

# Digital Transformation of Mortgage Rights: Juridical Implications for Creditor Protection

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**Abstract**

The development of digital technology has brought about a revolution in various aspects of life, including in the legal and land administration systems in Indonesia. This study examines the dynamics of the digital transformation of mortgage rights through the implementation of an electronic system (HT-el) initiated by the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN). Using a normative legal method, the study explores the legal implications of this digital transformation on the legal protection of creditors. The results indicate that HT-el not only accelerates and simplifies the registration process for mortgage rights but also enhances transparency, accountability, and legal certainty for all parties involved. However, this digitalization is also accompanied by challenges such as data entry errors, human resource readiness, and electronic data security, which require further attention. Furthermore, the executory power inherent in electronic certificates provides creditors with an effective legal protection mechanism without having to go through lengthy court proceedings in the event of default. This study recommends strengthening regulations, intensive socialization, and improving technological capacity so that the digital transformation of mortgage rights can run optimally and provide maximum protection for creditors. This study is expected to serve as an important reference for policymakers and legal practitioners in addressing the digitalization of the land collateral system in Indonesia.

**Keywords:** Electronic Liens; Digital Transformation; Creditor Protection; Land Administration; Legal Certainty

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## 1. Introduction

In the current era of globalization and digitalization, governments across nations are required to adapt as effectively as possible to these developments as an effort to remain competitive amid global inter-state competition. Digitalization refers to the process of converting analog systems into digital formats through the utilization of technology and digital data, supported by automated and computerized operating systems.<sup>1</sup> From year to year, advancements in digital technology—particularly the emergence of the Internet—have significantly transformed societal lifestyles. This technological convenience has also been utilized by the state to advance Indonesia's national development agenda, particularly in the economic sector, as a means to increase national revenue. The increasingly massive infrastructure development observed in

<sup>1</sup> Abdul Azis Manurung, "Peran Digitalisasi Birokrasi Dalam Agraria Terkait Hak Tanggungan Elektronik," *INNOVATIVE: Journal Of Social Science Research* 3, no. 3 (2023): 801–8.

recent years serves as concrete evidence of the government's policy implementation aimed at promoting economic growth through the expansion of facilities and public utilities. Economic growth within society naturally gives rise to various needs, one of which is the availability of financial resources. In this context, the financial services industry—such as banking institutions, cooperatives, and other financial service providers—plays a pivotal role in facilitating the provision of capital, which is generally structured in the form of credit schemes.<sup>2</sup>

Economic growth driven by credit, in principle, does not necessarily require collateral or security, since creditors typically conduct a thorough and measurable assessment of a prospective debtor's financial capacity and income prospects. However, financial institutions as creditors consistently apply the principle of prudence, which serves as a preventive measure against potential default by the debtor. Consequently, debtors are required to provide security for their obligations. Such security may take the form of movable property—such as fiduciary guarantees or pledges—or immovable property, particularly land, which is secured under the legal institution of mortgage rights<sup>3</sup>. Land, in addition to serving as a vital means of livelihood, can also function as collateral to obtain funding necessary for economic activities and the fulfillment of daily needs. The land security institution that provides strong legal certainty and protection for both creditors and debtors is known as the Hak Tanggungan under Indonesian law.<sup>4</sup>

Article 1 point 1 of the Law on Mortgage Rights (Undang-Undang Hak Tanggungan) stipulates that a Mortgage Right (Hak Tanggungan) over land and objects related to the land constitutes a security right imposed on land rights as referred to in Law Number 5 of 1960 concerning Basic Agrarian Principles (UUPA). This right, whether or not it extends to other objects that are integral to the land, serves as collateral for the repayment of a specific debt and grants preferential status to a particular creditor over other creditors. The Hak Tanggungan therefore establishes the creditor as a preferred creditor, granting them priority in debt repayment and the authority to execute the collateral directly through a parate executie mechanism. Consequently, if the debtor defaults, the creditor holding the Hak Tanggungan may sell the collateral object through a public sale or auction process.

The Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (Kementerian Agraria dan Tata Ruang/Badan Pertanahan Nasional - ATR/BPN) plays

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<sup>2</sup> Ivonia Auxiliadora et al., "Pertumbuhan Ekonomi Sebagai Cerminan Perkembangan Perekonomian Suatu Negara" 2, no. 3 (2024): 40–47.

<sup>3</sup> Nadia Imanda, "Lahirnya Hak Tanggungan Menurut Peraturan Pemerintah Agraria Tentang Pelayanan Hak Tanggungan Terintegrasi Secara Elektronik," *Notaire* 3, no. 1 (2020): 151, <https://doi.org/10.20473/ntr.v3i1.17536>.

<sup>4</sup> IGA Ganga Santi Dewi and Mira Novana Ardani, "Kebijakan Penjaminan Tanah Melalui Hak Tanggungan Di Indonesia (Studi Penjaminan Hak Tanggungan Elektronik Di Kabupaten Badung Provinsi Bali)," *Law, Development and Justice Review* 3, no. 1 (2020): 57–69, <https://doi.org/10.14710/ldjr.v3i1.7835>.

a crucial role as a government institution responsible for providing land administration services to the public. As a public service institution in the land sector, the ATR/BPN is required to deliver effective and efficient services in order to enhance public trust and satisfaction. To achieve good governance, one of the strategic approaches adopted has been the modernization of public administration through the implementation of e-Government systems, utilizing digital technology and communication platforms.

The ATR/BPN officially began providing electronic-based services in 2017, following the issuance of Ministerial Regulation of ATR/BPN Number 5 of 2017 concerning Electronic Land Information Services, which introduced nine types of electronically managed land information services. This was followed by Ministerial Regulation of ATR/BPN Number 3 of 2019 on the Implementation of Electronic Signatures, aimed at facilitating the issuance of electronic land certificates. Subsequently, Ministerial Regulation of ATR/BPN Number 9 of 2019 on Electronically Integrated Mortgage Services (Pelayanan Hak Tanggungan Terintegrasi Secara Elektronik) was promulgated on June 21, 2019, establishing the legal foundation for the HT-el system (Electronic Mortgage Rights Service). This regulation was later superseded by Ministerial Regulation of ATR/BPN Number 5 of 2020, which refined and strengthened the framework for electronic mortgage right services in Indonesia.

