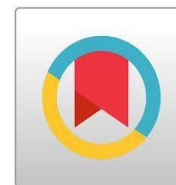


## Digital Village Transformation: A Human Resource Readiness Perspective

### Transformasi Desa Digital: Perspektif Kesiapan Sumber Daya Manusia



Marisa Permatasari<sup>1\*</sup>, Otti Ilham Khair<sup>2</sup>

<sup>12</sup> Sekolah Tinggi Ilmu Pemerintahan Abdi Negara, Jakarta

<sup>12</sup> Jl. Lenteng Agung Raya No. 37A, Jakarta Selatan

marisa.permatasari@gmail.com<sup>1\*</sup>; [otti.ilham1610@gmail.com](mailto:otti.ilham1610@gmail.com)<sup>2</sup>

Corresponding Author: marisa.permatasari@gmail.com<sup>1\*</sup>

ARTICLE INFORMATION	
<p><b>Keywords</b>  <i>Digital Village;                      Transformation;                      Readiness;                      Human Resource;</i></p>	<p><b>ABSTRACT</b>                      Digital village represents the implementation of digital transformation at the rural level, aimed at improving public services, efficiency, and accountability. This research aims to examine human resource readiness and efforts to improve it. The research was conducted using a qualitative approach. Data collection was carried out through interviews with participants from the Ciawi Village government. Data analysis utilized the People Capability Maturity Model. The research findings revealed that at level 2 (Managed), the Ciawi Village government does not yet have sufficient readiness to face digital village transformation. Based on the process areas of the People Capability Maturity Model, several areas require attention, specifically work environment, performance management, and training and development. The Ciawi Village government needs to develop its physical work environment to enhance community services and support village officials productivity. It needs to consider performance management to identify areas requiring development. This creates its relevancy with training and development programs to ensure alignment with digital transformation needs. The limitation of this research was that it specifically analyzed the readiness of Ciawi Village's human resources aspect in facing the digital village transformation; it did not consider the readiness of any other aspects such as digital infrastructure and digital literacy. Future research will emphasize on digital literacy of the village community, broadening the scope of the digital village transformation readiness analysis.</p>
<p><b>Kata Kunci</b>  <i>Desa Digital;                      Transformasi;                      Kesiapan;                      Sumber Daya Manusia;</i></p>	<p><b>ABSTRAK</b>                      Desa digital merupakan penerapan transformasi digital di tingkat pedesaan yang bertujuan untuk meningkatkan layanan publik, efisiensi, dan akuntabilitas. Penelitian ini bertujuan untuk mengkaji kesiapan sumber daya manusia dan upaya peningkatannya. Penelitian dilakukan dengan menggunakan pendekatan kualitatif. Pengumpulan data dilakukan melalui wawancara dengan peserta dari pemerintah desa Ciawi. Analisis data menggunakan People Capability Maturity Model. Temuan penelitian menunjukkan bahwa pada level 2 (Managed), pemerintah desa Ciawi belum memiliki kesiapan yang memadai untuk menghadapi transformasi desa digital. Berdasarkan area proses dari People Capability Maturity Model, beberapa area yang memerlukan perhatian adalah lingkungan kerja, manajemen kinerja, dan pelatihan dan pengembangan. Pemerintah desa Ciawi perlu mengembangkan lingkungan kerja fisik untuk meningkatkan layanan masyarakat dan mendukung produktivitas perangkat desa. Perlu mempertimbangkan manajemen kinerja untuk mengidentifikasi area-area yang membutuhkan pengembangan. Hal ini menciptakan keterkaitan dengan program pelatihan dan pengembangan untuk memastikan keselarasan dengan kebutuhan transformasi digital. Penelitian ini terbatas hanya menganalisis kesiapan pada aspek sumber daya manusia Desa Ciawi dalam menghadapi transformasi desa digital, tidak mempertimbangkan kesiapan pada</p>

	aspek lainnya seperti infrastruktur digital dan literasi digital masyarakat desa. Penelitian selanjutnya akan menekankan pada literasi digital masyarakat desa, memperluas cakupan analisis kesiapan transformasi desa digital.
<b>Article History</b> Send 22 <sup>th</sup> December 024 Review 24 <sup>th</sup> January 2025 Accepted 17 <sup>th</sup> February 2025	Copyright ©2026 <a href="#">Jurnal Aristo (Social, Politic, Humaniora)</a> This is an open access article under the <a href="#">CC-BY-NC-SA</a> license. Akses artikel terbuka dengan model <a href="#">CC-BY-NC-SA</a> sebagai lisensinya.



## Introduction

Digital technology has become everyday life needs, fundamentally altering the ways individuals connect, share information, and accomplish daily activities (Palos-Sánchez et al., 2023). Moreover, in public sector, digital technology has changing how public services are delivered, thus, digital transformation in public sector all over the world has become an inevitable choice, the strategic necessity to improve service performance, transparency, accountability, and enhance community engagement (Huda et al., 2024; Palos-Sánchez et al., 2023; Shenkoya, 2023; Xiao et al., 2023). The adoption of digital technology in public service delivery, widely known as e-government, it transformed how governments served their citizens by offering effective and efficient services while enhancing accessibility and community engagement (Mergel et al., 2019).

In Indonesia, President Regulation No. 95 of 2018 refined the concept of e-government into Electronic-Based Government System (Sistem Pemerintahan Berbasis Elektronik/SPBE), aiming to enhance public service delivery from village to central government institution. The implementation of SPBE manifests differently, in urban areas, it takes shape through smart city initiatives, while rural regions adopt smart village or digital village initiatives. This digital village transformation efforts serve a dual purpose: reducing the service quality gap between village governments and their community while streamlining administrative processes by minimizing bureaucratic procedures and paper-based documentation in rural service delivery. According to Hlaváček (2023), digital villages represent an adaptation of smart city concepts within rural contexts, aimed at fostering sustainable development and enhancing the quality of life for rural communities. Moreover, this initiative seeks to transform rural areas into more advanced and self-reliant regions.

Since 2019, approximately 40% of the villages in West Java have undergone digital transformation to become digital villages (Rahmadini & Fitriani, 2023). This include Ciawi Village which already has its village website and the implementation of various administrative application such as Siskeudes, Sipades, SSO, Sipanda, Sitanti and et cetera. However, this digital transformation has primarily been limited to internal administrative processes and has not yet extended to direct service delivery for village residents. Ciawi Village faces several limitations that impede its digital transformation progress including inadequate human resource (HR) readiness, insufficient digital infrastructure and low levels of digital literacy among village officials and their community. Similar constraints have been documented across village governments undertaking digital transformation initiatives. Research by Mayasari et al. (2023) demonstrated that insufficient HR readiness among

village officials and inadequate digital infrastructure present consistent obstacles across village government settings, while Rumsowek et al. (2023) identified both digital literacy and economic factors as key impediments. Furthermore, studies by Pascalina et al. (2022) highlighted community-related challenges as the main barrier.

