

Effectiveness Of Online Service System at National Land Agency (Bpn) Office in Kudus Regency

Ariana Damayanti Finandita¹⁾ & Gunarto²⁾

¹⁾Master of Notary Law, Faculty of Law, Universitas Islam Sultan Agung (UNISSULA) Semarang, Indonesia, E-mail: arianafinandita@gmail.com

²⁾Master of Notary Law, Faculty of Law, Universitas Islam Sultan Agung (UNISSULA) Semarang, Indonesia, E-mail: Gunarto@unissula.ac.id

Abstract. *The development of digital technology has driven the transformation of the land administration system towards electronic-based services. One of the main efforts in supporting the successful implementation of online land services is the provision of integrated and secure digital data sources. Optimal digitalization of land registration can accelerate the land service process and increase legal certainty for the community. This study aims to analyze the implementation of the online service system at the BPN office in Kudus Regency, as well as to determine and provide solutions to its effectiveness. This study uses a sociological legal approach with a descriptive analytical research method. The data used includes primary and secondary data, which are analyzed descriptively qualitatively to describe and evaluate the implementation of the online land registration system. The results of the study indicate that the implementation of online land registration at the BPN of Kudus Regency is able to guarantee legal certainty, because electronic certificates have legal force recognized by laws and regulations and can be used as valid evidence. The registration process can be done through the official website <https://loket.atrbpn.go.id>. with the assistance of the Land Deed Making Officer (PPAT). In terms of effectiveness, online land registration has proven to be more efficient than conventional systems. The benefits felt by the community include increased productivity and service efficiency, reduced queues at land offices, accelerated administrative processes, and reduced errors in document completeness. In addition, this online service minimizes the risk of complicated bureaucracy and accelerates legal certainty for applicants. The public response to this system has been very positive, with the adoption rate increasing significantly.*

Keywords: *Certificates; Electronic; Online; Services.*

1. Introduction

Article 1 of the 1945 Constitution states that Indonesia is a country based on law, which means that all government activities and people's lives must be based on clear and fair applicable laws. The concept of a country based on law is becoming increasingly relevant in the era of digital transformation where information and communication technology plays a crucial role in everyday life. In this context, the application of digital technology must be in line with applicable legal principles so that citizens' constitutional rights remain protected. For example, in the management of personal data, laws such as the Personal Data Protection Law (UU PDP) must be strictly implemented to ensure that personal data is not misused and that individual privacy is maintained. In addition, digital transformation must support the principles of transparency and accountability in public administration so that all technology-based policies and services must be accessible and supervised by the public in accordance with existing regulations. In the process of digital reform and adaptation, the Indonesian state based on law must ensure that the use of technology does not shift the principles of justice and the supremacy of law. Law Number 27 of 2022 states that personal data is data about a person that can be used to identify the individual directly or indirectly. Therefore, although digitalization brings progress and efficiency, it must be accompanied by strict regulation and effective supervision so that every innovation remains within the applicable legal framework, protects constitutional rights, and promotes legal certainty. In this way, digital transformation can strengthen, not weaken, the foundation of the Indonesian legal state as stated in the 1945 Constitution.

In the digital era, technological transformation provides great benefits in advancing justice in various aspects of life, especially through increasing access and transparency. Digitalization expands access to public services and the justice system, enabling people in remote or underserved areas to obtain legal information and services online. This includes access to legal documents, virtual legal consultations, and mechanisms for filing complaints or lawsuits through digital platforms. Digital systems increase transparency by providing a publicly accessible platform to monitor government processes and decision-making, thereby reducing the possibility of corruption and abuse of authority. One of them is the National Land Agency (BPN) office in Kudus Regency which implements an online service system. Based on Government Regulation 18 of 2021, it stipulates procedures for land registration, including measurement, mapping, and issuance of certificates, in order to provide legal certainty for land ownership rights and protect the interests of rights owners. On the basis of unity in article 3, it states that land registration is a series of activities carried out by the Government continuously, continuously and regularly including the collection, processing, bookkeeping, and presentation and maintenance of physical data and legal data, in the form of maps and lists, regarding land plots,

Above Ground Space, Basement Space and apartment units, including the provision of proof of rights for land plots, Above Ground Space, Basement Space that already have rights and ownership rights to Apartment Units and certain rights that burden them. Overall, digital transformation supports justice by making the system more responsive to the needs of the community, thereby encouraging equal access and protection of individual rights more effectively.

