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Digitalization of Regional Regulation Enforcement: A Legal Review of the Use of Information Technology by Batam City's Public Order Agency (Satpol PP)

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Abstract: The advancement of information technology has led to substantial transformations in government, particularly in the enforcement of regional regulations by the Public Order Agency (Satpol PP). The digitalization of regional regulation enforcement exemplifies the application of e-government principles, intended to enhance the efficiency, transparency, and accountability of regulatory enforcement personnel at the regional level. This study aims to examine the legal framework governing the Satpol PP's use of information technology in executing its regional regulatory enforcement duties. The research involved an analysis of pertinent laws and regulations, including Law Number 23 of 2014 regarding Regional Government, Regulation of the Minister of Home Affairs Number 16 of 2023 on Guidelines for the Nomenclature of Regional Apparatuses in Public Order, Security, and Community Protection, as well as associated policies regulating the application of information technology within the regional government framework. The findings of this study are anticipated to enhance the evolution of administrative law in the digital age, specifically in fortifying the legal framework for the enforcement of information technology-based regional regulations. The research findings are anticipated to offer recommendations for regional governments on formulating policies aligned with the principles of good governance, ensuring that digitalization not only expedites law enforcement processes but also safeguards citizens' rights and legal certainty in their execution. Most crucially, this study finds that the legal legitimacy of digital enforcement is conditioned by privacy-compliant governance: when Batam's Satpol PP processes complaint, surveillance, or violation data without sufficiently specific derivative rules on access, retention, and accountability, the efficiency gains of e-government risk colliding with citizens' privacy rights and weakening legal certainty.

Keywords: Regional Regulation Enforcement, Digitalization, Satpol PP, Policy, Law, Implementation, Effectiveness

INTRODUCTION

Regional regulations are legal instruments that play a strategic role in implementing regional governance and regulating community life. Regional Regulations not only complement national legislation but also serve as the primary legal tool for regional governments to maintain public order and public safety and enforce local legal norms in accordance with regional characteristics (Kostrubiec, 2021). Therefore, the effectiveness of Regional Regulations is largely determined by the mechanisms and quality of their enforcement.

In Indonesia's regional government system, the Public Order Agency (Satpol PP) is a regional apparatus authorized to enforce Regional Regulations and Regional Head Regulations (Wahyono, 2019). This authority is normatively regulated in Law Number 23 of 2014 concerning Regional Government and clarified in Government Regulation Number 16 of 2018 concerning the Satpol PP. As the enforcement agency for Regional Regulations, Satpol PP plays a strategic and complex role, straddling the intersection of law enforcement and public service functions within the context of government administration (Maindoka et al., 2025).

Along with the development of information and communication technology, government administration practices, including administrative law enforcement, are undergoing a significant shift toward digital patterns or are entirely based on information technology. Hossin et al. (2025) emphasize that digital governance encourages the use of various information technology instruments in administrative, supervisory, and law enforcement processes. In the context of regional regulatory enforcement, the Public Order Agency (Satpol PP) is increasingly using information technology, including violation-reporting applications, digital database systems, CCTV cameras, and the integration of information systems among regional agencies. This use of technology, on the one hand, offers increased efficiency, transparency, and accountability in regional regulation enforcement (Hafiez Sofyani et al., 2020; David et al., 2023).

Batam is a compelling locus because the digitalization of enforcement is no longer hypothetical. Satpol PP Batam has publicly introduced SIAP GARDA as a public reporting channel for Perda/Perkada violations, provides SP4N-LAPOR complaint access, and Batam's planning documents also reference a patrol application and CCTV-supported facilities within the city's enforcement ecosystem. In other words, the city already exhibits an operational shift toward complaint-based, data-based, and technology-assisted enforcement. Yet this practical development is not automatically matched by a sufficiently specific local legal architecture governing data classification, retention periods, access restrictions, evidentiary use, inter-agency data sharing, and complaint remedies. This gap makes Batam normatively urgent: digital tools are already visible in practice, while the derivative legal foundation that should discipline their use remains fragmented and under-specified.

