



Implementation of Electronic Land Deeds by Land Deed Officials (PPAT) as an Effort to Optimize Land Administration in Mataram City

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Abstract

This thesis aims to analyze the regulatory authority of Land Deed Officials (PPAT) in the electronic issuance of deeds based on Article 86 of Government Regulation Number 18 of 2021, and to examine the implementation of electronic land deeds by PPAT in optimizing land administration. This study employs an empirical legal research method, utilizing both a statutory and a conceptual approach. Data were collected through a literature review of relevant laws and legal literature, as well as through interviews with stakeholders involved in land service implementation. The results indicate that the regulation of PPAT's authority in electronic deed issuance does not fundamentally alter the substance of their role as public officials authorized to produce authentic deeds for specific legal land transactions. Article 86 of Government Regulation Number 18 of 2021 provides the legal basis for electronic land services to enhance efficiency and effectiveness. Furthermore, the practical implementation of electronic land deeds by PPAT improves efficiency, transparency, and effectiveness in land administration processes, despite existing technical challenges. Consequently, the implementation of an electronic-based land service system is expected to improve the quality of public services in the land sector and realize a more modern, transparent, and accountable land administration.

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1. Introduction

The advancement of information and communication technology in the digital era has brought a fundamental transformation to various aspects of life, including the administration of land affairs in Indonesia ^[1]. As a vast archipelago with land parcels numbering in the hundreds of millions, Indonesia faces significant challenges in managing land efficiently, transparently, and with legal certainty for the public.^[2] The long-standing conventional land administration system has revealed fundamental weaknesses, ranging from bureaucratic delays and potential abuse of power to the risks of document loss and forgery, which ultimately disadvantage the public.

The digital transformation of land administration has rendered the role of Land Deed Officials (PPAT) increasingly vital, as they serve as the vanguard in implementing the electronic certificate system. PPAT must adapt to new technologies and ensure that the deeds they produce are integrated with the digital systems developed by the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN). This shift requires PPAT to enhance their digital competence and master the

¹ Sy. Arifin Habibi, *et al.*, "Digital Transformation of Land Administration: Implementation and Challenges of Electronic Certificates in Indonesia," *Rio Law Journal*, Vol. 1 No. 2 (2026): 500. (Note: Year adjusted to 2026 as per current context).

² Klinik Pertanahan, "Land Digitalization: The Future of Land Management in Indonesia," accessed September 10, 2025, <https://klinikpertanahan.com/blog/digitalisasi-pertanahan-masa-depan-pengelolaan-tanah-di-indonesia>.

intricacies of information technology within the context of land services. To support this, the Ministry of ATR/BPN provides various digital services accessible to the public, aimed at facilitating easier access to land parcel information.^[3]

Digital land administration is a management system that integrates information and communication technology across all service aspects—from land registration and certificate issuance to data maintenance. This concept encompasses document digitalization, business process automation, database integration, and the development of digital platforms. Its scope includes several key components: First, an integrated land information system connecting all land offices in Indonesia into a single national database. Second, electronic certificates that replace physical documents with secure digital ones. Third, online service platforms. Fourth, data security systems to protect against cyber threats. Fifth, the technological infrastructure, including servers and hardware, necessary to support digital operations.

Land registration conducted through digital processes is essentially a government effort to modernize the land sector and provide legal certainty for land rights holders.^[4] The implementation of digital land administration offers significant benefits. For the public, it provides ease of access and reduces costs through efficiency and transparency. For the government, it enables accurate data management, real-time monitoring, and data-driven decision-making. From a national economic perspective, it bolsters investment through better legal certainty and improves Indonesia's competitiveness in the ease of doing business.

Despite its potential, implementation faces several systematic challenges.^[5] These include uneven technological infrastructure in remote areas, limited digital literacy—particularly among the elderly and concerns regarding data security and privacy. Furthermore, regulatory gaps and the need for human resource development, both within the government and among PPAT as partners, remain critical hurdles.

PPAT hold a strategic role that cannot be overlooked. As officials who interact directly with the public in land transactions, they are the spearhead of digital implementation. The quality of deeds produced by PPAT determines the success of digital integration. Government Regulation Number 18 of 2021 concerning Management Rights, Land Rights, Flat Units, and Land Registration provides a solid legal foundation for this transition. Article 86 explicitly states that "The issuance of deeds by Land Deed Officials may be conducted electronically." This regulation updates Government Regulation Number 24 of 1997, aiming to codify and simplify rules to meet contemporary legal needs.