The Electronic Mortgage Service (HT-el) was officially launched on September 3, 2019, by the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN). As part of its initial implementation, the Ministry designated 42 land offices (Kantor Pertanahan) across various regencies and municipalities as pilot project locations for the operation of the HT-el system.<sup>5</sup> This service has also demonstrated significant progress. According to data released by the Center for Land Data and Information, Spatial Planning, and Sustainable Agricultural Land (Pusdatin and LP2B), as of 2020, the issuance of Electronic Mortgage Rights (HT-el) had reached 82.7% nationwide. The implementation of the HT-el is based on the Ministerial Regulation of ATR/BPN Number 5 of 2020 concerning Electronically Integrated Mortgage Services. In providing electronic mortgage services, the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN) collaborates with Land Deed Officials (Pejabat Pembuat Akta Tanah - PPAT) and banking institutions. The existence of such inter-organizational collaboration between ATR/BPN and its institutional partners serves as a key foundation for the successful delivery of public services in the land administration sector.

In an era of increasing population mobility, large-scale demographic shifts, and global political transitions have generated profound social and political impacts. Through their research, Daivi Rodima-Taylor and Parker Shipton, in their seminal work "Land

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<sup>5</sup> "Menteri ATR/BPN: Selamat Tinggal HT Konvensional, Selamat Datang HT-Elektronik," [sinarpagibaru.id](http://sinarpagibaru.id), n.d.

& The Mortgage,” argue that in post-socialist societies, land tenure systems have become experimental grounds for land certification and the financialization of property following a historical period in which real property rights were absent.

In an era of increasing population mobility, large-scale migration and global political transitions have brought profound social and political consequences. Through their research, Daivi Rodima-Taylor and Parker Shipton, in their work titled “Land & The Mortgage,” argue that in post-socialist settings, societies have served as testing grounds for land certification and financialization reforms following an era in which real property rights were nonexistent. The attempt to institutionalize mortgage lending within contemporary societies demonstrates, in many respects, the enduring resilience of previous patterns of authority and the recommended forms of property that have evolved across different historical periods and property regimes.<sup>6</sup>

In a thesis conducted by Ferika Rahmatul Zulfa, titled “Juridical Analysis on the Electronic Integrated Mortgage Service (Hak Tanggungan Terintegrasi Secara Elektronik)”, it is explained that one of the defining characteristics of a Mortgage Right (Hak Tanggungan) as a strong land security institution lies in its ease and certainty of execution. This principle is enshrined in Article 20 of Law Number 4 of 1996 concerning Mortgage Rights on Land and Objects Related to Land. The study further elaborates that the mechanism for electronic registration of Mortgage Rights (HT-el), as regulated under Ministerial Regulation of Agrarian Affairs and Spatial Planning Number 9 of 2019 in conjunction with Number 5 of 2020, constitutes a digital or electronic innovation launched by the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN). This innovation aims to simplify land administration procedures based on the principles of transparency, timeliness, efficiency, accessibility, and affordability in the framework of public service delivery, while simultaneously adapting to developments in law and information technology to establish a more effective and efficient Mortgage Right service procedure.

Marisa and Aminah, in their journal article entitled “Implementation of Electronic Mortgage Rights with Land Certificate as Collateral”, also discuss the practical implementation of the electronic mortgage system using land certificates as collateral across multiple dimensions—legal, technical, and social. Their research concludes that, in practice, the implementation of the HT-el system has not yet reached an optimal level of effectiveness. The digital transformation within the Mortgage Right system is not merely a conversion of physical documents into electronic forms; rather, it represents a modernization of the national land law system, with the potential to bring about significant changes in the legal protection of creditors.<sup>7</sup>

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<sup>6</sup> Parker Shipton, “Land & the Mortgage,” n.d.

<sup>7</sup> Mellysa Febriani Wardoyo, “Legal Standing” 2, no. 1 (2018): 242–55.

This transformation encompasses various stages, including the preparation of deeds, registration, supervision, and execution of the Mortgage Right, all of which carry complex juridical implications, particularly concerning the legal protection of creditors. Consequently, this shift requires serious attention from legal practitioners and policymakers to ensure the protection and integrity of existing data. A number of legal issues have begun to emerge, especially regarding the validity and legal force of electronic documents, the security of sensitive data belonging to creditors and debtors, as well as technical obstacles within the registration system that may affect creditor rights protection.

Thus, this research is expected to make a scientific contribution to understanding the ongoing digitalization of the Mortgage Right system and to analyze the juridical implications of the Electronic Mortgage Right (HT-el) in safeguarding the interests and rights of creditors.

## **2. Research Method**

This study employs a normative juridical method to analyze the norms, rules, and legal principles governing the digital transformation of Mortgage Rights (Hak Tanggungan) and its implications for creditor protection. The research adopts a statutory approach, examining relevant laws and implementing regulations related to Mortgage Rights and the digitalization of land administration services. In addition, a conceptual approach is applied to explore theoretical perspectives in legal scholarship concerning Mortgage Rights and creditor protection within the context of digital transformation.

The data used in this study consist of primary and secondary data. The primary data include statutory regulations and official government documents relevant to the topic, while the secondary data are derived from legal literature, scholarly journals, books, and previous research that discusses the legal aspects of Mortgage Rights and the use of information technology in land administration services. Data analysis is conducted qualitatively using a descriptive-analytical method, which involves describing and analyzing the relevant legal provisions and supporting literature to comprehensively explain the juridical implications of the digital transformation of Mortgage Rights on creditor protection. The research findings are presented systematically to provide an in-depth understanding of the legal issues examined in this study.

## **3. Research Results and Discussion**

### **3.1. Electronic Mortgage Rights Mechanism**

In relation to the practice of granting credit secured by land rights, the implementation of such credit mechanisms requires the existence of a security rights institution capable of providing legal certainty for all interested parties in achieving a prosperous society, as mandated by Pancasila and the 1945 Constitution of the Republic of Indonesia. Given that the fulfillment of certain

land use rights must be registered and, by nature, is transferable, such rights may also be encumbered with Mortgage Rights (Hak Tanggungan).

Mortgage Rights are a security right imposed on land rights as regulated under Law No. 5 of 1960 concerning Basic Agrarian Principles (UUPA). These rights are indivisible in nature, except when otherwise agreed upon in the Deed of Granting Mortgage Rights (Akta Pemberian Hak Tanggungan or APHT). Essentially, a Mortgage Rights agreement is an accessory (accessoir) agreement, which follows the principal agreement. The principal agreement in this context may take the form of a loan or credit agreement.