The application of information technology in the enforcement of regional legislation transcends basic technical or administrative concerns and presents essential legal challenges. From the standpoint of state administrative law, all governmental actions, including the implementation of regional regulations by the Satpol PP, must comply with the principle of legality. This concept mandates that all governmental authorities and actions of officials must possess a clear and legitimate legal foundation (Hickman, 2020). The use of information technology lacking a sufficient normative foundation may lead to governmental activities that exceed legal power (*détournement de pouvoir*) or that contravene the law (As-Saber et al., 2006; Brownsword, 2022).

Alongside the principle of legality, Made & Premaiswari (2024) and Rabbani et al. (2020) elucidate that the application of information technology in the enforcement of regional regulations is directly related to the protection of citizens' rights, specifically the right to privacy and personal data protection. The use of technology, including CCTV, digital data collection, and the management of personal data, poses a risk of human rights infringements if

not rigorously regulated and monitored (Rabbani et al., 2020). The implementation of Law Number 27 of 2022 on Personal Data Protection mandates the state and government authorities to ensure the security and lawful, proportional use of personal data.

Prior research has predominantly concentrated on the efficacy and creativity of technology in enhancing the performance of the Satpol PP or municipal governments. Nonetheless, research particularly investigating the application of information technology by Satpol PP within a normative legal analytical framework is relatively scarce. The absence of a thorough legal study may lead to legal ambiguity and conflict between governmental authority and citizen rights in the digitalization of regional regulatory enforcement.

This research is essential for enhancing the comprehension of the legal validity of Satpol PP's use of information technology in the enforcement of regional legislation. This study specifically examines the application of information technology in the execution of the responsibilities and powers of the Batam's Satpol PP, the regulatory enforcement body under the Batam Government. The research examines the legal validity and constraints on the Batam's Satpol PP implementation of digital systems in the execution of its administrative, supervisory, and enforcement duties. This research aims to make theoretical contributions to advancing state administrative law studies and to offer normative recommendations for local governments on developing digital policies that enforce regional regulations in alignment with the principles of the rule of law.

Literature Review

Constitutional Framework and Authority of the Satpol PP

Law enforcement in Indonesia, including the enforcement of Regional Regulations (Perda) by the Satpol PP, has a strong constitutional basis in the 1945 Constitution of the Republic of Indonesia (UUD 1945). Article 1, paragraph (3) of the 1945 Constitution states that Indonesia is a state based on law, which requires all government actions, including the enforcement of Perda, to be carried out in accordance with applicable law. Article 18 of the 1945 Constitution provides the basis for regional autonomy, allowing local governments to establish Perda applicable within their jurisdictions and empowering the Satpol PP to enforce them. As explained by Wahyuni (2020), the Satpol PP's authority to enforce Perda is rooted in the principle of the rule of law guaranteed in the constitution, and the Satpol PP's duty is to maintain public order through preventive and limited repressive administrative actions.

Rusdi et al. (2021) also explain in their research that in Government Regulation No. Law No. 16 of 2018 concerning the Public Order Agency (Satpol PP) explains that the Satpol PP's duties include enforcing Regional Regulations (Perda) and Regional Head Regulations (Perkada), as well as maintaining public order and public tranquility. Satpol PP functions as an administrative law-enforcement apparatus responsible for implementing regional policies on public order.

According to the Minister of Home Affairs Regulation No. 6 of 2020, Satpol PP is part of the regional government apparatus responsible for enforcing Regional Regulations and creating public order and tranquility. Therefore, the Satpol PP's role is crucial in maintaining security and order at the regional level through administrative law enforcement. To support this authority, digitizing regional regulation enforcement is highly relevant, particularly through the use of information technology (IT). Satpol PP, as explained in Presidential Regulation No. 95 of 2018 concerning the Electronic-Based Government System (SPBE), is expected to integrate IT into government administration to increase the efficiency and transparency of regional regulation enforcement. This digitization includes the use of a complaint application, a violation data collection system, real-time violation monitoring, and documentation of the results of Satpol PP enforcement actions.

To guarantee that the implementation of IT in enforcing regional legislation does not contravene other regulations, a comprehensive legal examination is essential. These

acknowledge the presence of legislation such as Law Number 27 of 2022 on Personal Data Protection, which governs the processing of personal data, and Law Number 14 of 2008 on Public Information Disclosure, which ensures public access to information. A study is required to examine the implementation of legislation on the digitalization of regional enforcement without infringing on personal data privacy or public information disclosure provisions. According to David et al. (2023), regional agencies, including the Satpol PP, must consistently uphold the principles of transparency in information and privacy protection to ensure that citizens' rights are protected during law enforcement activities.