As stipulated in the Regulation of the Minister of Spatial Administration of the National Land Agency (BPN), land registration can apply information and communication technology which can be implemented through an Electronic system. The implementation of the online service system aims to improve efficiency, transparency, and accessibility of land services by allowing registration of land certificate applications, status checks, and payments electronically. However, this system faces several shortcomings and weaknesses that can affect its effectiveness. Limited access to technology in some areas, especially in remote areas, hinders some people from optimally utilizing this service. In addition, low digital literacy among users can make it difficult for them to use the system, which has the potential to cause errors or dissatisfaction. Technical problems such as server disruptions or system errors can also interfere with accessibility and slow down the process, increasing the workload of staff. Data security and privacy are major concerns considering that sensitive information managed digitally is vulnerable to breaches and cyber attacks so that data protection must be continuously strengthened. Electronic Information is any information that is sent, received, processed, stored, or generated in electronic form. Processes that take time and may not be fully resolved by digitalization slow down the completion of applications. To measure the effectiveness of the system, it is important to collect feedback from users to evaluate their satisfaction, analyze usage data to understand patterns and common problems, and periodically audit the system to ensure compliance with technical and security standards. Training and technical support are also needed to improve the digital skills of users and staff, so that the online service system can provide maximum benefits and overcome existing deficiencies effectively.

In Law Number 11 of 2008, the ITE Law which has been amended to Law Number 1 of 2024 regulates various aspects related to the use of information technology and electronic transactions, including recognition and legal protection of electronic information, electronic transactions, and procedures and mechanisms for resolving electronic disputes. This law also regulates criminal acts related to the use of information technology, such as identity theft, online fraud, and the dissemination of information or electronic documents containing negative or unlawful content. In this case, the National Land Agency (BPN) Office in Kudus Regency is one example of the implementation of this policy at the local level. This change allows the creation of a land database that is accurate, transparent,

and easily accessible to the public.¹Article 33 paragraph 3 of the 1945 Constitution states "The land, water, and natural resources contained therein are controlled by the state and used for the prosperity of the people". The importance of land use for human life means that state intervention through its agents in the land law system is an absolute must.²Land registration is very important to achieve orderly land administration, knowing the status, land area, land boundaries, buildings on it and plants on the land and in registering our land, we will obtain legal protection and legal certainty and obtain proof of land ownership in the form of a certificate. In Government Regulation Number 24 of 1997 it states that a certificate is proof of land rights. Meanwhile, supporting public policies such as privacy policies and data security are also needed to build public trust in online services.³

This study aims to explore the effectiveness of the online service system at the BPN office by involving two main dimensions, namely the legal and sociological dimensions. From a legal perspective, an evaluation will be carried out on the regulatory and legal framework governing the land system in Kudus Regency. This legal basis is critical in assessing the success of the implementation of the online service system. According to Ministerial Regulation Number 50 of 2017 concerning Electronic Defense Information Services, the sustainability of this technology must also be in line with recognized legal principles, and this study will try to understand the extent to which the online service system at the BPN Office complies with and supports the existing legal framework. From a sociological perspective, the use of the online service system at the BPN office raises questions about how society adopts and interacts with rapid technological developments that bring progress to almost all aspects of human life.⁴The perception and level of public acceptance of the online service system must be considered, because this can affect the level of success of implementation. Therefore, this study will also involve social analysis to understand the social factors that influence public acceptance and participation in utilizing this system. By combining these two dimensions, this study is expected to provide a holistic view of the effectiveness of the online service system at the BPN office. The results of this study are expected to be a valuable contribution in formulating better policy recommendations, which not only consider legal aspects, but also social aspects of the community in the context of land services.

¹Kurnia Rheza Randy Adinegoro., (2023), Analisis Transformasi Digital Layanan Publik Pertanahan: Hak Tanggungan Elektronik pada Kementerian Agraria dan Tata Ruang, *Jurnal Administrasi Publik*, Vol. 1, No. 2, p. 31.

