

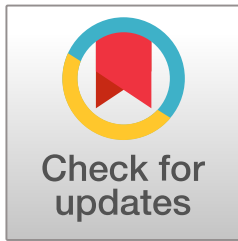
ARTICLE

E-Government and Digital Transformation Toward a World-Class Bureaucracy in Bali Provincial HR Agency

Pande Putu Anugraha Dewata ✉, I Gusti Ayu Agung Dewi Sucitawathi Pinatih

University of National Education, Denpasar, Indonesia

✉ aanugraha.dewata@gmail.com

**OPEN ACCESS**

Citation: Dewata, P. P. A., & Pinatih, I. G. A. A. D. S. (2025). E-Government and Digital Transformation Toward a World-Class Bureaucracy in Bali Provincial HR Agency. *Jurnal Bina Praja*, 17(3). <https://doi.org/10.21787/jbp.17.2025-2929>

Submitted: 31 August 2025

Accepted: 16 November 2025

Published: 31 December 2025

© The Author(s)



This work is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/).

Abstract: Digital transformation through e-government policy has become a strategic agenda of the Indonesian government in realizing effective, efficient, transparent, and accountable governance. One form of e-government implementation in the personnel sector is the utilization of the Personnel Management Information System (SIMPEG) developed by the Bali Province Personnel and Human Resources Development Agency (BKPSDM/HR). Although it has been implemented systematically, the implementation of SIMPEG still faces various challenges, especially related to system integration, data updating, and human resource readiness. This study aims to analyze the implementation of e-government policy through SIMPEG in BKPSDM Bali Province, as well as to identify supporting and inhibiting factors in its implementation. The study uses a qualitative descriptive approach with data collection techniques in the form of observation, in-depth interviews, and documentation studies. Research informants were determined purposively, including the leaders and main managers of SIMPEG. Data analysis was carried out using the Miles, Huberman, and Saldaña model through the stages of data reduction, data presentation, and conclusion drawing. The results show that the implementation of e-government through SIMPEG has been running with the support of regulations, infrastructure, and strong leadership commitment, but is still at the interaction and transaction stage and has not achieved integrated digital bureaucratic transformation. The main problems encountered include fragmented system governance, limited interoperability with the central personnel system, the digital literacy gap among civil servants, and resistance to changes in work culture. These findings confirm that the success of e-government is determined not only by technological readiness, but also by organizational and human resource factors. This research provides conceptual and practical contributions in strengthening e-government implementation in the public sector, particularly in encouraging data-driven and sustainable digital transformation of personnel.

Keywords: E-Government; SIMPEG; Policy Implementation; Digital Transformation; Personnel Management.

1. Introduction

Digital transformation in governance has become a strategic agenda for the Indonesian government to achieve effective, efficient, transparent, and accountable governance. This commitment was formally realized through Presidential Instruction Number 3 of 2003, which emphasized the importance of developing e-government as a national framework for improving the quality of public services. Through the utilization of information technology, e-government is expected to strengthen the relationship between the government and the public while improving public administration performance in facing increasingly complex environmental dynamics.

The development of e-government implementation in Indonesia shows a positive trend. According to the 2024 United Nations E-Government Survey, Indonesia was ranked 64th out of 193 countries in the Very High E-Government Development Index (EGDI) with a score of 0.7991. This achievement reflects significant progress since the issuance of Presidential Regulation Number 95 of 2018 concerning Electronic-Based Government Systems (SPBE) and demonstrates the government's consistency in promoting government digitalization. However, the success of national e-government policies depends heavily on the readiness and performance of local governments, the spearheads of public service delivery.

In the context of regional government, human resource management is a crucial element in supporting the success of e-government. Civil servants play a role as both policy makers and implementers of public services, so the effectiveness of personnel management has direct implications for the quality of governance. The use of the Personnel Management Information System (SIMPEG) is a strategic form of e-government implementation that supports integrated, accurate, and sustainable data management of civil servants. SIMPEG is designed to provide a personnel database that can be used in planning, development, administration, and decision-making related to civil servants.

The Bali Province Human Resources Development and Personnel Agency (BKPSDM) has developed SIMPEG (Simple-to-Use Data Management System) as part of its merit system implementation in regional personnel management. This system is expected to support comprehensive personnel data management and improve the quality of data-driven decision-making. However, in practice, SIMPEG implementation at the Bali Province BKPSDM still faces various challenges, particularly related to the completeness and accuracy of personnel data. The persistence of incompletely recorded personnel data has the potential to cause administrative problems, hinder the decision-making process, and reduce the system's effectiveness in supporting human resource management.

This situation indicates a gap between the normative objectives of e-government policy and the reality of its implementation at the regional level. Therefore, an in-depth study of the implementation of e-government policy, particularly through SIMPEG at the Bali Provincial Human Resources Development Agency (BKPSDM), is crucial to identify factors influencing its success and obstacles. This research is expected to contribute to strengthening the digital transformation of the public sector as part of efforts to realize the vision of Golden Indonesia 2045.

This study not only corroborates the existence of classic challenges in e-government implementation but also offers more context-specific conceptual and empirical insights. First, this study looks at how e-government is implemented in civil service human resource management, which differs from public services, particularly data management, merit systems and data-driven decision-making. This study also integrates digital maturity and policy implementation theory, offering a

more comprehensive approach to understanding e-government implementation. This study also confirms that the success of digital transformation is not solely determined by technological readiness but is significantly influenced by organizational culture and the digital literacy of government officials. This finding reinforces a human-centered approach to digital governance.

