

# **Transformation of Dependent Rights In The Digital Era**

## **A Study In Electronic Implementation**

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### **ABSTRACT**

The digitization of the dependent rights system is an innovation in land administration that aims to increase efficiency, transparency, and legal certainty in Indonesia. The implementation of Electronic Dependent Rights (HT-el) brings various benefits, such as a faster registration process, wider access, and minimal administrative errors compared to conventional systems. However, in its implementation, there are still various obstacles, such as limited technological infrastructure, low public digital literacy, and challenges in maintaining data security and user privacy. This study uses normative juridical methods, utilizing legal and conceptual approaches to examine the effectiveness of regulations regarding electronic liens. The findings of the study suggest that although HT-el has significant promise to improve land services, additional strategies are essential. This includes strengthening regulations, improving infrastructure, and engaging with the community. These measures are necessary to ensure the optimal implementation of this system and to provide legal certainty for all stakeholders involved.

**Keywords:** Dependent Rights, Digitalization, Electronic Certificates, Legal Certainty, Legal Technology

## **1. INTRODUCTION**

The government of each country must do everything in its power to survive in the current era of globalization and digitalization. If the government cannot compete in the current era, it will be very difficult to achieve the welfare of its own people. This situation should not be allowed because it is contrary to the national goal of providing fair and prosperous welfare for the community. State administrators must continue to accelerate Indonesia's national development, especially in the economic sector. In recent years, massive infrastructure development has emerged as tangible evidence that economic development policies are implemented first through infrastructure development, in the hope that the effects of development will spread throughout society. (Adinegoro, 2023).

Advances in information technology have given rise to cyber law, also known as telematics law. Globally, the term "cyber law" encompasses legal regulations related to the use of information and communication technologies. In contrast, telematics law emerged from the integration of media, informatics, and telecommunications laws. (Djakatara et al., 2023).

The ongoing digitalization process affects many aspects of society, especially in the land sector. In today's rapidly changing landscape, it is important for governments to adapt and innovate while



implementing policies that promote social and economic growth. The digitization of land certificates is considered a step forward in providing information on the land administration system and creating legal certainty. Aided by the development of more efficient, transparent, and accountable digital technologies, Indonesia's land services are one of the industries that continue to grow and change. The application of electronic certificates as a form of digital transformation in land management is one of the important steps that have been taken. Along with the development of information and communication technology, digital transformation in the land system is an important step to overcome these challenges. Electronic land certificates are expected to replace physical land certificates with a safer, more effective, and transparent digital format. (Auliani & Roisah., 2025).

Land has a significant impact on nation building. The current land problem can hinder development, which is why it is very important that the national Land Law be extended. Providing legal clarity to interested parties is the goal. (Alimuddin., 2021). Government Regulation Number 18 of 2021 related to Management Rights, Land Rights, Flats, and Land Registration was made in line with Law Number 11 of 2020 concerning Job Creation. This regulation aims to streamline licensing processes and regulations while fostering a more investment-friendly environment. This regulation contains 3R provisions, namely Rights, Barriers, and Responsibilities. This regulation contains 3R provisions, namely Rights, Obstacles, and Responsibilities. (Djakatara et al., 2023)

The governments of each country must do their best to survive in the midst of global competition in the era of globalization and digitalization. The government of a country will find it very difficult to achieve the welfare of its own people if they cannot compete in the modern era. As it is contrary to the national goal of ensuring a fair and successful welfare for the community, this scenario should not be allowed to happen. State officials must continue to accelerate the development of the nation, especially in the economic sector. Recently, massive infrastructure development has shown that the implementation of economic development policies must take precedence over infrastructure development. Everyone is expected to feel the impact of the development on economic growth. (Adinegoro, 2023a).

Indonesia's land services are one of the industries that continue to grow and change, aided by the development of digital technology that is more efficient, transparent, and accountable. Digital transformation in land management includes the implementation of electronic certificates, which is one of the important steps that has been taken. With the development of information and communication technology, digital transformation in the land system is an important step to



overcome these challenges. With a safer, more efficient, and transparent digital format, electronic land certificates are expected to be used as a substitute for physical land certificates. (Auliani & Roisah., 2025).