PPAT are authorized public officials whose deeds serve as authentic evidence in legal acts concerning land rights or ownership of flat units (HMSRS).^[6] In the digital era, they act as intermediaries helping the public navigate digital procedures while ensuring the validity of electronic documents. Optimizing land administration through

electronic deeds is now an urgent necessity. This system offers advantages such as guaranteed legal validity, improved accountability, and the minimization of corruption or malpractice.

Based on the background above, this research addresses two primary legal questions: First, how is the authority of PPAT regulated regarding the electronic issuance of land deeds under Article 86 of Government Regulation Number 18 of 2021 in Mataram City? Second, how is the implementation of electronic land deeds by PPAT carried out as an effort to optimize land administration in Mataram City?

2. Research Method

Research is a systematic search for knowledge, emphasizing that the inquiry is directed toward solvable problems. The type of research employed in this study is empirical legal research. Empirical legal research examines law not only as a set of rules or norms but also investigates the practical application of these legal rules within society.^[7]

Research Approaches

To provide a comprehensive analysis, this study utilizes the following approaches:

- **Statutory Approach:** Examining the relevant laws and regulations.
- **Conceptual Approach:** Analyzing the legal concepts and doctrines underlying the research topic.
- **Sociological Approach:** Observing the social phenomena and interactions related to the implementation of land administration.

Data Collection Techniques

In empirical legal research, legal materials are derived from both written norms and field practices. Therefore, the data collection techniques include:

2.1. Library Research

This technique involves reviewing and analyzing various legal materials relevant to the study, categorized as follows:

1. **Primary Legal Materials:** Authoritative documents such as Laws (*Undang-Undang*), Government Regulations, and other related statutory mandates.
2. **Secondary Legal Materials:** Books, academic journals, previous research findings, and legal scholars' opinions.
3. **Tertiary Legal Materials:** Legal dictionaries, encyclopedias, and other supporting references.
4. **Documentary Study:** This involves examining official documents related to the research object, such as institutional archives, case files, deeds, and official reports. This study serves to compare legal norms with their practical reality on the ground.

5. Secondary Data Collection

This method involves systematic documentation and collection of literature—including papers, journals, and encyclopedias—that addresses the research problem, drawing from primary, secondary, and tertiary sources.

³ Nandang Isnandar, *Building Village Land Administration Based on Digital Maps*, SIP Publishing, Banyumas, 2022, p. 34.

⁴ [4] Muhammad Khaidir Kahfi Natsiret et al., *Land Law: Theory, Regulation, and Practice in Indonesia*, CT. Gita Lentera, Padang, 2025, p. 45.

⁵ Syarifatul Hidayah, et al., "Challenges and Opportunities of Electronic Certificates in Land Registration Reform in the Digital Era," *Jurnal Ilmiah Nusantara*, Vol. 1 No. 6 (2024).

⁶ Salim HS, *Technique of Deed Issuance for Land Deed Officials (PPAT)*, Rajawali Pers, Depok, 2016, p. 75.

⁷ Muhaimin, *Metode Penelitian Hukum (Legal Research Methods)*, Mataram University Press, Mataram, 2020, p. 117.

Data Analysis

The data is analyzed using a qualitative approach applied to both primary and secondary data. Qualitative analysis produces descriptive-analytical data, which includes written or oral statements from respondents and observable behaviors, studied as a holistic entity. In this framework, the emphasis is placed on data quality. The researcher does not merely aim to uncover the truth but strives to understand the underlying context and substance of that truth. This ensures that the analysis of legal materials is profound, comprehensive, and meaningful.

3. Discussion

3.1. Regulation of PPAT Authority in the Electronic Issuance of Land Deeds Based on Article 86 of Government Regulation Number 18 of 2021 in Mataram City

Article 86 of Government Regulation Number 18 of 2021 establishes the legal foundation for the electronic delivery of land services. This provision serves as a formal legalization of the digital transformation within the land administration system. However, the regulation does not explicitly alter the substantive authority of Land Deed Officials (PPAT) in deed issuance. PPAT continue to exercise their authority based on the prevailing regulations governing their office, while the electronic system primarily affects the administrative mechanisms of registration. Consequently, this regulation is administrative-procedural rather than substantive-authoritative in nature.