The present study was analyzed using several relevant concepts and theories as a foundation for understanding the phenomenon under examination. A primary concept employed is public policy, which can be defined as a series of decisions and actions taken by the government in response to various issues arising in society. The emergence of these issues can be attributed to a number of factors, including a paucity of information, a deficiency in motivation, conflicts of interest, and the ineffectiveness of prior policy implementations. In the domain of public administration studies, policy is conceptualized not solely as the consequence of a decision but also as a process encompassing multiple actors and interests (Pasolong, 2019). Public policy is essentially the decisions and actions taken by the government in response to emerging issues in society. These policies are designed to address various public problems that arise from imperfect information, weak motivation, conflicts of interest, and failure of previous policy implementation. In public administration studies, policy is understood not only as a product of decisions but also as a process involving various actors and interests (Pasolong, 2019).

Structurally, public policy can be classified into several levels: macro-level strategic policies, managerial policies that regulate implementation, and technical operational policies that are directly related to implementation in the field. From a managerial perspective, public policy is viewed as a series of stages that include policy formulation, implementation and monitoring, and evaluation to assess the effectiveness of achieving goal (Ramadannisa, 2023).

The public policy process involves various stakeholders, including the executive, legislative, and non-governmental groups such as professional organizations and non-governmental organizations. The involvement of these actors demonstrates that public policy is the result of the interaction between government interests and public needs. Thus, public policy can be understood as a strategic instrument used by the government to systematically and purposefully resolve public problems (Frinaldi et al., 2024). Policy implementation is a crucial stage in determining the success of a policy, as a formulated policy will not have a real impact without effective implementation. This stage begins after policy goals and objectives are established, programs are designed, and necessary resources are allocated. Implementation focuses on transforming policy decisions into concrete actions that can be felt by the community (Nurhidayat, Nurmandi, & Congge, 2024). In its implementation, policy implementation involves various administrative and operational activities carried out by government officials or designated parties.

The main objective of this stage is to ensure that the policy is implemented according to plan and produces outputs and outcomes that align with policy objectives. Successful implementation depends heavily on clarity of objectives, adequate resources, coordination between implementers, and the commitment of policy implementers (Mutiarin et al., 2024). Policy implementation also serves as a bridge between policy formulation and its impact on society. If a policy fails to address the targeted public problem, this failure may be due to weaknesses in its formulation and implementation. Therefore, policy implementation requires not only compliance with regulations but also ongoing adaptation and oversight (Nurhidayat, Nurmandi, & Misran, 2024).

E-government is a concept of governance that utilizes information and communication technology to improve public administration performance and the quality of public services. The use of technology, particularly the internet, enables the government to deliver services and information more quickly, openly, and with greater public access. This approach is part of an effort to modernize the bureaucracy to meet the demands of an increasingly dynamic society (Muslikhah, 2019). In national policy, e-government is positioned as a means to build an electronic-based government system capable of increasing the efficiency and effectiveness of public services. Through the use of digital technology, previously complex and time-consuming bureaucratic processes can be simplified, allowing the public to access services without having to go through lengthy procedures (Setiawan et al., 2022).

On a national scale, the development of e-government in Indonesia is demonstrating substantial advancement. According to data from KemenPANRB (2024), Indonesia has shown a substantial improvement in its position in the UN E-Government Survey, indicative of the efficacy of the SPBE implementation. However, as Nurhidayat, Nurmandi, and Misran (2024) have noted, challenges persist in achieving full digital integration and interoperability across government institutions.

The primary goal of e-government is to improve the quality of public services, strengthen government transparency and accountability, and optimize resource utilization. The success of e-government implementation is influenced by several factors, including infrastructure readiness, human resource competency, public participation, and government policy support. With these factors, e-government can become a crucial instrument in realizing good governance (Rizky Z & Supardi, 2018). The Personnel Management Information System (SIMPEG) is part of a human resources information system designed to support integrated personnel data management. This system collects, stores, processes, and presents employee-related information needed in the human resources management process (Miad et al., 2019). SIMPEG not only covers technological aspects such as hardware and software, but also involves procedures, data, and the human resources that manage it (Pasanda, 2016).

Policy analysis in this study refers to the framework developed by Dunn (1994), which emphasizes that public policy must be understood through a systematic process involving problem structuring, forecasting, recommendation, monitoring, and evaluation. This approach is relevant in analyzing the gap between policy design and implementation in SIMPEG.

Furthermore, according to Pasolong (2019), public administration is not only concerned with policy formulation but also with the effectiveness of implementation in achieving public service goals.

In the context of regional policy formulation, studies such as Matdoan (2021) highlight that urban policy planning and design require alignment between regulatory frameworks, institutional capacity, and implementation mechanisms, which is also relevant in understanding digital governance in regional bureaucracies.