²Thalib Hambali, (2009), *Sanksi Pemidanaan dalam Konflik Pertanahan: Kebijakan Alternatif Penyelesaian Konflik Pertanahan di Luar Kodefikasi Hukum Pidana*. Jakarta: Kencana., p. 310.

³Indra Pahlevi, (2015), *Pengembangan Teknologi Informasi Komunikasi bagi Pelayanan Publik dan keamanan Nasional di Daerah*, Yogyakarta: Azza Grafika. p. 112.

⁴Man Suparman Sastrawidjaja, (2002), *Perjanjian Baku dalam Aktivitas Dunia Maya Cyberlaw: Suatu Pengantar*, Jakarta: Elips., p. 14.

2. Research Methods

In evaluating the effectiveness of the online service system at the BPN office, sociological legal research will be applied. This research method is an approach that integrates legal analysis and social aspects in order to understand legal phenomena in the context of society. In sociological legal studies, humans are placed as the main subject of discussion.⁵The specifications of this study use a qualitative approach. This study will focus on an in-depth understanding of how online services at the BPN office are used, understood, and assessed by users. Data collection methods such as in-depth interviews with BPN office staff, direct observation of the online service process, and analysis of documents related to service policies. Data sources come from primary data and secondary data. The Data Analysis Method used is descriptive statistics and regression analysis.

3. Results and Discussion

3.1. Implementation of Online Service System at the National Land Agency (BPN) Office in Kudus Regency

The BPN organization is divided into three levels: Head Office at the National level, Regional Office at the Provincial level, and City Office at the Regency level. Based on this, the Kudus BPN Office is included in the third category, namely the Office at the Regency level, which is located on Jl.Mejobo, Mlati Kidul, Kudus City District, Kudus Regency, Central Java.

Land services *on line* in Kudus Regency covers various data maintenance, including services for transfer of rights, changes in rights, roya, mortgage rights, and access to land information such as checking, SKPT, and ZNT. Responding to the implementation of services according to the announcement from the Kudus Regency BPN, people who want to register land through PPAT can do it completely online, and only need to come directly to the Kudus Regency Land Office if the land product has been completed.

Based on the announcement number: 663/Peng-33.14.UP.04.04/IV/2020 by the Kudus Regency National Land Agency Office, most services are now carried out online *on line* by utilizing information technology, which changes previous service habits. Following up on the Circular Letter of the Minister of ATR/Head of BPN No. 2/SE-100.TU.03/III/2020, the Kudus Regency Land Office shows its concern by providing facilities that facilitate the public in land registration services. The National Land Agency is responsible for implementing government duties in the land sector nationally, regionally, and sectorally, in accordance with the provisions of the Law. The National Land Agency has a primary role in land allocation, management of government and individual land ownership rights,

⁵Muhammad Chairul Huda, (2021), *Metode Penelitian Hukum (Pendekatan Yuridis Sosiologis)*, Semarang: The Mahfud Ridwan Institute. p. 23.

and the regulation of documents related to land ownership. As mandated by Article 19 of the UUPA. This article includes the general provisions of land registration in Indonesia, namely:

- 1) To ensure legal certainty, the government carries out land registration throughout the territory of the Republic of Indonesia in accordance with the provisions stipulated in Government Regulations.
- 2) The registration referred to in paragraph 1 of this article includes:
 - a. Land measurement, mapping and bookkeeping.
 - b. Registration of land rights and transfer of these rights
 - c. Providing letters of proof of rights, which act as a strong means of proof.
- 3) Land registration is carried out taking into account the state and community conditions, socio-economic traffic needs and the possibility of implementing it, according to the considerations of the Minister of Agrarian Affairs.⁶