Electronic Dependent Rights seeks to overcome a number of problems that arise when company operations are carried out manually or conventionally. The issuance period for conventional liens is often larger than that specified in the service's operational guidelines because it still requires the signature of the head of the land office as physical attestation. Of course, this is because the head of the office has a lot on his plate and sometimes needs to leave the office. Electronic Dependents address this issue by using digital signatures that can be viewed by the head of office or other authorized authority from anywhere. The ability to manage the Right of Dependency certificate in a timely, practical, ecologically responsible, transparent, and accountable manner is another benefit of the Electronic Right of Dependency service. In addition, face-to-face meetings are not required for Electronic Dependent Rights registration.(Adinegoro, 2023).

## **2. RESEARCH METHODS**

This study uses normative juridical methods, utilizing legal and conceptual approaches. The normative juridical method was chosen because it focuses on the analysis of legal norms that govern the transformation of dependent rights in the digital era, especially related to the application of electronic certificates. The legislative approach involves a thorough examination of relevant laws and regulations, including Law Number 4 of 1996, relating to the rights of dependents.

In this study, a conceptual approach is used to investigate legal concepts related to electronic liens, legal certainty, and protection of rights for both creditors and debtors in the digital system. The data sources used consist of secondary data collected through literature research. This includes primary legal materials such as laws and regulations governing dependent rights and electronic certificates, as well as secondary legal materials such as scientific journals, books, and previous research investigating the digitization of dependent rights. In addition, tertiary legal materials, such as legal dictionaries and encyclopedias, are combined to improve understanding of the legal concepts being analyzed. Data collection involves systematically tracing relevant legal sources, utilizing printed and digital documents. The data collected is carefully and thoroughly analyzed to gain insight into regulatory dynamics and to understand the implications of implementing electronic certificates in the dependency system.

Data analysis was carried out qualitatively, using descriptive and analytical techniques. The data that has been collected are classified based on their type and relevance to the research



problem, then analyzed to find patterns, regulatory gaps, and potential improvements in the implementation of electronic dependent rights. A descriptive-analytical approach is used to describe the factual conditions related to the regulation and implementation of electronic certificates and evaluate their effectiveness in ensuring legal certainty. In addition, this study also compares with practices in other countries that have previously adopted the digitization of dependent rights to provide more comprehensive and applicable policy recommendations. With this method, it is hoped that research can make a significant scientific contribution to the development of regulations on the rights of dependents in the digital era.

### **3. RESEARCH OBJECTIVES**

This study aims to analyze the implementation of electronic certificate of dependent rights in the digital era. The main focus includes the study of the legal foundation, the effectiveness of implementation in increasing efficiency and transparency, and the challenges faced. In addition, this study also seeks to formulate strategic recommendations to optimize the use of electronic certificates in the land system and strengthen legal certainty for related parties.

#### **Literatur Review**

##### **Transformation of Dependent Rights in the Context of Digitalization**

Given the rapidly changing environment driven by technological advancements, digital transformation has become an essential strategy for organizations seeking to stay competitive and ensure their long-term survival. As technology continues to advance at an incredible pace, many aspects of daily life have changed significantly, especially when it comes to accessibility and efficiency. Digital technology allows individuals to access a wide array of services that are faster, more convenient, and more efficient. In particular, electronic services provided by the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN) significantly improve the quality of public service delivery. The digitization of land services aims to improve accessibility and transparency while streamlining the often complicated administrative processes associated with the management of land documents. Essentially, this digital transformation is designed to leverage technology to increase productivity, reduce operational costs, and promote sustainable innovation. By implementing digital systems, organizations can speed up workflows and increase efficiency, offering greater value to their service users. On a broader scale, digitalization is essential for organizations to succeed in an ever-evolving, competitive, and technology-focused environment. (Adinegoro, 2023)

Overall, digitalization in the management of dependent rights plays a fundamental element



in increasing organizational effectiveness and efficiency, especially in facing challenges in the modern era that is increasingly competitive and technology-based. By implementing a digital system, organizations can adapt to the changing dynamics of the environment more quickly and flexibly, while strengthening competitiveness in the midst of global competition. In addition, the use of digital technology allows organizations to optimize the services provided to the community, both in terms of speed, transparency, and accuracy of information. Administrative processes that were previously done manually can be transformed into a more structured, integrated, and accessible system. Digitalization is therefore more than just technical innovation; It serves as a transformative strategy that improves service quality and offers legal certainty to stakeholders. (Noer et al., 2024)