SIMPEG plays a crucial role in providing accurate and up-to-date personnel information, such as competency data, job history, work experience, and career development. Furthermore, the system also maintains records of inactive employees, such as retired or dismissed employees, as part of personnel documentation. This information serves as a crucial basis for planning, decision-making, and developing personnel policies (Yulia & Ratnawati, 2020). As a personnel management application, SIMPEG is designed to improve the efficiency and

effectiveness of personnel administration. With the support of computer technology, various administrative processes can be automated, reducing manual workloads and minimizing data management errors. Therefore, SIMPEG is a strategic instrument in supporting professional, data-driven human resource management in government organizations (Mardi, 2013).

2. Methods

This study employs a qualitative descriptive approach to obtain an in-depth understanding of the implementation of e-government policies through the Personnel Management Information System (SIMPEG). The research was conducted at the Bali Province Civil Service and Human Resources Development Agency (BKPSDM), which is responsible for managing civil servants and developing the SIMPEG system. Data were presented in a narrative descriptive form, emphasizing detailed explanations of research findings based on real conditions. Primary data were collected through in-depth interviews with purposively selected informants, including key officials directly involved in SIMPEG management, while secondary data were obtained from relevant documents such as performance reports, institutional records, and official administrative data. Data collection techniques included observation, interviews, and documentation studies to ensure comprehensive and accurate information. Data analysis was carried out continuously using the interactive model of Miles et al. (2020), which consists of data reduction, data display, and conclusion drawing. To ensure data validity, triangulation was applied by comparing interview results with supporting data such as Public Satisfaction Survey (SKM) results, institutional achievement records, and official documents including SAKIP and LAKIP reports. This approach allows for a systematic interpretation of findings and provides a holistic understanding of policy implementation within the organizational context.

3. Results and Discussion

3.1. BKPSDM Overview

The Bali Province Personnel and Human Resources Development Agency (BKPSDM) are a regional agency established as a follow-up to national and regional policies in the field of civil service personnel management. The legal existence of the BKPSDM is based on Presidential Decree No. 159 of 2000 and is reinforced by Bali Province Governor Regulation No. 25 of 2023, which regulates the status, organizational structure, duties, and working procedures of regional agencies.

As a regional technical institution, the Bali Provincial Human Resources Development Agency (BKPSDM) plays a strategic role in supporting the Governor's duties, particularly in the management of the state civil apparatus (ASN). Its primary functions include formulating technical personnel policies, providing operational technical support, providing guidance, and monitoring and evaluating ASN management. All of these functions are aimed at supporting the achievement of the vision and mission of the Bali Provincial Government for the 2025–2029 period.

The Bali Provincial Human Resources Development Agency (BKPSDM) does not establish its own institutional vision, but instead fully adheres to the Bali Provincial Government's vision, namely "Nangun Sat Kerthi Loka Bali through a Planned Universal Development Pattern Towards a New Era of Bali." This alignment of visions affirms BKPSDM's position as a supporting regional agency that functions to implement development policies by strengthening the capacity of the apparatus.

In line with this vision, the mission of the Bali Provincial Human Resources Development Agency (BKPSDM) is oriented towards developing quality governance by enhancing the competence, professionalism, and integrity of civil servants (ASN). The mission focuses on strengthening merit-based personnel management, improving the quality of public services, and sustainably developing the careers and welfare of civil servants. Thus, BKPSDM plays a key role in creating a civil service capable of optimally supporting regional development.

The organizational structure of the Bali Provincial Human Resources Development Agency (BKPSDM) is based on Bali Governor Decree No. 897/01-E/HK/2024 concerning job maps and formations. This structure is designed to ensure the effective implementation of the agency's duties and functions in managing civil servants (ASN).

The BKPSDM organization consists of a Secretariat, five technical divisions, Regional Technical Implementation Units (UPTD), and Functional Positions. This structural division reflects a systematic and integrated organizational approach, ensuring that each unit plays a mutually supportive role in achieving the institution's goals.

In the context of this research, the Bali Provincial Human Resources Development Agency (BKPSDM) is a relevant location because it plays a central role in implementing e-government policies in the personnel sector. The researcher acts as an internal evaluator, assessing the effectiveness of the Personnel Information System in supporting bureaucratic transformation.

3.2. Research Result

The research results show that the implementation of e-government policies through the Personnel Information System (SIMPEG) at the Bali Provincial Human Resources Development Agency (BKPSDM) has been carried out in a planned and systematic manner. Digital transformation has been underway, supported by adequate infrastructure and regulations, but has not yet fully reached the stage of integrated digital bureaucratic transformation oriented toward seamless services. The current implementation is still in the transition phase from administrative digitalization to strategic cross-system integration.

Empirically, SIMPEG has functioned as a centralized personnel data consolidation center with a high level of completeness. This system is capable of centrally collecting ASN information and supporting administrative needs and managerial decision-making. However, data utilization is still dominated by administrative functions, while its use as a basis for analytical-based policy formulation is not yet optimal.

The main issues identified include fragmented system governance, limited interoperability with the central personnel system, imperfect real-time data updates, and a digital literacy gap among employees. These conditions prevent SIMPEG from fully serving as a single source of truth for strategic personnel decision-making.

The results of this study are consistent with the findings of previous research emphasizing that the implementation of e-government in Indonesia still faces structural and cultural challenges. [Farida and Lestari \(2021\)](#) emphasize that e-government, as a public service innovation, frequently encounters limitations in institutional readiness and technological adaptation.