Digital transformation implementation requires careful preparations across several domains to ensure success. As Tabrizi et al. (2019) stated that digital transformation transcends mere technological implementation or strategic planning, it is fundamentally a human-centric process that hinges on individual and collection mindsets. In the case of Ciawi Village, digital transformation efforts are currently constrained by above challenges area. But the primary impediment to Ciawi Village digital transformation appears to be the village officials readiness. As Adeosun and Adegbite (2022) mentioned that successful implementation of digital transformation depending on the HR readiness to adapt to increasingly digitalized work environments. This requires a workforce characterized by digital adaptability and the capacity to navigate fundamental shift in professional paradigms. Align with that, Tabrizi et al. (2019) posited that the success of digital transformation depends critically on people's willingness to adapt, learn and embrace technological changes.

The digital village transformation program was launched to modernize the village governance through the utilization of the information technology and communication in order to reduce the gap between the urban and rural areas, bridging the village public services closer, accelerating administrative processes, widening the open access public information and improving the village community's quality of life. Currently, Ciawi Village is in the early stages of its digital village transformation. While the digital transformation initiatives exist, they have not yet reached optimal implementation due to several limitations such as low levels of digital literacy in the community as reflected in the minimal usage of the village digital services, limited digital technology infrastructure and inadequate HR readiness among the Ciawi Village officials. This situation creates an urgency to conduct in-depth research to analyze the level of the HR readiness in Ciawi Village.

There are three factors needed for a successful digital transformation: the HR readiness of village government, the adequate digital infrastructure and the community's digital literacy. The importance of this research specifically emphasize on the HR readiness of Ciawi Village government, as HR serves as the fundamental aspect for successful digital transformation. Without skilled and digitally competent staffs, a digital infrastructure alone will fail to deliver its benefit to provide better services for the community. Therefore, this

research aims to examine the level of HR readiness of Ciawi Village government in facing digital village transformation using the PCMM model and determine approaches for development. The findings will contribute to strengthen on the key areas that currently hindering the HR readiness at Ciawi Village government.

Digital transformation is a process that connects businesses and customers across all value-chains by leveraging new technologies and advance data skills that involves collecting, analyzing, and converting data into strategic insights that enable informed decision-making and drive organizational performance (Schallmo et al., 2017). However, according to Ziadlou (2021), digital transformation is a process that goes beyond mere technological adoption, it requiring a comprehensive approach that integrates people, technological and strategic dimension to fundamentally reshape organization. Align with that, Mergel (2019) articulated, digital transformation reshapes traditional processes and services, a transition from analog to digital but not simply a technological upgrade, it aims to generates focuses on user satisfactions and new services delivery. And Savic (2019) described digital information is a process of reimagining organizational operations, fundamentally reshaping how businesses function by harnessing modern technological capabilities. Digital transformation is complex and dynamic process characterized by digital technologies' disruptive potential which compels organizations to strategically recalibrate their approach to value creation, reimagining how values is generated, delivered and sustained (Vial, 2019).

HR readiness refer to an organization's and its workforce's capacity and preparedness to implement and adapt to organizational change effectively, encompassing psychological readiness and capabilities and skills to support transformation (Weiner, 2020). Otoluwa and Tanaiyo (2023), HR readiness is the individual capacity to adapt to technological changes through continuous learning, strategic thinking, and the ability to effectively apply technology to achieve organizational success. Align with that, Vrchota (2020) defined that HR readiness is the the person's capability to acquire new knowledge with particular emphasis on three key aspects: flexibility, adaptability and skillsets. Katsaros (2020) stated that HR readiness refers to a person's psychological and mental preparedness to embrace and actively engage in transformational processes. Moreover, Peersia (2024) HR readiness represents an individual's workplace preparedness, encompassing adaptive capabilities and professional awareness to changes.

People capability maturity model (PCMM) is a strategic framework that guides organizations in systematically improving their HR management processes, which critically

important during digital transformation (Sutanto & Tjahjadi, 2023). PCMM provide a roadmap for enhancing workforce’s capabilities over time as its primary objective (Curtis et al., 2009). The workforce capability indicates an organization’s readiness for performing their activities, results from their activities and potential benefit from investment’s in the change process of advanced technology (Curtis et al., 2009). Therefore, in the context of digital transformation PCMM helps organization build human capabilities necessary to successfully navigate technological change.

According to Curtis (2009) PCMM has five maturity level: (1) Initial, (2) Managed, (3) Defined, (4) Predictable and (5) Optimizing with each of maturity level has different concern for managing and developing the workforce. Each of the maturity level with exception of level Initial have a total of 22 PA that has been identified as the practices and capabilities that are need to be fulfilled in order to achieve the maturity level and the main objective which is the competencies development such as developing individual capability, building workgroups and culture, motivating and managing performance, and shaping the workforce (process thread) (Curtis et al., 2009).

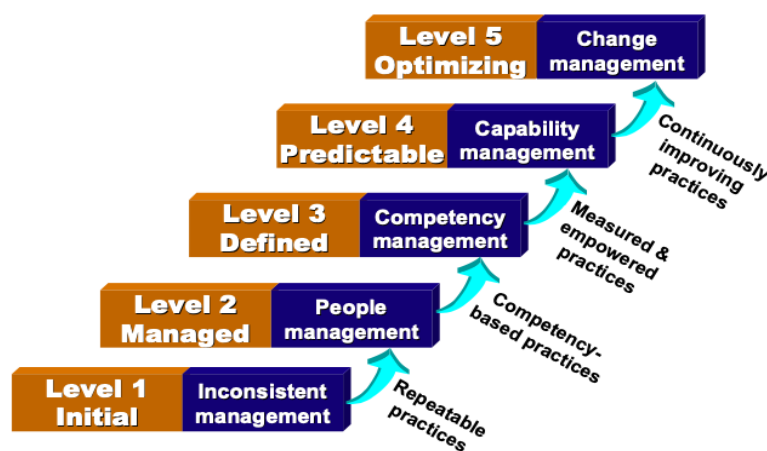


Figure 1. Five Maturity Levels (Curtis et al., 2009)

Moreover, the information regarding the competencies development as explained by Curtis (2009) are as below:

1. Developing individual capability

In level Managed, the individual focus on utilizing training for self-development. Level Defined, individuals’ knowledge, skills and abilities are identified through competency analysis. Level Predictable, mentors are provided to support individuals development and Level Optimizing, the focus is on continuous individual capacity development.

