted on an ongoing basis to improve security, reliability, and ease of access for citizens. Currently, developments are underway to enable IKD activation without requiring citizens to visit Population and Civil Registration Offices or other service locations, allowing activation to be conducted independently from anywhere. Strengthening security measures is a critical prerequisite for achieving this objective. In addition, population administration services continue to be expanded within the application to further facilitate public access.

Furthermore, the Directorate General of Population and Civil Registration promotes collaboration with various stakeholders to broaden the utilization of Digital Population Identity across both public and non-public services. Through these roles, the Directorate General serves as a key driver of digital transformation in population administration, supporting the implementation of digital-based population services at the local government level.

b. Governance and Engagement

From a digital transformation perspective, Westerman, Bonnet, and McAfee (2014) emphasize that the success of digital initiatives depends not only on technological capability but also on clear governance and organization-wide engagement (*governing the transformation* and *engaging the organization at scale*). Effective digital governance ensures that technology utilization aligns with organizational strategic objectives, clarifies roles and responsibilities, and is supported by coordinated decision-making mechanisms.

The research findings indicate that the Department of Population and Civil Registration of Depok City has improved its governance practices, particularly digital governance, in the delivery of population administration services. When analyzed using the framework of Westerman, Bonnet, and McAfee (2014), this condition reflects the application of the *Governing the Transformation* principle, whereby digital technology utilization aligns with organizational strategic goals and is supported by policies and structures that enable sustainable transformation. Digital governance functions not merely as a control mechanism but also as a framework guiding decision-making, role distribution, and coordination across organizational units in implementing digital initiatives. Without clear governance, technology utilization risks becoming fragmented and failing to generate strategic organizational impact.

This perspective provides the basis for examining governance and engagement practices observed in population administration services at both central and local levels. The utilization of the *Silondo Bermula* web portal represents a concrete manifestation of this effort. The portal reflects an attempt to reorganize service processes to be more structured, transparent, and accessible to the public. According to Westerman et al. (2014), digital technology should be positioned as an enabler of transformation rather than merely an automation tool. In this regard, *Silondo Bermula* functions not only as a service delivery platform but also as a process management instrument that helps the organization control workflows, enhance transparency, and strengthen consistency in population administration services.

The findings further reveal that internal engagement within the Department of Population and Civil Registration of Depok City is reflected in coordination across divisions and the adjustment of service procedures to support the activation of Digital Population Identity (IKD). Civil servants are involved in data management, information dissemination, and strengthening the integration of IKD with other population administration services. This condition indicates efforts to build shared understanding and commitment within the organization, enabling digital transformation to be implemented consistently.

c. Competence and Culture

The competence and culture aspect emphasizes the need to develop new skills through training, reskilling, and upskilling, as well as fostering organizational cultural change toward more adaptive, innovative, and collaborative mindsets. An inclusive digital culture oriented toward innovation is a critical factor in sustaining digital transformation.

Based on the research findings, the Department of Population and Civil Registration of Depok City demonstrates an ongoing commitment to enhancing the digital competencies of its personnel as part of its digital transformation strategy. Interviews with several informants reveal that digital competency development is not implemented uniformly but rather through strategic human resource arrangements tailored to individual levels of digital proficiency. Informants explained that employees are assigned to specific tasks and functions based on their digital skills, enabling workflows and service delivery to operate more effectively without hindering organizational performance.

In addition to competency-based staff placement, interview findings indicate that the Department actively participates in various training programs and information updates organized by the Directorate General of Population and Civil Registration, particularly those related to the implementation of the Digital Population Identity (IKD) application. Informants noted that such training serves as an important medium for understanding policy developments, system updates, and the latest operational procedures, allowing staff to adapt to ongoing changes. These findings suggest that digital competency development is viewed as a continuous learning process that must evolve alongside regulatory dynamics and technological advancements.

Furthermore, interview results indicate that digital competency enhancement is also pursued through internal learning initiatives. Several informants stated that employees are encouraged to learn new digital-related skills through work experience, peer knowledge sharing, and by observing digital practices implemented in other institutions. When innovations or new working methods are deemed beneficial, such practices may be adapted and applied within the Department of Population and Civil Registration of Depok City. This condition demonstrates organizational encouragement of proactive and exploratory attitudes toward digital competency development, as articulated by the Head of the Population Administration Information Management Division of the Department of Population and Civil Registration of Depok City.

