



THE ROLE OF DIGITALIZATION IN INFORMATION SYSTEMS TO IMPROVE THE EFFICIENCY OF COMPLETE SYSTEMATIC LAND REGISTRATION (PTSL)

Fania Ika Febrilian^{1*}, Viviana Mayasari¹ and Masahiro Ishimoto²

¹Economic and Business Faculty, Jenderal Soedirman University

²Osaka International University

*Email Corresponding Author: fania.febrilian@mhs.unsoed.ac.id

Abstract

In the era of advanced digital technology that is growing rapidly, an agency is required to be adaptive and innovative in the face of global competition. One of the factors to achieve superior competitiveness is through optimizing organizational strategies. In this case, the Information System (SI) is an important component to support the efficiency and effectiveness of the implementation of a program. The goal achieved from this study is to be able to explore the performance of digital technology in improving the efficiency of the Complete Systematic Land Registration (PTSL) program by using qualitative methods, literature studies and direct approaches through work practices. The results of the analysis show that in the PTSL program, data differences between agencies often cause information inconsistencies, ownership inconsistencies, and delays in the land certification process. The implementation of digital information systems has proven to be able to balance data from various agencies more accurately, accelerate the verification and validation of land ownership information, and increase transparency and accountability in land administration management through a more integrated and well-documented system. In addition, the application of digital information systems in the PTSL program has a significant positive impact on public services, especially in improving the efficiency and accuracy of land data management. With digitalization, the administrative process becomes faster, can minimize errors, and make it easier for the public to access land ownership information.

Keywords: Digital Information System, Complete Systematic Land Registration (PTSL), Efficiency



Abstrak

Di era majunya teknologi digital yang semakin berkembang pesat, sebuah instansi dituntut untuk adaptif dan inovatif dalam menghadapi persaingan global. Salah satu faktor untuk mencapai daya saing yang unggul adalah melalui optimalisasi strategi organisasi. Dalam hal ini, Sistem Informasi (SI) menjadi komponen yang penting untuk mendukung efisiensi dan efektivitas pelaksanaan suatu program. Tujuan yang dicapai dari penelitian ini adalah mampu menggali kinerja teknologi digital dalam meningkatkan efisiensi program Pendaftaran Tanah Sistematis Lengkap (PTSL) dengan menggunakan metode kualitatif, studi literatur dan pendekatan secara langsung melalui praktik kerja. Hasil analisis menunjukkan bahwa dalam program PTSL, perbedaan data antar instansi sering kali menyebabkan ketidaksesuaian informasi, ketidaksesuaian kepemilikan, serta keterlambatan dalam proses sertifikasi tanah. Penerapan sistem informasi digital terbukti mampu menyeimbangkan data dari berbagai instansi secara lebih akurat, mempercepat verifikasi dan validasi informasi kepemilikan tanah, serta meningkatkan transparansi dan akuntabilitas dalam pengelolaan administrasi pertanahan melalui sistem yang lebih terintegrasi dan terdokumentasi dengan baik. Selain itu, penerapan sistem informasi digital pada program PTSL membawa dampak positif yang signifikan terhadap pelayanan publik, terutama dalam meningkatkan efisiensi, dan akurasi pengelolaan data pertanahan. Dengan digitalisasi, proses administrasi menjadi lebih cepat, dapat meminimalisir kesalahan, serta mempermudah masyarakat dalam mengakses informasi kepemilikan tanah.

Kata Kunci: Sistem Informasi Digital, Pendaftaran Tanah Sistematis Lengkap (PTSL), Efisiensi



A. INTRODUCTION

Land is one of the high-value assets, clear and legal land ownership is an important factor in supporting development stability and community welfare. The National Land Agency (BPN) is an institution responsible for land affairs and seeks to improve the land management system to be more efficient and easily accessible to the public. One of the efforts made is through the Complete Systematic Land Registration (PTSL), a program that aims to accelerate land certification throughout Indonesia (Ramadhani, R. (2021)

In the era of globalization that has become more advanced, the development of information technology has had a major impact on the PTSL process. Digitalization and integrated information systems are able to bring changes in the field of land administration governance. Transparency in the PTSL program needs to be increased so that it is easier for the public to know the status of the management that is being carried out and increase trust in the government that carries out the task. In its development, systematic land registration carried out in all villages in the district area and all urban villages in urban areas covering all land plots throughout the Republic of Indonesia is a PTSL policy. This policy is a National Strategic Program with the concept of building new land parcel data and at the same time improving and maintaining the quality of existing registered land parcel data so that all registered land parcels are complete and accurate, which provides a guarantee of certainty and legal protection of land rights and a guarantee of certainty of the location and boundaries of land parcels (JUKNIS PTSL, 2023).