Government Digitalization and Information Technology Utilization

The digitalization of government, or digital governance, refers to the transformation of administrative procedures via information technology to enhance the efficiency, transparency, and accountability of public services. Within the realm of administrative law, digitalization does not eliminate the legal nature of governmental operations; instead, it alters the medium and methods of their execution. Sira (2025) posits that digitalization enhances transparency, accountability, and efficiency in the enforcement of regional regulations; however, stringent oversight is necessary to safeguard against violations of personal data protection and public information transparency principles.

Numerous studies indicate that information technology in government should be regarded as a supportive tool for authority, rather than a new source of authority (Kurnia et al., 2017; Rose et al., 2015). Consequently, the implementation of digital applications, database systems, and surveillance technology by the Satpol PP in enforcing regional rules must have a clear legal foundation. It must not exceed the authority established by statutory provisions.

The Principle of Legality in Technology-Driven Government Actions

The idea of legality is a foundational tenet of a rule-of-law state, requiring that all governmental activities be grounded in legitimate laws and regulations. In the realm of digitalizing regional regulatory enforcement, the notion of legality requires explicit standards that delineate the technology employed, its intended purpose, and the constraints on the power of the Satpol PP officials.

Multiple sources affirm that the utilization of information technology by government officials lacking a sufficient legal foundation may result in maladministration and the misuse of authority. Consequently, implementation of technology in regional regulatory enforcement must not rely solely on internal rules or practical requirements but should be anchored in explicit, quantifiable regulations.

Brata et al. (2025) identified that robust cooperation among concerned agencies and meticulous file preparation in compliance with legal protocols are critical determinants for the effective execution of regional regulations. This can be ascribed to the use of information technology grounded in legislation and to enhanced inter-agency collaboration, thereby enabling the best attainment of regional regulatory enforcement objectives. The following table outlines the statutes and rules governing the digitalization of Regional Regulation enforcement by the Satpol PP.

Table 1. Fundamental Legal Documents and Legal Examination of the Satpol PP's Jurisdiction

No	Hierarchy and Legal Materials	Main Substance of the Regulations	Legal Analysis of the Authority of Satpol PP
1	1945 Constitution of the Republic of Indonesia	The 1945 Constitution is the constitutional basis for the authority of the Public Order Agency (Satpol PP). Every action by the Satpol PP, including those based on information	The 1945 Constitution is the constitutional basis for the Public Order Agency's (Satpol PP) authority. Enforcement of regional regulations is only valid if implemented within the framework of the rule of law, regional autonomy, and respect for human rights. Every Satpol PP action, including those based on information technology, must