In a similar vein, Nurhidayat, Nurmandi, and Congge (2024) have demonstrated that digital inequality exerts a substantial influence on public participation in e-government, a finding that aligns with the digital literacy gap identified in this study.

Furthermore, Mutiarin et al. (2024) posit that digital transformation necessitates agile governance, wherein organizational adaptability emerges as a pivotal factor in determining success. This finding serves to reinforce the notion that technological readiness, in and of itself, is inadequate for achieving the desired outcomes, and that it is essential to engage in cultural and organizational transformation as well.

3.3. Supporting Factors for E-Government Implementation

The research identified several key supporting factors for e-government implementation at the Bali Provincial Human Resources Development Agency (BKPSDM). The commitment of regional leaders was the most crucial factor, reflected in the existence of regulations requiring the digitization of personnel services. This hierarchical support provided organizational legitimacy and encouraged a shift in staff work patterns toward an information technology-based system.

Furthermore, the availability of relatively adequate technological infrastructure, such as internet networks, hardware, and server management support, enables SIMPEG's stable operations. Another supporting factor is the ongoing budget allocation for system maintenance, data security enhancements, and human resource capacity development. The combination of leadership, infrastructure, and funding forms a critical foundation for the sustainability of the digital transformation of human resources.

3.4. Factors Inhibiting E-Government Implementation

On the other hand, the study identified several inhibiting factors that significantly impact the effectiveness of e-government implementation. The main obstacles lie in human resources and information system governance. The digital literacy gap between generations of employees results in uneven and suboptimal system utilization. Some employees still need time to adapt to application updates and changes in digital work patterns.

Furthermore, resistance to organizational change remains a challenge, especially in work units accustomed to manual procedures. This resistance is cultural and psychological, not solely technical, slowing down the system's overall adoption. Another technical barrier is limited interoperability between regional SIMPEG and the central personnel system, which leads to duplication of data input and reduced work efficiency.

Data security is also a key concern. Concerns about the protection of civil servants' personal data and the potential for cyberattacks impact user trust in the system. This low level of trust leads to excessive caution in utilizing digital systems, preventing the full benefits of e-government from being fully realized.

From a managerial perspective, decision-making in public organizations is increasingly influenced by information systems. Muslikhah (2019) states that management information systems play a crucial role in supporting strategic decision-making processes in government institutions.

This is reinforced by Kaleb et al. (2019), who highlights that the implementation of management information systems improves supervision and administrative control, although challenges remain in system integration and user adaptation.

3.5. Discussion

The implementation of e-government in Indonesia is a technological initiative and a regulatory mandate. The issuance of Presidential Instruction Number 3 of 2003 signaled the initial commitment to developing digital governance, a commitment that was later reinforced by Presidential Regulation Number 95 of 2018 concerning Electronic-Based Government Systems (SPBE). These regulations emphasize the importance of integration, interoperability, and data governance in public administration.

Regarding personnel management, the legal basis is reinforced by Law Number 43 of 1999, which establishes the principles of civil service management and the importance of professional, accountable human resource governance. At the regional level, this is further operationalized by Bali Governor Regulation No. 64 of 2020, which supports digital personnel administration.

Research findings indicate that e-government implementation at the Bali Provincial Human Resources Development Agency (BKPSDM) is in a transition phase toward digital bureaucracy. From a digital maturity perspective, the organization has surpassed the initial stage of digitalization and entered the interaction and transaction phase but has not yet achieved integrated transformation. SIMPEG has served as an effective administrative tool but has not yet been fully utilized as a strategic instrument for data-driven decision-making.

Drawing upon Edward III's policy implementation model, the success of the SIMPEG implementation at the Bali Provincial BKPSDM cannot be explained solely by identifying supporting and hindering factors in isolation; rather, it must be understood as the result of a dynamic interaction between communication, resources, implementers' dispositions, and bureaucratic structures.

Digitalization policies are communicated top-down through regulations and directives. This has hindered the establishment of a comprehensive understanding among stakeholders regarding the pressing nature and advantages of digital transformation. Consequently, the policies are perceived as administrative obligations rather than organizational necessities. The IKM score is in the "good" category (86.02), but implementation hasn't resulted in significant behavioral changes.

With regard to human resources, the BKPSDM has a sufficient staff of 229 individuals, the majority of whom possess higher education degrees. However, a qualitative analysis reveals a digital competency gap that is the underlying cause of the problem. This phenomenon suggests that the primary issue is not a lack of staff, but rather an incongruity in skill sets. This discrepancy can lead to technostress, defined as psychological pressure stemming from demands to utilize technology that exceeds one's capabilities. In this context, resistance is not merely a rejection but rather a form of adaptation to one's inability.

Moreover, resistance to SIMPEG is attributable to psychological and rational factors. Psychological research indicates that civil servants often adhere to their established routines and practices, exhibiting a tendency to favor the status quo. From a rational standpoint, the existence of non-integrated systems (e.g., double data entry) serves to reinforce the perception that digitization increases the workload. Consequently, resistance emerges as a consequence of employees' empirical experiences with systems that have yet to be fully optimized.

The progress achieved is inseparable from the synergy of strategic resources in the form of supportive leadership, adequate technological infrastructure, and budget

availability. However, this synergy has not been fully matched by the optimization of system utilization across units and levels of government. The main challenge has shifted from resource availability to managing organizational change and system integration.