Level of Digital Mastery at the Population and Civil Registration Office of Depok City

Digital transformation in public organizations, including the Population and Civil Registration Office of Depok City, cannot be separated from the dynamics of two main pillars as proposed by Westerman et al. (2014), namely Digital Capabilities and Leadership Capabilities. The results of the previous subsection indicate that these two capabilities develop gradually and do not always progress in a balanced manner. Imbalances or alignment between them shape different levels of organizational digital maturity.

Based on field findings, informant interviews, and analysis of digital service practices, this study shows that the implementation of digital transformation at the Population and Civil Registration Office of Depok City can be comprehensively analyzed through four levels of digital mastery: Beginners, Fashionistas, Conservatives, and Digital Masters. These categories are not rigid; rather, they represent stages in the evolution of digital transformation experienced by the organization.

a. Beginner Level: The Initial Foundation of Digitalization

According to the framework of Westerman et al. (2014), Beginners are organizations at the early stage of digital transformation. At this stage, organizations generally have very limited digital capabilities and are not yet supported by leadership that actively drives digital change. Digitalization tends to be understood

merely as the use of basic technology and has not yet become an integrated organizational strategy.

The findings indicate that the Population and Civil Registration Office of Depok City was previously in the beginner phase, particularly during the initial implementation of digital-based services. This condition was reflected in the dominance of conventional service processes, such as population document management that still required citizens to visit the service office in person, long and manual queues, and heavy reliance on face-to-face interactions with service officers of the Population and Civil Registration Office of Depok City.

At this stage, digitalization was largely perceived as an administrative complement, for example, the use of computers for document printing or data archiving, rather than as a means to transform business processes. Organizational leadership at this stage tended to adopt a *wait-and-see* approach, considering various regulatory constraints, data security risks, and the readiness of human resources.

b. Fashionistas Level: Digital Innovation without Integration

The Fashionistas level, according to Westerman et al. (2014), is characterized by organizations that enthusiastically adopt various digital technologies but are not accompanied by strong leadership and digital governance. Organizations at this stage tend to experiment with many innovations that are partial, fragmented, and not strategically integrated.

The findings show that the Population and Civil Registration Office of Depok City exhibited fashionista characteristics during the early period of digital development. This was evident from the emergence of various digital applications and service channels, such as online registration, application-based population administration services, and the use of social media for disseminating public information.

However, several of these innovations were not fully integrated into a comprehensive digital service ecosystem. The public still experienced confusion due to differences in service mechanisms and a lack of synchronization among work units. For instance, based on the researcher's observations and informant interviews, many citizens complained that the activation of Digital Population Identity still required them to visit the Population and Civil Registration Office of Depok City or service units directly. Thus, despite the presence of digital innovation, it still required strong commitment from both leadership and inter-unit coordination for effective adoption and utilization.

Moreover, although several innovations had been introduced, services were not yet integrated with sub-district (kelurahan) service units, nor was there adequate integration and cooperation with other community service units.

This condition aligns with the characteristics of fashionistas described by Westerman et al. (2014), namely organizations that enjoy experimenting with new technologies without a strong governance foundation. While digital experimentation may provide initial benefits, without clear strategic direction and effective coordination, it can potentially lead to budget inefficiencies and reduced service effectiveness. In the context of the Population and Civil Registration Office of Depok City, this phase served as an important learning stage, demonstrating that digital innovation is not merely about introducing technology but must be accompanied by leadership capable of aligning innovation with organizational goals and community needs.

c. Conservative Level: Strong Leadership with Limited Digital Innovation

The Conservative level is characterized by strong organizational leadership and sound governance, but with a tendency to be overly cautious in developing digital capabilities. Organizations at this stage prioritize control, certainty, and regulatory compliance, resulting in relatively slow digital innovation.

The findings at the Population and Civil Registration Office of Depok City indicate that its current digital mastery practices are still dominated by Conservative characteristics, as described in the Digital Mastery framework proposed by Westerman et al. (2014). This condition is evident in the high level of caution exercised in every stage of digital system development, considering that population data constitute sensitive personal data requiring special protection. Consequently, system security strengthening, personal data protection, and compliance with regulatory provisions become primary considerations in the management of digital services.