The implementation of electronic land registration at the Kudus Regency National Land Agency Office can provide legal certainty, because electronic certificates are protected by law and recognized as valid evidence. The electronic certificate registration process can be done through the assistance of PPAT on the site <https://loket.atrbpn.go.id> by logging in using a PPAT account or independently through the Sentuh Tanahku application and filling in the files on the site <https://loketku.atrbpn.go.id>. Applicants can immediately create land service registration files and upload the required documents into the system. After registration and document uploading are complete, the Land Office will validate the files online. Files that have been verified by the Land Office can be monitored in real-time through the Sentuh Tanahku application. Then after verification is complete, the applicant can choose a schedule to come to the Kudus Regency National Land Agency Office by bringing the original files of the uploaded documents and other required documents. If the verification goes smoothly, a deposit order will be printed and the applicant is required to make a payment in accordance with applicable provisions. After payment is made, the files will be processed further. Certificate collection is carried out by visiting the Kudus Regency National Land Agency Office according to the predetermined schedule.

⁶Wahyu Baskoro, (2021), *Jurisdiction Overview Implementation of Rights Transfer to Land & Building Registration with Selling-Buying Deed*, Sultan Agung Notary Law Review (SANLaR), Vol. 3, no. 2, p. 10.

3.2. Effectiveness of Online Service System at National Land Agency (BPN) Office in Kudus Regency

Public services are basically aimed at providing convenience for the community without presenting administrative or bureaucratic complications. At the Land Office there are various types of services, such as first-time land registration, land registration data maintenance, land recording and information, land plot measurement, and land arrangement and management. Each type of service has different procedures and requirements. However, the services provided by the Land Office often receive negative responses from the community as service recipients. Land certificate administration is considered time-consuming, complicated and convoluted, the costs required are expensive and there are individuals who seek profit.⁷

Land issues in Indonesia, especially regarding land data from the National Land Agency, currently there are 126 million plots of land from data in 2024 there are 82 million registered lands or only 30 percent that are not registered and do not have certificates and many lands have double certificates so the Government should resolve this first to get the amount of land because there are many differences in the field with their certificates, both those that do not match the size and some are still in dispute, there are 520 villages that have land disputes, with a total of 665 thousand hectares of land spread across 20 provinces throughout Indonesia and many more are in dispute in Court.⁸

The Ministry of ATR/BPN has formulated strategic steps listed in the 2020-2024 strategic plan to ensure that the Land Office works in a focused and measurable manner so that it is able to...responding to various complaints from the public as recipients of land services. This strategy is realized through a land service modernization program, one of which is the implementation of electronic Land Rights Registration Services.

Based on the experience of various institutions, there are several requirements that must be met to realize electronic or online services, including:

- 1) Change of mindset.
- 2) Need human resources with ICT (Information and Computer Technology) base
- 3) Adequate infrastructure is required to support online system operations.

⁷Damar Sagari, Mujiati, (2022), Efektivitas Layanan Hak Tanggungan Terintegrasi Secara Elektronik di Kantor Pertanahan, *Jurnal Tunas Agraria*, Vol. 5, No. 1, p. 34.

⁸Arif Rahman, Muammar, (2024), Prosedur Penerbitan Sertifikat Elektronik Sebagai Bukti Autentik Penguasaan Hak Atas Tanah, *Juridica: Jurnal Fakultas Hukum Universitas Gunung Rinjani*, Vol. 3, No. 1, p. 10.

4) Significant investment is required to realize online services.

5) Legal basis as a binding rule for the implementation of online services.⁹

Digital signature or *digital signature* used to ensure the authenticity of the identity of the sender of a message or the signer of a document, while ensuring that the contents of the message or document do not change during the delivery process. The working process of a digital signature involves summarizing the contents of the document to be secured, then encrypting it using a cryptographic algorithm, and the results are inserted into the document. Thus, digital documents and digital signatures are always integrated in one file. The use of the RSA cryptographic algorithm in digital signatures is able to guarantee document security in terms of integrity, authentication, and non-repudiation. In addition, with the cryptographic method, every data transaction between the client and server will be encrypted before being sent so that confidential information sent over the network (internet) cannot be accessed or utilized by unauthorized parties. Digital signatures use QR Code technology as an evaluation of the barcode. The application of QR Code to digital signatures uses a mathematical engineering science related to aspects of information security, data integrity, and data authentication, namely cryptography. QR Code can be used as a digital signature to validate the authenticity of digital documents and to minimize the potential for forgery. Compared to analog systems, electronic systems are better. Indeed, there is no internet-based electronic system that cannot be hacked to find internet security gaps.