The human factor and limited interoperability are the main bottlenecks in digital transformation. Without widespread digital literacy, a sustainable change management strategy, and robust system integration, e-government risks resulting in only procedural changes. Therefore, digital transformation of civil service needs to be directed not only at strengthening technology but also at establishing a digital work culture, increasing trust in the system, and strategically utilizing data to support professional, transparent, and accountable civil servant governance.

With respect to the bureaucratic structure, the primary concerns pertain to system fragmentation and inadequate interoperability. This issue is accentuated in the BKPSDM's strategic documents, which observe that civil service functions persist in their unintegrated state. A fragmented structure can result in administrative inefficiencies and erode user trust in digital systems. From a policy implementation perspective, this situation suggests the presence of structural constraints that impede policy effectiveness, despite the availability of resources and commitment.

All these dimensions interact and form patterns that reinforce each other. Resource gaps and structural weaknesses create implementers' attitudes of resistance, which are not offset by communication. This dynamic engenders a detrimental cycle in the implementation of digital policy. A merit system score of 386.5 (excellent category) signifies that BKPSDM has attained a high-performance level in administrative operations. This points to an "implementation paradox," where formal success doesn't always reflect substantive success in digital transformation. Policy implementation has succeeded at the compliance level, but not yet at the internalization level.

The subsequent section presents a comprehensive examination of the implementation of the SIMPEG system at the Bali Provincial BKPSDM, grounded in statistical data as illustrated in [Table 1](#).

No.	Analytical Dimension	Variable	Empirical Findings (LKJIP 2024)	Academic Analysis	Linkage to Bali Provincial Vision
1	Communication	System service performance	Community Satisfaction Index (CSI) of 86.02 (good category)	Indicates that policy communication and public service delivery are functioning effectively; however, services remain largely administrative and not yet fully digital-oriented.	Supports the mission of improving public services that are fast, certain, and affordable, but not yet optimal in digital transformation.
2	Resources	Human resource capacity	±216 personnel; dominated by Bachelor (S1) and Master (S2) degrees	Human resources are sufficient in quantity, but digital competencies and specialization are not evenly distributed, indicating a gap with current bureaucratic reform demands.	Requires strengthening of high-quality human resources to support sustainable development under Nangun Sat Kerthi Loka Bali.
3	Disposition	System acceptance	Indication of suboptimal utilization of digital personnel systems	Based on implementation theory, implementor attitudes affect policy success; partial adoption suggests resistance or limited adaptability.	Hampers the transformation toward adaptive and accountable governance.
4	Bureaucratic Structure	System integration	Personnel systems are not yet fully integrated (SIASN, Sikepo, e-SAKIP)	Fragmented systems create inefficiencies and duplication of processes, which contradicts good governance principles.	Not fully aligned with the mission of effective, efficient, and transparent governance.
5	Outcome	Institutional performance	Merit system score 386.5.		

Source: LKJIP BKPSDM Province of Bali 2024.

The role of SIMPEG as a human resource information system has been widely discussed in previous studies. Research by [Dharmawan et al. \(2019\)](#) shows that web-based SIMPEG systems can improve administrative efficiency but require strong system integration and user competence.

In addition, [Rizky Z and Supardi \(2018\)](#) emphasize that human resource information systems significantly enhance employee development effectiveness when supported by accurate and up-to-date data.

However, studies such as [Pasanda \(2016\)](#) indicate that the effectiveness of SIMPEG is highly dependent on user acceptance and organizational readiness, which is consistent with the resistance and digital literacy issues identified in this study.

In consideration of the Province of Bali's vision "Nangun Sat Kerthi Loka Bali through a Comprehensive Planned Development Model" and its mission to achieve effective, efficient, transparent, and accountable governance, the performance of the BKPSDM is on the right track but has not yet reached its full potential. Local values such as Tri Hita Karana, which emphasize balance between humanity, the environment, and the divine, should also be integrated into bureaucratic governance, including the development of sustainable, values-based systems.

Consequently, it can be concluded that the performance of the Bali Provincial BKPSDM in 2025 falls into the good to very good category quantitatively. However, it still faces structural and cultural challenges in its implementation. In the future, there is a need for more integrated strategic efforts, including enhancing civil servants' digital competencies, strengthening information system integration, and fostering an organizational culture that is adaptive to change. These measures are imperative to ensure that performance achievements are not merely administrative in nature but also have the capacity to drive substantive and sustainable bureaucratic transformation.

The implementation of e-government through SIMPEG at the Bali Provincial Human Resources Development Agency (BKPSDM) can be further understood within the broader framework of global digital government transformation. Digital transformation in the public sector is not merely the adoption of information technology; rather, it is a fundamental reconfiguration of organizational processes, institutional structures, and governance mechanisms. As [Mergel et al. \(2019\)](#) emphasize, digital transformation in government entails the integration of digital technologies into all aspects of public administration, thereby precipitating profound changes in the manner in which public value is created and delivered. This viewpoint underscores the fact that the obstacles encountered during the implementation of SIMPEG—particularly those associated with system fragmentation and constrained interoperability—are indicative not only of technical limitations but also of more profound institutional challenges.