2. Building workgroups and culture

Level Managed, individuals coordination within units to effectively managed work interdependencies. Level Defined, establishing organizational-wide coordination capabilities, building upon individual coordination skills. Level Predictable, leveraging and exploiting competency-based process capabilities. Level Optimizing, continuous improvement of work process through enhanced integration of individual work methods with workgroups.

3. Motivating and managing performance

Level Managed, focus on individual performance in each work unit, builds adequate work environment, manages performance and adjusts compensation. Level Defined, adapts workforce practices from managed level, motivates competency development and establishes career development as a motivation and reward system. Level Predictable, organization will quantitatively understands and controls performance management. Level Optimizing, aligns result from predictable level with organizational objectives.

4. Shaping the workforce

Level Managed, implementing staffing processes to align workforce with organizational objectives, ensuring employees possess appropriate skills. Level Defined, developing strategic workforce planning by identifying capability levels matching organizational competencies. Level Predictable, evaluating workforce practice impacts on achieving predefined strategic workforce objectives. Level Optimizing, seeking innovative technologies to support sustainable workforce development.



Maturity levels	Process Area Threads			
	Developing individual capability	Building workgroups & culture	Motivating & managing performance	Shaping the workforce
<b>5</b> Optimizing	Continuous Capability Improvement		Organizational Performance Alignment	Continuous Workforce Innovation
<b>4</b> Predictable	Competency Based Assets Mentoring	Competency Integration Empowered Workgroups	Quantitative Performance Management	Organizational Capability Management
<b>3</b> Defined	Competency Development Competency Analysis	Workgroup Development Participatory Culture	Competency Based Practices Career Development	Workforce Planning
<b>2</b> Managed	Training and Development	Communication & Coordination	Compensation Performance Management Work Environment	Staffing

Figure 2. Process Threads (Curtis et al., 2009)

## Method

This research conducted a qualitative method to examine HR readiness in digital transformation. The data collection process was carried out through in-depth interviews with 21 participants comprising Ciawi Village officials (village head, village secretary, head of government affairs, head of public service section, head of public welfare section, head of program and planning section, head of finance section, head of general affairs section, 2 hamlet heads, 2 staff members), 7 Badan Permusyaratan Desa (BPD) and 2 neighborhood association head. Each of the participants regularly engaged with digital tools in daily operations. Observations and field notes were also conducted to complement the research data. The interview protocol was structured based on the PCMM level Manage framework which concerns on people management practices within the organization. The PCMM level Manage framework encompassed six process area (PA) including: 1) staffing, 2) communication and coordination, 3) work environment, 4) performance management, 5) training and development and 6) compensation. Each of the PA has 18 to 24 practices that was evaluated using scoring system. Score below 50% indicate not implemented or partially implemented, while score over 50% indicate largely implemented or fully implemented. Moreover, this research employed both method triangulation and data triangulation. Method triangulation encompassed cross – referencing data from participants’ interviews, observations and field notes. Data triangulation involved cross – referencing from different group of data sources: Ciawi Village officials, BPD and neighborhood association heads. These triangulation approaches were implemented to ensure the data validity, examine the consistency, identify alignments and discrepancies in the findings.



The flow of the research conducted were as follows:

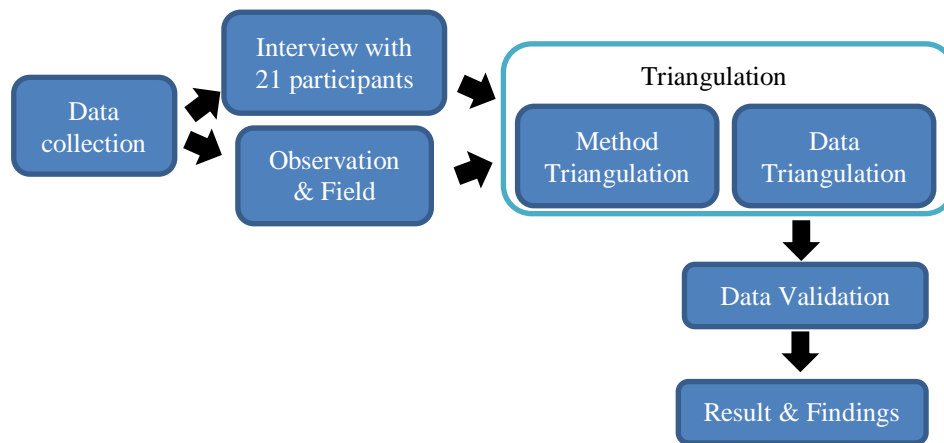


Figure 3. Research Process

## Result and Discussion

### Process Area: Staffing

The interview result at PA Staffing with a total of 28 practices has been affirmed that there were more than 50% or 24 practices that were well-implemented and the four practices were not implemented. The workforce management practices at Ciawi Village government operate within a strictly regulated framework that significantly impacts personnel decisions and performance evaluation approaches. The organization's inability to implement workforce reduction and discharge practices (P16 and P17) stems directly from the legal constraints established by Law No. 6 of 2014 concerning Villages, specifically Article 53. This legislation explicitly limits the head of village's authority in personnel management, requiring district-level consultation and approval for any staff dismissals, which can only occur under specific circumstances of ineligibility or documented violations. This regulatory framework creates a unique organizational dynamic where traditional performance management approaches must be adapted to align with both legal requirements and local cultural values. The absence of formal performance measurements in Ciawi Village government reflects a deliberate leadership choice, rooted in concerns about maintaining organizational harmony.

The head of village's perspective emphasizes the potential negative impact of formal performance metrics on workplace dynamics, particularly the risk of fostering unnecessary competition in an environment where cooperation and collaboration are paramount. Instead of implementing conventional performance measurement systems, Ciawi Village government has developed an alternative approach that prioritizes social cohesion and

collective achievement. This informal evaluation system, conducted through observational assessment and periodic focus group discussions, focuses primarily on evaluating contributions to community welfare rather than individual performance metrics. This approach aligns with the organization's cultural emphasis on social harmonization and collective work achievement. However, this informal approach to performance evaluation presents both advantages and challenges. While it may successfully maintain workplace harmony and encourage collaboration, the absence of structured performance measurements can limit the organization's ability to identify specific areas for improvement, track progress systematically, or implement data-driven development initiatives. The lack of formal metrics may also affect the organization's capacity to demonstrate accountability and effectiveness to external stakeholders.

The situation reflects a broader tension between modern public administration practices and traditional governance approaches in village-level government. While the emphasis on social harmony and collective achievement aligns well with community values and local governance needs, it may pose challenges for implementing systematic improvements and maintaining consistent service quality standards. This balance between maintaining cultural values and meeting contemporary governance requirements represents an ongoing challenge for village-level public administration.