A loan or credit agreement secured by Mortgage Rights does not arise automatically by virtue of law; rather, it emerges solely from an agreement between the parties. Therefore, such an agreement must first be mutually consented to by both parties, namely the creditor and the debtor, stipulating that the object of collateral shall be encumbered with Mortgage Rights.

Concerning the practice of credit secured by land rights, and in order to ensure legal certainty for the interested parties, the matter is specifically regulated in Law No. 4 of 1996 concerning Mortgage Rights on Land and Objects Related to Land (Undang-Undang Hak Tanggungan or UUHT). The registration of Mortgage Rights begins with an agreement between the creditor and the debtor, whereby both parties bind themselves through a contractual arrangement. Subsequently, the Land Deed Official (Pejabat Pembuat Akta Tanah or PPAT) is responsible for preparing and submitting the Deed of Granting Mortgage Rights (APHT) along with other supporting documents to the Land Office (Kantor Pertanahan) within seven days following the signing of the deed.<sup>8</sup>

Article 1 paragraph (1) of Law No. 4 of 1996 concerning Mortgage Rights on Land and Objects Related to Land stipulates that a Mortgage Right over land and objects related to the land – hereinafter referred to as Mortgage Right (Hak Tanggungan) – is a security right imposed on land rights as referred to in Law No. 5 of 1960 concerning Basic Agrarian Principles (UUPA), either with or without the objects that are an inseparable part of the land, for the repayment of a specific debt, granting a preferred position to a particular creditor over other creditors.

The rapid advancement of technology and communication systems has fostered significant progress across all sectors of life, accelerating a transformation toward digitalization in both the private and public spheres. This digital transformation has stimulated a variety of technological innovations, giving rise to systemic disruptions – commonly referred to as digital disruption – which

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<sup>8</sup> I Wayan Jody Bagus Wiguna, “Tinjauan Yuridis Terkait Pendaftaran Hak Tanggungan Secara Elektronik,” *Acta Comitas* 5, no. 1 (2020): 79, <https://doi.org/10.24843/ac.2020.v05.i01.p07>.

have profoundly altered many aspects of human activity and institutional practices.<sup>9</sup>

With the rapid advancement of technology, the government has also undertaken a digital transformation by introducing digitally based public services. The concept of “Digital Melayani” (Digital Service or DILAN) represents the vision and strategic framework of the Government of the Republic of Indonesia in implementing e-government. This concept reflects the government’s awareness that public service is not merely about serving but also about speed, efficiency, and accessibility. Service reform, therefore, emphasizes the transition toward electronic-based service systems as part of broader bureaucratic modernization.

One of the government institutions that has successfully innovated through digital transformation is the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (Kementerian ATR/BPN), which is responsible for administering governmental affairs in the sectors of agrarian affairs, land management, and spatial planning. In 2019, the Ministry launched the Electronic Mortgage Right (Hak Tanggungan Elektronik or HT-el) in response to the growing digitalization of business processes. This initiative was first formalized through Ministerial Regulation of the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN) No. 9 of 2019 concerning Integrated Electronic Mortgage Services, later amended by Ministerial Regulation No. 5 of 2020 on the same subject.

The Electronic Mortgage Right (HT-el) serves as a solution to the various obstacles and inefficiencies that often occurred in conventional, manual mortgage procedures. Under the traditional system, the issuance of a Mortgage Certificate required the physical signature of the Head of the Land Office as a form of legal authorization, which frequently resulted in delays beyond the stipulated service standards. Such delays typically arose because the Head of Office often had multiple administrative commitments or official duties outside the city or region.

With the implementation of the Electronic Mortgage System, these challenges have been effectively addressed. The process now only requires a digital signature, which can be securely accessed and verified by the Head of Office or other authorized officials from any location, thereby improving efficiency, transparency, and service reliability in Indonesia’s land administration system.<sup>10</sup>

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<sup>9</sup> Muhamad Danuri, “Perkembangan Dan Transformasi Teknologi Digital,” *Jurnal Ilmiah Infokam* 15, no. 2 (2019), <https://doi.org/10.53845/infokam.v15i2.178>.

<sup>10</sup> Santi Dewi and Ardani, “Kebijakan Penjaminan Tanah Melalui Hak Tanggungan Di Indonesia (Studi Penjaminan Hak Tanggungan Elektronik Di Kabupaten Badung Provinsi Bali).”

The Electronic Mortgage System (Hak Tanggungan Elektronik or HT-el), as stipulated in Ministerial Regulation of the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN) No. 5 of 2020, which amends Ministerial Regulation No. 9 of 2019, is the result of a comprehensive reform in the mortgage service process within the framework of land registration and maintenance conducted through an integrated electronic system.

This system encompasses several types of services under the Electronic Mortgage framework, including the registration of new Mortgage Rights, the transfer of Mortgage Rights, the modification of creditor names, and the deletion (release) of Mortgage Rights. The electronic system employed in HT-el consists of a series of digital tools and procedures designed to prepare, collect, process, analyze, store, display, announce, transmit, and/or distribute electronic information.

In accordance with Article provisions of Ministerial Regulation No. 5 of 2020, all deeds and supporting documents (warkah) related to Mortgage Rights may now be submitted in digital (scanned) form through the electronic system. Consequently, the National Land Agency (BPN) is no longer required to receive physical (hard copy) documents.

These electronic documents play a crucial role in the process of submitting an HT-el application, as they serve as the primary legal basis for BPN's approval to issue the Electronic Mortgage Certificate (Sertipikat Hak Tanggungan Elektronik). This transition to a fully electronic documentation process not only enhances administrative efficiency but also strengthens legal certainty, transparency, and accountability in Indonesia's land and mortgage administration system.<sup>11</sup> Although the registration mechanism for Mortgage Rights (Hak Tanggungan) within the electronic system has transitioned to a digital format, it must still be recorded in the land book (buku tanah). This step is carried out by the creditor until the Electronic Mortgage Certificate is printed and attached to the land title certificate.

The users of the Electronic Mortgage System (HT-el) consist of individuals or legal entities (as creditors), Land Deed Officials (PPAT), and civil servants of the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN). To access HT-el services, all users must first be registered in the ATR/BPN Partner Database (Mitra ATR/BPN). The following outlines the procedural flow for the registration of Electronic Mortgage Rights (HT-el):

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<sup>11</sup> Fitriya Nurmayuvita Buditama, Indah Wahyuni Olli, and Theanya Putri Azizah, "Batasan Pertanggungjawaban Ppat Terhadap Ketidakabsahan Dokumen Kelengkapan Persyaratan Dalam Sistem Hak Tanggungan Elektronik (Ht-El)," *Jurnal Hukum Caraka Justitia* 4, no. 1 (2024): 31–50, <https://doi.org/10.30588/jhcj.v4i1.1839>.