From the perspective of digital maturity, the condition of SIMPEG at BKPSDM Bali indicates that the organization is still in the intermediate stage of transformation. According to the e-government maturity model developed by [Layne and Lee \(2001\)](#), the evolution of digital government is characterized by four distinct stages: cataloguing, transaction, vertical integration, and horizontal integration. The empirical findings of this study suggest that SIMPEG has successfully reached the transaction stage, where digital services are already utilized for administrative processes. However, the absence of seamless integration with central systems, such as SIASN, indicates that the system has not yet achieved vertical and horizontal integration. This discrepancy is of critical importance because integration is a

prerequisite for realizing data-driven governance and improving the quality of decision-making.

The interoperability issue identified in this study is consistent with global findings in digital governance research. According to [Janssen \(2012\)](#), interoperability is a pivotal factor in the successful implementation of e-government systems. It facilitates data sharing across institutional boundaries, reduces redundancy, and enhances efficiency. In the case of BKPSDM Bali, the persistence of the “double input” phenomenon is indicative of a lack of system integration, which results in increased administrative burden and reduced trust in digital systems. This condition demonstrates that the absence of robust governance mechanisms for data integration can lead to the fragmentation and inefficiency of digital transformation efforts.

In addition to the technical challenges identified, the findings of this study underscore the pivotal role of human factors in the context of digital transformation. The digital literacy gap among civil servants represents a significant barrier to the effective utilization of systems. This perspective aligns with the argument posited by [Gil-García and Pardo \(2005\)](#), who underscore the pivotal role of human resource capacity and organizational readiness in the successful implementation of e-government initiatives. The presence of technostress among employees further indicates that digital transformation must be accompanied by adequate capacity-building programs and change management strategies. Absent such initiatives, the opposition to transformation will persist in impeding the implementation of digital systems.

Furthermore, the observed phenomenon of resistance can be explained through the framework of organizational behavior perspectives. Resistance to digital transformation is frequently rooted in both psychological and rational factors. Psychological research indicates that employees tend to adhere to established routines and demonstrate aversion to uncertainty associated with new technologies. Employees tend to perceive digital systems as increasing their workload rather than improving efficiency when they are not fully optimized, as in cases of duplicated data entry. This finding lends further support to the notion that digital transformation must be user-centered, ensuring that systems are designed to support, rather than burden, administrative processes.

From a governance perspective, the findings also indicate that leadership commitment plays a crucial role in driving digital transformation. The presence of robust, top-down support is conducive to the legitimization and direction of organizational change. However, as indicated in global digital government frameworks developed by the OECD, leadership alone is insufficient. Achieving effective digital transformation necessitates a comprehensive strategy encompassing regulatory alignment, institutional coordination, data governance, and stakeholder engagement. In the case of BKPSDM Bali, while leadership commitment is evident, the lack of integrated governance mechanisms limits the overall effectiveness of e-government implementation.

Moreover, the findings of this study underscore the significance of data governance as a foundational element for digital bureaucracy. The notion of “data as a strategic asset” has gained prominence in the realm of digital government literature. According to [Dener et al. \(2021\)](#), governments that effectively utilize data have the capacity to enhance policy formulation, improve service delivery, and increase transparency. However, the efficacy of data utilization is contingent upon the quality, integration, and accessibility of the data. In the context of SIMPEG, the

system has functioned as a centralized data repository. However, its potential as a decision-support tool has not been fully realized due to limitations in data integration and real-time updating.

In the context of Indonesia, these findings are particularly salient in light of the nation's ongoing efforts to implement electronic government systems. Nurhidayat, Nurmandi, and Congge (2024) have demonstrated that digital transformation in Indonesia is often constrained by disparities in digital infrastructure, institutional capacity, and human resource competencies. This finding suggests that the challenges faced by BKPSDM Bali are not isolated but rather reflect broader systemic issues in the implementation of e-government across the country.

These findings align with global studies, which suggest that e-government implementation in developing regions frequently confronts structural and cultural impediments. The persistence of system fragmentation and digital literacy gaps indicates that digital transformation in the public sector is not merely a technological issue but rather a complex socio-technical process involving institutional readiness, human capacity, and governance integration.

The findings are consistent with the policy implementation framework proposed by George Edward III, which identifies communication, resources, disposition, and bureaucratic structure as pivotal determinants of policy success. Furthermore, Grindle (1980) underscores that implementation outcomes are influenced by both policy content and implementation context, including institutional capacity and stakeholder interests.

This study underscores the importance of adopting a socio-technical approach in understanding digital transformation. It is imperative to acknowledge the interconnection between technology, organization, and human factors in determining the success of e-government implementation. The case of SIMPEG at BKPSDM Bali demonstrates that technological readiness alone is insufficient without corresponding improvements in organizational culture, human resource capacity, and governance structures. Consequently, subsequent endeavors to fortify e-government implementation ought to prioritize the establishment of an integrated digital ecosystem, which integrates technological innovation with institutional reform and human-centered methodologies.