Nevertheless, interview results indicate that the digitalization process at the Population and Civil Registration Office of Depok City continues to progress. Informants stated that system updates are carried out continuously and are accompanied by improvements to existing digital inventories. In addition, leadership commitment to promoting digital transformation is reflected in the active involvement of leaders in socialization activities related to the activation of the Digital Population Identity (Identitas Kependudukan Digital/IKD) for the public.
However, the development and implementation of Digital Population Identity at the local level cannot be separated from policy directions and system development strategies determined by the policy-making authority, namely the Directorate General of Population and Civil Registration. On the other hand, although digital technology development is continuously encouraged at both central and local levels, its implementation is still guided by the principle of prudence, particularly in maintaining system security and protecting personal data as an essential component of digital-based population administration services.

This approach also addresses concerns expressed by both the local government represented by the Population and Civil Registration Office of Depok City and the public. As conveyed by informants, questions were raised regarding the removal of several features in Version 2 of the Digital Population Identity application, such as access to the National Health Card (*Kartu Satu Sehat*), BPJS Health Card, and Taxpayer Identification Number (NPWP). These features were removed based on policies issued by the Directorate General of Population and Civil Registration, taking into account the Personal Data Protection Law.

This conservative approach has positive implications, particularly in maintaining the reliability and legitimacy of public services. However, excessive caution may also hinder the exploration of broader digital transformation opportunities. Some digital innovations require lengthy implementation periods due to multi-layered approval processes and cross-agency coordination. As noted by Westerman et al. (2014), conservatives often become overly focused on control and risk mitigation, making it difficult to recognize the strategic potential of digital technologies. In the context of the Population and Civil Registration Office of Depok City, the main challenge at this stage is balancing regulatory demands with public expectations for fast, adaptive, and innovative services.

d. Digital Masters Level: Toward Integrated Digital Transformation

The findings indicate that the Population and Civil Registration Office of Depok City is currently striving to move toward the Digital Masters category, as defined by Westerman, Bonnet, and McAfee (2014), namely organizations that are able to balance digital capabilities and leadership capabilities effectively. Although this ideal level has not yet been fully achieved, the direction of digital transformation at the Population and Civil Registration Office of Depok City has shown considerable progress.

This progress is reflected in the increasing integration of digital services, continuous system updates, and improvements to existing digital inventories. At the same time, leadership capability is demonstrated through the commitment of organizational leaders who are actively involved in promoting innovation and socializing the activation of Digital Population Identity (IKD) to the public.

However, as emphasized in the Digital Mastery theory, the success of digital transformation is not determined solely by organizational readiness at the local level but also by policy alignment and strategic support from the central level, particularly the Directorate General of Population and Civil Registration. This is especially relevant in the ongoing development of the Digital Population Identity application toward a more optimal and user-responsive version.

Currently, the Directorate General of Population and Civil Registration is developing Version 2 of the IKD application, which allows activation without requiring users to visit service offices in person. Instead, activation can be conducted through Single Sign-On (SSO), enabling users to activate the IKD application from anywhere. Furthermore, the Directorate General is actively expanding cooperation with user institutions and other stakeholders, such as banks, insurance companies, and other entities, to support integrated public services that enhance convenience for citizens.

Efforts to Enhance the Level of Digital Mastery at the Population and Civil Registration Office of Depok City

Based on the research findings, the Population and Civil Registration Office of Depok City is currently positioned at the Conservative level within the Digital Mastery framework proposed by Westerman, Bonnet, and McAfee (2014). At this level, the organization has relatively strong digital capabilities, as indicated by system stability, robust data security standards, and compliance with national regulations. However, the utilization of digital technology remains largely focused on operational and administrative aspects, meaning that the strategic value of digitalization has not yet been fully optimized.

Therefore, a series of directed and integrated efforts is required for the Population and Civil Registration Office of Depok City to transform toward the Digital Masters level. Within the context of Westerman et al.'s (2014) theory, advancing digital maturity is not solely determined by technological sophistication but by a balance between digital capabilities and leadership capabilities. Digital masters are characterized by their ability to leverage technology to create public value, enhance user experience, and are supported by visionary and consistent leadership.

