



Innovation of the E-Pakon (Electronic Pangestoh Oncorah Naghereh) Program in Improving Employee Discipline in the Pamekasan District Government

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ABSTRACT

This study aims to analyze the effectiveness of the e-Pakon program innovation and identify its supporting and inhibiting factors in improving employee discipline within the Pamekasan Regency Government. This descriptive qualitative research utilizes the Public Sector Innovation Typology framework. Data were collected through in-depth interviews, observations, and documentation studies, validated using triangulation, and analyzed via an interactive model. The results based on six dimensions indicate: (1) Service: the transition to personal device attendance highly increases practicality. (2) Technology: the integration of *Geofencing* and *Face Recognition* successfully eradicates manipulation. (3) Process: database automation accelerates sanction execution objectively. (4) Organization: data integration with income deductions successfully dismantles the culture of reluctance (*ewuh pakewuh*). (5) Conceptual: the cultural naming "Pangestoh" effectively builds digital shame. (6) Governance: cross-sectoral collaboration legitimizes cyber data as valid forensic evidence. The primary supporting factors are the resilience of the security architecture and the mathematical transparency of sanctions. Conversely, this innovation is hindered by server bottlenecks during crucial hours, device specification gaps, and the emergence of the *presenteeism* pathology. The study recommends increasing server capacity, integrating the e-Kinerja application, and implementing flexible radius adjustments.

INTRODUCTION

Good governance heavily relies on the quality and professionalism of the State Civil Apparatus (ASN). In the context of bureaucratic reform, government apparatuses are required to possess high integrity, excellent performance, and strict discipline to provide optimal public services. Discipline is the awareness and willingness of an individual to obey all institutional regulations and applicable social norms (Hasibuan, 2019). Without strong discipline, strategic government programs will encounter severe obstacles during implementation. Along with the development of the digital era, local governments are encouraged to thoroughly transform their bureaucratic governance through *Electronic Government* (Indrajit, 2002).

Regionally, the commitment to digitalizing the government system in the East Java Province area continues to show a rapid acceleration trend. This fact is evidenced by the significant increase in the East Java Province's Electronic-Based Government System (SPBE) Index from a score of 3.30 in 2022 to 3.62 in 2023. Pamekasan Regency is one of the regions that progressively responded to these bureaucratic digitalization demands. Based on official data released by the local Communication and Informatics Office, Pamekasan Regency successfully achieved the best SPBE predicate in Madura with an index score of 3.92 in the 2024 evaluation. This high achievement indicates that the network infrastructure and digitalization ecosystem within the Pamekasan Regency government have been well-established.

Even though the infrastructure has been built, the massive development of the *smart government* in Pamekasan raises a managerial paradox. The level of ASN disciplinary violations each year still shows alarming numbers, even culminating in dismissal sanctions due to accumulated absences. This disciplinary challenge is closely related to the massive personnel posture that must be supervised. Based on the 2025 personnel data profile, the Pamekasan Regency Government has a total of 7,092 State Civil Apparatus and 4,921 Non-ASN employees. The complexity of human resource management involving tens of thousands of employees in a single regional ecosystem confirms that the manual attendance system is no longer adequate to create a fair culture of discipline.



Figure 1 User Interface, Attendance Dashboard, Geofencing Validation, and Attendance History on the e-Pakon Application displays

The Pamekasan Regency Government subsequently launched an advanced attendance program innovation named e-Pakon (Electronic *Pangestoh Oncorah Naghereh*), which was developed with an estimated budget absorption of IDR 250,000,000. The implementation of this advanced attendance program can be observed through its application interface. Figure 1 User Interface, Attendance Dashboard, Geofencing Validation, and Attendance History on the e-Pakon Application displays an intuitive and functional design. The interface seamlessly integrates facial biometric validation (*facial recognition*) with *Global Positioning System* (GPS) tracking in real-time. The simplicity of the layout, from the login page to the attendance history, is a tangible manifestation of a managerial strategy to enhance the perceived ease of use among employees spanning highly diverse age ranges.