4. Conclusion

Based on the results of an in-depth analysis of digital transformation at the Bali Provincial BKPSDM, it can be concluded that the implementation of e-government policies through the application of the personnel information system is currently at the interaction and transaction stage but has not yet fully achieved a world-class integrated bureaucratic transformation. The phenomenon of "Digital Silo" remains a major obstacle, where inputted data often experiences delays in synchronization, so that the system is not yet able to present data in real time to support accurate leadership decision-making. Furthermore, digital efficiency is hampered by interoperability issues or "The Double Input Problem," where the lack of synchronization between regional applications and central ministries forces employees to input data twice, resulting in work inefficiencies. This obstacle is exacerbated by brainware factors, namely the digital literacy gap between generations and resistance to changing work culture from conventional patterns to digital ones. Nevertheless, the organization has strong strategic capital in the form of adequate network infrastructure support, sustainable budget allocation, and leadership commitment stipulated in regional regulations.

To accelerate the achievement of world-class bureaucracy, the Bali Provincial Human Resources Development Agency (BKPSDM) is advised to immediately implement strategic steps focused on strengthening a seamless digital ecosystem. The primary focus should be on standardizing APIs (Application Programming Interfaces) to ensure automatic data synchronization with the central system, thereby permanently eliminating the issue of duplicate input. From a human resources perspective, specific mentoring programs such as “Digital Champions” need to be established to bridge the digital literacy gap between generations and reduce resistance through internalizing the added value of technology for employee work convenience. Furthermore, strengthening security systems through advanced data encryption is imperative to build employee trust in the protection of personal data within the system. Finally, leaders are expected to optimize the use of analytical features and digital signatures in daily operations to encourage a transformation of work behavior that is truly data-driven and paperless.

The results of this study provide conceptual reinforcement for the study of e-government policy implementation by positioning leadership commitment as a determining factor in the success of digital transformation in the public sector. Hierarchical support has been shown to play a strategic role in maintaining policy continuity, consistent program implementation, and organizational compliance with the digitalization agenda.

Furthermore, the finding that systems fragmentation hinders digital maturity improvement emphasizes the relevance of the digital maturity model in the context of government bureaucracy. This research demonstrates that the availability of systems and technology does not necessarily result in optimal digital transformation without data integration, integrated governance, and alignment between work units.

This study also confirms that human resources and organizational culture play a more dominant role than technological infrastructure readiness. E-government effectiveness is strongly influenced by the adaptability of the apparatus, the level of digital literacy, and the organization’s readiness to respond to change. Thus, this study adds to the e-government literature by emphasizing the importance of organizational and human dimensions as the primary foundation of digital bureaucratic transformation.

Practically, the findings of this study provide strategic direction for strengthening e-government implementation at the Bali Provincial Human Resources Development Agency (BKPSDM). System integration through standardization of the Application Programming Interface (API) is an urgent need to address data duplication and improve the efficiency and accuracy of personnel information management.

Beyond technical aspects, strengthening human resource capacity requires adaptive managerial approaches, including developing the role of digital champions as agents of internal change. This strategy is expected to accelerate knowledge transfer, reduce resistance to technology, and foster a collaborative digital work culture.

The wider use of digital signatures is also a crucial step in driving the transformation of administrative processes toward greater efficiency, transparency, and accountability. Furthermore, strengthening information system security through the implementation of data protection technology and cybersecurity management is a key prerequisite for increasing government officials’ trust in digital systems. Guaranteed data security will encourage system acceptance and strengthen the legitimacy of e-government as an instrument of bureaucratic reform.

Acknowledgments

The author expresses his appreciation and gratitude to all parties who have contributed to the success of compiling this article.