Accordingly, efforts to improve the level of digitalization at the Population and Civil Registration Office of Depok City cannot be undertaken in a partial manner. Instead, they must involve active collaboration between the Population and Civil Registration Office of Depok City as a local government organization and the Directorate General of Population and Civil Registration as the central authority.

Efforts Required by the Population and Civil Registration Office of Depok City

As an organization positioned at the Conservative level and progressing toward Digital Masters, the Population and Civil Registration Office of Depok City needs to shift its digital orientation from merely ensuring system reliability toward creating strategic public service value. The findings indicate that the Population and Civil Registration Office of Depok City is technically and organizationally prepared to move toward the Digital Masters level, particularly in the implementation and activation of Digital Population Identity (*Identitas Kependudukan Digital/IKD*).

This readiness is reflected in the successful and continuous activation of IKD, both through office-based services and outreach activities within the community. However, to strengthen its trajectory toward Digital Masters, the Population and Civil Registration Office of Depok City needs to optimize IKD not only as a service innovation but also as a strategic instrument for transforming population administration services. This aligns with the view of Westerman et al. (2014) that Digital Masters leverage digital technology as a key driver to enhance user experience (citizen experience) and organizational effectiveness. Accordingly, IKD should be positioned as an entry

point for integrating population services with other public services at the local level.

In addition, the Population and Civil Registration Office of Depok City needs to strengthen the analytical use of population data. At the Conservative level, data are generally used for administrative and reporting purposes, whereas Digital Masters utilize data as a basis for strategic decision-making. This effort can be pursued by developing data-driven service performance monitoring systems, enabling leaders and service managers to understand patterns of public demand, identify service bottlenecks, and design more targeted service improvements.

From a leadership perspective, the findings indicate that leadership at the Population and Civil Registration Office of Depok City has supported system stability and regulatory compliance in digital services. However, to advance toward Digital Masters, leadership must assume a stronger role as an agent of digital change. According to Westerman et al. (2014), digital leadership is characterized by leaders' ability to articulate a clear digital vision, build an adaptive organizational culture, and encourage controlled innovation. Thus, leaders of the Population and Civil Registration Office of Depok City need to consistently link digitalization to improvements in service quality and public trust, rather than focusing solely on internal efficiency.

Efforts Required by the Directorate General of Population and Civil Registration

The findings also indicate that although the Population and Civil Registration Office of Depok City has demonstrated readiness to move toward Digital Masters, achieving this level cannot be separated from the role of the Directorate General of Population and Civil Registration as the central authority. Within the national population administration system, the Directorate General plays a strategic role as a policy maker, standard setter, and manager of national population data infrastructure.

Efforts required by the Directorate General include strengthening the standardization and interoperability of the Digital Population Identity system at the national level, thereby enabling local governments such as Depok City to develop service innovations without being constrained by system integration limitations. Furthermore, the Directorate General needs to provide a policy framework that encourages the strategic use of population data while consistently upholding personal data protection principles in accordance with applicable regulations.

Beyond policy and technological aspects, the Directorate General of Population and Civil Registration also plays a critical role in strengthening digital leadership at the local level. This support can be realized through capacity building, mentoring, and alignment of digital transformation visions between central and local governments. With such alignment, digitalization will not merely function as an administrative obligation but will evolve into a shared strategy for improving the quality of public services.

Balancing Digital Capabilities and Leadership Capabilities in Achieving Digital Masters

This discussion emphasizes that achieving the Digital Masters level cannot be accomplished simply by following digital trends or introducing numerous technological innovations. As argued by Westerman et al. (2014), Digital Masters emerge from a balance between the effective use of digital technologies and strong, well-directed leadership. In the context of the Population and Civil Registration Office of Depok City, this balance is particularly critical given the nature of population

services, which involve personal data and public trust.

Therefore, efforts to enhance the level of digital mastery should be understood as a process of organizational transformation rather than merely technological modernization. The Population and Civil Registration Office of Depok City functions as the implementer of transformation at the local level, while the Directorate General of Population and Civil Registration serves as the strategic guide and guarantor of system alignment at the national level. Synergy between the two is a key prerequisite for achieving sustainable Digital Mastery, ultimately supporting comprehensive digital transformation both internally and externally.