Digitization of documents in information systems can also improve

alternative administrative processes so that data collection is now more efficient than before. The validation and storage process of data administrators plays an important role in the correct storage of soil data and reduces paperless and storage in emailable channels. The process of validating and verifying land ownership data is also assisted in the information system. With the existence of a digital database, checking land ownership there is a guarantee of ownership for people who participate in the program. A system like this is very helpful to provide a certain aspect of checking so that it can be used as a tool to minimize administrative errors.

The sustainability of the PTSL program is interrelated with the coordination process between the central and regional governments. With good coordination between the various agencies involved, the land registration process can run more smoothly, reducing operational costs, and the risk of data damage or loss can be reduced. Land management and land rights that are being managed by the government are part of land administration, therefore the majority of land ownership must be managed and recorded in a correct and thorough system. Considering that the land area in Indonesia is not increasing while the needs continue to grow, a well-organized administrative system is needed. This aims to prevent disputes and conflicts related to land ownership and use. To reduce the problems that occur, the government has established the PTSL program as a means of making it easier for people to have legal rights from their land ownership.

B. IMPLEMENTATION AND METHODS

In the activities carried out by the author during the internship which took place on August 5 – December 6, 2024



for four months at the Banyumas Regency Land Office, the writer for four months was placed in the Land Acquisition and Development Section. The internship procedure is carried out for five days a week.

systematically. Warkah includes basic documents for the issuance of land certificates, such as survey letters, sale and purchase deeds, and other proof of ownership.

Table 1. Internship Operating Hours

Weekdays	Business Hours	Break Time
Monday - Friday	07.30 – 12.00 04.30 WIB	12.00 – 13.00 WIB

Activities during the MBKM internship at the Banyumas Regency Land Office for four months, as follows:

1. To carry out the previous step input activity, all files must have been recorded in the agenda book to make it easier to check so that no files are tucked or lost. Before inputting, it is ensured that all data has been prepared, this input process is carried out using E-Office, namely Microsoft Excel.
2. The process of distributing land certificates begins by explaining information related to land certificates and the flow of taking certificates. The certificate owner registers first by showing an invitation letter, then the village collects the invitation and gives it to the Banyumas Regency Land Office. The owner of the land certificate is then called based on the ownership number, and shows his or her identity in accordance with the data listed on the land certificate. Once completed, the owner is asked to sign on the receipt sheet.
3. Filing of warkah at the Land Office is an important process in land administration to store and manage land ownership documents

C. RESULTS AND DISCUSSION

Along with the development of an increasingly modern era, the need to access information quickly and transparently has become increasingly important in various fields, including in the land sector. The public now expects a more efficient, accurate, and fast administrative process without having to face convoluted procedures. Transparency in land management is urgently needed to ensure legal certainty, reduce potential disputes, and speed up the process of registering and managing land certificates. Therefore, the use of technology in land information systems is an effective solution to meet these needs. The government facilitates public access to information through the PTSL program, which can be done online. This application is intended to be integrated with existing land information systems so that government agencies can share data more effectively (Noer & Nugroho, 2024).

The ATR/BPN portal is one of the openings of the digital and government world described by the Office of the Minister and the National Land Agency/Layout which was created to make it easier for the public to access online-based publication features. The existence of this portal system brings enormous benefits and makes defense services happen for the sake of transparency and accountability which can now help the community in a faster, easier, and more convenient way to invest. One of the main advantages of the ATR/BPN Portal application is its ability to provide access to land registration



information quickly and transparently so that the public can be more open to getting used to land ownership. With this application, the public becomes aware of the status of the land and advanced information about the PTSL program.

The success of the Complete Systematic Land Registration Program (PTSL) in the information system can be measured through various indicators that reflect the effectiveness and efficiency of services. One of the main aspects that is a benchmark is the efficiency in the land registration process, where the use of information systems is expected to be able to cut processing time compared to conventional methods. The faster the document verification and validation is carried out, the higher the success rate of this program. In addition, the accessibility and ease of use of the system are also important factors, especially in ensuring that the public can easily access registration services digitally without experiencing difficulties in understanding the procedures.