References

- Dener, C., Nii-Aponsah, H., Ghunney, L. E., & Johns, K. D. (2021). *GovTech Maturity Index: The State of Public Sector Digital Transformation*. The World Bank. <https://doi.org/10.1596/978-1-4648-1765-6>
- Dharmawan, I. W., Raka, A. A. G., & Mardika, I. M. (2019). Implementasi Program Sistem Informasi Manajemen Kepegawaian (SIMPEG) Berbasis Web di Badan Kepegawaian dan Pengembangan Sumber Daya Manusia (BKPSDM) Kabupaten Badung. *Public Inspiration: Jurnal Administrasi Publik*, 4(1), 31–38. <https://doi.org/10.22225/pi.4.1.2019.31-38>
- Dunn, W. N. (1994). *Public Policy Analysis: An Introduction*. Prentice Hall.
- Farida, I., & Lestari, A. (2021). Implementation of E-Government as a Public Service Innovation in Indonesia. *Vestnik Rossijskogo Universiteta Družby Narodov*, 8(1), 72–79. <https://doi.org/10.22363/2312-8313-2021-8-1-72-79>
- Frinaldi, A., Afdalisma, Rezeki, A. P. T., & Saputra, B. (2024). Digital Transformation of Government Administration: Analysis of Efficiency, Transparency, and Challenges in Indonesia. *Proceedings IAPA Annual Conference*, 82–101. <https://doi.org/10.30589/proceedings.2024.1096>
- Gil-García, J. R., & Pardo, T. A. (2005). E-Government Success Factors: Mapping Practical Tools to Theoretical Foundations. *Government Information Quarterly*, 22(2), 187–216. <https://doi.org/10.1016/j.giq.2005.02.001>
- Grindle, M. S. (1980). *Politics and Policy Implementation in the Third World*. Princeton University Press.
- Janssen, M. (2012). Sociopolitical Aspects of Interoperability and Enterprise Architecture in E-Government. *Social Science Computer Review*, 30(1), 24–36. <https://doi.org/10.1177/0894439310392187>
- Kaleb, B. J., Lengkong, V. P. K., & Taroreh, R. N. (2019). Penerapan Sistem Informasi Manajemen dan Pengawasannya di Kantor Pelayanan Pajak Pratama Manado. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, 7(1), 781–790. <https://doi.org/10.35794/emba.v7i1.22555>
- Layne, K., & Lee, J. (2001). Developing Fully Functional E-government: A Four Stage Model. *Government Information Quarterly*, 18(2), 122–136. [https://doi.org/10.1016/S0740-624X\(01\)00066-1](https://doi.org/10.1016/S0740-624X(01)00066-1)
- Mardi. (2013). Pengaruh Sistem Informasi Manajemen Pegawai terhadap Kualitas Pelayanan Administrasi Kepegawaian di Badan Kepegawaian Daerah (BKD) Kota Samarinda. *EJournal Ilmu Pemerintahan*, 1(2), 535–547. <https://ejournal.ip.fisip-unmul.ac.id/site/?p=727>
- Matdoan, U. A. (2021). *Proses Perumusan Kebijakan, Perencanaan dan Perancangan Kawasan Perkotaan (Studi di Kota Tual)*. <https://doi.org/10.31219/osf.io/2n93h>
- Mergel, I., Edelmann, N., & Haug, N. (2019). Defining Digital Transformation: Results From Expert Interviews. *Government Information Quarterly*, 36(4), 101385. <https://doi.org/10.1016/j.giq.2019.06.002>
- Miad, A., Arifin, J., & Subadi, W. (2019). Evaluasi Program Pemberdayaan Masyarakat dalam Penggunaan Dana Desa di Desa Kitang Kecamatan Tanjung Kabupaten Tabalong (Studi pada Pelatihan Menjahit). *JAPB: Jurnal Administrasi Publik dan Administrasi Bisnis*, 2(2), 375–391. <https://jurnal.stiatabalong.ac.id/index.php/JAPB/article/view/186>
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2020). *Qualitative Data Analysis: A Methods Sourcebook*. SAGE.
- Muslikhah, R. I. (2019). Dukungan Sistem Informasi Manajemen Kepegawaian terhadap Pengambilan Keputusan di BKPP Kabupaten Sukoharjo. *Efisiensi: Kajian Ilmu Administrasi*, 16(2), 10–21. <https://doi.org/10.21831/efisiensi.v16i2.27417>
- Mutiarin, D., Khaerah, N., Nyssa, A. V. I., & Nasrulhaq. (2024). E-Government Development: Catalysing Agile Governance Transformation in Indonesia. *Journal of Contemporary Governance and Public Policy*, 5(1), 87–110. <https://doi.org/10.46507/jcgpp.v5i1.270>
- Nurhidayat, Nurmandi, A., & Congge, U. (2024). Bridging the Digital Divide: Analyzing Public Participation in Indonesia's E-Government Through the E-Participation Index. *Otoritas: Jurnal Ilmu Pemerintahan*, 14(2), 481–498. <https://doi.org/10.26618/ojip.v14i2.14435>
- Nurhidayat, Nurmandi, A., & Misran. (2024). Evaluation of the Challenges of E-Government Implementation: Analysis of the E-Government Development Index in Indonesia. *Jurnal Manajemen Pelayanan Publik*, 8(2), 371–383. <https://doi.org/10.24198/jmpp.v8i2.52759>
-

- Pasanda, L. (2016). *Pengaruh Penerapan Sistem Informasi Manajemen Kepegawaian terhadap Kinerja Pegawai Negeri di Kantor Badan Kepegawaian Daerah (BKD) Kota Palopo* [Undergraduate Thesis]. Universitas Hasanuddin.
- Pasolong, H. (2019). *Teori Administrasi Publik*. Alfabeta.
- Ramadannisa, C. A. (2023). Implementasi Kebijakan Katalog Lokal Pemerintah Kabupaten Jembrana untuk Meningkatkan Peran serta Usaha Mikro, Kecil, dan Koperasi pada Pengadaan Barang/Jasa Pemerintah. *Academia Praja: Jurnal Ilmu Politik, Pemerintahan dan Administrasi Publik*, 6(1), 109–128. <https://doi.org/10.36859/jap.v6i1.1164>
- Rizky Z, E. R., & Supardi, E. (2018). Sistem Informasi Sumber Daya Manusia Meningkatkan Efektivitas Pengembangan Pegawai. *Jurnal Pendidikan Manajemen Perkantoran*, 3(2), 226–232. <https://doi.org/10.17509/jpm.v3i2.11768>
- Setiawan, N. A., Rachmadani, B., & Putra, E. R. (2022). Development Web Based Employment Information System for Yugo Putra Sejahtera Inc. *TEPIAN*, 3(3), 116–122. <https://doi.org/10.51967/tepiian.v3i3.869>
- Yulia, E., & Ratnawati, S. (2020). Analisis Sistem Informasi Manajemen Kepegawaian (SIMPEG) Sebagai SISDM di Pemerintah Kota Magelang. *Jurnal Maneksi (Management Ekonomi dan Akuntansi)*, 9(2), 444–453. <https://doi.org/10.31959/jm.v9i2.467>
-