No	Hierarchy and Legal Materials	Main Substance of the Regulations	Legal Analysis of the Authority of Satpol PP
		technology, must comply with the principles of legality, legal certainty, and protection of citizens' rights.	comply with the principles of legality, legal certainty, and protection of citizen rights.
2	Law Number 23 of 2014 concerning Regional Government	Regulates the division of government affairs and the formation of regional apparatuses, including matters of public order and public safety.	This law forms the basis for delegating authority to regional governments to establish Public Order Agency (Satpol PP). The authority to enforce regional regulations is administrative and falls within the scope of regional governmental obligations. Digitizing regional regulation enforcement is viewed as an instrument for implementing authority, not as an addition of new authority.
3	Government Regulation Number 16 of 2018 concerning the Civil Service Police Unit	Regulates the duties, functions, and authority of the Satpol PP in enforcing Regional Regulations (Perda) and Regional Head Regulations (Perkada) and maintaining public order.	This PP is a <i>lex specialis</i> that explicitly defines the scope of the Satpol PP's authority. Enforcement of the regulation is carried out through proportional guidance, supervision, and administrative action. The use of information technology is legally valid as long as it supports these functions and does not exceed the established authority.
4	Minister of Home Affairs Regulation Number 54 of 2011 concerning Standard Operating Procedures for Satpol PP	Regulates technical procedures and stages of Satpol PP's task implementation.	This Home Affairs Ministerial Regulation emphasizes that the Public Order Agency (Satpol PP)'s authority must be exercised based on clear and measurable standard operating procedures (SOPs). In the context of digitalization, every use of electronic applications or systems must adhere to standard procedures to prevent arbitrary action.
5	Law Number 30 of 2014 concerning Government Administration	Regulates government decisions and/or actions and the General Principles of Good Governance (AUPB).	The enforcement of regional regulations by the Satpol PP is classified as an administrative government action. Therefore, every action, whether manual or digital, must comply with the principles of legality, accuracy, proportionality, and accountability, and provide legal protection mechanisms for the public.
6	Presidential Regulation Number 95 of 2018 concerning the Electronic-Based Government System (SPBE)	Regulates national policy on the application of information technology in government administration.	This Presidential Regulation provides normative legitimacy for the use of information technology by government agencies, including the Satpol PP. Digitizing regional regulation enforcement is part of the modernization of governance, as long as it does not change the substance of authority and remains subject to administrative law and human rights.
7	Law Number 11 of 2008 in conjunction with Law Number 19 of 2016 concerning Electronic Information and Transactions	Recognizes electronic information and documents as valid legal evidence.	The ITE Law strengthens the legitimacy of the use of digital evidence in enforcing regional regulations. However, electronic evidence is only valid if obtained through a reliable system and in accordance with legal procedures, so the Satpol PP is obliged to guarantee the integrity and authenticity of digital data.
8	Law Number 27 of 2022 concerning Personal Data Protection	Regulates the rights of data subjects and the obligations of controllers and processors of personal data.	In digitizing regional regulation enforcement, Satpol PP has the potential to process the public's personal data. Legally, enforcement authority is limited by the obligation to protect personal data, so data collection, storage, and publication must be conducted lawfully, limitedly, and proportionally.

No	Hierarchy and Legal Materials	Main Substance of the Regulations	Legal Analysis of the Authority of Satpol PP
9	Law Number 14 of 2008 concerning Public Information Disclosure	Regulates the public's right to public information and exceptions.	Enforcement of regional regulations is public information, but this transparency is not absolute. Satpol PP must balance transparency obligations with the protection of personal data and individual rights, particularly in the publication of IT-based enforcement activities.

Based on the hierarchy and substance of the main legal materials above, the authority of the Civil Service Police Unit in enforcing Regional Regulations is an administrative authority derived from the constitution and delegated through laws and regulations in the field of regional government. The use of information technology in enforcing Regional Regulations is legally clearly stated and can be justified as a supporting instrument for the implementation of authority, as long as it adheres to the principles of the rule of law, general principles of good governance, protection of human rights, and provisions regarding electronic evidence, protection of personal data, and openness of public information.

Personal Data Protection and Information Disclosure in Regional Regulation Enforcement

The use of information technology in enforcing regional regulations by the Satpol PP must also adhere to two important principles: personal data protection and public information disclosure. Law Number 27 of 2022 concerning Personal Data Protection provides guidelines that personal data collected in regional regulation enforcement must be protected and not misused. Furthermore, Law Number 14 of 2008 concerning Public Information Disclosure requires that public information related to regional regulation enforcement be accessible to the public, while still prioritizing individual privacy. Mahameru et al. (2023) highlight the importance of a balancing act between public information disclosure and personal data protection to ensure that technology does not compromise individual rights in the law enforcement process.

These two principles demonstrate how digitalization operations within regional governments, supported by the Satpol PP, have clear boundaries. This allows for minimizing errors and oversights in the implementation of digital government. Based on our literature review, research on the Satpol PP and the digitalization of regional regulation enforcement tends to focus on policy implementation, performance effectiveness, and public service innovation. Meanwhile, studies specifically examining the use of information technology by Satpol PP within a normative legal framework are still relatively limited. To clarify the position of this research, the following table presents the state of the art: table 2.

Recent international literature strengthens this concern. Afzal and Panagiotopoulos (2025) show that data-driven policing transforms organizational accountability, documentation practices, and the evidentiary chain, not merely operational speed. Nhan and Helfers (2025) likewise demonstrate that surveillance technologies generate acute privacy tensions when deployment outpaces clear rules on access, retention, and oversight. From the administrative-law side, Hirvonen (2024) argues that digital public administration requires accountability structures that can trace responsibility across institutions, systems, and human operators rather than relying only on ex post sanctioning. These international debates are directly relevant to Batam because they confirm that digital enforcement is lawful only when efficiency is accompanied by explicit legality, reviewability, and privacy safeguards.