- a. Preliminary Certificate Verification - The PPAT conducts a certificate verification of the land title prior to drafting the Deed of Granting Mortgage Rights (Akta Pemberian Hak Tanggungan/APHT) through the portal [intan.atrbpn.go.id](http://intan.atrbpn.go.id)
- b. Issuance of Electronic APHT Code - Once the verification is completed and the certificate matches the records in the Land Office, the PPAT proceeds by generating an electronic APHT number and code via [mitra.atrbpn.go.id](http://mitra.atrbpn.go.id). The PPAT then prepares the Electronic APHT by uploading all required supporting documents to issue a referral letter addressed to the financial institution (creditor) for registration.
- c. Electronic Application Submission by the Creditor - The financial institution, acting as the creditor, creates an Electronic Mortgage Rights file through the [intan.atrbpn.go.id](http://intan.atrbpn.go.id) application. The creditor must upload all required documents, including the application letter and other supporting materials (warkah). Once submitted, the system automatically generates a proof of registration receipt, which includes, at minimum, the registration file number, date of application, applicant's name, and payment code for service fees listed in the payment instruction letter (Surat Perintah Setor).
- d. Verification and Payment Confirmation - The application will be processed once the data and payment are confirmed by the electronic system. If payment confirmation fails, the creditor may manually verify the transaction through the Land Office or the Customer Complaint Service. If the payment period expires without settlement, the application will be automatically cancelled.
- e. Document Examination - The examination of the application documents is conducted electronically by the Head of the Land Office or an appointed official through the HT-el system.
- f. Issuance of Electronic Mortgage Certificate - The result of the Electronic Mortgage Service is issued on the seventh (7th) working day after the application confirmation is validated by the system.
- g. Recording of Mortgage Rights - The Electronic Mortgage System (HT-el) issues the Electronic Mortgage Certificate (Sertipikat Hak Tanggungan Elektronik), which includes an annotation (encumbrance note) on the land book and the Certificate of Land Title or Ownership Certificate of Condominium Unit (Sertipikat Hak Milik atas Satuan Rumah Susun).
- h. Printing of the Electronic Mortgage Certificate - The creditor may independently print the HT-el Certificate, including the annotation

record generated by the system, and attach it to the Certificate of Land Title or Ownership Certificate of Condominium Unit as physical evidence of the registered mortgage.

This digitalized mechanism not only simplifies administrative procedures but also enhances the accuracy, transparency, and accountability of mortgage registration, aligning with Indonesia's broader goal of realizing efficient, technology-driven public services in the agrarian and land administration sectors.

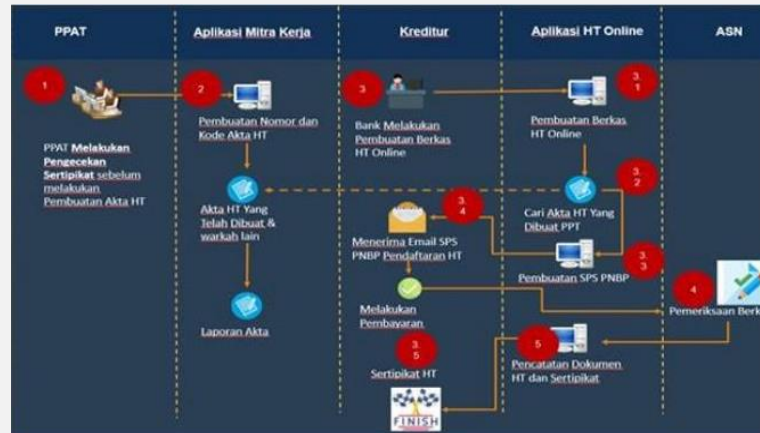


Figure 1.1. Flowchart of Electronic Mortgage Registration (HT-el)

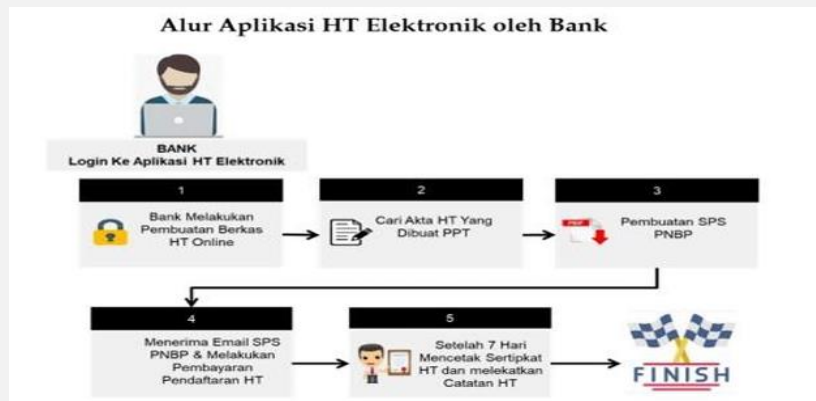


Figure 1.2. Flowchart of Creditor Registration in the Electronic Mortgage System (HT-el)

The implementation of Electronic Mortgage Services (Hak Tanggungan Elektronik or HT-el) as stipulated in PERMEN ATR/BPN No. 5 of 2020 aims to fulfill the principles of transparency, timeliness, efficiency, accessibility, and affordability in public service delivery. Fundamentally, a mortgage (hak tanggungan) arises from a security agreement that has been formalized through the *Deed of Granting Mortgage Rights (Akta Pemberian Hak Tanggungan or APHT)*. To obtain binding legal force, the mortgage must be registered with the Head of

the National Land Agency (Badan Pertanahan Nasional or BPN). Moreover, the establishment of the HT-el system represents the government's initiative to enhance the effectiveness and efficiency of mortgage services by adapting to legal developments and utilizing digital technology as an electronic medium of service delivery.

### **3.2. Effectiveness of the Electronic Mortgage System (HT-el)**

The introduction of the Electronic Mortgage System (HT-el) has significantly improved transparency and accountability in public service administration by providing higher-quality, easily accessible data. However, the implementation of this system also highlights the need for regulatory clarity to ensure legal certainty for all involved parties. Additionally, continuous and intensive training for Land Deed Officials (*Pejabat Pembuat Akta Tanah* or PPAT) is required to optimize the operation of the electronic system effectively.