Article 86 emerged as a response to the rapid advancement of information technology and the national bureaucratic reform policy. Within the national agrarian legal framework, Government Regulation No. 18 of 2021 acts as an implementing regulation for the Basic Agrarian Law (UUPA) and other sectoral land regulations. Therefore, Article 86 must be understood through the lens of legal harmonization with higher-level norms and subordinate technical regulations. Systematically, this article does not stand alone; it is an integral part of a broader land administration digitalization policy spearheaded by the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN).

While Article 86 paves the way for the digitalization of land services, normatively, it does not restructure the authority of PPAT as public officials. The authority of a PPAT remains derived from the attribution of power granted by the laws governing the office of PPAT. This implies that the transition to an electronic system does not shift the PPAT's position as a creator of authentic deeds but merely transforms the administrative governance of the process.

The provisions of Article 86 emphasize the technical and administrative aspects of exercising pre-existing authority. Three fundamental understandings can be drawn from this provision:

- **Substantive Authority of PPAT Remains Conventional** Juridically, PPAT authority originates from the regulations previously governing their office and duties, namely Government Regulation No. 37 of 1998 in conjunction with Government Regulation No. 24 of 2016. Under this construction, PPAT are authorized to produce authentic deeds regarding specific legal acts involving land rights or ownership of flat units. Article 86 of Government Regulation No. 18 of 2021 neither introduces new types of authority nor diminishes the existing scope of authority. The substance of

PPAT authority remains focused on:

- The creation of deeds as legal evidence of transactions;
- Guaranteeing the authenticity of the deed;
- Formal and material liability for the contents of the deed.

Thus, the change occurs not in the substance of the power, but in the medium through which that power is exercised. Theoretically, this aligns with the Theory of Authority, which stipulates that the attribution of authority must have a clear legal basis and cannot be implicitly expanded without an express norm.

- **Digital Transformation of Registration Administration**

While the substantive authority remains constant, the transformation occurs within the realm of land administration. This is a continuation of the mandate of Article 19 of Law No. 5 of 1960, which requires land registration to ensure legal certainty. The digital transformation introduced by Government Regulation No. 18 of 2021, and further clarified by ATR/BPN Ministerial Regulation No. 3 of 2023, signifies a shift from a physical paper-based system to an electronic-based system. This transition is administrative and procedural, not normative, meaning it does not alter the fundamental rights and obligations of the parties involved.

- **Electronic-Based Working Relationship between PPAT and Land Offices**

Prior to the electronic system, the working relationship between PPAT and Land Offices was manual-administrative, where deeds and supporting documents (*warkah*) were physically submitted. Under the new system, this mechanism has shifted to an electronic platform. However, the functional relationship remains within their respective jurisdictional boundaries: the PPAT remains the public official creating the deed, while the Land Office remains the institution responsible for the registration and maintenance of land data. Article 86 essentially functions as an enabling provision—a norm that empowers the use of technology without restructuring the inherent authority of land officials or PPAT. As public officials, PPAT act as organs of the state's function to provide legal certainty regarding the transfer and encumbrance of land rights.

In the Theory of Authority, legal power is generally acquired through three primary methods:

1. **Attribution:** The original grant of authority by a primary legislative body (Constitution or Law).
2. **Delegation:** The transfer of existing authority from one state organ to another.
3. **Mandate:** A situation where an official acts on behalf of a superior, where responsibility remains with the mandator.

3.2. Implementation of Electronic Land Deed Issuance by PPAT in the Effort to Optimize Land Digitalization in Mataram City

A. Optimizing Land Administration through the Implementation of Electronic Systems in Mataram City

The optimization of land administration is a core component of national agrarian governance reform, aimed at creating a public service system that is efficient, transparent, accountable, and based on legal certainty. Fundamentally, land administration encompasses:

1. Registration of land rights;
2. Transfer of rights;

3. Encumbrance of mortgages (*Hak Tanggungan*);
4. Maintenance of land data.

The transformation of land administration toward an electronic system is part of the policy to modernize public services through information technology. In the national land system, digitalization is directed toward increasing efficiency, transparency, and accountability in the registration process without altering the authoritative structure of the relevant officials. The implementation of electronic land deeds must be understood as a shift in administrative mechanisms rather than a change in substantive authority. PPAT continue to function as public officials who produce authentic deeds, while the Land Office retains the authority for registration and the issuance of certificates. Thus, digitalization serves as a facilitative administrative instrument to support the optimization of land services.