Table 2. Previous Studies

No	Research and Year	Focus	Approach	Findings
1	Fahmi & Suryadi, (2024)	Satpol PP Performance	Empirical	The high performance of the Public Order Agency (Satpol PP) is

No	Research and Year	Focus	Approach	Findings
				supported by several factors, such as
2	(Yusuf & Apriani, 2025)	Digital Regional Governance	Descriptive	Digitalization supports transparency
3	Ghafur, (2018)	Regional Regulation Enforcement	Normative	Regional regulation enforcement must adhere to the principle of legality
		Digitalization of Regional Regulation Enforcement by Satpol PP	Normative-Judicial	Analyzing the legal basis and implications for citizens' rights

Based on the table, it can be confirmed this research has a novel position, emphasizing the analysis of the legal basis and legal implications of information technology utilization by the Public Order Agency (Satpol PP), with the research location in Batam City, particularly from the perspective of the principles of legality and protection of citizens' rights.

Unlike previous research that emphasized implementation and managerial aspects, this study specifically examines the legal legitimacy of information technology utilization by the Satpol PP in enforcing Batam City's Regional Regulations. By using a normative legal approach, this research is expected to provide a clear legal analytical framework for developing digitalization policies for regional regulation enforcement that align with the principles of the rule of law.

METHOD

This research employs doctrinal legal analysis, focusing on the application of information technology by the Public Order Agency (Satpol PP) in the enforcement of Regional Regulations. This study was selected for its focus on aspects beyond the conduct of officers or the efficacy of policy implementation in practice. It examines the legislative stipulations regulating the authority of the Satpol PP and the legal principles that constrain the application of information technology in the enforcement of Regional Regulations.

This study employs a statutory approach and a conceptual approach. The legislative analysis involved scrutinising pertinent laws and regulations, including the 1945 Constitution of the Republic of Indonesia, Law Number 23 of 2014 on Regional Government, Law Number 30 of 2014 on Government Administration, Law Number 11 of 2008 on Electronic Information and Transactions as amended by Law Number 19 of 2016, Law Number 27 of 2022 on Personal Data Protection, and Government Regulation Number 16 of 2018 on the Civil Service Police Unit. A conceptual framework was employed to analyze legal doctrines and principles pertaining to the rule of law, governmental acts, and the safeguarding of people's rights within the realm of digital law enforcement.

This research utilizes both primary and secondary legal materials. Primary legal resources include laws and regulations applicable to the Satpol PP, the implementation of regional rules, and the use of information technology and personal data protection. Secondary legal materials encompass legal textbooks, scholarly publications, prior research findings, and perspectives from legal professionals pertinent to the research subject. The legal material-gathering method includes library research, encompassing the examination of laws, regulations, legal literature, and scholarly publications relevant to government digitalization and the implementation of regional rules. All acquired legal papers were subsequently subjected to qualitative analysis employing deductive reasoning, deriving conclusions from overarching legal principles to particular concerns related to the utilization of information technology by the Satpol PP in the enforcement of regional legislation.

The analysis results are presented both descriptively and analytically to offer a thorough overview of the legal foundation for the utilization of information technology by the Satpol PP,

while evaluating its adherence to the principles of legality and the safeguarding of citizens' rights within the context of a rule-of-law state.

RESULTS AN DISCUSSION

An analysis of original legal texts indicates that the Satpol PP's jurisdiction to implement Regional Regulations (Perda) is an administrative power rooted in the principles of the rule of law and regional autonomy, as outlined in Articles 1, paragraph (3), and 18 of the 1945 Constitution. The devolution of authority is underscored by Law Number 23 of 2014 on Regional Government and Government Regulation Number 16 of 2018 on the Civil Service Police Unit.

Presidential Regulation Number 95 of 2018 regarding the Electronic-Based Government System (SPBE) offers normative legitimacy for the implementation of information technology in governance within the framework of digitalization. Consequently, the utilization of reporting software, digital database systems, electronic documentation, and surveillance technologies, including CCTV, can be considered valid administrative tools.