In practice, the effectiveness of PERMEN ATR/BPN No. 5 of 2020 still encounters several challenges, particularly in terms of human resource capacity and the availability of adequate digital infrastructure. To address these challenges, the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN) has provided an online registration option to improve the efficiency and effectiveness of mortgage service delivery. This online mechanism enables faster access, reduces administrative burden, and enhances the overall quality and accountability of the data and service process.

From a time-efficiency perspective, the HT-el service requires a high level of accuracy and precision from its administrators. The successful implementation of the online mortgage registration process depends on the alignment between the execution of duties and the intended objectives, thereby ensuring that results are achieved in a more efficient and timely manner. This is consistent with the core principles of mortgage service delivery, which emphasize punctuality, cost efficiency, speed, accessibility, ease of service, and assurance of service quality.

Legal certainty, in this context, serves as the fundamental objective of law. The absence of legal certainty would undermine the identity and essence of the legal system itself. Legal certainty guides citizens toward developing a more positive attitude toward the rule of law, ensuring that societal conduct is governed by clear, consistent, and orderly regulations. Furthermore, legal certainty demands that law enforcement and administrative practices remain unaffected by subjective social circumstances, thereby upholding objectivity and fairness within society.

The Digital Service Concept (DILAN) represents the vision and strategic framework of the Government of the Republic of Indonesia in optimizing the implementation of e-government. This initiative marks a significant step in

public service reform, particularly through the adoption of electronic-based services such as e-government, e-budgeting, and e-procurement systems. In line with this transformation, the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN) has responded proactively by launching its digital transformation roadmap.<sup>12</sup>

It is important to note that the Ministry's commitment to digital transformation predates the formal introduction of the DILAN concept. As early as 2001, the ATR/BPN had already initiated its shift toward digitalization by developing a computerized land service application known as KKP (Komputerisasi Kantor Pertanahan). This system aimed to digitize various aspects of land administration that were previously conducted manually – such as tracking land documents, assigning identification numbers to properties, and managing land rights records.

The digitalization process has continued to evolve over the years, with the digital transformation roadmap being updated annually to align with technological advancements and contemporary administrative needs. The Ministry's strong commitment to digital transformation has been demonstrated through the continuous modernization of its service applications across multiple areas of land administration. These improvements leverage the KKP platform as a single sign-on system, enabling users to access all integrated land service applications within one secure ecosystem using a single user account.

Furthermore, the Ministry of ATR/BPN continues to refine and enhance its service mechanisms, particularly focusing on the digitalization of land services. This effort reflects a broader commitment to improving service efficiency, transparency, and accessibility through the effective integration of modern information and communication technologies. The ongoing development of the digital service framework not only embodies the spirit of bureaucratic reform but also serves as a model for the implementation of smart governance in Indonesia's public sector.

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<sup>12</sup> Kurnia Rheza Randy Adinegoro, "Analisis Transformasi Digital Layanan Publik Pertanahan : Hak Tanggungan Elektronik Pada Kementerian Agraria Dan Tata Ruang," *Jurnal Administrasi Publik* 19, no. 1 (2023): 26–49, <https://doi.org/10.52316/jap.v19i1.135>.

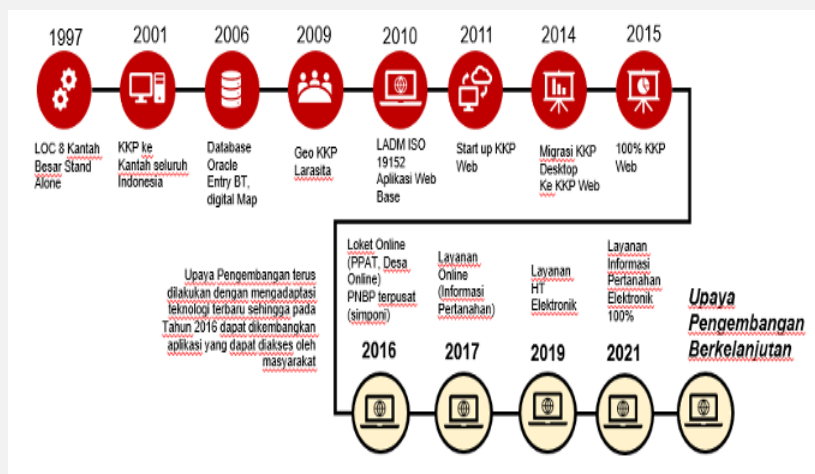


Figure 1.3. Development of the Digitalization of HT-el Services

Source: Data and Information Center (Pusdatin), Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN)

The digital transformation in land services represents a significant and necessary innovation undertaken by the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN) for several strategic reasons. First, it aligns with the strategic goal of the Ministry to evolve into a world-class institution through the implementation of digitalization initiatives. Second, it serves as a form of anticipation and preparation for the growing volume of derivative services following the Complete Systematic Land Registration Program (PTSL). Third, it embodies a crucial component of bureaucratic reform aimed at achieving comprehensive digital transformation within government institutions. Lastly, it contributes to improving Indonesia’s ease of doing business index by enhancing efficiency, transparency, and accessibility in land administration.

The implementation of digital land services through the DILAN framework (Digital Melayani) reflects the Ministry’s strong commitment and determination to shift the long-standing paradigm of land services—often perceived as complex, cumbersome, and costly—toward a more transparent, timely, efficient, user-friendly, and affordable system. This transformation not only supports the realization of public service principles but also aligns with the development of legal frameworks that accommodate the use of digital technologies in public administration.