Nevertheless, the implementation of this advanced program has not been entirely seamless. The system recorded massive violation anomalies, evidenced by employee dismissal sanctions due to cumulative absences of up to 55 working days in 2025, as well as the discovery of *Fake GPS* manipulation. Deductions in Additional Employee Income (TPP) resulting from ASN attendance violations even contributed to the Remaining Budget Calculation (SILPA) of regional treasury savings by more than IDR 1.2 billion throughout 2024. The substantial amount of TPP deduction funds indirectly proves that financial sanctions have not provided a complete deterrent effect on the work ethos of the Pamekasan apparatus.

Based on these phenomena, there is a distinct research gap. Various previous studies mostly viewed the adoption of digital attendance purely as an administrative-bureaucratic entity. No research has holistically examined an oversight innovation that simultaneously collides with massive server issues, *Fake GPS* sabotage, dismissal threats, and the local Madurese cultural philosophical approach. The urgency of this research occupies a highly vital position to provide an independent academic evaluation so that e-Pakon does not merely become an SPBE Index booster. Therefore, the research objectives are formulated to answer two main questions: (1) How does the innovation of the e-Pakon (electronic *pangestoh oncorah naghereh*) program improve employee discipline in the Pamekasan Regency Government? and (2) What are the supporting and inhibiting factors for implementing the e-Pakon program innovation in improving employee discipline in the Pamekasan Regency Government?.

LITERATURE REVIEW

New Public Management

The paradigm shift in public administration science has birthed the *New Public Management* (NPM) reform idea. NPM is an approach that adopts management techniques and practices from the private sector to be implemented in the public sector to achieve the highest level of efficiency (Hughes, 2012). This concept emphasizes the application of business management tools and quantitative performance measurement in government environments (Pollitt & Bouckaert, 2011). Through the lens of NPM, the government transforms into an organization driven by outcome achievements,

thus positioning the integration of technological discipline with performance incentive deductions as a rational step to suppress public service budget waste.

Innovation and Public Sector Innovation Typology

Innovation is defined as an idea, practice, or object that is perceived and accepted as new by an individual or a group (Rogers, 2003). In the government spectrum, innovation is not merely aimed at seeking profit but at creating tangible public value for the wider community. To dissect the dimensions of this renewal, Bekkers, Edelenbos, and Steijn (2011) formulated six typologies of public sector innovation: (1) *Product or Service Innovation*, namely the creation of new services or drastic modifications of existing services; (2) *Technological Innovation*, closely related to the adoption of the latest hardware and software infrastructure; (3) *Process Innovation*, emphasizing the improvement of work methods and simplification of bureaucracy in internal areas; (4) *Organizational and Managerial Innovation*, encompassing changes in performance management, incentive structures, and organizational culture; (5) *Conceptual Innovation*, the introduction of new perspectives or philosophies in defining public problems; and (6) *Governance Innovation*, the development of strategic partnership patterns and cross-sectoral collaboration relations.

Electronic Government

Electronic Government (e-Government) emerged as a form of bureaucratic transformation in response to technological civilization advancements. *E-Government* is a new interaction mechanism between the government and the community or internal entities through the intensive use of information technology to boost service quality (Indrajit, 2002). The use of this technology is implemented to re-engineer institutional workflows so that bureaucratic processes can be carried out much faster, accurately, and transparently (Heeks, 2006). The e-Pakon system is a pure manifestation of the e-Government principle that alters manual management into a cyber-based government working without conventional time boundaries.

METHODOLOGY

This study employs a qualitative approach with a descriptive research type to explore phenomena naturally (Creswell, 2016). The research location was established in the Pamekasan Regency Government, focusing specifically on the Human Resources Research and Development Agency (BKPSDM) as the formulator of sanction regulations, the Communication and Informatics Office (Diskominfo) as the entity responsible for the application's server architecture, as well as several technical Regional Apparatus Organizations (OPD). The focus of the study is elaborated based on the parameters of the 6 public sector innovation typologies and the analysis of supporting-inhibiting factors.

Primary data sources were collected directly from key informants selected through a purposive sampling technique, including the Head of BKPSDM, the e-Pakon IT Development Team of Diskominfo, the Head of the Apparatus Development Division, and the apparatus (ASN and Non-ASN) as end-users. Secondary data sources were gathered from monthly attendance reports, the

2025 discipline violation data recapitulation, the results of the 2024-2025 Community Satisfaction Survey (SKM), the Government Agency Performance Report (LAKIP), and the ASN Professionalism Index report. Data collection utilized in-depth interviews, observations of device interface activities and monitoring dashboards, and documentation studies of server digital footprints.