Kurnia et al. (2017) and Rose et al. (2015) assert that technology in government should not be regarded as a new source of authority, but rather as an ancillary tool for executing existing authority. The digitalization of regional regulation enforcement shall not extend the authority of the Public Order Agency (Satpol PP) beyond the legal parameters established by legislation. This theory aligns with Hickman's (2020) perspective on the principle of legality, which views legality as a regulatory mechanism for administrative acts. The digitalization of regional regulatory enforcement is legitimate only as long as it adheres to the limits of delegated administrative authority.

This research, while legal and juridical, is bolstered by a synthesis of empirical studies about the performance of the Satpol PP and digital governance.

Fahmi and Suryadi (2024) discovered that the efficacy of the Satpol PP in enforcing regional legislation is substantially affected by the quality of internal coordination, administrative organization, and the backing of a systematic work framework. Digitalization can enhance documentation and accountability, therefore reinforcing the legitimacy of administrative acts.

Research conducted by Brata et al. (2025) indicates that the optimization of regional regulation enforcement by Satpol PP PPNS is significantly reliant on inter-agency communication and the thoroughness of case file administration. Digital systems have demonstrated efficacy in enhancing coordination and reducing administrative errors.

David et al. (2023) concluded, based on a systematic review (PRISMA), that the implementation of digital technology by local governments enhances openness, responsiveness, and the integration of public services. This accomplishment requires harmony among the legislative framework, organizational preparedness, and the safeguarding of citizen rights.

These findings corroborate the results of the normative analysis, indicating that the digitalization of regional regulatory enforcement has considerable potential to enhance transparency in the enforcement process, accountability for documentation, data integration among regional agencies, and the efficiency of administrative procedures. This efficacy depends on legal certainty and competent governance.

Legal Limitations: The Principle of Legality and Personal Data Protection; Digitizing the enforcement of regional regulations is not without legal risks, particularly in the protection of personal data and the use of electronic evidence. Law Number 30 of 2014 concerning State Administration stipulates that all administrative actions must comply with the General Principles of Good Governance (AUPB), including the principles of accuracy, proportionality, and accountability.

In the context of technology, Rabbani (n.d.) found that CCTV regulations in several regions do not fully address data retention standards and access restrictions. This has the potential to lead to privacy violations if not strictly regulated.

Mahameru et al. (2023) emphasized that the implementation of the Personal Data Protection Law requires government agencies to have a reliable information security system and clear data management procedures. Thus, when the Public Order Agency (Satpol PP) processes digital-based violation data, it can legally be qualified as a data controller, obligated to determine the legitimate and specific purposes of the processing, limit data use in accordance with the principles of necessity and proportionality, ensure the security and integrity of electronic systems, and delete data once it is no longer relevant.

This conflict between e-government efficiency and personal data protection also raises a concrete administrative-law question: if a system breach, unlawful disclosure, or misuse of digital enforcement data occurs, who is legally accountable? Normatively, responsibility cannot be dissolved into a mere “technical error.” The first layer remains with the public body that determines the purpose and use of the data in enforcement, because it functions as the administrative controller of the processing. A second layer may attach to the agency leadership or designated officials responsible for governance, access control, supervision, and breach response. Where systems are integrated with other regional agencies or external vendors, shared implementation does not eliminate public accountability; instead, responsibility must remain traceable through delegation, cooperation instruments, SOPs, and audit trails. In administrative law, therefore, a data breach should trigger not only technical recovery but also notification, corrective measures, internal evaluation, and, where negligence or abuse is proven, disciplinary or further legal liability.

From the perspective of legal technology disruption theory, Brownsword (2022) cautions that technological innovation can shift the boundaries of legal authority if not properly controlled. Therefore, the digitalization of regional regulation enforcement must be formalized through derivative regulations such as Regional Head Regulations and electronic-based technical standard operating procedures (SOPs).

Based on normative analysis and empirical support, the following synthesis can be formulated: digitalization of regional regulation enforcement has adequate legal legitimacy within the national legal framework; empirically, digitalization increases efficiency, transparency, and accountability; the main risks lie in the potential for abuse of authority and personal data breaches; technical regulations at the regional level are a key prerequisite for successful digitalization; and digitalization represents a transformation of the medium for implementing authority, not an expansion of authority. The complete results are presented in Table 3.