Specifically, the Electronic Mortgage System (HT-el) serves as a breakthrough in Indonesia’s land registration system. It allows creditors to independently print electronic mortgage certificates issued through the HT-el system, which can then be attached directly to the corresponding Land Title Certificate (Sertipikat Hak Atas Tanah). This innovation signifies a tangible step toward modernizing

Indonesia's land governance, ensuring greater legal certainty, administrative efficiency, and data integrity within the national land registration framework.<sup>13</sup>

### **3.3. Challenges and Issues in the Digital Sphere**

A mortgage right (Hak Tanggungan) does not arise automatically; rather, it must go through several procedural stages, including registration in the land book carried out by the Head of the Land Office, as a prerequisite for fulfilling the principle of publicity (*asas publisitas*). The principle of publicity plays a pivotal role in secured transactions between creditors and debtors involving property rights. This is because such an agreement not only binds the debtor and creditor but also extends its legal effect to third parties. Therefore, legal certainty in the implementation of the mortgage right is crucial to ensure that the security agreement is recognized as binding not merely between the contracting parties but also against third parties, thereby preventing it from being a unilateral contractual arrangement.<sup>14</sup>

From this understanding, it can be concluded that the concept of the mortgage right inherently embodies the principle of publicity. This principle applies to immovable property, which requires the public announcement of ownership status to establish a legally recognized security right. In other words, the public must be informed regarding the actual control and legal status of an object, such as land, that is encumbered by a mortgage right. This public disclosure is realized through the process of land registration, which is formally documented in the land book (*buku tanah*).

In the context of digital transformation, however, the implementation of this principle presents new challenges. As mortgage registration transitions into an electronic system, questions arise regarding how effectively the principle of publicity can be maintained in a virtual environment. The digitalization of land and mortgage records, while enhancing efficiency and accessibility, also raises concerns related to data security, authenticity, transparency, and public accessibility. Ensuring that the electronic system continues to uphold the public nature of land information—as required under the traditional understanding of the publicity principle—thus becomes a critical legal and technological challenge in the evolving digital framework of Indonesia's land administration system.

The principle of publicity (*asas publisitas*) in the context of mortgage rights (Hak Tanggungan) serves as a legal foundation that binds third parties, thereby ensuring legal certainty for all interested parties. This principle signifies that

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<sup>13</sup> Caesar Wulan and Tri Kurniawati, "Pendaftaran Hak Tanggungan Secara Elektronik," *INNOVATIVE: Journal Of Social Science Research* 4 (2024): 6597–6612.

<sup>14</sup> H Moch. Isnaini, *Pengantar Hukum Jaminan Kebendaan* (Laksbang Pressindo : Yogyakarta., 2016, n.d.).

once the object of the mortgage right has been registered with the Land Office (Kantor Pertanahan), its legal status becomes publicly accessible and transparent. Consequently, the registration process transforms the mortgage right into a legally recognized encumbrance that can be enforced not only between the creditor and debtor but also against third parties.

A mortgage right is considered valid and enforceable only after fulfilling the principle of publicity and the principle of registration (*asas pencatatan*). These principles collectively establish the real right (*hak kebendaan*) arising from the encumbrance placed upon the land or property object used as collateral. The existence of a real right depends entirely on the fulfillment of the principle of publicity, which is achieved through its registration with the Land Office. Without such registration, the mortgage right remains a mere personal obligation between the parties and does not possess the enforceability characteristic of a real right.<sup>15</sup>

This legal requirement is expressly stipulated in Article 12 paragraph (1) of Law Number 4 of 1996 concerning Mortgage Rights on Land and Objects Related to Land, which states that "the granting of a mortgage right must be registered with the Land Office." Hence, registration is not a mere administrative formality but a constitutive element essential to the creation and perfection of the mortgage right, marking its transformation from a contractual agreement into a binding real right recognized by law and enforceable *erga omnes* (against all).

However, in its practical implementation, the Electronic Mortgage System (*Hak Tanggungan Elektronik* or HT-el) still encounters several challenges. According to Windi Handoko, one of the major drawbacks of the electronic mortgage system lies in its susceptibility to data entry errors, including inaccuracies during the inputting process and mistakes in accessing the intended system or database. Additionally, there are significant concerns regarding the readiness and competence of human resources, as the successful operation of digital systems heavily depends on the users' technical proficiency and understanding of the system. Another critical issue pertains to the central data server infrastructure, which requires serious attention to ensure the security, reliability, and integrity of stored data. The implementation of HT-el must not merely become a symbolic or image-driven project; instead, it must guarantee that data servers are properly designed and maintained to provide accurate, stable, and secure electronic data management. Inadequate data protection or reliance on poorly configured servers could compromise the integrity of legal records and undermine public trust in the system.<sup>16</sup>

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<sup>15</sup> M.H. Dr. H. Imron Rosyadi, S.H., *Jaminan Kebendaan Berdasarkan Akad Syariah* (Kencana, 2017).

<sup>16</sup> Vanny Djakatarata, Hasbir Paserangi, and Sri Susyanti Nur, "Implementasi Pendaftaran Hak Tanggungan Secara Elektronik," *Amsir Law Journal* 4, no. 2 (2023): 183–93, <https://doi.org/10.36746/alj.v4i2.184>.

Moreover, a considerable societal challenge arises from the technological divide within Indonesia. A substantial portion of the population still struggles with digital illiteracy or a lack of familiarity with modern technological advancements. This gap affects not only individual users but also professionals and institutions expected to transition smoothly into the digital environment. Consequently, without adequate training, digital infrastructure development, and public education, the potential benefits of the Electronic Mortgage System may not be fully realized, thereby limiting its effectiveness and inclusivity in achieving the broader goal of digital transformation in land administration.<sup>17</sup>

In an effort to improve the quality of land data, poor data integrity can lead to errors in service processes, policy formulation, and ultimately result in dissatisfaction among service recipients. Such procedural errors may have serious and long-term consequences, potentially generating complex administrative and legal problems in the future. Conversely, maintaining high-quality data ensures that resulting products are reliable, accurate, and minimize the likelihood of future disputes or service inefficiencies.

The improvement of land data quality is intended to ensure that all land-related data are valid both physically and juridically. Moreover, the commitment of HT-el service users—particularly Land Deed Officials (PPAT) and creditors—plays an essential role in determining the success of electronic mortgage registration. Without a strong commitment from these users, the service process may face significant delays, leading to additional time and financial costs. As stipulated, the electronic mortgage certificate (HT-el) is automatically issued on the seventh (7th) day following the payment of the Deposit Order (Surat Perintah Setor or SPS). Therefore, the discipline and responsibility of both PPAT and creditors are crucial in ensuring timely and accurate service completion.<sup>18</sup>

The accuracy and completeness of the data and documents submitted by PPAT and creditors form the legal foundation for issuing the electronic mortgage certificate. Hence, both parties must ensure that the submitted documents are authentic, verifiable, and legally accountable. Any negligence or inaccuracy at this stage could jeopardize the entire registration process and the validity of the resulting certificate.