Based on an interview with Mr. Heru, Head of the Kudus Regency Land Agency Office, the community's response to the use of services *on line* from the Land Office/National Land Agency (BPN) Kudus is quite positive. Online services offer various benefits, such as reducing queues or crowds, providing certainty, speeding up the service process, and avoiding applicants going back and forth due to incomplete administrative files. BPN Kudus is committed to continuing to develop this online service so that the public is increasingly facilitated in managing land, so that the target of land certification can be achieved immediately.¹⁰ It's just that many Kudus people do not have mobile phones, or have mobile phones but cannot access online services because they are not yet technology literate. In addition, even though there are already online land registration services that can be accessed anytime and anywhere, there are still many people in Kudus Regency who come directly to the BPN office. This is due to the lack of BPN socialization to the community. BPN will continue to conduct

⁹Septina Marryanti, Arsan Nurrokhman, (2019), Kesiapan Data Pertanahan Menuju Pelayanan Online, *Jurnal Prosiding*, Puslitbang Kementrian Agraria dan Tata Ruang/Badan Pertanahan Nasional, Vol. 5, No. 3, p. 23.

¹⁰Interview with Mr. Heru Muljanto, Head of the National Land Agency Office of Kudus Regency, 23 February 2025.

socialization so that the community is increasingly familiar, aware of and can utilize this electronic land registration. This online Land Service is also still relatively new, so many do not know and think that online land services are more complicated and convoluted.¹¹

Electronic systems have replaced various conventional tools such as analog books, physical calendars, calculators, landlines, fax machines, radios, world maps, printed photos, and diaries. Technological developments have provided convenience beyond human expectations. Meanwhile, certificates that have been issued remain valid and will not be withdrawn. Certificate replacement is only carried out on data maintenance services. For this reason, there is no mechanism or cost provided for the public to independently apply for a certificate replacement to be electronic. Analog certificates are still stored at the Land Office as documents, and will be replaced with electronic certificates if data maintenance transactions are carried out. The main difference between analog certificates and electronic certificates lies in the physical aspect, type of information, and security methods. Analog certificates are given to rights holders in book form, while electronic certificates are provided in digital form or electronic files.

Based on the theory of effectiveness, the author is of the opinion that land registration is...*on line* or electronic is more effective than conventional land registration. This is due to the various benefits offered to the community. These benefits include increasing productivity and efficiency, considering that the previous paper-based system required quite large operational costs, made it difficult to store and retrieve land documents, and took a long time. In some cases, land documents can be difficult to find. Online services provide various benefits such as reducing queues or crowds, speeding up the service process, and preventing applicants from having to go back and forth to the Land Office due to incomplete administrative files. The online registration process is more practical because applicants do not need to come directly to the Land Office to submit an application. In addition, the service implementation time is more measurable because it has been regulated by the system. Recording and signing are carried out electronically and have been guaranteed their validity by laws and regulations. Electronic certificates use digital signatures encoded with cryptographic algorithms and use Hash Codes and QR Codes, so security is more guaranteed compared to analog. Access to the electronic system is given on a limited basis, generally only to legitimate rights holders, courts, and land authorities. Electronic documents are stored in the system, so they do not require physical space for storage and make it easier to search for documents when needed.

¹¹*Ibid.*

4. Conclusion

Electronic land registration at the Kudus Regency BPN Office provides legal certainty because electronic certificates are valid according to laws and regulations and can be used as evidence. The process is carried out through the website <https://loket.atrbpn.go.id>, where applicants can upload files and documents. After validation, the system issues a deposit letter, then the files are processed after payment. Documents are picked up according to schedule at the BPN Office. The electronic system has proven to be more effective than conventional methods because it increases efficiency, speeds up services, reduces queues, and minimizes administrative errors. The recording and signing process is carried out digitally and is legally valid. Documents are stored electronically, so they do not require physical space and are easy to find. The Kudus community welcomes this service. BPN Kudus will continue to develop the system and conduct socialization to support ease of service and acceleration of land certification.

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