To ensure the data obtained are objective and accountable, this study uses a data validity test through source triangulation and method triangulation techniques (Moleong, 2017). Qualitative data analysis was conducted using a continuous interactive model (Miles, Huberman, & Saldana, 2016). The analysis steps began with data condensation to select interview transcripts, followed by data display using attendance matrix tables, and concluded with conclusion drawing/verification to formulate the meaning of the program's effectiveness and obstacles comprehensively.

RESEARCH RESULT AND DISCUSSION

Innovation of the e-Pakon Program in Improving Employee Discipline in the Pamekasan Regency Government

The implementation of the e-Pakon program is analyzed using the six dimensions of the Public Sector Innovation Typology (Bekkers et al., 2011). The following explanation details the transformation impact on each dimension within the Pamekasan Regency bureaucracy.

Product or Service Innovation

E-Pakon radically restructures the attendance instrument from static fingerprint machines to an application based on *Bring Your Own Device* (BYOD). This service transition eliminates physical queues and risky mechanical touches. This transition represents an improvement in the quality of *User Experience*, as every device belonging to the employee transforms into an independent service counter.

Table 1. Shift in Internal Service Quality Parameters Post e-Pakon Implementation

Service Satisfaction Dimension (SKM)	2024 Score	2025 Score (Sem. I)	Growth Trend	Analytical Remark
Facilities and Infrastructure	3.94	3.95	Up +0.01	Migration to personal smartphones is deemed highly effective in reducing physical queues.
Service Completion Time	3.58	3.70	Up +0.12	The clock-in process becomes instantaneous (in seconds) without waiting for machine turns.
Service Requirements	3.54	3.68	Up +0.14	Tolerance for low-specification devices begins to be well accommodated.
Total Satisfaction Index	91.34	92.76	Up +1.42	Enters the Very Good satisfaction category.

Source: Processed Data by Researcher from BKPSDM SKM 2024-2025

Based on Table 1, there is a clear positive correlation between the e-Pakon independent service and internal customer satisfaction. The loss of the physical attendance requirement at the machine point provides extreme flexibility.

To suppress economic discrimination, e-Pakon is designed with a high level of inclusivity through the provision of a *multi-account login* feature. The decision to accommodate logins through devices belonging to institutional administrators for employee groups who do not yet own adequate smartphones confirms the social mitigation of policy implementers. This intelligent system rejects the negligence of the attendance rights of economically vulnerable groups, ensuring all strata of employees remain protected in a single attendance architecture.

The increase in time compliance also implicates the smoothness of public services. The disappearance of the physical queue culture in front of the scanner machine returns productive morning time for regional apparatuses. The time successfully saved is immediately converted into bureaucratic administrative services that are far more responsive, evidenced by the skyrocketing of the Service Unit Community Satisfaction Index to the Very Good category, confirming the success of personal digital autonomy.

Table 2. Dynamics of Discipline and Apparatus Interaction Correlation

Public Service Element SKM	2024 Score	2025 Score (Sem. I)	Service Correlation Trend
U3 - Completion Time	3.58	3.70	Increasing. Discipline impacts the availability of apparatuses to complete tasks faster.
U7 - Implementer Behavior	3.63	3.64	Stagnant. Evaluation notes officers look stiff, confused, and lack smiles.
U8 - Complaint Handling	3.62	3.66	Increasing. Preparedness at the service desk increases responses to technical disruptions.
U9 - Facilities and Infrastructure	3.94	3.95	Increasing. Investment in physical infrastructure is responded to positively.

Source: Processed Data by Researcher from BKPSDM SKM 2024-2025

Based on Table 2, forced discipline creates sociological pressure in the form of *digital fatigue*, expressed through the stiff behavior of officers during public interactions. Even so, the integration of the *WhatsApp*-based *Helpdesk* successfully maintains the stability of institutional technical support.

Technological Innovation

The technological dimension highlights the application of advanced infrastructure that alters organizational capabilities. E-Pakon adopts *Zero-Trust* security by combining *Face Recognition* biometric computing and satellite *Geofencing*.