The socialization and training programs organized by local Land Offices (Kantor Pertanahan) are attended by service users such as PPATs and creditors. During these sessions, participants are guided through the practical aspects of the HT-el

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<sup>17</sup> Bimrew Sendekie Belay, “No Title5 הארץ העינים, לנגד שבאמת את מה קשה לראות את מה שבאמת לנגד העינים,” no. 8.5.2017 (2022): 2003–5.

<sup>18</sup> Damar Sagari and Mujiati Mujiati, “Efektivitas Layanan Hak Tanggungan Terintegrasi Secara Elektronik Di Kantor Pertanahan Kabupaten Klaten,” *Tunas Agraria* 5, no. 1 (2022): 33–46, <https://doi.org/10.31292/jta.v5i1.166>.

service process, from account creation to document uploading. These activities are conducted interactively, fostering direct communication between Land Office officials, PPATs, and creditors, thereby enabling users to better understand and properly implement electronic mortgage registration procedures.

A stable and reliable internet connection is a critical supporting factor for the smooth operation of the HT-el system. However, during the early stages of its implementation, several technical issues were encountered, such as the inaccessibility of the website and failure to upload required documents. These difficulties arose because the HT-el system was still in its development phase, continuously being refined toward an optimal version. The preparation of electronic submission files is also time-consuming, as each document must first be scanned to ensure legibility. High-quality scanned documents are essential so that officers can verify and correct data efficiently, ensuring accuracy and compliance in the electronic land registration process.

#### **3.4. Juridical Implications of Electronic Mortgage (HT-el) on Creditor Protection**

Normatively, the principles contained in the Banking Law and the Mortgage Law are designed to ensure legal certainty and legal protection so that credit agreements and security agreements between creditors and debtors can operate properly without causing harm to either party. However, in practice, there are frequent occurrences of default (breach of contract) by debtors regarding their obligations as stipulated in the agreement. In reality, creditors often encounter obstacles when attempting to execute the collateral object, whether these obstacles originate from the debtor or from third parties.

An obligation arises from an agreement. As stated in Article 1234 of the Indonesian Civil Code (*Kitab Undang-Undang Hukum Perdata*), an obligation is established to give something, to do something, or to refrain from doing something. The law of obligations adopts an open system, meaning that individuals are free to form legal obligations from any type of agreement, whether or not such agreements are expressly regulated by law. This principle is known as *freedom of contract*, provided that it does not violate legal provisions or public order.<sup>19</sup>

Article 1234 of the Indonesian Civil Code also emphasizes that the primary objective of the law of obligations is to provide clarity regarding the intentions of the parties entering into an agreement, thereby ensuring the fulfillment of the performance (*prestasi*) owed by each party. Consequently, the binding nature of an agreement between a creditor and a debtor is rooted in mutual consent and

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<sup>19</sup> "Hukum Perikatan," Hukum Online.com, n.d.

good faith, which serve as the legal foundation for enforcing contractual rights and obligations.

In the context of Electronic Mortgage (HT-el), these juridical principles remain relevant, as the system's digitalization aims not only to streamline administrative processes but also to strengthen the legal enforceability of creditors' rights. However, when defaults occur, creditors must still rely on existing procedural mechanisms for executing the collateral—mechanisms that, despite the electronic nature of registration, continue to depend on legal certainty and the effectiveness of enforcement instruments. Therefore, ensuring that HT-el implementation aligns with the principles of *legal certainty, justice, and protection of creditor rights* is essential to maintaining a balanced legal relationship between debtors and creditors in the era of electronic land registration.

An agreement can be properly executed when all parties involved have fulfilled their respective obligations as stipulated in the contract, based on mutual consent and intention, without causing harm to any party. However, within the implementation of an agreement, it is possible for a debtor to commit a *breach of contract (wanprestasi)*.

According to Article 1238 of the Indonesian Civil Code (*Kitab Undang-Undang Hukum Perdata*), a debtor is considered to be in default upon the issuance of a formal notice (*surat perintah*), or by means of an equivalent legal instrument, or by virtue of the binding force of the obligation itself—namely when the obligation causes the debtor to be in default due to the lapse of a specified time period.

In relation to Article 1238 of the Civil Code, when it is connected with a credit agreement secured by a *Hak Tanggungan* (Mortgage Right), a debtor is deemed to have committed a breach of contract if they fail to fulfill their obligation to repay the loan within the period agreed upon in the contract.

Concerning the debtor's negligence in failing to meet their obligations, Article 1243 of the Civil Code applies. This article regulates compensation for costs, losses, and interest resulting from non-performance of an obligation. Such compensation becomes enforceable when the debtor, despite having been declared in default, still fails to fulfill the obligation, or when the act or object to be performed or delivered can only be carried out after the expiration of the stipulated time period. Thus, these provisions establish a strong legal foundation for creditors to claim damages in the event of a debtor's continued default,

reinforcing the principle of legal certainty in the execution of credit agreements secured by *Hak Tanggungan*.<sup>20</sup>

In the event of a breach of contract (*wanprestasi*) committed by the debtor in a credit agreement secured by a *Hak Tanggungan* (Mortgage Right), the creditor is not required to file a lawsuit in court. This is because the *Hak Tanggungan* certificate contains the executorial heading (*irah-irah*) stating, “For the Sake of Justice Based on the Belief in the Almighty God”, which grants it the same executorial force as a final and binding court judgment.

The provisions under Articles 1247 and 1248 of the Indonesian Civil Code (*Kitab Undang-Undang Hukum Perdata*) establish two limitations on compensable losses, namely:

- a) Losses that could have been reasonably foreseen at the time the obligation was made; and
- b) Losses that are the direct result of the breach of contract.

The interpretation of these provisions encompasses costs, losses, and interest (*kosten, schaden en intressen*), and all such losses must constitute direct consequences of the breach, as stipulated in Article 1248 of the Civil Code, which states: “Even if the non-performance of an agreement results from the debtor’s deceit, the damages, costs, and benefits that may be claimed shall not exceed the losses directly caused by the non-performance.” The annulment of a contract – often referred to as termination – implies that the agreement is considered null and void following the occurrence of a breach. If the contract concerns the performance of an obligation, for instance, the promise to deliver a certain good, the occurrence of a breach renders the contract automatically terminated.

A breach of contract can only occur during the performance stage, after a valid and binding agreement has been established. The legal concept of *wanprestasi* is thus designed to protect the parties involved in an agreement, particularly during its execution, ensuring that obligations are fulfilled in accordance with the principles of good faith and legal certainty.