### **Legal Framework for Electronic Land Certificates and Digital Dependent Rights**

A proper and reliable operational system is essential to produce authentic and trustworthy documents. When using electronic systems, obtaining certification is essential to ensure that the electronic documents generated are guaranteed to be valid. It is important to consider the validity of electronic documents as evidence, as they have unique characteristics that distinguish them from conventional forms of evidence. The storage of these items in electronic format makes them more vulnerable to counterfeiting and abuse, especially if there is no robust data security system in place. As a result, the integrity of data as evidence is often questioned if security measures are not adequately maintained. (Khasanah.,2021)

Government Regulation Number 71 of 2019 discusses the implementation of electronic systems and transactions, while Ministerial Regulation of ATR/BPN Number 1 of 2021 provides a legal framework for the use of electronic certificates, including their application to dependent rights. According to Articles 5 and 6 of Law Number 11 of 2008, which relates to Electronic Information and Transactions (UU ITE), electronic documents that comply with legal standards are considered valid evidence. A number of studies have shown that electronic land certificates have the same legal validity as their physical certificates, significantly impacting the process of recording and enforcing the rights of dependents as outlined in Law Number 11 of 2008 concerning Electronic Information and Transactions.

Article 6 of the Electronic Information and Transaction Law (UU ITE) stipulates that electronic documents are considered valid if they are accessible, can be displayed, have guaranteed integrity, and can be reliably accounted for. Therefore, electronic land certificates that meet these criteria offer a strong legal basis for evidence in the land registration process in Indonesia. (Khasanah., 2021)



The Electronic Dependent Rights Certificate (HT-el) has ecumenical powers, allowing it to be immediately used as the basis for execution without the need for a court lawsuit. In the land law system, the certificate of dependent rights serves as evidence of a guarantee for a debt given by the debtor to the creditor. The applicability of HT-el in the legal system is supported by regulations that have been set, so that it has a position equivalent to a conventional certificate of dependent rights. If the debtor does not fulfill its obligations, the creditor can immediately execute based on the electronic certificate. Thus, the implementation of HT-el provides legal certainty for all parties involved, reduces the possibility of disputes, and speeds up the process of resolving dependent rights in court. (Gratia., 2020).

### 3. RESULTS AND DISCUSSION

#### Changes in the Procedure for Dependents in the Digital Era

The change in the Dependent Rights (HT) procedure from a manual system to a digital system has had a major impact on the process of issuing and registering certificates. The digitization of land services aims to increase efficiency, transparency, and speed in administration, while reducing obstacles that often arise in traditional systems. With the shift to conventional methods that still rely on physical documents and direct meetings to electronic-based systems, various aspects of the management of Dependent Rights have experienced significant improvements. The digital system allows services to be carried out online, reduces lengthy bureaucratic processes, and speeds up the registration and certificate issuance stages. To understand the differences between the two systems more clearly, here is a comparison between conventional and digital mechanisms in the management of Dependent Rights:

Table 1. Comparison of Conventional and Digital Mechanisms in the Management of Dependent Rights

Aspects	Conventional Systems	Digital Systems
Registration process	The Land Deed Making Officer (PPAT) submits the physical application file to the Land Office for further processing. (Sagari et.al. 2022.)	Creditors apply online through the electronic system without having to visit the Land Office in person. (Sagari et. al., 2022.).
Interaction with officers	This process requires a direct meeting between the Land Deed Making Officer (PPAT), debtors, creditors, and land officers. (Daniawijaya dkk, 2024)	The entire process is carried out online without the need for a face-to-face meeting. (Japar et al., 2024)
Document Checking	Document checks are carried out directly by officers manually, which	The inspection process is carried out automatically through the



	has the potential to cause delays in the process.(Pangesti & Sahetapy, 2023)	system, allowing for quick identification of data discrepancies. (Pangesti & Sahetapy, 2023)
Certificate issuance time	This process tends to take longer and often experiences delays (Pangesti & Sahetapy, 2023)	The Certificate of Dependent Rights in electronic form is issued within a maximum period of 7 working days. (Pangesti & Sahetapy, 2023)
Proof of Certificate Ownership	Certificates in the form of physical documents that have a risk of being damaged or lost.(Adinegoro, 2023a).	Certificates in electronic form are stored securely in the system and can be accessed whenever needed.(Adinegoro, 2023a).
Certificate Collection	Certificate documents in physical form must be taken directly at the Land Office.(Eva., 2022)	It can be downloaded and printed directly through the online system.(Eva., 2022)
Data Security	Documents are easy to forge and risk of loss.(Adinegoro, 2023a).	Security is more assured because it is stored in an electronic database with encryption protection.(Adinegoro, 2023a).
Roya Recording	The process must be done manually by submitting an application directly to the Land Office.(Adinegoro, 2023a).	Applications can be made and processed digitally, thereby speeding up procedures and reducing bureaucracy. (Adinegoro, 2023b).