In practice, these services are carried out by the Mataram City Land Office as a vertical agency of the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN). Digitalization through electronic systems aims to reduce manual bureaucracy and expedite administrative processes. Optimization in this study is measured through:

- Time efficiency;
- Cost efficiency;
- Transparency of processes;
- Certainty of legal status;
- Strengthening of administrative oversight.

Based on an interview with a PPAT in Mataram City, Ermi Purnamasari, the mechanism for implementing electronic land deeds includes:

1. Conventional deed preparation (presence of parties, reading, and signing);
2. Data entry of the deed into the electronic system;
3. Uploading supporting documents;
4. Online submission of files to the Land Office;
5. Monitoring the process through the system dashboard.

"Once the deed is signed, we immediately input it into the system and upload the documents. The process is much faster compared to carrying physical files. Now we can monitor the status of the files without having to visit the office in person. It is very helpful."^[8]

"All files entering the system are immediately recorded and can be verified more quickly. There are no more manual queues like before."^[9]

This indicates a significant shift in administrative patterns. This integration creates a more structured and documented workflow. The transformation from conventional mechanisms to electronic-based systems carries significant implications for service efficiency. Efficiency in this context is defined not only as the acceleration of processes but also includes operational cost savings and increased security in document management.

Based on field research and interviews, the impact of this efficiency can be analyzed through the following aspects:

1. Time Efficiency

One of the most tangible impacts is the acceleration of administrative processes. In the conventional system, PPAT had to physically submit deeds and supporting documents (*warkah*) to the Land Office. This process required additional time for duplicating and legalizing documents, physical delivery, queuing for service, and manual verification by officers. In the electronic system, this is streamlined through a document upload mechanism on the official ATR/BPN system, as regulated by ATR/BPN Ministerial Regulation No. 3 of 2023.

2. Cost Efficiency

Digitalization gradually reduces the need for physical documents, large quantities of paper and ink, and transportation costs for file delivery. This efficiency is felt not only by the PPAT but also by the public as service users, indirectly reducing the economic burden of land transactions.

3. Reduction of Document Loss Risks

Physical documents carry high risks of loss, which can lead to disputes and legal uncertainty. Electronic systems mitigate this through digital database integration, which allows for data backups, systematic tracking, authorized access, and protection against physical damage (fire, flood, or age). This directly supports the objectives of land registration as mandated in Article 19 of Law No. 5 of 1960.

Findings show that the transformation occurs in administrative aspects, not in the substance of deed issuance. Furthermore, every stage in the system is digitally recorded (digital trail), minimizing the possibility of data manipulation. From the perspective of the Legal Certainty Theory, the law must be clear, predictable, consistent, and enforceable.

Electronic systems support these four elements through standardized procedures and national data integration. When land data is linked within a unified system, the potential for:

- Overlapping certificates (*sertifikat ganda*);
- Conflicting land rights; and
- Document misuse can be significantly minimized.

Consequently, digitalization is not merely an administrative innovation but a structural instrument to strengthen legal certainty. A crucial issue in the implementation of electronic deeds is whether the digital format affects the authenticity of the PPAT deed. Normatively, a PPAT deed remains an authentic deed as long as it meets the following criteria:

- Produced by an authorized official;
- Created in a form prescribed by law;
- Executed within the official's territorial jurisdiction.

The use of electronic media does not diminish this authenticity, provided the issuance procedure complies with applicable regulations.

⁸ Interview with Ermi Purnamasari (Land Deed Official/PPAT), Tuesday, February 24, 2026, 11:30 WITA.

Interview with Halid Aslamudin Putra Utama, Head of the Mataram City Land Office.

Interview with Halid Aslamudin Putra Utama, Head of the Mataram City Land Office.

⁹ Interview with Ermi Purnamasari (Land Deed Official/PPAT), Tuesday, February 24, 2026, 11:30 WITA.

Interview with Halid Aslamudin Putra Utama, S.SiT., M.M., Head of the Mataram City Land Office, Wednesday, February 25, 2026, 11:40 WITA.