### **Process Area: Communication and Coordination**

Result indicated that from a total of 21 practices, the informants affirmed there were more than 50% or 19 practices that were well-implemented and the other two practices were not implemented. The absence of performance measurement practices in communication and coordination activities at Ciawi Village government (ME1 and ME2) represents a significant operational deficiency that impacts organizational effectiveness. This lack of systematic measurement and evaluation mechanisms prevents the organization from quantifiably assessing the efficiency and effectiveness of its internal and external communication processes. The deficiency in performance measurements manifests in several critical ways. Without established metrics (ME1), the organization cannot effectively track response times to citizen inquiries, monitor internal information flow efficiency, or evaluate the success rate of inter-departmental coordination efforts. The absence of unit-level measurement collection and maintenance (ME2) further compounds this issue, as there is no standardized method to assess communication patterns and coordination effectiveness across different organizational units. This measurement gap creates substantial challenges for strategic improvement.

Without quantifiable data on communication effectiveness, village officials lack the analytical foundation needed to identify bottlenecks, assess resource allocation, or implement targeted improvements. The organization cannot effectively evaluate whether current communication channels are meeting stakeholder needs or if coordination mechanisms are supporting efficient service delivery.

The impact of this deficiency extends beyond operational inefficiencies. Without performance metrics, the organization struggles to establish accountability frameworks for communication responsibilities, identify training needs, or justify resource investments in communication infrastructure. The lack of data-driven insights also hampers the organization's ability to adapt its communication strategies to evolving community needs and technological capabilities. Moreover, the absence of performance measurements affects the organization's capacity for continuous improvement. Without systematic tracking of communication and coordination metrics, the village government cannot establish meaningful benchmarks, set realistic improvement targets, or demonstrate progress in enhancing service delivery efficiency. This limitation particularly affects the organization's ability to respond to changing citizen expectations and implement modern governance practices that require data-driven decision-making.

### **Process Area: Work Environment**

PA Work Environment has a total of 18 practices, and the result affirmed that there were more than 50% or 10 practices that were well-implemented and the rest of practices were not implemented. The current office infrastructure presents multiple challenges that affect both employee performance and community accessibility. The office's location poses a fundamental challenge, being situated away from the main road and embedded within a residential area. The limited access, restricted to pedestrians and motorcycles, creates substantial barriers for citizens seeking services, particularly for elderly individuals, those with disabilities, or during inclement weather. This accessibility issue contradicts basic principles of public service accessibility and inclusivity.

The workspace configuration reveals considerable inadequacies. While each village official has been allocated a designated workspace (P2 and P3), these areas fall below acceptable standards for professional public service delivery. The main office room and individual workspaces are notably undersized, creating cramped conditions that can impair staff productivity and comfort. The absence of a proper parking facility (P6 and P7) further

compounds the accessibility issues, potentially deterring citizens from accessing services and creating logistical challenges for staff and visitors alike.

The physical infrastructure shows signs of deterioration, yet despite recognized needs for improvement (P5), no substantial renovations or modifications have been implemented. The confined spaces and suboptimal layout contribute to frequent work disruptions (P8), affecting the quality and efficiency of public service delivery. The lack of proper ventilation, adequate lighting, and modern office amenities further compromises the working environment, of particular concern is the absence of proper measurement and evaluation systems for workplace conditions (ME1 and ME2). Without systematic assessment of environmental factors such as air quality, noise levels, lighting adequacy, and space utilization, the organization cannot effectively identify and address workplace deficiencies. This gap in monitoring and evaluation prevents the development of data-driven improvements to the physical work environment. The cumulative effect of these physical workspace limitations creates a challenging environment for both staff and citizens. The constrained space, poor accessibility, and inadequate facilities not only affect daily operations but also potentially impact the organization's ability to meet evolving public service needs and professional standards. These conditions suggest an urgent need for comprehensive workplace infrastructure improvements to enhance service delivery capabilities and staff working conditions.

### **Process Area: Performance Management**

PA Performance management has 24 practices, and the result affirmed that there were below 50% or nine practices that were well-implemented while the other 15 were not implemented. Meaning, Ciawi Village government there are significant gaps concerning performance management practices. This was shown that there are no established measurable performance objectives (P1) for its units, and there is a notable absence of mechanisms to identify and implement potential improvements in processes, tools, and resources (P8) that could enhance employee performance. The management system lacks formal procedures for addressing persistent performance issues, as evidenced by the absence of documented performance improvement plans (P11) and their periodic evaluation (P12). The village government has also fallen short in implementing recognition and reward systems. There are no established guidelines for acknowledging outstanding performance (P13), nor is there a systematic approach to providing timely recognition for exceptional achievements (P14). The fundamental organizational structure for Performance Management is incomplete, with no

documented policy (CO1) or designated organizational role for providing guidance on Performance Management activities (CO2). At the unit level, there are significant deficiencies in responsibility assignment and resource allocation. No individuals have been formally assigned responsibility for Performance Management activities within units (AB1), and adequate resources have not been allocated (AB2). The preparation and orientation of personnel involved in Performance Management activities are notably absent (AB3, AB4), indicating a lack of capacity building initiatives. Furthermore, the measurement and evaluation aspects of Performance Management are not in place. The organization has not implemented systems for measuring Performance Management activities' status and effectiveness (ME1), nor are unit-level performance measures being collected and maintained (ME2). Finally, there is no verification process or responsible individual ensuring that Performance Management activities align with organizational policies and procedures (VE1).

This concluded the entire process of a formal performance management activities were not carried out. There were no performance goals, a documented performance plan, and also there were no specific role of the village official to undertaken the performance management activities due to limited amount of the workforce. Therefore, the performance management in Ciawi Village was not fully implemented. It was due to lack of performance goals, documented performance plan, and there was no designated role for village officials to carry out performance management activities.

The head of Ciawi Village does not support the idea of having performance management in order to keep the harmony within the village officials, because a formal performance management may lead to unhealthy competition with each other. However, there was an informal performance evaluation process conducted by organizing a forum group discussion. Any performance issues and solutions were discussed and resolved together, therefore village officials will feel comfortable of sharing with their problems and boost cooperation with each other. This unique approach reflects the values of mutual cooperation that have indeed become a characteristic of rural communities in Indonesia.

### **Process Area: Training and Development**

The interview result affirmed that from a total of 18 practices, there were below 50% or seven practices were well-implemented, and the 11 practices that were not implemented. The regional government's approach to providing training and development programs for village governments reveals several critical gaps in the digital transformation journey. The current programs demonstrate a significant misalignment between the offered training content

and the actual requirements needed to facilitate effective digital transformation at the village level. This misalignment is further compounded by the absence of a structured work performance system within the village government framework. The P5 practice requirements specifically highlight the necessity for a comprehensive training plan, yet the current structure falls short of meeting these fundamental needs. This gap becomes particularly problematic when considering the specialized nature of digital transformation initiatives. The situation becomes more complex when examining the organizational framework. The absence of documented policies (CO1) and clear organizational roles and responsibilities (CO2) creates a fundamental weakness in the governance structure. Furthermore, the lack of basic administrative practices (AB1) and proper documentation procedures (AB4) significantly hampers the systematic development of digital capabilities among village officials.