The use of digital systems in the Dependent Rights process has a significant impact by increasing convenience, effectiveness, and openness. This digitization allows procedures to take place faster, reduces reliance on physical documents, and reduces the potential for administrative errors. In addition, the use of technology in the registration and issuance of Dependent Rights certificates also helps simplify the previously complicated bureaucracy, so that the process becomes more efficient and integrated. By minimizing the administrative constraints commonly found in traditional systems, we can encourage more innovative services that are aligned with the needs of society.(Alimuddin, 2021).

### **Implementation of Electronic Declaration of Dependent Rights**

A lien is a form of security interest in property that allows creditors to prioritize their claims for debt payments ahead of other creditors. This means that creditors with dependent rights have the benefit paid first and have the authority to initiate direct enforcement through the execution mechanism. If the debtor fails to meet their obligations, the creditor, who has the lien, has the option to sell the related property. This can be done either through a public auction or by initiating court proceedings. It is very important that the rights of dependents are registered, as this registration is essential for their enforcement. The determination of material guarantees between creditors and debtors is significantly shaped by the principle of publicity. This principle not only

guarantees that the agreement is valid and legally binding for the parties involved, but also offers legal certainty and applies to third parties as well. (Saputra., 2022).

The difference between manual and electronic registration of dependent rights can be studied through the principles of land registration outlined in Government Regulation Number 24 of 1997. These principles include simplicity, security, affordability, currency, and transparency. Additionally, it is important to evaluate how this method aligns with the overall purpose of land registration. These objectives include providing legal certainty to the holder of dependent rights, conveying important information to all relevant parties, and promoting efficient land administration. The certificate of dependency must be issued within seven days, provided that there are no deficiencies or discrepancies in the electronic dependency service file. In the past, the process required a certificate from the Land Office to be submitted to PPAT before being handed over to the holder of the right of dependency within the same seven-day period after the approval of the file. This is necessary because the inclusion of the seventh date in the Entry 208 list only serves as a formal indication that the bookkeeping has been completed. However, it is often not feasible to record the date in the title deed book, dependency book, and on each certificate within seven days, as the entire process can take a week or more to complete after the announcement. (Halim et.al., 2022).

The registration process for Dependent Rights begins with an agreement on debts and receivables. This was followed by the creation of a deed that provided the right of dependency. In the end, the right of dependents is recorded using an electronic system at the Land Office, based on the applicant's place of residence. The process involves the following steps: (Alimuiddin, 2021)

#### **Submission of Application by Registered Users**

To apply for registration of Dependent Rights using the Electronic Dependent Rights System (HT-el), it is important for creditors and Land Deed Making Officials (PPAT) to complete the registration process first. PPAT registers through the official platform of the Ministry of ATR/BPN, while creditors, especially those in the form of legal entities, must have a verified account and be registered with the Financial Services Authority (OJK). This system ensures a faster, more transparent, and more efficient registration process. (Ita Cahyanti & Made Subha Karma Resen, 2023).

To register, PPAT must use the official PPAT Partner Application provided by the Ministry of Agrarian and Spatial Planning or the National Land Agency (ATR/BPN). During this process, PPAT is required to upload the necessary data and documents for verification. After the registration is completed, the Land Office in the area designated by PPAT will review and validate





the information submitted. If all requirements are satisfactorily met, the PPAT account will be approved and activated, granting access to electronic services in the Electronic Dependent Rights (HT-el) system. (Agata., 2021).

Individual creditors are required to register as service users on the Touch-Tanahku Application, an official platform established by the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN). As part of the registration process, they must provide their identity information and upload relevant documents to verify their eligibility. (Agata., 2021.) Creditors of legal entities are required to register for the Financial Services Partner Application and become a member of the Financial Services Authority (OJK). In addition, they must complete the data validation and verification process carried out by the Ministry of ATR/BPN before gaining access to HT-el services. (Halim et al., 2022).

#### Submission of Electronic Documents

When registering Dependent Rights through the Electronic Dependent Rights System (HT-el), applicants must upload documents in digital format. This includes the Deed of Grant of Dependent Rights (APHT) issued by the Land Deed Making Officer (PPAT), as well as a certificate confirming the right to land or ownership of the flats in the name of the debtor. (Ita Cahyanti & Made Subha Karma Resen, 2023).