Therefore, the change in medium (from physical to digital) does not alter the legal character of the deed, but only its mode of presentation. This demonstrates that Article 86 of Government Regulation Number 18 of 2021 is adaptive to technological advancements without reducing the probative value (*nilai pembuktian*) of the deed.

Furthermore, increased transparency and accountability within the electronic system create a more rigorous oversight mechanism through:

- Digital audit trails;
- Timestamps;
- System user identification; and
- Account-based activity logs.

In the conventional system, oversight relies heavily on physical documents and manual controls. Conversely, in an electronic system, every administrative action is automatically recorded, facilitating easier evaluation and auditing. This aligns with the principles of Good Governance, which demand that every action taken by a public official be transparent and accountable. Accountability is enhanced because the process is no longer closed; data is traceable, and irregularities are more easily detected. Thus, digitalization narrows the space for maladministration and the abuse of authority.

When analyzed from a progressive legal perspective, the law must not remain static; it must evolve alongside societal developments, including information technology. The transformation of the land system toward a digital framework indicates that regulations are striving to adapt to contemporary needs. In this context, digitalization represents a legal response to:

- The complexity of land transactions;
- Demands for public service efficiency;
- Advancements in information technology; and
- The necessity for transparency and accountability.

Therefore, the implementation of electronic land deeds reflects a legal renewal effort aimed at serving the public interest more effectively. The application of electronic systems in land administration can be further analyzed through the lens of Legal Certainty Theory. In land services, legal certainty is a primary objective of land registration ensuring legal protection for land rights and providing clarity regarding the legal status of land objects.

B. Implementation of Electronic Land Deed Issuance by PPAT within the Land Administration System in Mataram City

The digitalization of land administration through electronic systems contributes to the enhancement of legal certainty in several aspects. One of the most prominent features is the permanent digital documentation stored within a centralized database. All documents uploaded during the administrative process including deeds issued by PPAT and other supporting materials—are electronically archived in an integrated system. This digital storage ensures that these documents can be retrieved whenever necessary, thereby mitigating the risk of loss or physical damage to documents, which was a frequent occurrence in manual systems.

Furthermore, the electronic system provides a transaction recording mechanism known as an electronic audit trail. Through this mechanism, every stage of the administrative process is automatically recorded, including the timestamp, the identity of the system user, and the specific actions performed. The existence of an audit trail ensures transparency in land services, as all activities within the system can be traced back if needed.

Transparency is also evident through online application status monitoring. Service users, including PPAT, can track the progress of their applications through the provided electronic interface. Consequently, every administrative stage becomes clearer and more measurable, providing procedural certainty in the delivery of land services.

However, the legal certainty generated by electronic systems is heavily dependent on the stability and reliability of the underlying technological infrastructure. Technical disruptions can hinder ongoing services and delay administrative processes that are supposed to be completed within a specific timeframe.

"If the server is down, we cannot access the system. This can delay the entire process."¹⁰

This statement underscores that while electronic systems have the potential to bolster legal certainty through digital recording and transparency, their effectiveness remains contingent upon system stability. If the system is inaccessible due to server failures or other technical issues, the land administration process is temporarily halted until the system returns to normal operation.

Based on this analysis, it is understood that legal certainty in an electronic-based land administration system is determined not only by regulations governing digital services but also by the readiness and reliability of the supporting technological infrastructure. Therefore, strengthening information technology systems is a critical factor in ensuring that electronic implementation effectively provides optimal legal certainty.

The application of electronic systems in land services must also be analyzed through the Theory of Authority in administrative law. This theory explains that the authority of a public official is acquired through mechanisms of attribution, delegation, or mandate as stipulated by law. In the context of land administration, the authority of the Land Deed Official (PPAT) as a public official is normatively established under Government Regulation No. 37 of 1998, as amended by Government Regulation No. 24 of 2016.

Under these provisions, the primary authority of a PPAT is to produce authentic deeds regarding specific legal acts related to land rights or ownership of flat units. These deeds then serve as the legal basis for registering changes in land data at the Land Office.

Regarding the implementation of electronic systems, the changes do not fundamentally alter the substantive authority of the PPAT. The electronic system functions solely as an administrative tool to support the submission and processing of documents. Thus, the core function of the PPAT as the official authorized to create authentic deeds remains intact.