Resource constraints present another significant challenge. The limited allocation of both time and resources (AB2 and AB3) creates a substantial impediment to meaningful skill development. This resource scarcity particularly affects the depth and quality of digital skills training that village officials can receive, creating a widening gap between required and actual digital competencies. The evaluation framework also shows significant weaknesses. The absence of performance measurement systems (ME1, ME2) and proper evaluation mechanisms (VE1, VE2) makes it impossible to effectively track progress and identify areas for improvement. Without these crucial feedback mechanisms, the village government cannot accurately assess the effectiveness of their training initiatives or make data-driven decisions about future training needs.

The regional government's training approach demonstrated several critical shortcomings. First, the programs were generally designed with a broad, one-size-fits-all methodology that did not account for the specific digital competency gaps present at the village level. Many village officials entered these training programs with varying levels of digital literacy, yet the standardized curriculum failed to address these individual differences.

Furthermore, the training programs often focused on theoretical aspects of digital governance rather than practical, hands-on skills that village officials needed for day-to-day operations. This misalignment between training content and actual job requirements created a significant gap in practical digital competencies. For instance, while officials might receive general information about digital systems, they often lacked specific training on the actual platforms and tools they would need to use in their roles. The timing and frequency of these training programs also proved problematic. Training sessions were typically conducted as isolated events rather than as part of a continuous learning process. This sporadic approach

made it difficult for village officials to build upon their knowledge progressively or to keep pace with rapidly evolving digital technologies.

Additionally, the absence of a needs assessment mechanism meant that training programs were not tailored to address the most pressing digital challenges faced by village governments. Without proper evaluation of existing skills and required competencies, the regional government's training initiatives often missed crucial areas of development necessary for successful digital transformation.

The lack of post-training support and follow-up resources further diminished the effectiveness of these programs. Village officials often found themselves unable to apply their learning effectively when they returned to their workplaces, as there was no sustained guidance or mentoring system in place to help them overcome implementation challenges. These limitations in the training and development programs have created a substantial obstacle to achieving the desired level of digital transformation at the village government level. The situation calls for a more targeted, comprehensive, and sustainable approach to capacity building that aligns more closely with the specific needs of village officials and their digital transformation goals.

### **Process Area: Compensation**

The result affirmed that from a total of 21 practices, there were below 50% or nine practices were well-implemented and 12 practices were not implemented. Compensation practices at Ciawi Village government reveals significant structural limitations due to its rigid adherence to legal frameworks. While the organization has established a basic compensation strategy (P1), there is minimal flexibility for strategic review and adaptation (P2). The current system does not effectively incorporate workforce input in developing or revising compensation components (P3), limiting employee engagement in the process. Although the organization maintains a documented compensation plan as required by law (P4), the system's inflexibility hampers its ability to address compensation inequities or implement necessary adjustments (P11). The documented procedure for determining individual compensation packages (P7) follows strict governmental guidelines, leaving little room for performance-based considerations. This rigidity is particularly evident in the limited capacity to adjust compensation based on individual accomplishments and performance objectives (P8), though decisions are formally communicated to employees as per protocol (P9). The technical execution of compensation activities shows similar constraints. While personnel handling compensation receive basic preparation (AB3), their role is largely administrative rather than



strategic. The measurement and evaluation components (ME1, ME2) are primarily focused on compliance rather than effectiveness, and the analysis of aggregate trends in compensation activities (ME3) serves more as a monitoring tool than a driver for improvement. The compensation system of the village government has been regulated in the Law No. 6 of 2014 concerning Villages and Government Regulation No. 2019 concerning The Second Amendment of Government Regulation No. 43 of 2014 concerning Implementation Regulations of Law No. 6 of 2014. Village government does not have the flexibility to development or review the compensation strategy. However, there were no rules regarding the informal compensation. This rigid, law-based compensation structure, while ensuring compliance and standardization, significantly limits the organization's ability to use compensation as a strategic tool for motivation and performance enhancement.

### **HR Readiness of Ciawi Village government**

Given these findings, level Managed of PCMM suggest that their readiness appears inadequate for supporting digital transformation, although this does not means it automatically disqualified from digital transformation. Overall, the absence of measurement practices across all process area creates critical limitation, the Ciawi Village government lacks of the quantitative foundation needed to gauge digital readiness and improvement. Whereas, in digital transformation contexts, organization need data-driven insights to understand their current capabilities, track progress, and make informed decisions.

The most concerning factors that shown significant gaps in key process area necessary for digital transformation are:

#### **1. Work environment**

The absence of 8 out of 18 key practices points to substantial infrastructural challenges that impede digital transformation efforts. The inadequate physical workspace presents multiple operational challenges that directly impact the effectiveness of digital initiatives. The current workspace conditions significantly affect the quality of digital operations in several ways. Village officials often work in cramped, shared spaces that lack proper ergonomic setups necessary for extended computer work. This environment makes it difficult to maintain focus during critical digital tasks such as data entry, online service delivery, or virtual meetings. The lack of dedicated workstations means officials frequently need to share limited resources, leading to decreased productivity and potential delays in digital service delivery. The office location's distance from the main road, coupled with narrow access routes, creates substantial challenges for digital infrastructure maintenance

and upgrades. This geographical isolation complicates regular technical support visits and makes it difficult to ensure reliable internet connectivity. When technical issues arise, the remote location extends resolution times, potentially leading to prolonged service interruptions. Additionally, the delivery and installation of new digital equipment become more complex and costly due to access difficulties. Environmental factors within the workspace further compound these challenges. Poor lighting, inadequate ventilation, and insufficient climate control can affect both the performance of digital equipment and the comfort of staff members using these tools. These conditions can lead to increased equipment maintenance needs and potential hardware failures, disrupting digital operations and service delivery. The lack of proper storage facilities for digital equipment and documentation also poses security risks and makes it difficult to maintain organized digital records. Without adequate space for proper filing systems and secure storage of digital assets, the village government faces increased risks of data loss or unauthorized access. These workspace limitations ultimately create a cascading effect that hampers the overall digital transformation initiative. The combination of inadequate physical infrastructure, poor accessibility, and environmental challenges creates an environment that is not conducive to sustained digital operations, potentially undermining the long-term success of digital transformation efforts in village government. These findings align with Lindeberg (2022) who articulated that inadequate physical workspaces and layouts create an environment where employees struggle to perform their responsibilities effectively and fail to provide appropriate spaces for concentrated tasks and confidential activities. A well-designed physical workspace not only facilitate richer interactions and engagement among the employees but also will improve employees responsiveness, enthusiasm, motivation and effectiveness (Dery et al., 2017; Horváth et al., 2022; Susanto & Erdiansyah, 2024).