When registering Dependent Rights through the Electronic Dependent Rights System (HT-el), the applicant is required to upload documents in digital format.

#### Verification and Payment of Fees

Once the application is submitted through the Electronic Dependent Rights System (HT-el), the system will generate proof of registration, confirming that the application has been accepted. This documentation will include important details such as file number, registration date, applicant's name, and payment code required for the next administrative step (Guntoro & Kontesa, 2020). This document serves as official confirmation that your registration has been successfully entered into the system. It will also serve as a reference during the verification and subsequent processing stages. In addition, this proof of enrollment allows applicants to track the status of their application and ensure that payment for services is aligned with applicable regulations. (Nurwulan, 2021).

#### Recording of Dependent Rights

Once the application for registration of the Right of Dependency is submitted through the Electronic Right of Dependency System (HT-el), the system will officially document the Right of Dependency in the land registration. This procedure is supervised by the Head of the Land Office



in the relevant jurisdiction. (Nurdin., 2022).

The introduction of this mechanism smoothed the administrative process of handling Dependent Rights, making it faster, more transparent, and more efficient. By utilizing an electronic system, every stage of recording and verification can be automated, minimizing the possibility of administrative errors and speeding up the registration process. In addition, the digitization of these procedures ensures compliance with relevant regulations, increases accountability, and simplifies management for all parties involved in the Dependent Rights.

#### Issuance of Electronic Dependent Rights Certificate

After the application for registration of the Right of Dependency is submitted through the Electronic Right of Dependency System (HT-el), the system will generate a digital Certificate of Right of Dependency. The use of electronic signatures guarantees the authenticity and integrity of the issued certificates. (Nyoman et al., 2021)

Dependents can easily access and download their electronic Dependent's Rights Certificate through the Electronic Dependent's Rights System (HT-el). The system streamlines the administrative process, allowing users to obtain documents digitally without the need for physical printing, thereby increasing efficiency and simplicity (Halim et al., 2022). Additionally, electronic certificates simplify the process for rights holders to store, manage, and verify their documents at any time. This not only minimizes the risk of loss or damage but also increases the security of the data stored within the system. (Pratama et al., 2023).

From the description given, it is clear that Indonesia has adopted an electronic system for the Rights of Dependents service, in line with the Regulation of the Minister of Agrarian Affairs Number 5 of 2020. (Saputra., 2022).

#### Position of Electronic Dependent Rights Certificate in the Digital Era

The latest advancement in Indonesia's land administration system is the introduction of electronic land certificates. These digital documents are created and stored electronically, streamlining the management of land records. In recent years, the Indonesian government has launched a series of modernization programs designed to improve land administration, with prominently displaying electronic land certificates. This innovative approach seeks to streamline land administration processes, minimize bureaucratic barriers, and improve legal security for landowners. The use of electronic documents offers increased flexibility, making them easier to modify, copy, distribute, and store. The use of electronic documents as evidence in court is governed by various laws. In some cases, these documents may be considered confidential, restricting access to only authorized individuals. The implementation of electronic land



certification can help minimize disputes related to land ownership. It also serves to reduce conflicts, prevent land mafia activities, and prevent duplication of certificates. (Aji Permana et.al., 2023).

A digital Certificate of Dependent Rights is a document in electronic form issued through the Electronic Dependent Rights (HT-el) service. This system allows various legal processes related to dependent rights, such as recording, change of ownership, updating creditor data, deletion, and revision of information, to be carried out digitally and accurately. (Pangesti & Sahetapy, 2023).

The Electronic Certificate of Dependent Rights (HT-el) has a strong position in the Indonesian land law system in the digital era. Here are some aspects that show its role and legality:

#### Proof of Valid Rights

According to Government Regulation (PP) Number 24 of 1997, which relates to Land Registration, the certificate serves as official proof of land rights. This is stated in Article 19 paragraph (2) letter c of the Agrarian Constitution (UUPA). The certificate includes a variety of rights, including land rights, management rights, waqf land, ownership rights over flats, and other registered dependent rights documented in the relevant land book. In addition, Article 32 of the UUPA emphasizes that the certificate serves as strong evidence of the physical and legal data it contains, provided that this information corresponds to the details in the survey letter and the appropriate land book. In essence, land certificates are the culmination of a comprehensive land registration process designed to ensure legal certainty regarding land ownership and rights. (Yudistiara & Santoso, 2024).