Data accuracy and security are also the main concerns, considering that the validity of land ownership information must be maintained to avoid recording errors or data manipulation. Security in data storage is necessary to prevent the loss or misuse of important information. Furthermore, transparency in the implementation of PTSL also plays a role in increasing public trust. When information regarding land ownership status can be accessed clearly and easily, the potential for disputes to arise can be minimized.

In addition, the scope and reach of the program also reflects the success of PTSL, especially in looking at how many regions have been registered and the number of certificates that have been successfully issued. If more and more people gain legal certainty over their

land through this program, then it can be said that the information system implemented has been effective. Another great benefit is the reduction in the number of land disputes, because with a more organized system, the history of land ownership can be traced more accurately. With these various indicators, the implementation of the information system in PTSL is expected to create more efficient, transparent, and reliable land governance.

The PTSL program is a program implemented by the Indonesian government to accelerate the land certification process throughout Indonesia. This program has driving factors, including:

1. Support from the Government
Support from the government is urgently needed. There are clear regulations set by the government for the sustainability of the PTSL program, if the regulations are clear and the strategy has been well prepared, the program will run smoothly. Support from the government is not only in the form of regulations and a well-coordinated distribution of jobdesks, budget support from the government also has a considerable role in the implementation process of the PTSL program.
2. Technology
Technology is a driving factor for the implementation of the PTSL program. The technological advances that accompany the program can have a positive impact on shortening the processing time, making the work more efficient, facilitating communication, especially in the coordination process between individuals and groups.
3. Community participation in the implementation of PTSL



The community can participate by participating in socialization and counseling organized by the government, which aims to provide an understanding of the importance of the PTSL program, the stages of the land registration process, and the benefits of having a land certificate, such as legal protection and easy access to capital. Through this socialization, the public can also ask questions and overcome obstacles faced in the registration process.

The implementation of PTSL is inseparable from several obstacles that need to be overcome in order for this program to run effectively. The following are the obstacles that occurred during the implementation of the PTSL program:

1. Limited Human Resources To carry out the program, competent and qualified experts are needed in carrying out the tasks that have been given. In reality, the available experts are still limited while the need in the field is more, this causes delays in the land registration process and hinders the achievement of PTSL targets.
2. Long implementation time Although the PTSL program aims to accelerate land certification, this can take longer because each region certainly has many sub-districts/villages. Although at the Banyumas Regency Land Office, there are already several teams that manage this program and each village already has a team in charge. Checking data and measuring soil takes a long time because it must be done one by one correctly and carefully while each team is responsible for several villages.

D. CONCLUSION

Conclusion

The public now expects a more efficient, accurate, and fast administrative process without having to face convoluted procedures. Transparency in land management is urgently needed to ensure legal certainty, reduce potential disputes, and speed up the process of registering and managing land certificates.

The ATR/BPN portal is one of the openings of the digital and government world described by the Office of the Minister and the National Land Agency/Layout which was created to make it easier for the public to access online-based publication features. The existence of this portal system brings enormous benefits and makes defense services happen for the sake of transparency and accountability which can now help the community in a faster, easier, and more convenient way to invest.

The faster the document verification and validation process, the potential and success rate of this program will increase. Easy access and use of the system is an important factor so that people can register quickly and easily. Program transparency can help increase public trust and show that PTSL programs are doing well. Another great benefit is the reduction in the number of land disputes, because with a more organized system, the history of land ownership can be traced more accurately. The PTSL program is a program implemented by the Indonesian government to accelerate the land certification process throughout Indonesia.



Suggestion

1. Application Evaluation and Development
Conduct periodic or routine evaluations of the ATR/BPN Portal application and the information system used. The development of new features that are more user-friendly and the provision of information in real time will improve the user experience and effectiveness of PTSL services.
2. Socialization and Public Education
Conduct targeted socialization about the benefits and procedures of PTSL through digital and conventional or direct media. Education to the public will increase public participation and trust, so that this program can run more optimally.
3. Strengthening Digital Infrastructure
Expansion and improvement of technological infrastructure, especially in remote areas, so that PTSL services can be widely and quickly accessed by all communities, as well as implementing a cyber security system to protect land ownership data from the threat of cyber crime. This includes improvements to the internet network and supporting hardware.
4. Cloud-Based Data Back Up
With the implementation of cloud-based storage, the PTSL program can run more effectively, transparently, and safely, ensuring that every citizen gets clear and well-documented land ownership rights. The cloud system supports automatic backup, so in the event of data loss or corruption, recovery can be done quickly without disrupting the administrative process.

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