## 2. Performance management

The concerning reality that more than 50% of essential practices remain unimplemented reveals fundamental weaknesses in the village government's approach to digital transformation. This substantial implementation gap creates a problematic environment where digital initiatives lack proper structure, guidance, and accountability mechanisms. The absence of clear performance targets aligned with digital transformation objectives creates a significant strategic vacuum. Without well-defined goals, village officials lack direction in their digital adoption journey, making it challenging to prioritize skill development and measure progress effectively. This misalignment between individual performance and organizational digital objectives undermines the overall transformation

effort. The informal evaluation approach through focus group discussions, while promoting organizational harmony, proves inadequate for managing digital transformation. While these discussions may facilitate open dialogue, they lack the systematic rigor needed to accurately assess digital competencies, track progress, and identify specific areas for improvement. This informal approach fails to provide the structured feedback necessary for developing digital capabilities effectively. The lack of documented policies and clearly defined roles in performance management creates substantial operational challenges. Without formal documentation, responsibilities become ambiguous, accountability diminishes, and consistency in digital skill development suffers. This absence of structure makes it particularly difficult to establish and maintain the standardized workflows essential for digital operations. The missing preparation and orientation components for performance management activities create significant obstacles in skill development. Without proper onboarding and guidance, village officials struggle to understand performance expectations related to digital competencies, leading to inconsistent skill development and potential resistance to technology adoption. These gaps in performance management practices have far-reaching implications for the village government's digital transformation journey. The ability to track, measure, and improve digital competencies becomes severely compromised, potentially leading to: inconsistent service delivery in digital platforms, reduced efficiency in digital operations, difficulty in identifying and addressing skill gaps, limited ability to adapt to new digital requirements and challenges in maintaining digital service quality standards. According to Cosa and Torelli (2024) digital transformation necessitates performance management system to enhance adaptability, efficiency and sustainability in organization. Performance management is crucial during digital transformation as it enables organizations to effectively plan, organize and supervise public service efficiencies and accountability while adapting to new technologies (Handayani & Syahril, 2024; Rohmah & Komarudin, 2023; Shrestha & Kumar, 2022).

### 3. Training and development

The implementation of only 7 out of 18 critical practices represents a significant organizational deficiency that undermines the village government's digital transformation efforts. This substantial gap in practice implementation creates systemic weaknesses in developing and maintaining digital competencies across the organization. The absence of comprehensive monitoring mechanisms severely impacts the organization's ability to track digital skill development effectively. Without proper tracking systems, the village

government cannot accurately assess whether training initiatives are yielding the desired outcomes or identify emerging skill gaps that require attention. This lack of visibility makes it challenging to make informed decisions about resource allocation and training priorities. Moreover, current training programs often lack alignment with specific digital transformation requirements, resulting in a mismatched skill set among village officials. This misalignment becomes particularly problematic as digital systems and processes evolve, creating an increasing gap between available skills and operational needs. Limited time and resources allocated for training programs restrict the depth and breadth of digital skill development opportunities. This limitation is particularly concerning given the rapid pace of technological advancement, which requires continuous learning and skill updates to maintain operational effectiveness. And the lack of proper measurement and evaluation practices creates a critical blind spot in assessing training effectiveness. Without systematic evaluation mechanisms, the organization cannot effectively determine whether training investments are yielding the desired outcomes or identify areas requiring additional focus and also makes it difficult to justify additional resource allocation for training and development initiatives. The situation calls for a fundamental shift in approach to training and development. This shift emphasizes the importance of investment in infrastructure and continuous training with the program focus on digital literacy, digital reskilling and upskilling to adapt to new technologies (Chakraborty & Konwar, 2024; Handayani & Syahrial, 2024; Liubarets et al., 2024; Safae & Chaimae, 2024).

### **Approaches for HR readiness improvements**

Several advance strategic approach to improve Ciawi Village government's HR readiness and advance level of maturity by focusing on the three key area identified:

#### **1. Work environment**

Creating a better workspace is essential (Lindeberg et al., 2022). As a government office that primarily focused on public service delivery, the redesigning and development of the physical work environment is inevitable. It will support both community services and village officials' productivity. The current physical workspace constraints present significant challenges that directly impact both public service quality and operational efficiency. The existing office space is inadequate to meet the dual demands of community engagement and administrative functions, creating bottlenecks in service delivery and limiting the effectiveness of village officials in performing their duties. A strategic

redesign of the physical workspace would yield multiple operational benefits. An expanded office layout would allow for dedicated spaces that separate public service areas from administrative workstations, enabling officials to maintain focus while ensuring appropriate community engagement. This separation is particularly crucial as digital transformation initiatives require concentrated attention for tasks such as data entry, digital document processing, and online service management. As Horváth et al. (2022) suggest, workspace modification promotes better interaction and engagement. Better yet, if village office have a more strategic location with improve access would significantly enhance the overall office's ability to serve the community while supporting the technological dan operational needs of a modern government facility. An optimized office layout would facilitate more effective communication between village officials and community members, while also supporting internal collaboration among staff. This enhanced interaction capability becomes increasingly important as government services evolve to incorporate both digital and in-person components. Relocating the village office to a more strategic location with improved access would generate substantial operational advantages. Better accessibility would not only enhance community access to government services but also facilitate the maintenance and upgrading of technological infrastructure. This improved location would support more efficient delivery of equipment and services, reducing downtime and maintenance challenges that currently impact digital operations. The workspace redesign should incorporate modern office design principles that support technological integration. This includes adequate power supply infrastructure, proper networking capabilities, and appropriate environmental controls to protect digital equipment. These improvements would create a more resilient operational environment capable of supporting the technological requirements of modern government services. Furthermore, a well-designed physical workspace would contribute to employee well-being and productivity. Proper ergonomic setups, adequate lighting, and appropriate climate control would create a more comfortable working environment, potentially reducing stress and fatigue among village officials who spend significant time working with digital systems.