Table 3: Synthesis of Previous Research

No	Researcher	Focus	Approach	Key Findings	Relevance to Research
1	Fahmi & Suryadi (2024)	Satpol PP Performance	Empirical	Performance improves with orderly administration and good coordination	Supports the argument that digitalization strengthens accountability
2	Brata et al. (2025)	Regional Regulation Enforcement by Civil Service Officers	Empirical	Administrative coordination and documentation determine success	Digital systems accelerate coordination and filing
3	David et al. (2023)	Local Government Technology Adoption Strategy	PRISMA review	Digitalization increases transparency and responsiveness	Strengthens aspects of good governance

No	Researcher	Focus	Approach	Key Findings	Relevance to Research
4	Rabbani (n.d.)	CCTV Regulation and Privacy	Empirical	Weak data retention and access arrangements	Strengthens the urgency of data protection
5	Hickman (2020)	Legality Principle	Theoretical	Legality as a control over administrative actions	Foundations for limiting digitalization
6	Brownsword (2022)	Technology & Legal Disruption	Theoretical	Technology can shift the boundaries of legal authority	The importance of derivative regulations

CONCLUSION

This study validates that the digitalization of Regional Regulation (Perda) enforcement by the Batam's Satpol PP is robustly lawful within the context of Indonesia's rule of law. The legitimacy arises from the hierarchical framework of laws and regulations, beginning with the principles of the rule of law and regional autonomy in the 1945 Constitution, the governance of regional authority in Law Number 23 of 2014, and the endorsement of information technology utilization in Presidential Regulation Number 95 of 2018 regarding Electronic-Based Government Systems (SPBE). Consequently, digitalization in Perda enforcement might be perceived normatively as a valid and constitutional administrative tool.

Nonetheless, this research indicates that digitalization does not confer additional jurisdiction on the Batam's Satpol PP. The transition is pivotal, specifically altering the means of exercising administrative authority rather than augmenting its essence. Consequently, all technology-driven actions are governed by the concepts of legality and the General concepts of Good Governance (AUPB), which encompass accuracy, proportionality, accountability, and the prohibition of authority abuse. In the absence of explicit, quantifiable restrictions, digitalization may lead to maladministration, infringements of citizens' rights, and legal disputes within the administration.

The major legal issues pertain to the safeguarding of personal data and the administration of public information. Within the framework of digitalization, the Satpol PP may act as a data controller, bearing legal accountability for the processing of data related to infractions of regional regulations. Therefore, all data collection, storage, utilization, and dissemination must be carried out legally, restrictively, and proportionately, in compliance with the Personal Data Protection Law and the Law on Public Information Transparency. A balance between transparency and privacy protection is essential to ensure that the digitalization of regional regulatory enforcement aligns with human rights values.

This research advances state administrative law by asserting that digital governance in administrative law enforcement requires a clear regulatory framework. Digitalization transcends mere technical modernization; it represents a governance revolution that necessitates the redefinition of the normative limits of administrative authority in the information technology age. Consequently, our research enhances the dialogue on the interplay between technology, administrative power, and the tenets of the rule of law.

This study advises the Batam government to formulate more explicit derivative regulations, including Regional Head Regulations or electronic system-based Standard Operating Procedures (SOPs) that delineate mechanisms for technology utilization, system security standards, data retention policies, and public complaint protocols. In the absence of such technological regulations, digitalization may devolve into an administrative procedure devoid of comprehensive normative oversight.

Accordingly, the closing legal position of this article must remain firm: information technology is only an auxiliary instrument for carrying out authority that already exists in law;

it is not, and must not become, an independent source of new coercive power for Satpol PP. The principle of legality therefore requires every digital feature, from reporting platforms to CCTV integration and digital evidence management, to remain subordinate to previously conferred authority, clear procedural limits, and rights-protective safeguards.

This study is limited by its reliance on a normative juridical approach and the absence of empirical testing of the implementation of digitalization in regional regulatory enforcement. Consequently, future studies should adopt a socio-legal or empirical methodology to evaluate implementation efficacy, institutional capability, and its influence on safeguarding citizens' rights. A comparative analysis across regions can yield a more thorough understanding of optimal approaches to digitalizing regional regulatory enforcement.

Consequently, the digitalization of regional regulatory enforcement can only be deemed successful if it operates within transparent, accountable, and human rights-safeguarding legal frameworks. A state governed by the rule of law in the digital age necessitates both technological innovation and a steadfast commitment to maintaining the rule of law as the fundamental basis of governance.

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