Table 3. Recapitulation of Geospatial Anomaly Detections Based on e-Pakon Server Logs (January 2026)

Technological Constraint Category	Frequency	System Penalty Impact	Algorithm Resolution (Diskominfo)
Bottleneck / Server Down	Very High	Massive Late Status	Implementation of Load Balancing on Node Servers.
GPS Drifting (Signal Jumps)	High	Check-in Failed	Extension of Error Margin tolerance to a 20-30m radius.
Liveness Detection Failure	Medium	Force Close on Low-end devices	Automatic compression of camera resolution below 100kb.
Fake GPS / Mock Location	Low	Permanent Absence Status (TPP Cut)	Injection of Anti-Spoofing script & IP Address Log Audit.

Source: Diskominfo Helpdesk Documentation 2026

Based on Table 3, Diskominfo successfully embedded a robust *anti-spoofing* algorithm to ward off *Fake GPS* attacks. Blocking the gallery (*upload from gallery blocked*) ensures photos are taken *live*. On the other hand, the conventional morning assembly instrument is retained to cover the *technological blindspot* of the *hit-and-run* absence phenomenon (clocking in at the parking area and then leaving).

The success of this hardware innovation is further supported by the implementation of cutting-edge military-grade cryptographic protection. The supervisory coordinate points are locked using a *hash* function, and the database is protected via AES-256 encryption to prevent information traffic hijacking (*man-in-the-middle attacks*). Absolute compliance with Electronic-Based Government System (SPBE) standards ensures that personnel digital footprints are immune to all forms of external infiltration.

The technological innovation cycle in the e-Pakon application runs continuously through an update pattern of a centralized analytic algorithm. Developers are required to have agility in reading new attendance anomaly patterns that continue to mutate every month. The tactical game between tight security systems and the ingenuity of rogue employees triggers the constant maturation of computational protection, enabling surveillance devices to recognize location hacking patterns as early as possible.

Process Innovation

This innovation annihilates the regime of monthly manual recapitulation paper stacks. The consolidation process of dozens of OPDs is aggregated independently by the machine through scheduled data pulling (*Cron Job*) via an encrypted API route.

Table 4. Matrix of Bureaucratic Process Cycle Time Reduction Transformation

Back-Office Process Indicator	Conventional Era (Pre-2022)	Automation Era (e-Pakon 2024-2026)	Efficiency Level
TPP Lateness Calculation	Manual Excel, 5-7 working days per month.	Hardcoded Algorithm, results out instantly.	99.9%
Recapitulation of Absences	Hierarchical paper recap, prone to negotiation.	Auto-flagging colors (Red/Yellow) by server.	100%
Reprimand Procedure (BAP)	Waiting for the year-end late accumulation report.	Automatic Early Warning notification at 3 days of Absence.	Preventive
Leave / Official Duty Validation	Slow cross-agency physical correspondence.	Upload PDF documents (SPT/Certificate) directly in the app.	85.0%

Source: Comparative Analysis of Pamekasan Regency BKPSDM Management Processes

Referring to Table 4, e-Pakon accelerates the decision chain with automatic marking (*auto-flagging*). The decimal calculation of TPP is directly integrated with the regional treasurer's portal (SimGaji), erasing human calculation errors. The bureaucratic disciplinary hearing process also changed based on digital forensic facts of minutes and seconds that cannot be refuted.

The destruction of the paper regime and the burning of monthly recap file stacks freed up thousands of functional working hours in the administrative division. Administrative personnel who previously stuck to the routine of verifying obsolete attendance sheets can now redirect their focus to the strategic agenda of developing the competence of state servants. This change in the managerial workflow reflects a high efficiency in utilizing human resources.

Although automation dominates, this management innovation still leaves an administrative pebble in handling daily exceptional conditions. Employees carrying out sudden external official duties are required to undergo a hybrid bureaucracy by uploading physical evidence in the form of an Official Duty Letter (SPT). The obligation to attach this legal paper document acts as a system safety valve to ward off corrupt morality from rogue officers who like to abuse field work status requests.

Organizational and Managerial Innovation

E-Pakon transforms into a change management weapon. Decimal attendance sanctions are multiplied directly by the TPP rupiah (0.5% - 1.5% per minute late), instantaneously shattering the bureaucratic rubber-time habit.