#### Digitization of Land Services

Digital transformation in land services is a transition from manual systems to electronic-based systems. This process includes digitizing land documents and integrating land parcel maps into an online system to speed up and improve service efficiency. This effort aims to overcome negative perceptions related to land services which are often considered slow and complicated, as well as encourage transparency and accuracy in land data management. (Fitrianingsih., 2021)

The National Land Agency (BPN) has created the "Touch My Land" application as part of the digitization of land services. This application is designed to make it easier for the public to obtain information about land, such as registration procedures, cost estimates, and estimated service completion times. This initiative is in line with the concept of Society 5.0, which integrates technology in various aspects of life to improve the efficiency and accessibility of public services. (Noer et.al., 2024).



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**Using Digital Security**

The Indonesian government has implemented electronic land certificates as part of the digitization of land services. This initiative aims to increase effectiveness, protection, and openness in land administration. With digital certificates, the risk of loss or damage to physical documents can be minimized. In addition, the use of security technologies such as electronic signatures and data encryption plays a role in preventing forgery and duplication of certificates, thus ensuring their validity and security. (Rachmawati et.al., 2024).

The importance of legal certainty in protecting personal data lies in the basic principle that the privacy rights of each individual must be upheld, protected, and respected in harmony with established laws and regulations. Without an adequate information security system, confidential data risks turning into personal information that can be accessed illegally, either by individuals or companies. In fact, sensitive information related to state interests can also be leaked and taken advantage of by irresponsible parties. (Surya., 2022)

Regulation of the Minister of ATR/BPN Number 1 of 2021 concerning Electronic Certificates does not have specific provisions regarding data security protection for land rights holders, highlighting important weaknesses in the regulation. The law prohibits the improper use of personal information and imposes criminal penalties for violations covered by Articles 65 to 69, especially if such violations include the disclosure or misuse of personal information. (Surya., 2022).

**Improving the Ease of Doing Business (EODB)**

The Indonesian government is very focused on improving its Ease of Doing Business (EODB) rating to encourage a more favorable investment climate and streamline business operations. A key component of the EODB is credit accessibility, which is closely related to the encumbrance and registration mechanism of the right of dependency. To improve efficiency in this area, the government has introduced an electronic dependent rights system (HT-el). The initiative is designed to speed up the registration process, minimize bureaucratic barriers, and increase transparency, all in the hope of contributing to a higher EODB rating for Indonesia. (Pangesti & Sahetapy, 2023).

Introduction to Electronic Dependent Rights (HT-el) offers significant advantages in streamlining administrative processes; However, its implementation faces several challenges. A major concern is the uneven state of technological infrastructure in different regions, which can hinder the effectiveness of these systems. In addition, users have to adapt to this new technology, which presents challenges for many. To ensure optimal use of the system and improve Indonesia's Ease of Doing Business (EODB) ranking, it is critical to conduct comprehensive outreach and

training initiatives for all stakeholders involved. (Musadad et.al., 2024).

The Electronic Certificate of Dependent Rights (HT-el) has an important role in the digitization of land services. With a strong legal foundation, a higher level of efficiency, and improvements in security and transparency, HT-el is a strategic step in building a more modern and reliable land system.

### **Legal Power of Electronic Certificates in Dependent's Rights**

One of the latest advances in Indonesia's land administration system is the introduction of electronic land certificates. This certificate is a digital document that is created and stored in a computer system. In recent years, the Government of Indonesia has launched various initiatives aimed at modernizing land management, with electronic land certificates being a prime example. The purpose of implementing this certificate is to streamline the land administration process, reduce bureaucratic complexity, and improve legal security for landowners. Electronic documents have a number of advantages; They are flexible, easy to modify, and can be easily copied, shared, and stored. In addition, many laws regulate the use of electronic documents as evidence in legal proceedings, ensuring their legitimacy and reliability.