Based on the above discussion, it can be concluded that the Population and Civil Registration Office of Depok City has established a strong initial readiness to progress toward the Digital Masters level, particularly through the implementation of Digital Population Identity and the stability of its digital systems. However, achieving this level requires simultaneous efforts to strengthen digital capabilities and leadership capabilities at the local level, supported by policy frameworks, standards, and strategic leadership from the Directorate General of Population and Civil Registration. These findings reinforce the argument of Westerman et al. (2014) that Digital Masters are shaped not by technology alone, but by a balanced integration of digital capabilities and leadership capabilities.

4. Conclusion

Based on the research findings and discussion on the Digital Mastery of the Population and Civil Registration Office of Depok City toward Government Digital Transformation, with a focus on the activation of Digital Population Identity (*Identitas Kependudukan Digital/IKD*), the following conclusions can be drawn: The digital mastery of the Population and Civil Registration Office of Depok City in supporting digital transformation through the activation of Digital Population Identity (IKD) indicates that the organization is positioned at the Conservative level within the Digital Mastery framework proposed by Westerman et al. (2014). This condition is characterized by the availability of relatively stable, secure, and standardized digital systems, as well as the utilization of information technology primarily aimed at improving the efficiency of population administration services.

The activation of IKD has been implemented as part of the national policy on digital transformation in population administration, supported by adequate technological infrastructure, system integration with the Directorate General of Population and Civil Registration, and compliance with security standards and personal data protection regulations. However, the findings reveal that the utilization of digital technology remains largely operational and administrative in nature and has not yet been fully accompanied by user-oriented service innovation, service personalization, or the strategic use of data.

From the perspective of digital leadership capability, leadership commitment to digitalization is evident through support for IKD implementation and the strengthening of digital systems. Nevertheless, this form of digital leadership still places greater emphasis on risk control and regulatory compliance than on encouraging the exploration of more transformative digital innovations. This finding reinforces the conclusion that the Population and Civil Registration Office of Depok City has not yet fully achieved a balance between digital capabilities and leadership capabilities, which is a defining characteristic of organizations at the Digital Masters level.

Efforts to elevate the level of digital mastery of the Population and Civil Registration Office of Depok City

toward the Digital Masters level need to be undertaken systematically and sustainably, encompassing both digital capability and leadership capability dimensions. Based on the research findings, such efforts include the need to strengthen an integrated digital strategy between central and local government policies, so that IKD activation is not merely perceived as an administrative obligation but as a strategic instrument for transforming citizen-oriented public services.

Furthermore, enhancing the digital competencies and digital culture of public officials constitutes a key factor in promoting more optimal adoption and utilization of IKD. The ability of employees to conduct effective socialization, education, and trust-building among citizens regarding the security and benefits of IKD is a critical prerequisite for successful digital transformation. Strengthening public digital literacy is also necessary to ensure that IKD is not only formally activated but is genuinely used in daily life.

Moreover, synergy between the Population and Civil Registration Office of Depok City and the Directorate General of Population and Civil Registration needs to be reinforced, particularly in the areas of system development, data integration, and the provision of technical guidelines and policy frameworks that are adaptive to digital dynamics. By strengthening visionary digital leadership, encouraging data-driven service innovation, and improving the user experience of IKD, the Population and Civil Registration Office of Depok City has the potential to transform from a Conservative organization into a Digital Master, as articulated in the Digital Mastery theory of Westerman et al. (2014).

As a follow-up to the conclusions of this study on the digital mastery of the Population and Civil Registration Office of Depok City in the activation of Digital Population Identity (IKD), the following recommendations are proposed: To enhance the level of digital mastery from Conservatives to Digital Masters, the Population and Civil Registration Office of Depok City, in collaboration with the Directorate General of Population and Civil Registration, is advised to formulate a more integrated and adaptive digital strategy between central and local governments. This strategy should promote visionary, innovative, and collaborative digital leadership, ensuring that digital transformation does not solely focus on system stability but also emphasizes service innovation and the strategic use of population data. In addition, central–local synergy should be directed toward strengthening the IKD ecosystem through cross-service integration, refinement of technical policies, and reinforcement of system security and personal data protection. Through these efforts, IKD activation is expected to generate tangible added value for citizens while accelerating sustainable digital transformation in population administration.

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