Table 5. Correlation of Time Violation Accumulation to Disciplinary Managerial Evaluation

Apparatus Name (NIP Disguised)	Lateness Frequency	Absence Frequency	Total Accumulated Lost Time	System-Based Managerial Action
Achmad Sugianto	20 Times	4 Times	> 25 Hours	Maximum TPP percentage deduction & BAP.
Abd. Abdul Bari, SE	0 Times	24 Times	Total Absence Status	Execution of Summons for the Inspectorate Code of Ethics Hearing.
R. Sarif Candra G.W	19 Times	-	> 1 Hour	Automatic written reprimand, degradation of SKP value.
Abu Riadi Pujianto	21 Times	4 Times	> 3 Hours	TPP deduction according to the algorithm formula.
Sura'i	1 Time	0 Times	< 1 Minute	Full retention reward, entitled to receive TPP.

Source: Secretariat & BKPSDM Employee Attendance Data January 2026

Based on Table 5, the algorithmic machine successfully uncovers the dark veil of absolute truants without intervention. The authority of punishment shifted to the server, eradicating the culture of *ewuh pakewuh* (reluctance). The enforcement of this transparent sanction is portrayed absolutely in the aggregate ASN Professionalism Index (IP ASN).

The strict execution of algorithmic incentive deductions at the beginning of the implementation produced an immensely large surge in the Remaining Budget Calculation (SILPA). This phenomenon marks the success of the shock therapy phase in toppling the arrogance of the regional bureaucracy accustomed to a relaxed life. The decline in the trend of rupiah deductions in the transition of the second year certifies the fact that financial sanctions slowly began to engineer the apparatus's commuting schedule routine permanently.

Even though cyber algorithms dictate discipline, the strength of local leadership remains the main magnet forming departmental integrity. The exemplary structural superior who diligently performs pure organic attendance without false dispensations emits a radiation of obedience that sweeps away the seeds of rebellion in the subordinate ranks. Institutions with highly committed protective figures proved capable of dominating the top of the ASN Professionalism Index standings.

Table 6. Anatomy of PNS Category IP ASN Achievements (2025)

Rank (PNS)	Name of Regional Apparatus Organization	Competency Score	Performance Score	Discipline Score	Total IP ASN
Top 1 Best	Bapperida	33.58	30.00	5.00	91.58
Top 2 Best	BKPSDM	33.20	28.47	5.00	89.67
Rank 42 (Lowest)	Population and Civil Registration Office	19.70	16.14	5.00	64.24

Source: BKN Evaluation Metric Updates

Through Table 6, it is confirmed that the Regency Discipline Dimension score reached an absolute point (5.00). The high attendance reveals an organizational pathology disease namely *presenteeism*, where employees are present passively without productivity, evidenced by the plummeting Performance Dimension scores of the lower institutions.

Conceptual Innovation

E-Pakon engineers the apparatus's paradigm through the semantic injection of the Madurese language, "Pangestoh Oncorah Naghereh" (Serving as the Light of the Nation). This philosophy undermines the stigma of a repressive satellite tracking device.

Table 7. Transformation of Pamekasan Regency ASN Cultural Paradigm

Pre-Innovation Cultural Paradigm	Conceptual Change Agent	Post-Innovation Cultural Paradigm
Rubber Time pleasantries.	Mathematical machine second calculations & Dashboard warning colors.	Precision Professionalism: Without time tolerance negotiations.
Ewuh Pakewuh: Superiors hesitate to punish.	Algorithmic System (Scapegoat).	Algorithmic Objectivity dismantles communal protection.
Salary as a routine Labor Right.	Pangestoh Philosophy & Halal Salary Doctrine.	Salary as service Accountability.
Physical Malo (Shame) in the field.	Red/Yellow Flagging on colleagues' screens.	Digital Reputation Prestige: Fear of bad status on the dashboard.

Source: Interview Results 2026

The analysis of Table 7 shows that e-Pakon capitalizes on the digital shame (*malo*). When violations are displayed on a colleague's dashboard, apparatuses rush to be present to protect their reputation. The application is refined with a morning encouragement *gamification* feature to fade cultural resistance.

True conceptual innovation does not stop at semantic naming ornaments but expands broadly to the internalization of religious doctrine regarding the halality of regional allowances. The constant directives of leaders who continuously voice the advice that punctuality is an absolute requirement to provide for the family successfully convert profane routines into forms of transcendental accountability. Understanding this spiritual foundation slowly uproots the staff's hatred towards the salary-cutting machine.