### 3.5. Prospects and Recommendations for Strengthening Creditor Protection

Legal protection for creditors in the *Hak Tanggungan* agreement is very important, as it aims to ensure legal certainty and minimize the risk of loss for banks or financial institutions that provide credit.<sup>21</sup> This is to minimize the risk of bad credit from individual loans without collateral. The establishment of a

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<sup>20</sup> Oleh Pamela et al., “1 2 3 4” X, no. 1 (2022): 172–82.

<sup>21</sup> Chandera Halim and Vincentius Patria Setyawan, “Legal Protection for Creditors in Increasing Satisfaction in Credit Agreements with Liens as Collateral,” *Santhet (Jurnal Sejarah Pendidikan Dan Humaniora)* 8, no. 2 (2024): 2028–37, <https://doi.org/10.36526/santhet.v8i2.4547>.

credit agreement gives consequences to the creditor regarding legal certainty if the debtor fails to fulfill his obligations. The credit granted to the debtor must be secured, meaning that its repayment or settlement must be guaranteed. In order to provide security and certainty of credit repayment, the creditor needs to request collateral which can then be bound in a security agreement. The principle of prudence, commonly known as the *banking prudential principle*, is a principle generally used in banking activities or operations.<sup>22</sup>

In relation to the provisions of the Mortgage Law (*Undang-Undang Hak Tanggungan*) Number 4 of 1996 as stipulated in Article 15 paragraphs (2), (3), and (4), which are connected to the Regulation of the Minister of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN) Number 5 of 2020 concerning Mortgage Services, the Ministry of ATR/BPN has reviewed the regulation because it is considered disadvantageous to creditors. This issue is related to the smooth distribution of credit and the electronically integrated registration process of *Hak Tanggungan*. In this regard, there must be clear regulations concerning invalid data, such as cases where the guarantor has passed away before the Deed of Granting of Mortgage Rights (*Akta Pemberian Hak Tanggungan* or APHT) is registered. In practice, legal protection for creditors in credit agreements secured by mortgage rights has been strengthened through clauses included in the Credit Agreement and the APHT.

Legal protection for creditors in credit agreements secured by *Hak Tanggungan* must still maintain a balance of interests between creditors and debtors. In the context of law enforcement, creditor protection is also supported by the role of the judiciary. However, such legal protection is not absolute and must still adhere to the principles of justice and propriety. Overall, legal protection for creditors in credit agreements guaranteed by *Hak Tanggungan* under Indonesia's positive law has been comprehensively regulated through various statutes and regulations. Credit agreements secured by land title certificates serve as one of the legal instruments that provide strong protection for creditors. One of the main advantages of *Hak Tanggungan* lies in its inherent executorial power, which allows creditors to auction the collateral object without undergoing lengthy civil litigation. This provides efficiency and legal certainty for creditors.

Therefore, to ensure creditor protection in agreements with debtors, it is necessary to apply prudence and conduct thorough verification regarding the authenticity and clarity of the collateral used by debtors to prevent future disputes. In addition to formal legal aspects, creditor protection can also be strengthened through administrative and contractual measures. The prospects

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<sup>22</sup> Yuni Andaryanti (Universitas Islam Sultan Agung Semarang), "Rekonstruksi Regulasi Perlindungan Hukum Terhadap Kreditor Dalam Perjanjian Kredit Dengan Jaminan Hak Tanggungan Yang Berbasis Nilai Keadilan" (2025).

for creditor protection under the *Hak Tanggungan* regime still require improvements in regulation, bureaucracy, and the implementation of an integrated digital system. A combination of legal amendments, standardized execution procedures, and creditor risk mitigation will reinforce the legal protection of creditors in the future.<sup>23</sup>

## 4. Closing

### 4.1. Conclusions

The digitalization of the *Hak Tanggungan* registration and execution system represents a strategic step to enhance transparency and efficiency. Through the use of technology, administrative processes can operate more swiftly, with easier supervision and real-time access to information regarding collateral status, both for creditors and other relevant parties. The digital transformation in *Hak Tanggungan* services (*HT-el*) implemented by the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN) constitutes a significant milestone in the modernization of Indonesia's land administration system. The *HT-el* mechanism enables faster, more transparent, and efficient processes of registration, supervision, and execution of *Hak Tanggungan*, thereby providing greater convenience for both creditors and debtors. However, the implementation of this digitalization initiative is not without challenges, including the readiness of human resources, data quality, technological infrastructure, and the protection of data security and parties' rights. From a juridical standpoint, *HT-el* continues to ensure legal protection for creditors with strong executorial power, although it requires further regulatory reinforcement and a more comprehensive approach to address the technical and legal issues that arise in practice. Therefore, the digital transformation of *Hak Tanggungan* is not merely a technical adjustment but also a challenge and opportunity to strengthen legal protection for creditors while advancing the utilization of information technology in land administration.

### 4.2. Suggestions

- a. For the Government or ATR/BPN: The government, particularly the Ministry of ATR/BPN, should continue to develop and optimize the *HT-el* system by strengthening technological infrastructure, ensuring data security, and enhancing human resource capacity through continuous training. Additionally, it is essential to reinforce regulations concerning the validity and legal force of electronic documents, improve technological infrastructure, and provide comprehensive socialization and intensive training for Land Deed Officials (PPAT) and creditors.

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<sup>23</sup> Salsabila Biuti Oktamiarsa and Fitika Andraini, "Rewang Rencang : Jurnal Hukum Lex Generalis. Vol.5. No.8 (2024) Tema/Edisi : Hukum Perdata (Bulan Ketujuh) <https://jhlg.rewangrencang.com/>" 5, no. 8 (2024): 1–18.

- b. For Creditors: Creditors are advised to apply the prudential principle by conducting thorough verification of collateral and ensuring the completeness and accuracy of uploaded electronic documents.
- c. For Debtors and the Public: Debtors and the public should increase their commitment and diligence in managing data and documents submitted to the HT-el system to ensure that the execution of Hak Tanggungan proceeds smoothly and securely. Moreover, they should understand the importance of legality and authenticity in land data and adapt to digital systems to facilitate more effective service delivery.
- d. For Law Enforcement and Supervisory Institutions: Law enforcement and supervisory institutions must strengthen their oversight to ensure that the implementation of HT-el is fair, transparent, and accountable, thereby fostering full confidence among parties involved in credit transactions secured by Hak Tanggungan.

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