## 2. Performance management

While the idea of maintaining a harmonious culture to avoid a competitive work atmosphere may be acceptable for now, but this approach becomes increasingly less relevant as technology advances. Ciawi Village government needs to implement performance management systems. As digital systems become more integral to

government operations, the need for measurable performance standards and clear accountability mechanisms becomes increasingly critical. A performance management system can effectively bridge the gap between traditional values and modern operational requirements. Such a system would establish clear metrics for success while fostering an environment where collaboration and individual growth coexist. This approach enables village officials to understand their progress, identify areas for improvement, and align their development with organizational objectives. The implementation of performance management need not compromise workplace harmony. Rather, it can enhance it by providing transparency and fairness in evaluation processes. When officials understand the criteria for success and receive regular feedback on their performance, it reduces uncertainty and creates a more predictable work environment. This clarity can actually strengthen working relationships by eliminating ambiguity and ensuring equitable treatment. Strategic implementation of performance management should focus on several key aspects. It should establish clear, achievable metrics that align with digital transformation goals, incorporate regular feedback mechanism that support continuous improvement, and include development pathways that help village officials enhance their digital competencies. This structured approach provides a framework for growth while maintaining the collaborative spirit that characterizes the organization. As explained by Handayani and Syahril(2024), performance management system may create a more competitive work environment, but it can actually enhance collaborative work and help organizations operate more effectively through work planning, organization, and supervision. Therefore, by thoughtfully implementing performance management systems, Ciawi Village government can maintain its cultural values while building the capabilities needed for successful digital transformation. This balanced approach to performance management will position the organization to better meet the challenges of digital governance while preserving the positive aspects of its organizational culture. The result will be a more capable, accountable, and effective government organization prepared to serve its community in the digital age. The village government can better track progress, identify areas for improvement, and support employee development. A performance management system balances healthy competition with effective collaboration. This approach creates accountability while maintaining positive working relationship. When properly implemented, it provides clear metrics for success, encourages skill development, and supports the organization's digital transformation goals. The key lies in thoughtful implementation that consider both organizational culture and operational efficiency.

### 3. Training and development

While the government provides various training and development programs, their application has not been fully optimized to support digital capability enhancement. Therefore, by implementing performance assessment systems, village governments can better identify precise training and development needs. The implementation of comprehensive performance assessment systems would enable village governments to conduct precise needs analyses for training and development. By systematically evaluating employee performance against specific digital competency requirements, organizations can identify exact skill gaps and development needs. This data-driven approach would replace the current generalized training model with one that addresses individual and organizational requirements more effectively. Performance evaluations provide detailed insights into areas where digital capabilities need strengthening, allowing for the creation of customized training programs that directly address identified gaps. This targeted approach ensures that training resources are allocated efficiently and that development initiatives align with actual operational needs. Systematic collection of performance data would enhance the strategic planning of training initiatives. By understanding patterns in skill deficiencies across the organization, village governments can develop more focused and relevant training programs. This approach would help prioritize critical skill development areas and ensure that training investments yield meaningful improvements in digital capabilities. Moreover, regular performance assessments create a feedback loop that can measure the effectiveness of training programs. By evaluating performance before and after training initiatives, organizations can assess whether these programs are achieving their intended outcomes. This evaluation mechanism enables continuous refinement of training approaches, ensuring they remain effective and relevant to evolving digital transformation needs. The integration of performance assessment systems with training and development would also support long-term career development planning. By establishing clear connections between performance metrics and skill development opportunities, village officials can better understand their growth trajectory and take ownership of their professional development in alignment with digital transformation objectives. This enhanced approach to training and development, guided by performance assessment data, represents a significant advancement from the current state. It would enable village governments to move beyond generic training programs toward a more strategic, targeted approach that directly supports their digital transformation goals while maximizing the return on training investments. A well-implemented performance



assessment system thus becomes not just an evaluation tool, but a strategic driver of organizational development, ensuring that training initiatives directly contribute to building the digital capabilities necessary for modern government operations. In the context of digital transformation, following Chakraborty and Konwar (2024) and Liubarets et al. (2024) recommendations, this should focus on digital literacy, reskilling, and upskilling specifically tailored to digital transformation needs. This connection between performance management and training effectiveness is particularly crucial in the context of digital transformation. When village governments can accurately assess performance against digital competency requirements, they can make more informed decisions about training investments. The performance evaluation process reveals not only individual skill gaps but also broader organizational capability needs that should inform training program selection and design.

## **Conclusion**

Ciawi Village government current state indicates inadequate readiness according to PCMM's Managed level criteria, but this does not preclude the organization from pursuing digital transformation efforts. There are three areas of concern: work environment, performance management, training and development. The physical work environment requires substantial enhancement, particularly in terms of workspace design and office location. A strategic redesign of the office space would not only accommodate public service delivery more effectively but also support the productivity requirements of village officials in a digital work context. As supported by recent research, well-designed workspaces facilitate better interaction, engagement, and operational efficiency necessary for digital transformation. The implementation of a formal performance management system emerges as a critical necessity, despite the current preference for maintaining harmonious workplace culture through informal evaluations. While this transition may initially create a more competitive environment, evidence suggests that properly implemented performance management systems can enhance both collaboration and operational effectiveness. This systematic approach would provide the framework needed to track digital competencies, establish clear metrics for success, and maintain accountability in the digital transformation process. The connection between performance assessment and training effectiveness represents a crucial pathway for building digital capabilities. While government training programs exist, their application needs to be more precisely aligned with digital transformation requirements. By implementing performance evaluations that identify

specific skill gaps and development needs, the village government can make more informed decisions about training investments and ensure that development programs directly support digital transformation objectives.

The limitation of this research solely on analyzing the HR readiness of Ciawi Village government, excluding the other aspects of digital transformation such as digital infrastructure and community's digital literacy. However, future studies will emphasize on the aspect of community's digital literacy, analyzing their readiness to engage with and benefit from digital government services.

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### **References**

- Adeosun, O. T., & Adegbite, W. (2022). Human resource professionals and readiness for the future of work. *EUREKA: Social and Humanities*, 5, 39–50. <https://doi.org/10.21303/2504-5571.2022.002486>
- Chakraborty, S., & Konwar, J. (2024). Exploring the digital transformation of training and skill development in IT companies. In *Futuristic Trends in Management* (Vol. 3). IIP Series.
- Cosa, M., & Torelli, R. (2024). Digital transformation and flexible performance management: A systematic literature review of the evolution of performance measurement system. *Global Journal of Flexible Systems Management*, 25(3), 445–466. <https://doi.org/10.1007/s40171-024-00409-9>
- Curtis, B., Hefley, B., & Miller, S. (2009). *People capability maturity model (P-CMM) version 2.0*. <http://www.sei.cmu.edu>
- Dery, K., Sebastian, I. M., & van der Meulen, N. (2017). The digital workplace is key to digital innovation. *MIS Quarterly Executive*, 16(2).
- Handayani, M., & Syahrial, M. A. (2024). Leveraging digital transformation for performance management: A case study on E-Sakip implementation in government institutions. *International Journal of Economics and Management Sciences*, 1(4), 138–157. <https://doi.org/10.61132/ijems.v1i4.237>