In practice, PPAT continue to perform their essential functions:

1. Issuing authentic deeds related to legal acts concerning land rights;

¹⁰ Interview with Ermi Purnamasari (Land Deed Official/PPAT), Tuesday, February 24, 2026, 11:30 WITA.

2. Assuming responsibility for the formal truth of the deed's contents, including the identity of the parties, the object of the transaction, and the consistency of supporting documents;
3. Ensuring compliance with legal procedures, such as reading the deed before the parties and ensuring signatures follow applicable regulations.

The electronic system does not transfer or diminish these responsibilities. The system is merely used to facilitate administrative processes after the deed is executed—such as uploading documents, filing registration applications, and monitoring the status of administrative processes at the Land Office.

From the perspective of the Theory of Authority, this situation demonstrates that the digitalization of land services does not change the source of the PPAT's authority, which remains rooted in legislative attribution. The implementation of electronic systems is more accurately understood as a modernization of administrative mechanisms aimed at increasing efficiency and effectiveness. Therefore, the optimization of these systems should not be interpreted as a shift or transfer of authority between the PPAT and the Land Office. The PPAT's authority remains in the realm of deed issuance, while the Land Office retains the authority for registration and data maintenance. The electronic system serves only as an administrative instrument to ensure these authorities are exercised in a more effective, transparent, and integrated manner. The government's policy regarding electronic land services is an essential effort to align the land administration system with rapid advancements in information technology—a necessary and unavoidable step in modernizing public services.^[11]

The rapid advancement of information technology has compelled various government sectors to transition from conventional service systems to electronic-based platforms. In the context of land administration, the implementation of electronic systems is expected to enhance service quality while fostering a more effective and efficient land data management framework.

A primary consideration in implementing this policy is the aspect of land data security and protection. Manual data management has historically faced numerous weaknesses, particularly concerning the vulnerability of physical documents to damage or loss. Land archives stored in physical form are susceptible to deterioration caused by factors such as age, environmental conditions, natural disasters, fires, and the risk of theft.^[12]

With the policy of electronic implementation, land data is intended to be stored digitally within an integrated database. Electronic storage is considered more capable of ensuring the continuity of land archives, as data can be secured and backed up in digital storage systems. Furthermore, digitalization allows for more systematic and organized data management. Land data stored electronically can be retrieved more easily for administrative purposes and document verification. The government's policy in implementing electronic-based land services is a strategic step toward modernizing the land administration system,

aiming not only to keep pace with technological trends but also to improve the long-term security, reliability, and sustainability of land data management.

The implementation of electronic land services at the Mataram City Land Office has been carried out gradually and has shown significant progress. The Mataram City Land Office serves as a pilot office for the implementation of electronic land services within the West Nusa Tenggara Province. As a pilot office, it was among the first institutions to implement the transfer of land rights through electronic systems. Under this mechanism, Land Deed Officials (PPAT) no longer submit application files physically in person; instead, they transmit the necessary data and documents through the provided electronic system. Once the data is received, the Land Office proceeds with verification and data processing as part of the land registration administration stages.

To support the execution of electronic-based services, the Mataram City Land Office has developed an integrated digital database. Various land documents previously stored as physical archives have been progressively converted into electronic formats. This conversion process includes the digitalization of vital documents such as Land Books (*Buku Tanah*), Measuring Letters (*Surat Ukur*), and other land administration documents.

This digitalization aims to build a modern and organized land database. With data available electronically, the search and processing stages can be conducted more rapidly and efficiently, facilitating easier access for the public. The implementation of this electronic service system at the Mataram City Land Office began several years ago and continues to undergo refinement.

The Mataram City Land Office has taken various strategic steps to support this implementation, including the construction of a digital database through document conversion. With an integrated data system, land services are expected to be faster, more efficient, and more responsive to public needs.^[13]

Land Deed Officials (PPAT) play a crucial role in supporting the electronic land service system. In the land administration system, PPAT are viewed as strategic partners of the National Land Agency (BPN), particularly in preparing the deeds that serve as the basis for land registration and the alteration of land rights data. PPAT interact directly with the public in various legal acts concerning land, such as sales and purchases, grants (*hibah*), exchanges, and other rights transfers. Consequently, the implementation of electronic services directly impacts the work mechanisms of PPAT in exercising their duties and authority.