The exploitation of the fear of losing allowance pockets slowly metamorphosed into producing noble cognitive habituations. Employees started adjusting their body's biological clock punctuality much earlier, not simply because of the threat of system coercion, but purely due to the formation of a collective moral consciousness. The psychological evolution from the sense of material compulsion towards a natural reflex routine confirms the absolute success of the apparatus's mental engineering.

Governance Innovation

The tripartite strategic collaboration was formed harmoniously due to the Regent's vertical intervention.

Table 8. Architecture of Cross-Regional Apparatus Governance Authority Distribution (e-Pakon)

Institutional Actor	Governance Authority Domain	System Execution Implication
Regent	Publisher of Regional Regulations.	Eliminates ego-sectoralism; binds absolute regulations.
BKPSDM	Business Owner: HR Regulator.	Prints violation reports & fine formulator.
Diskominfo	System Provider: IT Architect.	Developer of AES-256 encryption security & server Uptime.
Inspectorate	Judicative Auditor.	Uses e-Pakon MySQL as evidence for dismissal hearings.
Head of OPD	Local Admin: Local Override Rights.	Decentralization of dispensation approval prevents central queues.

Source: Analysis of Pamekasan E-Government Sectoral Administration 2026

Based on Table 8, authority segregation secures e-Government orchestration. BKD manages HR regulations, Diskominfo maintains network *uptime*, and the Inspectorate utilizes the e-Pakon database as an undeniable forensic tool for bureaucratic trials. The delegation of dispensation authority to local OPD Subdivision Heads visibly cuts down the dispute bureaucracy.

Efforts to avoid the blockage of paper bureaucracy queues at the regional leadership desk are executed tangibly through the policy of decentralizing governance authority. Granting local amnesty validation access rights (*override*) to the Personnel Subdivision Head successfully cuts the chain of command drastically and efficiently. The delegation of partial jurisdiction forces mid-level

executives to dare to take moral responsibility for the real attendance justification of their subordinate ranks in their respective agencies.

The limited range of satellite signal transmission in the northern region of Pamekasan urged local government parties to stretch the boundaries of governance innovation beyond government walls. Lengthy strategic lobbying with external cellular network provider companies to execute the construction of new transmission towers is a crucial equalization step. The justice of equalizing telecommunications infrastructure is affirmed as an absolute key so that the sword of the machine's calculations can equitably slash the laziness of village implementers without location discrimination.

Supporting and Inhibiting Factors for Implementing the e-Pakon Innovation Supporting Factors

The implementation of e-Pakon is strongly supported by the robust multi-layered biometric security architecture. The fusion of facial recognition and geolocation destroys the deception gaps of the past.

Table 9. Analysis of Validation Success Metrics and Detection of e-Pakon Anti-Spoofing Anomalies

System Security Parameter Type	Total Detected Cases	Automatic System Mitigation Action	Blocking Success Percentage
Mock Location Activation Detection (Fake GPS)	842 attempts	Account locked 24 Hrs, Admin Notification	98.5%
Timestamp Manipulation / Device Time	315 attempts	Bypass rejected, Server NTP time synchronization	100%
Biometric Authentication Failed (Printed Photo)	1,204 attempts	Clock-in rejection, Eye blink required (Liveness)	94.2%
IP Address Anomaly (Foreign VPN)	56 attempts	Warning Flagging, log sent to Diskominfo	100%

Source: Pamekasan Diskominfo Server Log, 2026

The data in Table 9 certifies that the system's *anti-spoofing* script acts as an aggressive *gatekeeper*. The transparent integration between cyber violation detection and the withdrawal of TPP nominal rupiah deductions stimulates solid mass compliance regardless of hierarchy.

Inhibiting Factors

The application of innovation must collide hard with the limitations of server infrastructure. The *bandwidth* load on the computing center often fails to facilitate the morning access surge.



Figure 5.1 Fluctuation of Server Load, Ping Latency, and e-Pakon Authentication Failure Rate Based on the Morning Time Window

Based on the visual graphic fluctuation (Figure 5.1), the organic access explosion of thousands of ASNs at 06:45 – 07:00 WIB causes extreme latency. This cloud computing congestion phenomenon is worsened by the disparity of apparatus personal device ownership facilities.