- Hlaváček, P., Kopáček, M., Kopáčková, L., & Hruška, V. (2023). Barriers for and standpoints of key actors in the implementation of smart village projects as a tool for the development of rural areas. *Journal of Rural Studies*, 103. <https://doi.org/https://doi.org/10.1016/j.jrurstud.2023.103098>
- Horváth, D., Csordás, T., Ásványi, K., Faludi, J., Cosovan, A., Simay, A. E., & Komár, Z. (2022). Will interfaces take over the physical workplace in higher education? A pessimistic view of the future. *Journal of Corporate Real Estate*, 24(2), 108–123. <https://doi.org/10.1108/JCRE-10-2020-0052>
- Huda, Muh. N., Putra, R. I., & Akbar, P. (2024). Measuring digital maturity in local government: A case study of Karanganyar Regency technological adoption and organizational readiness. *Jurnal Aristo (Social, Politic, Humaniora)* , 13(1).
- Katsaros, K. K., Tsirikas, A. N., & Kosta, G. C. (2020). The impact of leadership on firm financial performance: the mediating role of employees' readiness to change. *Leadership and Organization Development Journal*, 41(3), 333–347. <https://doi.org/10.1108/LODJ-02-2019-0088>
- Lindeberg, P., Saunila, M., Lappalainen, P., Ukko, J., & Rantanen, H. (2022). The relationship of physical, digital and social work environment changes with the development of organizational performance in the activity-based work environment. *Facilities*, 40(15–16), 72–88. <https://doi.org/10.1108/F-07-2021-0061>
- Liubarets, V., Kashyna, G., Kachan, Y., Brezetskyi, S., & Ostrovershenko, A. (2024). Adapting professional development to the digital transformation of today's job market. *Multidisciplinary Science Journal*, 6. <https://doi.org/10.31893/multiscience.2024ss0713>
- Mayasari, R., Heryana, N., & Hananto, A. (2023). Village government readiness toward the adoption of E-Government. *Buana Information Technology and Computer Sciences (BIT and CS)* , 4(1).
- Mergel, I., Edelman, N., & Haug, N. (2019). Defining digital transformation: Results from expert interviews. *Government Information Quarterly*, 36(4). <https://doi.org/10.1016/j.giq.2019.06.002>
- Otoluwa, M. H., & Tanaiyo, R. (2023). The Readiness of human resources and the challenges in implementing the MBKM program. In *Proceedings of the Unima International Conference on Social Sciences and Humanities (UNICSSH 2022)* (pp. 1212–1216). [https://doi.org/10.2991/978-2-494069-35-0\\_145](https://doi.org/10.2991/978-2-494069-35-0_145)
- Palos-Sánchez, P. R., Baena-Luna, P., García-Ordaz, M., & Martínez-López, F. J. (2023). Digital transformation and local government response to the COVID-19 pandemic: An assessment of Its impact on the sustainable development goals. *SAGE Open*, 13(2). <https://doi.org/10.1177/21582440231167343>
- Pascalina, D., Widhiastono, R., & Juliane, C. (2022). Pengukuran kesiapan transformasi digital Smart City menggunakan aplikasi Rapid Miner. *Technomedia Journal*, 7(3), 293–302. <https://doi.org/10.33050/tmj.v7i3.1914>

- Peersia, K., Rappa, N. A., & Perry, L. B. (2024). Work readiness: definitions and conceptualisations. *Higher Education Research and Development*. <https://doi.org/10.1080/07294360.2024.2366322>
- Rahmadini, F., & Fitriani, N. (2023). *Transformasi digital dan reformasi birokrasi di Jawa Barat*.
- Rohmah, N., & Komarudin. (2023). Digital transformation in business operations management. *American Journal of Economic and Management Business*, 2(9), 2835–5199.
- Rumsowek, S. J. J. C., Khair, O. I., & Setianingsih, S. (2023). Implementasi sistem pemerintahan berbasis elektronik dalam pelayanan desa melalui pengembangan aplikasi indeks desa membangun di Desa Tapos 1 Kecamatan Tenjolaya Kabupaten Bogor Provinsi Jawa Barat. *Wahana Bina Pemerintahan* , 5(2).
- Safae, I., & Chaimae, D. (2024). *Managing organisational performance in the digital age: A case study of a construction company*. <https://doi.org/10.20944/preprints202405.1671.v1>
- Savic, D. (2019). *From digitization, through digitalization, to digital transformation* (Vol. 43).
- Schallmo, D., Williams, C. A., & Boardman, L. (2017). Digital transformation of business model: Best practice, enablers, and roadmap. *International Journal of Innovation Management*, 21(8). [https://doi.org/10.1007/978-3-319-72844-5\\_2](https://doi.org/10.1007/978-3-319-72844-5_2)
- Shenkoya, T. (2023). Can digital transformation improve transparency and accountability of public governance in Nigeria? *Transforming Government: People, Process and Policy*, 17(1), 54–71. <https://doi.org/10.1108/TG-08-2022-0115>
- Shrestha, M., & Kumar, R. (2022). Performance management in digital transformation: A strategy for sustainability. In *Handbook of Research on Digital Transformation Management and Tools*. IGI Global Scientific Publishing.
- Susanto, M., & Erdiansyah, R. (2024). The influence of compensation, physical work environment, organizational climate on performance with work motivation as an intervening variable on workers in DKI Jakarta. *Journal Eduvest*, 4(10). <http://eduvest.greenvest.co.id>
- Sutanto, L., & Tjahjadi, B. (2023). Analisis human capital readiness dengan human maturity model pada RSUD Dr. Soetomo. *Value Added: Majalah Ekonomi Dan Bisnis*, 19(1).
- Tabrizi, B., Lam, E., Girard, K., & Irvin, V. (2019). *Digital transformation is not about technology*. Harvard Business Review. <https://hbr.org/2019/03/digital-transformation-is-not-about-technology>
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. In *Journal of Strategic Information Systems* (Vol. 28, Issue 2, pp. 118–144). Elsevier B.V. <https://doi.org/10.1016/j.jsis.2019.01.003>

- Vrchota, J., Maříková, M., Řehoř, P., Rolínek, L., & Toušek, R. (2020). Human resources readiness for industry 4.0. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(1). <https://doi.org/10.3390/joitmc6010003>
- Weiner, B. J. (2020). A theory of organizational readiness for change. In P. Nilsen & S. A. Birken (Eds.), *Handbook on implementation science* (pp. 215–332). Elgar Online.
- Xiao, J., Zhang, H., & Han, L. (2023). How digital transformation improve government performance: The mediating role of partnering agility. *IEEE Access*, 11, 59274–59285. <https://doi.org/10.1109/ACCESS.2023.3284793>
- Ziادلou, D. (2021). Strategies during digital transformation to make progress in achievement of sustainable development by 2030. *Leadership in Health Services*, 34(4), 375–391. <https://doi.org/10.1108/LHS-08-2020-0056>