Law Number 5 of 1960, known as the Basic Law on Agrarian Affairs, serves as the basic law for land issues in Indonesia. It outlines the process of land registration and issuance of ownership certificates. The terms "record" and "land registry" are interchangeable in this context. (Afif & Mahfud., 2023). Land rights refer to the rights that individuals have over a specific area of the earth's surface, which can be vast and vast. However, these rights become ineffective if they are limited to the surface. Humans also need access to subsurface, water resources, and above-ground space. Landowners have the right to utilize and benefit from their property, covering not only the surface but also all the resources that exist underneath. (Risti., 2022)

Land rights encompass a wide range of characteristics and can be classified into several different types, including:

- a. Property Rights
- b. Right of Use
- c. Right of Use
- d. Lease Rights
- e. Right to Clear Land
- f. The right to harvest forest products

As technology advances, the importance of electronic land certificates as a form of evidence is increasing. This shift is closely related to two main factors: legal certainty and



protection of individual property rights. Traditionally, land certificates have served as the gold standard for legal documentation in land-related matters. In Indonesian procedural law, the introduction of electronic certificates marks a significant advance in valid evidence. The government is currently working to issue land certificates in a digital format, which will seamlessly integrate rights holder information into the land system. This integration will improve the accessibility and reliability of land tenure data. (Aji Permana et.al., 2023) It presents a contemporary alternative to traditional land titles, which have historically been provided in paper or book format. In Indonesia, the implementation and regulation of electronic land certificates can vary from region to region. The legal validity of this electronic land certificate in court can be supported by the following legal foundations:

Law Number 11 of 2020 concerning Job Creation, which states that land certificates can be in electronic form

Article 147 of Law Number 11 of 2020, known as the Job Creation Law, is a very important legal basis for the implementation of the electronic land certificate system in Indonesia. This article highlights that various documents related to land ownership and management—such as proof of land rights, tenure rights to flats, management rights, and dependents—can now be issued in electronic format. In addition, it includes deeds for the transfer of land rights and other relevant documents related to land ownership and administration. With this regulation, the digitization of land certificates is expected to improve administrative efficiency, streamline land transactions, and offer better legal protection for land rights holders. (Rizkiana et al., 2023)

#### **Law Number 11 of 2008 concerning Information and Electronic Transactions (UU ITE)**

The enactment of Law Number 11 of 2008, known as Electronic Information and Transactions (UU ITE), has marked significant progress in Indonesia's legal landscape by officially recognizing electronic documents and information as valid evidence in the legal system. This recognition gives legitimacy to the use of digital documents in various legal contexts, including their role as evidence in court. An important application of this regulation is the introduction of electronic land certificates, which have the same legal weight as traditional paper-based land certificates. (Hidayah., 2024).

The legitimacy of electronic land certificates is strengthened by the provisions outlined in Article 5 paragraph (2), and Article 6 of the ITE Law. These articles affirm that electronic information and documents, including their printed versions, constitute a valid extension of evidence in accordance with Indonesian procedural law. As a result, digital documents can serve as credible evidence in legal proceedings, as long as they comply with the validity criteria set by





relevant laws and regulations (Law Number 11 of 2008 concerning Information and Electronic Transactions).

This recognition lays a strong legal basis for using electronic land certificates as legal evidence in the Indonesian legal system. With this attestation, digital land certificates are given the same status as traditional physical certificates. As a result, as long as an electronic land certificate meets all the necessary legal requirements—especially regarding validity, security, and data authentication—it has the same weight of proof as the printed equivalent. The introduction of electronic land certificates not only ensures legal certainty for landowners, but also improves the efficiency of land administration, speeds up the service process, and mitigates the risks associated with loss or falsification of physical documents. (Rizkiana et al., 2023)

Government Regulation Number 71 of 2019 concerning Integrated Electronic Systems Government Regulation Number 71 of 2019 related to the Implementation of Electronic Systems and Transactions (PP 71/2019) plays an important role in advancing the digitalization of land administration in Indonesia. This regulation serves as a legal basis for the shift from traditional systems to electronic-based frameworks, particularly in the adoption of e-Certificates for Electronic Land Certificates. By embracing these regulations, land governance will become more innovative, effective, and transparent, effectively addressing many of the challenges commonly associated with physical land certificates. (Assidiqih & Susilowati., 2024).

It is essential to ensure that the creation, issuance, and notification of Electronic Land Certificates are carried out in accordance with relevant laws and regulations. This will ensure that the certificate has strong legal validity and can be recognized as a legal liability in the eyes of the law. In addition to providing a strong legal foundation, technological advances play an important role in encouraging the digitalization of the land system, especially through the implementation of Electronic Land Certificates. The integration of technology into the land registration process has significantly accelerated the transformation of the land administration system, resulting in faster, more efficient, and more transparent services. In pursuit of a modern land system, the Government of Indonesia has initiated various technology-based programs, including the Spatial Information System (SISTR) and the Electronic Land Registration Information System (SIPTE). This initiative is designed to improve efficiency, and more transparent. In pursuit of a modern land system, the Government of Indonesia has initiated various technology-based programs, including the Spatial Information System (SISTR) and the Electronic Land Registration Information System (SIPTE). This initiative is designed to improve efficiency, transparency, and security in land data management. The establishment of the system shows that Electronic Land Certificates are not only



recognized within the Indonesian legal framework but also play an important role in the ongoing innovation of national land administration. (Aji Permana et.al., 2023.).