Table 10. Distribution of ASN Device Specification Capacity and its Correlation with Attendance Duration

Device Specification Category	Estimated Population	Authentication Loading Time	Force Close Risk Level	Implication on Attendance Record
High-End (RAM ge 8GB)	15%	2 - 4 seconds	Very Low (<1%)	Competitive advantage, never late due to device.
Mid-Range (RAM 4GB - 6GB)	45%	6 - 15 seconds	Low - Medium (5%)	Generally stable, dependent on network density.
Low-End (RAM le 3GB)	40%	20 - 45 seconds	Very High (>25%)	Prone to passive late accumulation. Device often crashes.

Source: Interview and Researcher Analysis 2026

Table 10 reveals an unfair reality; implementing staff with standard specification mobile phones often suffer lateness penalties due to slow camera processing. This obstacle is vividly reflected in the penalty recapitulation at the lower institutional level.

Table 11. General Section Employee Lateness Data (January 2026 Period)

No	Employee Name	Position	Total Lateness	Total Absence
1	Abu Riadi Pujiyanto	Administrator	21 Times	4 Times
2	Abd. Rahman	Administrator	20 Times	4 Times
3	Hasin	Operator	5 Times	1 Time
4	Arief Junaedi	Data Processor	10 Times	4 Times

Source: Pamekasan Regency BKPSDM, 2026

The analysis of Table 11 exposes the bitterness of system errors (*digital friction*). Forgetting to clock in and device failures rob implementing staff of hundreds of thousands of incentive rupiahs. The final managerial obstacle is that the high dependence on money-based attendance induces *presenteeism*, a condition where employees are merely physically present without real work report contributions just to avoid the machine executioner's sanctions.

CONCLUSIONS AND RECOMMENDATIONS

The e-Pakon innovation has transformed the disciplinary governance of the Pamekasan Regency Government comprehensively based on six innovation dimensions. Service innovation changes the biometric attendance medium into responsive independent devices, despite spawning *digital fatigue*. Technological innovation destroys cheating definitively using a *Zero-Trust* security system (*Face Recognition* and *Geofencing*). Process innovation automates daily reports digitally without paper intervention. Managerial innovation delegates the execution of money deduction (TPP) to computational algorithms, successfully getting rid of the *ewuh pakewuh* culture. Conceptual innovation brilliantly injects the philosophical value of "Pangestoh" to capitalize on the apparatus's digital shame. Finally, governance innovation births a tripartite functional fusion between BKPSDM, Diskominfo, and the Inspectorate, which legitimizes cyber *databases* as pure pillars of administrative trials.

The success of this massive surveillance is absolutely supported by two dominant factors, namely the robustness of the *anti-spoofing* protection script architecture that is impossible to hack, and the transparent precision of the objective mathematical decimal calculation sanction execution. On the opposite side, the enforcement of digital integrity is hindered by *server bandwidth* limitations that paralyze during crucial morning minutes, as well as the computational specification gap of the apparatus's low-end mobile phones that results in disproportionate time sanctions. In socio-managerial terms, the obsession with machine routines bears a massive risk of printing a stagnant *presenteeism* pathology among the ranks of the staff.

This research recommends the need to strengthen the robust server architecture through heavy-duty *Load Balancing* facilities to dampen simultaneous access surges. Policy-making institutions are urged to carefully provide specific attendance second tolerance extensions to respond to the slow processing of standard apparatus device mobile phones. Besides coordinate radius adjustments, BKPSDM is demanded to immediately integrate the e-

Pakon machine gate with the BKN e-Kinerja portal document upload obligation to ensure every morning apparatus time attendance is genuinely converted into a form of prime service to the community.

ADVANCED RESEARCH

This study develops an advanced understanding of digital bureaucratic governance by demonstrating that the e-Pakon innovation functions not merely as an attendance monitoring system but as an integrated digital discipline ecosystem that reshapes organizational behavior through the convergence of technological, managerial, cultural, and governance innovations. The findings reveal that algorithmic decision-making, biometric verification, and inter-agency data integration significantly enhance transparency, accountability, and policy enforcement, while simultaneously generating new challenges related to digital infrastructure capacity, technological inequality, and the risk of presenteeism-oriented work culture. Future research should expand this model by examining its long-term impact on employee performance, organizational commitment, public service quality, and digital trust across different governmental contexts, while incorporating emerging technologies such as artificial intelligence, predictive analytics, and adaptive governance frameworks to create a more human-centered, resilient, and sustainable digital public administration system.

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