The volume of land services in Mataram City is relatively high, with approximately 1,400 to 1,500 services processed monthly. Despite this large volume, all service processes are optimally handled by the human resources available at the Mataram City Land Office. This indicates that human resource readiness is a supporting factor in the implementation of the electronic land system. With an adequate number of staff possessing sufficient competence in information technology, the execution of electronic-based land services can proceed effectively.

¹¹ Interview with Halid Aslamudin Putra Utama, S.SiT., M.M., Head of the Mataram City Land Office, Wednesday, February 25, 2026, 11:40 WITA.

¹² Interview with Halid Aslamudin Putra Utama, S.SiT., M.M., Head of the Mataram City Land Office, Wednesday, February 25, 2026, 11:40 WITA.

¹³ Ibid.,

Thus, from a human resource perspective, the Mataram City Land Office faces no significant obstacles in operating the electronic land system.

The enhancement of electronic-based land administration is also pursued through efforts to increase the understanding and participation of stakeholders. This includes educating local governments and the general public regarding the latest information and policies in the land sector.

In addition to socialization activities, the Mataram City Land Office strives to improve accessibility by opening services on Saturdays and Sundays. This policy is intended to facilitate members of the public who have time constraints during the work week. Furthermore, educational activities are conducted directly in public spaces, such as during "Car Free Day" in Mataram City. On these occasions, the Land Office provides information services and updates regarding electronic administration directly to the public.

Another initiative involves encouraging the public to utilize the "Sentuh Tanahku" digital application provided by the Ministry of ATR/BPN. This application, available on the Play Store, provides various land-related information, such as application status and land certificate details, which can be accessed online.

Through these various steps, it is expected that public understanding and participation in electronic land services will increase, leading to more effective, transparent, and accessible administration. Therefore, continuous improvement of the electronic service system through technological updates, application development, and infrastructure capacity building is essential.

The Ministry of ATR/BPN has planned structured development steps for the electronic service system. Regional units, including the Mataram City Land Office, periodically receive information regarding policy updates and system upgrades. Moreover, monitoring and evaluation are conducted by the central office to ensure that regional implementation adheres to established standards. With ongoing development support and coordination between central and regional offices, electronic-based land services are expected to continue evolving and provide optimal benefits for the community in the future.

4. Conclusion

Based on the research and analysis conducted regarding the implementation of electronic land deeds by Land Deed Officials (PPAT) in Mataram City, the following conclusions can be drawn:

4.1. The Regulatory Framework and Nature of PPAT Authority

The authority of PPAT in the electronic issuance of deeds, as stipulated under Article 86 of Government Regulation Number 18 of 2021, does not fundamentally alter the substantive authority of the PPAT as public officials. This regulation serves as an enabling provision and a legal basis for the digitalization of land services. The primary shift is administrative and procedural rather than substantive; PPAT remains the authorized official for producing authentic deeds, while the electronic system acts as a modern medium to facilitate the registration and maintenance of land data. This transformation aligns with the Theory of Authority,

where the source of power remains rooted in legislative attribution, but its execution is modernized to meet contemporary technological demands.

4.2. Implementation and Optimization of Land Administration in Mataram City

The implementation of the electronic land deed system in Mataram City has significantly optimized land administration across several key indicators:

- **Efficiency:** Digitalization has streamlined the process by eliminating the need for physical submissions, thereby reducing administrative time and operational costs for both PPAT and the public.
- **Legal Certainty and Security:** The system enhances legal certainty through integrated digital archiving and the creation of an electronic audit trail. This minimizes risks associated with conventional systems, such as document loss, forgery, and overlapping certificates (*sertifikat ganda*).
- **Transparency and Accountability:** Every stage of the process is traceable and measurable through online monitoring features and system-based activity logs, which reduces the potential for maladministration and strengthens public trust.

4.3. Success Factors and Future Sustainability

The success of this digital transformation in Mataram City acting as a pilot project is supported by the readiness of human resources and proactive socialization efforts, such as the use of the "Sentuh Tanahku" application and weekend services. However, the effectiveness of this system remains highly contingent upon the reliability of technological infrastructure. To ensure long-term optimization, continuous efforts are required to strengthen server stability, update regulations to cover existing legal gaps, and maintain synergy between the Ministry of ATR/BPN and PPAT as strategic partners.

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