### **Challenges and Solutions in the Digitization of Dependent Rights**

The digitalization of Dependent Rights in Indonesia marks a significant innovation in the land administration system, designed to improve efficiency, transparency, and accuracy in the recording of material collateral. However, the implementation of these systems comes with a variety of challenges, including regulatory hurdles, technological infrastructure readiness, data security concerns, and varying levels of digital literacy among stakeholders. To effectively address these issues, a comprehensive and strategic approach is essential, ensuring that the system operates at its full potential while providing legal certainty and facilitating all parties involved in transactions related to Dependent Rights. Although the digitization of Dependent Rights brings many benefits, the implementation process is inseparable from various obstacles that must be resolved immediately so that the system can run optimally. Some of the key challenges and solutions include:

#### **Availability of Technology Infrastructure**

For the successful implementation of electronic certificates, a sophisticated, stable, and secure information technology infrastructure is essential. Reliable systems are essential for maintaining data integrity, optimizing service efficiency, and protecting against the risk of information leakage or manipulation. The main challenges in this effort are especially pronounced in areas with limited internet access and inadequate digital infrastructure. To ensure that electronic certificate systems are implemented effectively and inclusively, it is critical for governments and stakeholders to improve network quality, provide additional technological resources, and ensure equitable access to digital services across the region. (Adinegoro., 2023)

#### **Community Digital Literacy**

The limited public understanding of digital technology is a significant obstacle to the successful implementation of electronic certificate systems. Digital literacy shortages can hinder individuals' ability to access, understand, and utilize technology-driven land services. To address these challenges, ongoing education and training programs are essential to improve digital literacy, ensuring that all parties can adapt to the e-certificate system more effectively. (Japar et al., 2024).

#### **Data Security and Privacy**

An important strategic step to improve the effectiveness, security, and transparency of land administration in Indonesia is the digital transformation of notary practices. By digitizing processes such as the creation, verification, and recording of legal documents, we can achieve faster and



more accurate data management while minimizing administrative errors. Additionally, integrating technology into the notary system helps reduce the risk of document forgery and improves the protection of legal confidential information. With a digital-based framework, collaboration between notaries, land agencies, and other stakeholders can be simplified, ultimately offering greater legal certainty to the community. To achieve this transformation effectively, it is essential to have a robust technological infrastructure, policies aligned with digital advancements, and enhanced human resources capable of adapting to more modern systems. (Surya & Dua., 2022).

To effectively address the challenges posed by the digitalization of land administration, it is important for governments, the private sector, and the community to collaborate closely in creating a robust and sustainable digital system. Governments play a crucial role in formulating policies that encourage innovation, improve technological infrastructure, and ensure that regulations are aligned with the demands of digital transformation. In turn, the private sector can make a significant contribution through technological advancements, the development of reliable data security systems, and the provision of digital solutions that improve access to land services. In addition, the community has an important role in improving digital literacy, gaining a strong understanding of the electronic administration process, and making the best use of digital services. With these strategic steps, the digitization of land administration can run smoothly, improve efficiency in data management, strengthen transparency, and ensure information security, in line with the national digital transformation vision to create more modern, fast, and reliable public services.

#### **4.CONCLUSION**

The digitalization of dependency systems, particularly through the implementation of electronic certificates, is an important advancement designed to improve efficiency, transparency, and legal certainty in land administration across Indonesia. Adoption of Electronic Dependent Rights (HT-el) offers many advantages, including a faster registration process, improved accessibility, and a reduction in the likelihood of administrative errors commonly associated with traditional systems. Despite the progress, some challenges remain in the implementation process. These include inadequate technological infrastructure, lack of digital literacy among society and stakeholders, and issues related to data security and user privacy. To overcome these obstacles, it is important for governments and related parties to intensify their efforts in raising awareness, increasing technological capacity, and strengthening regulations. The sustainability of digital transformation in a dependency system is highly dependent on adaptive regulatory support, strong



infrastructure, and the readiness of human resources to navigate change. By implementing the right strategic measures, the digitization of dependent rights can effectively increase legal certainty, facilitate land services, and increase national competitiveness in the digital era.

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